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10 eV/amu-10 GeV/amu の荷電粒子の阻止能

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10 eV/amu - 10 GeV/amu の荷電粒子の阻止能

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線量評価、放射線検出器の応答特性および加速器の遮蔽計算等で重要な10種類の荷電粒子 π , μ , p , d , t , α , ${}^6\text{Li}$, ${}^7\text{Li}$, ${}^{12}\text{C}$, ${}^{16}\text{O}$ について、10 eV/amu ~ 10 GeV/amu のエネルギー範囲で10種類の単体：水素、ヘリウム、ベリリウム、炭素、アルミニウム、鉄、銅、タングステン、鉛、ウランおよび4種類の物質：水、ファントム、LiF-熱蛍光線量計、中性子飛跡検出器 (Solid State Neutron Track Detector) に対する電離衝突阻止能、核衝突阻止能および全阻止能を STOPPING, SPAR および RSTAN/RSHEV コードを用いて計算し、結果を図表にまとめた。

Stopping Power of Charged Particles from 10 eV/amu to 10 GeV/amu

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Electric collision, nuclear collision and total stopping powers in 10 kinds of elements: H₂, He, Be, C, Al, Fe, Cu, W, Pb and U, and 4 kinds of materials: water, phantom, LiF-TLD and SSNTD (solid state neutron track detector) have been calculated for 10 kinds of charged particles from 10 eV/amu to 10 GeV/amu with STOPPING, SPAR, and RSTAN/RSHEV codes, in which the charged particles are important projectiles for evaluating the dose and detector responses of radiations, and for accelerator shielding calculations.

Calculated data are presented in Table and Figure.

Keywords: Electric Stopping Power, Nuclear Stopping Power, Total Stopping Power, Charged Particles, STOPPING, SPAR, RSTAN/RSHEV

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1. はじめに

荷電粒子の阻止能は、生体への放射線リスクの指標である線質係数、シンチレーション検出器や熱蛍光検出器等の各種検出器の応答特性、放射線化学における線質依存など放射線に対する物理的、化学的、生物学的な影響を表す指標として広く利用されている。また、加速器の遮蔽計算では、加速イオンのエネルギー損失に伴う中性子等の2次粒子の生成、核反応生成物としての荷電粒子や各種イオンの物質へのエネルギー付与等を評価する上でも極めて重要な物理量である。

本報告では、単体、化合物、混合物に対する広範なエネルギー領域の荷電粒子の阻止能の算出に広く利用されている3種類の計算コード：STOPPINGコード¹⁾、RSTAN/RSHEVコード²⁾、SPARコード³⁾について比較検討すると共に、これらの計算コードを用いて線量評価、放射線検出器の開発および加速器の遮蔽計算等で重要な10種類の入射粒子 (projectile) π , μ , p , d , t , α , ${}^6\text{Li}$, ${}^7\text{Li}$, ${}^{12}\text{C}$, ${}^{16}\text{O}$ について、10 eV/amu \sim 10 GeV/amu のエネルギー範囲で10種類の単体：水素、ヘリウム、ベリリウム、炭素、アルミニウム、鉄、銅、タングステン、鉛、ウランおよび4種類の物質：水、ファントム、LiF-熱蛍光線量計、中性子飛跡検出器 (Solid State Neutron Track Detector) に対する電離衝突阻止能 (electric collision stopping power)、核衝突阻止能 (nuclear collision stopping power) および全阻止能 (total stopping power) を計算し、結果を図表にまとめた。

2. 計算方法

2.1 阻止能の計算

荷電粒子の阻止能を計算するコードとして現在広く利用されているのは、J.F.Ziegler等によるSTOPPINGコード、H.BichselによるRSTAN/RSHEVコード、高エネルギーのハドロン輸送計算コードHETCに組み込まれているT.W.Armstrong等によるSPARコードの3種類である。しかしながら、これらの計算コードはTable 1に示すように適用可能なエネルギー範囲、入射荷電粒子の種類、ターゲット物質等が異なり、10eV/amu~10 GeV/amuのエネルギー範囲で、入射粒子とターゲットのあらゆる組み合わせについての阻止能を1種類のコードで計算することは不可能であり、複数のコードによる計算が必要となる。

一般に荷電粒子に対する物質の全阻止能(total stopping power) S の計算は、電離衝突阻止能 S_e (electric collision stopping power) と核衝突阻止能 S_n (nuclear collision stopping power) の和として次式で表される。

$$S = S_e + S_n \quad (1)$$

以下それぞれの計算コードで用いられている計算式を示す。

2.1.1 電離衝突阻止能

(1) STOPPINGコード

電離阻止能 S_e は Lindhard の公式を基に、実験値に合うよう求められたフィッティング関数を用いて計算される。入射粒子が水素、ヘリウム、それ以上の重イオンの場合それぞれのフィッティング関数について示す。

(a) 水素イオン入射

(i) $E \geq 25\text{keV/amu}$

$$\frac{1}{S_e} = \frac{1}{S_L} + \frac{1}{S_H} \quad (2)$$

$$S_L = a_1 E^{a_2} + a_3 E^{a_4} \quad (3)$$

$$S_H = a_5 \ln(a_7/E + a_8 E) / E^{a_6} \quad (4)$$

ここで $a_1 \sim a_8$ はターゲット物質により異なる定数である。

(ii) $E \leq 25\text{keV/amu}$

境界点 ($E = 25\text{keV/amu}$) における (2) 式での電離阻止能を S'_e として

$$\text{for } Z \leq 6 \quad S_e = S'_e * (E/25)^{0.25} \quad (5)$$

$$\text{for } Z > 6 \quad S_e = S_e' * (E/25)^{0.45} \quad (6)$$

ここで Z はターゲット物質の原子番号である。

(b) ヘリウムイオン入射

水素イオン入射の阻止能 S_e^H を用いて次式により求める。

(i) $E \geq 1 \text{keV/amu}$

$$S_e^{He} = Z_{He}^2 \gamma_{He}^2 S_e^H \quad (7)$$

ここで Z_{He} はイオンの原子番号, γ は fractional effective charge と呼ばれるフィッティング関数で,

$$\gamma_{He} = 1 - \exp\left[-\sum_{i=0}^5 a_i (\ln E)^i\right] \quad (8)$$

$a_0 \sim a_5$ は係数である。

(ii) $E \leq 1 \text{keV/amu}$

境界点 ($E = 1 \text{keV/amu}$) における (7) 式での阻止能を S_{He}' として

$$S_e^{He} = \sqrt{E} S_{He}' \quad (9)$$

(c) 原子番号3以上の重イオン入射

$$S_e^{HI} = Z_{HI}^2 \gamma_{HI}^2 S_e^H \quad (10)$$

ここで γ_{HI} は Bohr/Northcliffe の関係式を実験値に合うようにフィッティングした次式を用いる⁴⁾。

$$\gamma_{HI}^2 = 1 - \exp[-0.92v_1 / (v_0 Z_1^{2/3})] \quad (11)$$

ここで Z_1 はイオン原子番号, v_1 は速度, v_0 は Bohr 速度である。

(2) SPARコード

SPARコードは陽子, 質量数2以上のイオン, π 中間子, μ 粒子入射の阻止能の計算が可能である。計算は陽子入射の場合とその他の粒子の場合に分けて行われる。

(a) 陽子入射の時

入射粒子の速度 β により, 以下の3領域に分けられる。

(i) $\beta > 0.07z^{2/3}$

$\beta = 0.07z^{2/3}$ は, 陽子の場合約 2.3MeV である。速度 v , 電荷 ze の荷電粒子入射に対する S_e は Bethe の公式²⁾により次式で与えられる。

* 文献3では $\beta > 0.04 z^{2/3}$ となっているが, 実際の計算には 0.07 が用いられている。

$$S_e = \frac{0.30708}{\beta^2} z^2 \frac{Z}{A} L \quad (12)$$

$$L = L_0(\beta) = \ln \left[\frac{2m_e c^2 \beta^2}{1 - \beta^2} \right] - \beta^2 - \ln \bar{I} - \frac{\bar{C}(\beta)}{\bar{Z}} - \frac{\delta}{2} \quad (13)$$

L : 媒質電子1個あたりの衝突数

$$\beta = v/c = \{(E/Mc^2 + 1)^2 - 1\}^{1/2} / (E/Mc^2 + 1)$$

A : 媒質元素の質量数

Z : 媒質元素の原子番号

m_e : 電子の静止質量

c : 光速

式 (13) の第1項, 第2項は入射荷電粒子と電子との相対論的な相互作用の第1次Born近似による記述である. 第1項, 第2項は $\beta \rightarrow 0$ で発散するため, Bethe の式は低エネルギーでは使えない. 第3項以降はBorn近似に対する補正項である. I は束縛電子のイオン化ポテンシャル, $C(\beta)$ は電子が束縛されていることによる殻補正, δ は密度効果である.

SPARコードでは上の2式より,

$$S_e = \frac{0.30708}{\beta^2} z^2 \frac{Z}{A} \left(\ln \left[\frac{2m_e c^2 \beta^2}{1 - \beta^2} \right] - \beta^2 - \ln \bar{I} - \frac{\bar{C}(\beta)}{\bar{Z}} - \frac{\delta}{2} \right) \quad (14)$$

ここで殻補正 $\bar{C}(\beta)$ は以下の式で与えられる.

• $E > 8\text{MeV}$ Barkas および Berger の式⁹⁾より

$$\left(\frac{\bar{C}(\beta)}{\bar{Z}} \right) = (f_1 \bar{I}^2 + f_2 \bar{I}^3) / \bar{Z} \quad (15)$$

f_1, f_2 はエネルギーの関数で表される係数である.

• $E \leq 8\text{MeV}$ Lindhard と Sharff⁷⁾ の方法より

$$\left(\frac{\bar{C}(\beta)}{\bar{Z}} \right) = \ln \left[\frac{2m_e c^2 \beta^2}{\bar{I}} \right] - L(x) \quad (16)$$

ここで $x = 137^2 \beta^2 / Z$ である.

$L(x)$ の実験値からの補正は, ICRU16 の水中の陽子の阻止能の値⁹⁾に合わせた $L_1(x)$ と ICRU16のアルミニウム中の陽子の阻止能の値⁹⁾に合わせた $L_2(x)$ を用い, $Z \leq 3.33$ の場合には L_1 を, $Z \geq 13$ の場合には L_2 を, また $3.33 < Z < 13$ の場合は Z で L_1, L_2 を補間したものを使用している.

また密度効果 δ は, Sternheimer の式⁹⁾の近似を用いて次式で求められる.

$$\bar{\delta} = \ln \frac{\alpha n \eta^2}{I^2} - 1 \quad (17)$$

ここで h : プランク定数
 $\alpha = (h^2 c^2 e^2) / \pi m c^2$
 $\eta = E / Mc^2 (E/Mc^2 + 2)$

但し上式で δ が負になる場合は0とする。

(ii) $0.0046 z^{1/3} < \beta \leq 0.07 z^{2/3}$

$\beta = 0.0046 z^{1/3}$ は、陽子の場合約 10^{-2} MeV である。ここでは式(14)に電荷減少の効果を加味し、陽子の電荷数 z を実効電荷数 z^* に置き換える。 z^* は Barkas の実験的な関係式¹⁰⁾を用いて計算される。

$$z^* = z [1 - \exp(-125 \beta z^{-2/3})] \quad (18)$$

(iii) $0 \leq \beta \leq 0.0046 z^{1/3}$

S_e は Lindhard の式¹¹⁾より

$$S_e = k \sqrt{E} \quad (19)$$

ここで k は定数で、境界条件より求める。

(b) その他の粒子

陽子以外の粒子の S_p^e は、陽子の S_p^e を粒子の質量及び実効電荷で補正することより、次式で求められる。

$$S_i^e(E, z_i, m_i) = \frac{z_i^*}{z_p^*} S_p^e(E, m_p / m_i) \quad (20)$$

ここで z_i は入射粒子の電荷数、 m_i はその質量、 z_p^* 及び z_i^* は式(18)で表される実効電荷である。

(3) RSTAN/RSHEVコード

RSTAN, RSHEVコードはそれぞれ独立した計算コードであり、RSTANコードが $Z < 57$ のターゲット物質についての、RSHEVコードがそれ以上の物質のうち特定の22核種(La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er, Yb, Hf, Ta, W, Os, Ir, Pt, Au, Pb, Bi, Th, U)についての計算を行うコードである。RSTAN/RSHEVコードでは、Betheの式に補正を加えた式のみを基にしており、計算可能なエネルギー領域の下限が約1 MeV/amu と、他のコードと比較して高い。RSTANコードは式(13)で表されるBetheの衝突阻止能 $L_0(\beta)$ に、低エネルギー領域での補正としてBarkas効果 L_1 およびBlochの項 L_2 を加えた以下の式を用いている⁹⁾。

$$L = L_0(\beta) + zL_1(\beta) + L_2(\beta) \quad (21)$$

・Barkas 効果¹²⁾

Barkas 効果 L_1 は第2次 Born 近似より求められる $(z/\beta)^3$ の補正項で、次式で与えられる。

$$L_1 = \frac{F(b/x^{1/2})}{Z^{1/2} x^{3/2}} \quad (22)$$

ここで $x=18787\beta^2/Z$ で、 F は文献13のテーブルにある値を用いる。 b は自由パラメータであり、水素分子に対して0.6、他の媒質には1.8としている。

・Bloch 項¹³⁾

$(z/\beta)^4$ 以上の高次の補正項である Bloch 項 L_2 は、 $y=z\alpha/\beta$ (α :微細構造定数) を用いて、次式で与えられる。

$$L_2(y) = -y^2 \sum_{j=1}^{\infty} \frac{1}{j(j^2+y^2)} \quad (23)$$

コード内では上式の近似式である以下の式を用いている。

$$L_2(y) = -y^2 [1.20206 - y^2(1.042 - 0.8549y^2 + 0.343y^4)] \quad (24)$$

RSTANコードでは以上の式で得られる L を式 (14) に代入して S_e を求める。但し、殻補正 \bar{C} は Walske の式^{14,15)} で与えている。また入射重イオンの有効電荷は、速度が遅くなるにつれ ze から離れる。これは電子との相互作用により重イオンが媒質電子をはぎ取り、中性化するため、この電荷減少 (Charge Reduction) の効果を原子番号が2以上の重イオンに対して用いる。有効電荷を z^*e としたとき、 z^* と z の比は次式で与えられる。

$$\frac{z^*}{z} = 1 - \exp(-1.316x + 0.1112x^2 - 0.0650x^3) \quad (25)$$

ここで $x=100\beta/Z^{2/3}$ で、上式は $x > 0.27$ の場合に有効である。

一方RSHEVコードではRSTANコードの計算式 (14) を基に、密度効果の補正を行った次式により S_e が計算される¹⁶⁾。

$$S_e = \frac{0.30708}{\beta^2} z^2 \frac{Z}{A} \left(\ln \left[\frac{2mc^2\beta^2}{1-\beta^2} \right] - \beta^2 - \ln \bar{I} - \frac{\bar{C}}{Z} + (G(z,\beta) - \delta(\beta))/2 \right) \quad (26)$$

ここで殻補正の式については、K-shell, L-shell を考慮したRSTANコードでの Walske の式に加えて、Bichsel によるM-shell, L-subshell の殻補正の式¹⁷⁾も使用している。

また Barkas 効果は次式で与えられる。

$$L_1(\beta) = 0.002833 * \beta^{-1.2} \quad (27)$$

2.1.2 核衝突阻止能

核衝突阻止能 S_n の計算が可能なのはSTOPPINGコードのみであるが、SPARコードでも低エネルギー領域に限ってコード内で計算を行っている。それぞれの計算方法を以下に示す。

(1) STOPPINGコード

STOPPINGコードにおける核衝突阻止能 S_n は以下の式で計算される¹⁸⁾。

$$S_n(E_0) = \frac{8.462 \times 10^{-15} z Z m S_n(\epsilon)}{(m+M)(z^{0.23} + Z^{0.23})} \quad (\text{eV}/(\text{atom}/\text{cm}^2)) \quad (28)$$

ここで z, Z, m, M はそれぞれ入射荷電粒子、ターゲット物質の原子番号、質量である。また ϵ は次式で与えられる reduced energy であり、

$$\epsilon = \frac{32.53 M E_0}{z Z (m+M)(z^{0.23} + Z^{0.23})} \quad (29)$$

ϵ に対する reduced nuclear stopping $S_n(\epsilon)$ は以下の式で求められる。

$$\text{For } \epsilon \leq 30: \quad S_n(\epsilon) = \frac{\ln(1+1.1383\epsilon)}{2[\epsilon+0.01321\epsilon^{0.21226}+0.19593\epsilon^{0.5}]} \quad (30)$$

$$\text{For } \epsilon > 30: \quad S_n(\epsilon) = \frac{\ln(\epsilon)}{2\epsilon} \quad (31)$$

(2) SPARコード

2.1.1 節の (iii) $0 \leq \beta \leq 0.0046 z^{1/3}$ の低エネルギー領域では全阻止能 S に占める S_n の割合を無視できないことから、コード内で次式により計算を行っている。

$$S = S_e + \sum_j S_n(j) \quad (32)$$

ここで、

$$S_n(j) = \left[\frac{A_j N_j}{N_a} \right] \left[\frac{d\epsilon}{d\rho} \right]_j / G_j \quad (33)$$

$$\left[\frac{d\epsilon}{d\rho} \right]_j = 4.51 \sqrt{\epsilon_j} \exp(-2.54 \epsilon_j^{0.277}) \quad (34)$$

$$\epsilon_j = 3.255 \times 10^4 E \frac{A_j / (A_j + m)}{z Z_j (z^{2/3} + Z_j^{2/3})^{1/2}} \quad (35)$$

$$G_j = 1.96 \times 10^{-4} \frac{A_j (m + A_j) (z^{2/3} + Z_j^{2/3})^{1/2}}{z Z_j m} \quad (36)$$

z, m : 入射粒子の原子番号, 質量

Z, A : ターゲット物質の原子番号, 質量数
 N : 原子数密度
 N_0 : アボガドロ数

2.2 化合物の阻止能

SPARコード, RSTANコードは化合物ターゲットの阻止能が計算可能であるが, その計算方法はコードによって以下のように異なる.

(1) SPARコード

化合物のイオン化ポテンシャル \bar{I} を以下の式で求め, これを式 (14) に代入して S_e を計算する.

$$\ln \bar{I} = \frac{\sum_i n_i Z_i \ln I_i}{\sum_i n_i Z_i} \quad (37)$$

ここで n_i はターゲット1分子あたりの構成元素 i の原子数である.

(2) RSTANコード

式 (14) の計算において, A, Z を化合物の全質量数, 全電荷数として計算している. 例えば水の Z は次式のように表される.

$$Z_{H_2O} = 2Z_H + Z_O \quad (38)$$

ここでのイオン化ポテンシャルは, 式 (37) のSPARコードでの計算と同様である.

STOPPINGコードでは, ターゲット物質として単体の元素だけしか扱うことができない. このため, 本計算では Kamaratos による Bragg 加算則¹⁹⁾をコードに組み入れ, 化合物(混合物)の阻止能を計算した. 例えば S を1分子あたりの阻止能とすると, 水に対する阻止能は次式で表される.

$$S_{H_2O} = S_{H_2} + \frac{1}{2} S_{O_2} \quad (39)$$

3. 計算コード間の比較

Fig. 1 は入射粒子が陽子、ターゲットが水素の場合のそれぞれの阻止能のエネルギー依存を示す一例である。全阻止能に対する核衝突阻止能の寄与はエネルギーが減少するにつれて大きくなり、 10^{-4} MeV/amu 付近では電離衝突阻止能とほぼ等しくなるが、エネルギーが増加するにつれて急速に減少し、 10^{-1} MeV/amu を越えるとその寄与はほとんどなくなる。この様子は入射粒子とターゲットの組み合わせにより若干異なるが、入射粒子の核子当たりのエネルギーが数100keV 以上では核衝突阻止能の寄与は極めて小さい。一方、電離衝突阻止能は 10^{-1} MeV/amu 近傍で最大になり、エネルギーが増加するにつれて減少するが、核衝突阻止能に比べるとかなり大きい。Ziegler の計算²⁰⁾によると、通常200keV/amu 以上では核衝突阻止能は電離衝突阻止能の1%以下であり、非常に重いターゲットと大きな原子番号の入射粒子の組み合わせ、例えばAuターゲットとU粒子の組み合わせでも、最大24%以下である。

第2章で説明した3種類の計算コードの本報告での適用範囲を決めるため、いくつかのケースについて比較計算を行った。

(a) 接続エネルギー点 (10MeV/amu) でのつながり

STOPPING, RSTAN/RSHEVの何れのコードを用いても、10MeV/amu 近傍の阻止能を計算することが可能である。Table 2 は両者の10MeV/amu での比をまとめたものである。これより入射粒子が異なってもターゲット物質が同じであれば、ほぼ同じ傾向となることが判る。また最も差が大きいのはターゲット物質がタンゲステン、入射粒子が ^{16}O の場合で、両コードの差が12.5%である。しかしその他の組み合わせでは10%以上の差はみられない。

(b) SPARコード, STOPPINGコードによる差

低エネルギー領域の π 中間子と μ 粒子入射の場合、STOPPINGコードでは計算できないため、代わりにSPARコードによって計算を行うことが考えられる。このとき2種類の計算コードの結果にどの程度の差があるのかを調べる必要があり、両コードで計算可能な陽子入射、アルミニウムターゲットの場合で比較をした(Fig.2)。これより1MeV/amu 以上では両者の結果はほぼ一致しているが、 10^{-1} MeV/amu 以下のエネルギー領域でSPARコードはSTOPPINGコードよりも全体的に小さい。

なおSPARコードで代用した場合、計算結果として全阻止能だけが得られ、STOPPINGコードで計算できる電離衝突阻止能、核衝突阻止能それぞれについては得られない。

(c) SPARコードによる π 中間子, μ 粒子入射の計算

高エネルギー領域を計算するRSTAN/RSHEVコードでは、 π^+ と π^- 、 μ^+ と μ^- それぞれの入射による計算が可能なのに対し、SPARコードでは π 、 μ のCharge stateの区別がない。Charge stateの違いについて調べるため、ターゲット物質が水の場合での計算結果をFig. 3, 4及びTable 3, 4に示す。RSTAN/RSHEVでのCharge stateの違いによる差は高エネルギー

程小さく、100MeV/amu 以上ではほとんどその差が見られないが、低エネルギーになる程、差が拡大する。ここでSPARでの π , μ がRSTAN/RSHEVでのどちらの Charge state に相当するかを考えた場合、まずSPARでの π , μ の質量はRSTAN/RSHEVのどちらの Charge state の質量とも異なっており、また両コードの計算結果を比較しても判断ができないが、本報告ではSPARコードによる計算を π^+ , μ^+ 入射としてまとめることにする。なおRSTAN/RSHEVコードにおける Charge state の差異は、Barkas 効果の計算において電荷が考慮されている点で、計算上の違いがみられる。

(d) ターゲット物質の状態

STOPPINGではターゲット物質として水素を用いた場合、液体のデータがライブラリから読まれるが、RSTANでは気体のデータが入っており、両者で異なる状態の計算を行っていることになる。その差を調べるため、RSTANコードで媒質が液体の場合の計算を行い、STOPPINGの結果と比較した (Fig. 5)。ここでRSTANで液体の計算を行う際に変更を加えたデータは媒質の密度と I -value の2パラメータである。これよりRSTANコード同士の比較においてもほとんど差がなく、またSTOPPINGコードとの差もほとんどない事がわかる。

この件に関しては、Ziegler が文献18の中で固体と気体の状態での計算を行っており、この結果からも、気体が数%程度大きい傾向にあるが、ほとんど差がないことが判る。

以上の検討結果をふまえて、第4章に示す阻止能データは、10MeV/amu以下の低エネルギー領域をSTOPPINGコード、それ以上の高エネルギー領域ではRSTAN/RSHEVコードにより計算し、STOPPINGコードが適用できない π 中間子、 μ 粒子入射については、SPARコードにより計算を行う。

4. 阻止能の計算結果

4.1 計算条件

阻止能データの計算を行ったのは、以下の入射粒子とターゲットの組み合わせである。

- ・ 入射荷電粒子(10核種)

π , μ , p, d, t, α , ${}^6\text{Li}$, ${}^7\text{Li}$, ${}^{12}\text{C}$, ${}^{16}\text{O}$

- ・ ターゲット物質(15種類)

Hydrogen, Helium, Beryllium, Carbon, Aluminum, Iron, Copper, Tungsten,
Lead, Uranium, TLD-100*(LiF), TLD-700*(${}^7\text{LiF}$), Phantom, Water,
SSNTD(中性子飛跡検出器**)

ここで TLD-100, -700, Phantom, SSNTDの組成は以下の通りである。

TLD-100 : Li natural (${}^6\text{Li}$:7.5%, ${}^7\text{Li}$:92.5%)

TLD-700 : ${}^7\text{Li}$ enriched (99.93%)

Phantom : 材質 アクリル (密度 1.20 g/cm³)

SSNTD : 材質 アリル・ジグリコール・カーボネート (密度 1.32 g/cm³)

但しターゲット物質について、RSTAN/RSHEVコードでは同位体の区別をしていないため、TLD-700の計算ができない。しかし、10MeV/amu 以上では TLD-100 との差がほとんど無いものと予測される。

計算条件としては、新たに入力を行う項目についてはできるだけ同一の値を用いるようにしたが、各コードでライブラリデータとして格納されている質量数や存在比、イオン化ポテンシャルなどのパラメータについては、各コード間で異なる値であってもそのまま計算を行っている。たとえばRSTAN/RSHEVコードとSPARコードにおける単原子のターゲット物質の場合のイオン化ポテンシャル I について Table 5 に示す。ここでRSTAN/RSHEVコードでは I がデータとして用意されているに対し、SPARコードでは Z が13までの核種についてはデータとして用意されているが、それ以上の核種については、

$$I=9.76Z+58.8Z^{-0.19} \quad (40)$$

によりコード内で計算を行っているため、SPARコードでの I は、 Z が大きい核種 (Tungsten, Lead, Uranium) ほどRSTAN/RSHEVコードとの差が大きいといった違いがある。

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4.2 阻止能

以上のような条件で、エネルギー範囲 10 eV/amu~10 GeV/amu の荷電粒子入射の阻止能について、3種類の計算コードを組み合わせて計算した結果を入射荷電粒子毎にまとめ、Table 6 に示す。また全阻止能 S についてグラフにした図を Fig. 6 に示す。

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Table 1 Comparison of calculation code of stopping power for charged particles

Code	RSTAN / RSHEV	STOPPING	SPAR
Particle	π^+ , μ^+ , p, \bar{p} , d, t, ^3He , ^4He , ^6Li , ^7Li , ^9Be , ^{10}B , ^{11}B , ^{12}C , ^{13}C , ^{14}N , ^{15}N , ^{16}O , ^{17}O	except π , μ	π , μ , p, Heavy Ions ($A > 2$)
Energy Range (MeV/amu)	0.5 ~	$10^{-13} \sim 10^2$	$0 \sim 10^6$
Target (compounds)	$Z < 57$ / $Z \geq 57$ (possible) / (impossible)	except gases (impossible*)	except gases (possible)
S_e , S_n Calculation	S_e Calculation only	S_e and S_n Calculation	S_e Calculation (S_n consideration at lower energy region)

* If correcting program, possible to calculate.

Table 2 Ratio of the stopping power with STOPPING (SPAR) to that with RSTAN/RSHEV

Target	projectile									
	π	μ	p	d	t	α	^6Li	^7Li	^{12}C	^{16}O
Hydrogen	0.993	0.993	0.973	0.973	0.973	0.972	0.970	0.970	0.976	0.981
Helium	1.002	1.002	0.982	0.983	0.983	0.982	0.981	0.981	0.988	0.994
Beryllium	0.988	0.988	0.967	0.967	0.968	0.966	0.965	0.965	0.971	0.976
Carbon	0.998	0.998	0.981	0.982	0.982	0.981	0.979	0.979	0.985	0.991
Aluminum	0.995	0.995	1.004	1.005	1.005	1.005	1.005	1.005	1.014	1.021
Iron	1.000	1.000	1.054	1.054	1.054	1.055	1.056	1.056	1.070	1.078
Copper	0.988	0.988	1.032	1.032	1.033	1.034	1.036	1.036	1.050	1.060
Tungsten	1.006	1.006	1.060	1.060	1.084	1.065	1.091	1.092	1.088	1.125
Lead	1.003	1.003	0.996	0.997	0.988	1.001	0.994	0.994	1.023	1.024
Uranium	1.013	1.013	1.010	1.010	1.000	1.015	1.008	1.008	1.038	1.039
TLD-100	0.997	0.997	0.984	0.985	0.985	0.984	0.983	0.983	0.989	0.995
Phantom	1.041	1.041	0.979	0.980	0.980	0.979	0.977	0.977	0.983	0.988
Water	1.001	1.001	0.981	0.981	0.981	0.980	0.979	0.979	0.984	0.990
SSNTD	1.002	1.002	0.981	0.981	0.981	0.981	0.979	0.979	0.985	0.990

Table 3 Difference of SPAR and RSTAN/RSHEV code for π

code	1 MeV/amu	10 MeV/amu	100 MeV/amu	1 GeV/amu
RSTAN/RSHEV (π^+)	269.0	46.1	7.33	2.21
RSTAN/RSHEV (π^-)	251.8	45.9	7.33	2.05
SPAR (π)	283.7	46.0	7.37	2.23

(MeV cm²/g)

Table 4 Difference of SPAR and RSTAN/RSHEV code for μ

code	1 MeV/amu	10 MeV/amu	100 MeV/amu	1 GeV/amu
RSTAN/RSHEV (μ^+)	269.0	46.1	7.33	2.21
RSTAN/RSHEV (μ^-)	251.8	45.9	7.33	2.21
SPAR (μ)	283.7	46.0	7.37	2.23

(MeV cm²/g)

Table 5 Differences of ionization potential I for targets

Targets	RSTAN/RSHEV	SPAR
Hydrogen	19.26	18.70
Helium	41.8	42.0
Beryllium	64.0	60.0
Carbon	78.0	78.0
Aluminum	166.0	163.0
Iron	280.0	285.4
Copper	322.0	314.1
Tungsten	775.0	748.2
Lead	779.0	825.8
Uranium	841.0	922.8

Table 6 Tables of electric collision, nuclear collision and total stopping powers

(Only total stopping power given for π , μ projectiles)

 * Pion (1/2) *

target	Hydrogen	Helium	Beryllium	Carbon	Aluminum	Iron	Copper	Tungsten
Energy (MeV/amu)	Total (MeV/(g/cm ²))							
1.00E-05	2.108E+02	3.745E+01	1.681E+01	1.388E+01	7.323E+00	3.768E+00	3.342E+00	1.258E+00
1.50E-05	2.401E+02	4.434E+01	2.025E+01	1.682E+01	8.934E+00	4.607E+00	4.088E+00	1.540E+00
2.00E-05	2.626E+02	4.994E+01	2.311E+01	1.926E+01	1.029E+01	5.313E+00	4.715E+00	1.778E+00
3.00E-05	2.966E+02	5.897E+01	2.782E+01	2.331E+01	1.254E+01	6.496E+00	5.766E+00	2.177E+00
4.00E-05	3.226E+02	6.631E+01	3.171E+01	2.668E+01	1.444E+01	7.491E+00	6.650E+00	2.512E+00
5.00E-05	3.439E+02	7.261E+01	3.510E+01	2.926E+01	1.610E+01	8.366E+00	7.428E+00	2.808E+00
6.00E-05	3.621E+02	7.819E+01	3.814E+01	3.226E+01	1.760E+01	9.156E+00	8.131E+00	3.076E+00
7.00E-05	3.781E+02	8.324E+01	4.090E+01	3.467E+01	1.897E+01	9.881E+00	8.777E+00	3.322E+00
8.00E-05	3.925E+02	8.788E+01	4.346E+01	3.691E+01	2.025E+01	1.036E+01	9.377E+00	3.550E+00
9.00E-05	4.056E+02	9.218E+01	4.585E+01	3.900E+01	2.145E+01	1.119E+01	9.940E+00	3.765E+00
1.00E-04	4.177E+02	9.621E+01	4.809E+01	4.096E+01	2.258E+01	1.179E+01	1.047E+01	3.968E+00
1.50E-04	4.679E+02	1.135E+02	5.781E+01	4.951E+01	2.751E+01	1.440E+01	1.280E+01	4.857E+00
2.00E-04	5.078E+02	1.277E+02	6.589E+01	5.663E+01	3.165E+01	1.661E+01	1.476E+01	5.607E+00
3.00E-04	5.721E+02	1.511E+02	7.928E+01	6.846E+01	3.856E+01	2.029E+01	1.804E+01	6.863E+00
4.00E-04	6.250E+02	1.705E+02	9.044E+01	7.833E+01	4.436E+01	2.339E+01	2.080E+01	7.921E+00
5.00E-04	6.714E+02	1.875E+02	1.002E+02	8.698E+01	4.946E+01	2.611E+01	2.323E+01	8.853E+00
6.00E-04	7.133E+02	2.028E+02	1.090E+02	9.477E+01	5.405E+01	2.857E+01	2.542E+01	9.695E+00
7.00E-04	7.520E+02	2.168E+02	1.170E+02	9.477E+01	5.827E+01	3.083E+01	2.744E+01	1.047E+01
8.00E-04	7.883E+02	2.298E+02	1.245E+02	1.085E+02	6.219E+01	3.294E+01	2.931E+01	1.119E+01
9.00E-04	8.225E+02	2.420E+02	1.315E+02	1.147E+02	6.586E+01	3.491E+01	3.107E+01	1.187E+01
1.00E-03	8.551E+02	2.536E+02	1.381E+02	1.206E+02	6.934E+01	3.678E+01	3.273E+01	1.251E+01
1.50E-03	1.001E+03	3.042E+02	1.671E+02	1.462E+02	8.452E+01	4.493E+01	4.000E+01	1.530E+01
2.00E-03	1.128E+03	3.470E+02	1.914E+02	1.677E+02	9.729E+01	5.180E+01	4.612E+01	1.766E+01
3.00E-03	1.347E+03	4.193E+02	2.322E+02	2.038E+02	1.187E+02	6.329E+01	5.637E+01	2.162E+01
4.00E-03	1.535E+03	4.807E+02	2.667E+02	2.341E+02	1.366E+02	7.297E+01	6.501E+01	2.495E+01
5.00E-03	1.702E+03	5.351E+02	2.970E+02	2.609E+02	1.525E+02	8.150E+01	7.261E+01	2.789E+01
6.00E-03	1.855E+03	5.844E+02	3.245E+02	2.851E+02	1.668E+02	8.919E+01	7.947E+01	3.054E+01
7.00E-03	1.996E+03	6.299E+02	3.499E+02	3.073E+02	1.799E+02	9.627E+01	8.578E+01	3.298E+01
8.00E-03	2.128E+03	6.723E+02	3.735E+02	3.281E+02	1.922E+02	1.029E+02	9.166E+01	3.525E+01
9.00E-03	2.253E+03	7.122E+02	3.957E+02	3.475E+02	2.037E+02	1.090E+02	9.717E+01	3.738E+01
1.00E-02	2.368E+03	7.496E+02	4.165E+02	3.659E+02	2.147E+02	1.150E+02	1.025E+02	3.943E+01
1.50E-02	2.694E+03	8.751E+02	4.920E+02	4.347E+02	2.654E+02	1.448E+02	1.293E+02	5.026E+01
2.00E-02	2.883E+03	9.573E+02	5.449E+02	4.836E+02	3.022E+02	1.673E+02	1.497E+02	5.866E+01
3.00E-02	3.051E+03	1.049E+03	6.112E+02	5.465E+02	3.511E+02	1.990E+02	1.787E+02	7.171E+01
4.00E-02	3.082E+03	1.089E+03	6.473E+02	5.826E+02	3.805E+02	2.196E+02	1.977E+02	8.080E+01
5.00E-02	3.050E+03	1.102E+03	6.662E+02	6.031E+02	3.985E+02	2.336E+02	2.107E+02	8.745E+01
6.00E-02	2.986E+03	1.099E+03	6.747E+02	6.140E+02	4.094E+02	2.430E+02	2.197E+02	9.243E+01
7.00E-02	2.909E+03	1.087E+03	6.764E+02	6.186E+02	4.155E+02	2.494E+02	2.258E+02	9.620E+01
8.00E-02	2.824E+03	1.069E+03	6.737E+02	6.190E+02	4.185E+02	2.537E+02	2.300E+02	9.906E+01
9.00E-02	2.738E+03	1.049E+03	6.680E+02	6.164E+02	4.191E+02	2.563E+02	2.327E+02	1.012E+02

target	Hydrogen	Helium	Beryllium	Carbon	Aluminum	Iron	Copper	Tungsten
1.00E-01	2.653E+03	1.027E+03	6.604E+02	6.118E+02	4.181E+02	2.577E+02	2.343E+02	1.029E+02
1.50E-01	2.271E+03	9.119E+02	6.098E+02	5.747E+02	4.009E+02	2.550E+02	2.329E+02	1.062E+02
2.00E-01	1.972E+03	8.106E+02	5.571E+02	5.320E+02	3.771E+02	2.453E+02	2.248E+02	1.054E+02
3.00E-01	1.554E+03	6.571E+02	4.684E+02	4.564E+02	3.316E+02	2.228E+02	2.052E+02	1.003E+02
4.00E-01	1.282E+03	5.510E+02	4.020E+02	3.974E+02	2.945E+02	2.024E+02	1.871E+02	9.426E+01
5.00E-01	1.094E+03	4.745E+02	3.519E+02	3.517E+02	2.648E+02	1.852E+02	1.717E+02	8.857E+01
6.00E-01	9.565E+02	4.171E+02	3.129E+02	3.155E+02	2.409E+02	1.708E+02	1.587E+02	8.349E+01
7.00E-01	8.513E+02	3.722E+02	2.819E+02	2.862E+02	2.212E+02	1.587E+02	1.477E+02	7.901E+01
8.00E-01	7.683E+02	3.367E+02	2.567E+02	2.622E+02	2.047E+02	1.484E+02	1.383E+02	7.504E+01
9.00E-01	7.013E+02	3.077E+02	2.358E+02	2.420E+02	1.908E+02	1.394E+02	1.302E+02	7.152E+01
1.00E+00	6.459E+02	2.836E+02	2.182E+02	2.249E+02	1.788E+02	1.317E+02	1.231E+02	6.838E+01
1.50E+00	4.697E+02	2.060E+02	1.602E+02	1.675E+02	1.374E+02	1.041E+02	9.774E+01	5.665E+01
2.00E+00	3.745E+02	1.638E+02	1.278E+02	1.346E+02	1.127E+02	8.698E+01	8.196E+01	4.891E+01
3.00E+00	2.719E+02	1.187E+02	9.256E+01	9.805E+01	8.424E+01	6.658E+01	6.300E+01	3.910E+01
4.00E+00	2.160E+02	9.459E+01	7.358E+01	7.809E+01	6.807E+01	5.460E+01	5.181E+01	3.301E+01
5.00E+00	1.799E+02	7.936E+01	6.163E+01	6.542E+01	5.751E+01	4.662E+01	4.432E+01	2.878E+01
6.00E+00	1.542E+02	6.874E+01	5.336E+01	5.661E+01	5.003E+01	4.086E+01	3.890E+01	2.565E+01
7.00E+00	1.347E+02	6.084E+01	4.727E+01	5.011E+01	4.443E+01	3.650E+01	3.479E+01	2.321E+01
8.00E+00	1.231E+02	5.440E+01	4.345E+01	4.668E+01	4.007E+01	3.363E+01	3.210E+01	2.131E+01
9.00E+00	1.115E+02	4.939E+01	4.132E+01	4.430E+01	3.661E+01	3.086E+01	2.948E+01	1.980E+01
1.00E+01	1.020E+02	4.530E+01	3.794E+01	4.071E+01	3.377E+01	2.856E+01	2.730E+01	1.842E+01
1.50E+01	7.189E+01	3.243E+01	2.692E+01	2.929E+01	2.454E+01	2.109E+01	2.000E+01	1.411E+01
2.00E+01	5.640E+01	2.555E+01	2.128E+01	2.319E+01	1.958E+01	1.696E+01	1.612E+01	1.156E+01
3.00E+01	4.013E+01	1.828E+01	1.528E+01	1.669E+01	1.242E+01	1.186E+01	1.186E+01	8.674E+00
4.00E+01	3.160E+01	1.444E+01	1.210E+01	1.324E+01	1.136E+01	9.985E+00	9.531E+00	7.057E+00
5.00E+01	2.631E+01	1.206E+01	1.012E+01	1.108E+01	9.543E+00	8.426E+00	8.032E+00	6.012E+00
6.00E+01	2.270E+01	1.042E+01	8.760E+00	9.597E+00	8.291E+00	7.343E+00	7.023E+00	5.276E+00
7.00E+01	2.007E+01	9.228E+00	7.655E+00	8.512E+00	7.371E+00	6.544E+00	6.263E+00	4.728E+00
8.00E+01	1.807E+01	8.317E+00	7.005E+00	7.682E+00	6.666E+00	5.929E+00	5.678E+00	4.303E+00
9.00E+01	1.649E+01	7.599E+00	6.404E+00	7.026E+00	6.107E+00	5.440E+00	5.213E+00	3.963E+00
1.00E+02	1.521E+01	7.017E+00	5.917E+00	6.494E+00	5.652E+00	5.042E+00	4.833E+00	3.685E+00
1.50E+02	1.129E+01	5.227E+00	4.418E+00	4.854E+00	4.246E+00	3.806E+00	3.633E+00	2.813E+00
2.00E+02	9.282E+00	4.306E+00	3.644E+00	4.007E+00	3.516E+00	3.161E+00	3.037E+00	2.352E+00
3.00E+02	7.239E+00	3.368E+00	2.856E+00	3.143E+00	2.770E+00	2.499E+00	2.403E+00	1.875E+00
4.00E+02	6.216E+00	2.898E+00	2.460E+00	3.143E+00	2.394E+00	2.165E+00	2.083E+00	1.634E+00
5.00E+02	5.611E+00	2.620E+00	2.265E+00	2.453E+00	2.172E+00	1.967E+00	1.894E+00	1.490E+00
6.00E+02	5.217E+00	2.439E+00	2.074E+00	2.286E+00	2.027E+00	1.839E+00	1.771E+00	1.335E+00
7.00E+02	4.945E+00	2.314E+00	1.969E+00	2.171E+00	1.928E+00	1.751E+00	1.687E+00	1.398E+00
8.00E+02	4.748E+00	2.224E+00	1.894E+00	2.089E+00	1.857E+00	1.688E+00	1.627E+00	1.290E+00
9.00E+02	4.603E+00	2.158E+00	1.834E+00	2.025E+00	1.802E+00	1.639E+00	1.581E+00	1.257E+00
1.00E+03	4.492E+00	2.107E+00	1.788E+00	1.976E+00	1.759E+00	1.602E+00	1.546E+00	1.233E+00
1.50E+03	4.212E+00	1.982E+00	1.666E+00	1.847E+00	1.652E+00	1.508E+00	1.457E+00	1.177E+00
2.00E+03	4.126E+00	1.946E+00	1.624E+00	1.804E+00	1.618E+00	1.480E+00	1.432E+00	1.166E+00
3.00E+03	4.121E+00	1.950E+00	1.606E+00	1.789E+00	1.613E+00	1.480E+00	1.434E+00	1.181E+00
4.00E+03	4.177E+00	1.981E+00	1.616E+00	1.802E+00	1.632E+00	1.495E+00	1.455E+00	1.206E+00
5.00E+03	4.246E+00	2.016E+00	1.631E+00	1.821E+00	1.655E+00	1.523E+00	1.479E+00	1.231E+00
6.00E+03	4.314E+00	2.052E+00	1.647E+00	1.841E+00	1.678E+00	1.545E+00	1.502E+00	1.254E+00
7.00E+03	4.378E+00	2.085E+00	1.663E+00	1.860E+00	1.700E+00	1.567E+00	1.523E+00	1.276E+00
8.00E+03	4.439E+00	2.115E+00	1.679E+00	1.878E+00	1.720E+00	1.586E+00	1.542E+00	1.295E+00
9.00E+03	4.495E+00	2.144E+00	1.693E+00	1.894E+00	1.738E+00	1.604E+00	1.560E+00	1.313E+00
1.00E+04	4.546E+00	2.170E+00	1.706E+00	1.909E+00	1.755E+00	1.621E+00	1.577E+00	1.329E+00

Total
(MeV/(g/cm2))

 * Pion (2/2) *

target	Lead	Uranium	LiF(TLD-100)	LiF(TLD-700)	Phantom	Water	SSNTD
1.00E-05	1.128E+00	9.930E-01	1.292E+01	1.290E+01	2.452E+01	3.506E+01	2.672E+01
1.50E-05	1.381E+00	1.216E+00	1.563E+01	1.561E+01	2.899E+01	4.081E+01	3.139E+01
2.00E-05	1.594E+00	1.404E+00	1.788E+01	1.785E+01	3.241E+01	4.540E+01	3.515E+01
3.00E-05	1.951E+00	1.719E+00	2.160E+01	2.157E+01	3.809E+01	5.265E+01	4.119E+01
4.00E-05	2.253E+00	1.984E+00	2.469E+01	2.467E+01	4.269E+01	5.844E+01	4.606E+01
5.00E-05	2.518E+00	2.218E+00	2.739E+01	2.737E+01	4.664E+01	6.335E+01	5.023E+01
6.00E-05	2.758E+00	2.429E+00	2.982E+01	2.979E+01	5.013E+01	6.766E+01	5.392E+01
7.00E-05	2.978E+00	2.624E+00	3.203E+01	3.200E+01	5.329E+01	7.153E+01	5.725E+01
8.00E-05	3.183E+00	2.804E+00	3.408E+01	3.405E+01	5.619E+01	7.508E+01	6.031E+01
9.00E-05	3.376E+00	2.974E+00	3.600E+01	3.597E+01	5.895E+01	7.835E+01	6.314E+01
1.00E-04	3.558E+00	3.135E+00	3.780E+01	3.777E+01	6.141E+01	8.141E+01	6.580E+01
1.50E-04	4.356E+00	3.838E+00	4.564E+01	4.561E+01	7.227E+01	9.445E+01	7.719E+01
2.00E-04	5.028E+00	4.430E+00	5.218E+01	5.215E+01	8.122E+01	1.051E+02	8.657E+01
3.00E-04	6.155E+00	5.423E+00	6.305E+01	6.301E+01	9.600E+01	1.227E+02	1.020E+02
4.00E-04	7.104E+00	6.260E+00	7.213E+01	7.210E+01	1.083E+02	1.373E+02	1.149E+02
5.00E-04	7.940E+00	6.998E+00	8.009E+01	8.006E+01	1.191E+02	1.501E+02	1.262E+02
6.00E-04	8.696E+00	7.664E+00	8.726E+01	8.723E+01	1.288E+02	1.616E+02	1.364E+02
7.00E-04	9.391E+00	8.276E+00	9.384E+01	9.380E+01	1.378E+02	1.723E+02	1.457E+02
8.00E-04	1.004E+01	8.846E+00	9.994E+01	9.991E+01	1.461E+02	1.822E+02	1.545E+02
9.00E-04	1.064E+01	9.382E+00	1.057E+02	1.056E+02	1.539E+02	1.915E+02	1.626E+02
1.00E-03	1.122E+01	9.888E+00	1.111E+02	1.111E+02	1.613E+02	2.003E+02	1.704E+02
1.50E-03	1.373E+01	1.210E+01	1.347E+02	1.347E+02	1.938E+02	2.393E+02	2.044E+02
2.00E-03	1.585E+01	1.397E+01	1.546E+02	1.546E+02	2.213E+02	2.726E+02	2.333E+02
3.00E-03	1.940E+01	1.710E+01	1.880E+02	1.880E+02	2.678E+02	3.289E+02	2.821E+02
4.00E-03	2.239E+01	1.974E+01	2.161E+02	2.161E+02	3.072E+02	3.768E+02	3.235E+02
5.00E-03	2.502E+01	2.206E+01	2.409E+02	2.409E+02	3.419E+02	4.192E+02	3.601E+02
6.00E-03	2.741E+01	2.416E+01	2.634E+02	2.634E+02	3.734E+02	4.576E+02	3.932E+02
7.00E-03	2.959E+01	2.609E+01	2.840E+02	2.840E+02	4.025E+02	4.931E+02	4.238E+02
8.00E-03	3.354E+01	2.789E+01	3.033E+02	3.033E+02	4.295E+02	5.262E+02	4.522E+02
9.00E-03	3.539E+01	2.958E+01	3.213E+02	3.213E+02	4.550E+02	5.573E+02	4.790E+02
1.00E-02	3.539E+01	3.120E+01	3.384E+02	3.383E+02	4.789E+02	5.865E+02	5.041E+02
1.50E-02	4.511E+01	3.977E+01	4.022E+02	4.022E+02	5.657E+02	6.910E+02	5.951E+02
2.00E-02	5.286E+01	4.662E+01	4.475E+02	4.475E+02	6.267E+02	7.635E+02	6.588E+02
3.00E-02	6.449E+01	5.696E+01	5.058E+02	5.058E+02	7.036E+02	8.529E+02	7.386E+02
4.00E-02	7.277E+01	6.436E+01	5.392E+02	5.392E+02	7.458E+02	8.998E+02	7.820E+02
5.00E-02	7.886E+01	6.985E+01	5.583E+02	5.583E+02	7.683E+02	9.229E+02	8.046E+02
6.00E-02	8.345E+01	7.401E+01	5.684E+02	5.684E+02	7.786E+02	9.317E+02	8.146E+02
7.00E-02	8.695E+01	7.720E+01	5.727E+02	5.727E+02	7.812E+02	9.313E+02	8.164E+02
8.00E-02	8.963E+01	7.967E+01	5.730E+02	5.730E+02	7.786E+02	9.252E+02	8.130E+02
9.00E-02	9.168E+01	8.1158E+01	5.707E+02	5.707E+02	7.725E+02	9.152E+02	8.060E+02

Total
 (MeV/(g/cm2))

target	Lead	Uranium	LiF(TLD-100)	LiF(TLD-700)	Phantom	Water	SSNTD
	Total (MeV/(g/cm ²))						
1.00E-01	9.325E+01	8.305E+01	5.665E+02	5.664E+02	7.641E+02	9.027E+02	7.967E+02
1.50E-01	9.660E+01	8.637E+01	5.321E+02	5.321E+02	7.074E+02	8.260E+02	7.352E+02
2.00E-01	9.620E+01	8.629E+01	4.926E+02	4.926E+02	6.474E+02	7.493E+02	6.712E+02
3.00E-01	9.191E+01	8.283E+01	4.225E+02	4.225E+02	5.459E+02	6.239E+02	5.639E+02
4.00E-01	8.664E+01	7.835E+01	3.680E+02	3.680E+02	4.694E+02	5.318E+02	4.837E+02
5.00E-01	8.162E+01	7.402E+01	3.256E+02	3.256E+02	4.115E+02	4.632E+02	4.232E+02
6.00E-01	7.710E+01	7.009E+01	2.921E+02	2.921E+02	3.663E+02	4.104E+02	3.762E+02
7.00E-01	7.309E+01	6.657E+01	2.650E+02	2.650E+02	3.303E+02	3.687E+02	3.389E+02
8.00E-01	6.953E+01	6.344E+01	2.428E+02	2.428E+02	3.010E+02	3.349E+02	3.085E+02
9.00E-01	6.636E+01	6.064E+01	2.241E+02	2.241E+02	2.767E+02	3.071E+02	2.834E+02
1.00E+00	6.353E+01	5.813E+01	2.083E+02	2.083E+02	2.562E+02	2.837E+02	2.622E+02
2.00E+00	5.288E+01	4.864E+01	1.550E+02	1.550E+02	1.884E+02	2.074E+02	1.925E+02
3.00E+00	4.581E+01	4.230E+01	1.246E+02	1.246E+02	1.504E+02	1.651E+02	1.535E+02
4.00E+00	3.679E+01	3.415E+01	9.079E+01	9.079E+01	1.090E+02	1.194E+02	1.111E+02
5.00E+00	3.116E+01	2.902E+01	7.231E+01	7.231E+01	8.663E+01	9.498E+01	8.836E+01
6.00E+00	2.723E+01	2.544E+01	6.057E+01	6.057E+01	7.256E+01	7.960E+01	7.401E+01
7.00E+00	2.431E+01	2.275E+01	5.242E+01	5.242E+01	6.281E+01	6.895E+01	6.409E+01
8.00E+00	2.203E+01	2.066E+01	4.640E+01	4.640E+01	5.564E+01	6.110E+01	5.677E+01
9.00E+00	2.021E+01	1.894E+01	4.385E+01	4.385E+01	5.174E+01	5.505E+01	5.257E+01
1.00E+01	1.881E+01	1.767E+01	3.993E+01	3.993E+01	4.708E+01	5.009E+01	4.783E+01
1.50E+01	1.749E+01	1.642E+01	3.672E+01	3.672E+01	4.327E+01	4.603E+01	4.395E+01
2.00E+01	1.642E+01	1.274E+01	2.645E+01	2.645E+01	3.242E+01	3.318E+01	3.170E+01
3.00E+01	1.101E+01	1.047E+01	2.097E+01	2.097E+01	2.564E+01	2.625E+01	2.509E+01
4.00E+01	8.285E+00	7.898E+00	1.512E+01	1.512E+01	1.843E+01	1.888E+01	1.804E+01
5.00E+01	6.753E+00	6.447E+00	1.201E+01	1.201E+01	1.461E+01	1.497E+01	1.430E+01
6.00E+01	5.760E+00	5.505E+00	1.006E+01	1.006E+01	1.222E+01	1.252E+01	1.197E+01
7.00E+01	5.060E+00	4.840E+00	8.714E+00	8.714E+00	1.058E+01	1.084E+01	1.036E+01
8.00E+01	4.538E+00	4.344E+00	7.732E+00	7.732E+00	9.377E+00	9.611E+00	9.187E+00
9.00E+01	4.133E+00	3.958E+00	6.980E+00	6.980E+00	8.460E+00	8.672E+00	8.290E+00
1.00E+02	3.809E+00	3.650E+00	6.386E+00	6.386E+00	7.736E+00	7.930E+00	7.581E+00
1.50E+02	2.709E+00	2.600E+00	5.904E+00	5.904E+00	7.148E+00	7.328E+00	7.005E+00
2.00E+02	2.267E+00	2.178E+00	4.417E+00	4.417E+00	5.339E+00	5.474E+00	5.234E+00
3.00E+02	1.810E+00	1.740E+00	3.648E+00	3.648E+00	4.405E+00	4.517E+00	4.319E+00
4.00E+02	1.578E+00	1.518E+00	2.864E+00	2.864E+00	3.453E+00	3.541E+00	3.386E+00
5.00E+02	1.440E+00	1.387E+00	2.470E+00	2.470E+00	2.975E+00	3.051E+00	2.918E+00
6.00E+02	1.351E+00	1.302E+00	2.237E+00	2.237E+00	2.692E+00	2.762E+00	2.641E+00
7.00E+02	1.291E+00	1.243E+00	2.085E+00	2.085E+00	2.509E+00	2.573E+00	2.461E+00
8.00E+02	1.248E+00	1.202E+00	1.906E+00	1.906E+00	2.382E+00	2.444E+00	2.337E+00
9.00E+02	1.217E+00	1.173E+00	1.845E+00	1.845E+00	2.205E+00	2.271E+00	2.248E+00
1.00E+03	1.194E+00	1.151E+00	1.797E+00	1.797E+00	2.135E+00	2.209E+00	2.086E+00
1.50E+03	1.142E+00	1.102E+00	1.671E+00	1.671E+00	1.944E+00	2.043E+00	1.885E+00
2.00E+03	1.136E+00	1.096E+00	1.627E+00	1.627E+00	1.867E+00	1.981E+00	1.802E+00
3.00E+03	1.157E+00	1.115E+00	1.607E+00	1.607E+00	1.815E+00	1.948E+00	1.741E+00
4.00E+03	1.186E+00	1.142E+00	1.616E+00	1.616E+00	1.807E+00	1.953E+00	1.727E+00
5.00E+03	1.215E+00	1.168E+00	1.631E+00	1.631E+00	1.812E+00	1.968E+00	1.729E+00
6.00E+03	1.241E+00	1.192E+00	1.647E+00	1.647E+00	1.822E+00	1.983E+00	1.736E+00
7.00E+03	1.264E+00	1.214E+00	1.663E+00	1.663E+00	1.834E+00	2.002E+00	1.745E+00
8.00E+03	1.284E+00	1.234E+00	1.678E+00	1.678E+00	1.846E+00	2.019E+00	1.755E+00
9.00E+03	1.303E+00	1.251E+00	1.692E+00	1.692E+00	1.858E+00	2.034E+00	1.765E+00
1.00E+04	1.320E+00	1.267E+00	1.705E+00	1.705E+00	1.869E+00	2.049E+00	1.775E+00

 * Muon (1/2) *

target	Hydrogen	Helium	Beryllium	Carbon	Aluminum	Iron	Copper	Tungsten
1.00E-05	1.750E+02	3.339E+01	1.567E+01	1.314E+01	7.136E+00	3.716E+00	3.302E+00	1.252E+00
1.50E-05	2.018E+02	3.989E+01	1.898E+01	1.597E+01	8.717E+00	4.547E+00	4.040E+00	1.533E+00
2.00E-05	2.228E+02	4.522E+01	2.174E+01	1.834E+01	1.005E+01	5.246E+00	4.662E+00	1.770E+00
3.00E-05	2.553E+02	5.392E+01	2.630E+01	2.228E+01	1.227E+01	6.418E+00	5.705E+00	2.168E+00
4.00E-05	2.807E+02	6.106E+01	3.010E+01	2.557E+01	1.414E+01	7.405E+00	6.582E+00	2.503E+00
5.00E-05	3.019E+02	6.723E+01	3.342E+01	2.845E+01	1.578E+01	8.273E+00	7.355E+00	2.798E+00
6.00E-05	3.203E+02	7.273E+01	3.640E+01	3.105E+01	1.726E+01	9.057E+00	8.053E+00	3.064E+00
7.00E-05	3.366E+02	7.773E+01	3.913E+01	3.342E+01	1.862E+01	9.778E+00	8.694E+00	3.309E+00
8.00E-05	3.513E+02	8.233E+01	4.165E+01	3.562E+01	1.989E+01	1.045E+01	9.291E+00	3.537E+00
9.00E-05	3.649E+02	8.662E+01	4.401E+01	3.768E+01	2.107E+01	1.108E+01	9.851E+00	3.752E+00
1.00E-04	3.774E+02	9.065E+01	4.623E+01	3.963E+01	2.219E+01	1.167E+01	1.038E+01	3.954E+00
2.00E-04	4.302E+02	1.080E+02	5.589E+01	4.809E+01	2.709E+01	1.427E+01	1.270E+01	4.841E+00
3.00E-04	4.726E+02	1.224E+02	6.395E+01	5.517E+01	3.120E+01	1.647E+01	1.465E+01	5.589E+00
4.00E-04	5.412E+02	1.461E+02	7.734E+01	6.696E+01	3.808E+01	2.013E+01	1.792E+01	6.842E+00
5.00E-04	5.977E+02	1.658E+02	8.853E+01	7.683E+01	4.386E+01	2.322E+01	2.067E+01	7.898E+00
6.00E-04	6.469E+02	1.831E+02	9.834E+01	8.549E+01	4.894E+01	2.594E+01	2.309E+01	8.829E+00
7.00E-04	6.913E+02	1.986E+02	1.072E+02	9.329E+01	5.353E+01	2.840E+01	2.528E+01	9.670E+00
8.00E-04	7.322E+02	2.129E+02	1.153E+02	1.005E+02	5.774E+01	3.065E+01	2.729E+01	1.044E+01
9.00E-04	7.702E+02	2.261E+02	1.228E+02	1.071E+02	6.166E+01	3.275E+01	2.916E+01	1.116E+01
1.00E-03	8.060E+02	2.385E+02	1.299E+02	1.133E+02	6.534E+01	3.472E+01	3.091E+01	1.184E+01
1.50E-03	8.400E+02	2.503E+02	1.365E+02	1.192E+02	6.881E+01	3.658E+01	3.257E+01	1.248E+01
2.00E-03	8.900E+02	3.016E+02	1.657E+02	1.449E+02	8.400E+01	4.473E+01	3.984E+01	1.527E+01
3.00E-03	1.119E+03	3.449E+02	1.902E+02	1.666E+02	9.678E+01	5.159E+01	4.595E+01	1.763E+01
4.00E-03	1.340E+03	4.178E+02	2.312E+02	2.028E+02	1.182E+02	6.309E+01	5.620E+01	2.158E+01
5.00E-03	1.530E+03	4.795E+02	2.658E+02	2.333E+02	1.362E+02	7.277E+01	6.484E+01	2.491E+01
6.00E-03	1.698E+03	5.341E+02	2.964E+02	2.601E+02	1.521E+02	8.130E+01	7.244E+01	2.785E+01
7.00E-03	1.852E+03	5.836E+02	3.240E+02	2.844E+02	1.664E+02	8.909E+01	7.931E+01	3.050E+01
8.00E-03	1.993E+03	6.291E+02	3.494E+02	3.067E+02	1.796E+02	9.609E+01	8.563E+01	3.294E+01
9.00E-03	2.126E+03	6.716E+02	3.730E+02	3.275E+02	1.918E+02	1.027E+02	9.150E+01	3.521E+01
1.00E-02	2.250E+03	7.116E+02	3.953E+02	3.471E+02	2.034E+02	1.089E+02	9.702E+01	3.734E+01
1.50E-02	2.366E+03	7.490E+02	4.161E+02	3.654E+02	2.144E+02	1.148E+02	1.023E+02	3.939E+01
2.00E-02	2.693E+03	8.748E+02	4.917E+02	4.344E+02	2.652E+02	1.446E+02	1.292E+02	5.022E+01
3.00E-02	2.882E+03	9.570E+02	5.447E+02	4.833E+02	3.021E+02	1.672E+02	1.496E+02	5.882E+01
4.00E-02	3.050E+03	1.049E+03	6.111E+02	5.463E+02	3.509E+02	1.989E+02	1.786E+02	7.168E+01
5.00E-02	3.081E+03	1.089E+03	6.472E+02	5.824E+02	3.803E+02	2.196E+02	1.976E+02	8.076E+01
6.00E-02	3.049E+03	1.102E+03	6.662E+02	6.030E+02	3.984E+02	2.335E+02	2.106E+02	8.742E+01
7.00E-02	2.986E+03	1.093E+03	6.746E+02	6.139E+02	4.093E+02	2.430E+02	2.196E+02	9.240E+01
8.00E-02	2.824E+03	1.069E+03	6.763E+02	6.185E+02	4.155E+02	2.494E+02	2.258E+02	9.617E+01
9.00E-02	2.738E+03	1.049E+03	6.680E+02	6.164E+02	4.184E+02	2.536E+02	2.299E+02	9.903E+01
					4.190E+02	2.562E+02	2.326E+02	1.012E+02

Total
 (MeV/(g/cm2))

target	Hydrogen	Helium	Beryllium	Carbon	Aluminum	Iron	Copper	Tungsten
1.00E-01	2.653E+03	1.027E+03	6.603E+02	6.118E+02	4.180E+02	2.577E+02	2.342E+02	1.028E+02
1.50E-01	2.271E+03	9.119E+02	6.098E+02	5.747E+02	4.009E+02	2.549E+02	2.328E+02	1.062E+02
2.00E-01	1.971E+03	8.105E+02	5.570E+02	5.320E+02	3.770E+02	2.453E+02	2.248E+02	1.054E+02
3.00E-01	1.554E+03	6.571E+02	4.684E+02	4.363E+02	3.316E+02	2.228E+02	2.052E+02	1.003E+02
4.00E-01	1.284E+03	5.510E+02	4.020E+02	3.974E+02	2.945E+02	2.024E+02	1.871E+02	9.425E+01
5.00E-01	1.094E+03	4.745E+02	3.519E+02	3.516E+02	2.648E+02	1.852E+02	1.717E+02	8.857E+01
6.00E-01	9.565E+02	4.171E+02	3.129E+02	3.155E+02	2.409E+02	1.708E+02	1.587E+02	8.349E+01
7.00E-01	8.513E+02	3.724E+02	2.819E+02	2.862E+02	2.212E+02	1.587E+02	1.477E+02	7.900E+01
8.00E-01	7.683E+02	3.369E+02	2.567E+02	2.622E+02	2.047E+02	1.484E+02	1.383E+02	7.504E+01
9.00E-01	6.459E+02	3.078E+02	2.358E+02	2.420E+02	1.908E+02	1.394E+02	1.302E+02	7.152E+01
1.00E+00	6.497E+02	2.836E+02	2.182E+02	2.249E+02	1.788E+02	1.317E+02	1.231E+02	6.838E+01
1.50E+00	4.697E+02	2.060E+02	1.602E+02	1.675E+02	1.374E+02	1.041E+02	9.774E+01	5.664E+01
2.00E+00	3.745E+02	1.638E+02	1.278E+02	1.346E+02	1.127E+02	8.698E+01	8.196E+01	5.664E+01
3.00E+00	2.719E+02	1.187E+02	9.256E+01	9.805E+01	8.424E+01	6.658E+01	6.300E+01	3.910E+01
4.00E+00	2.160E+02	9.459E+01	7.358E+01	7.809E+01	6.807E+01	5.460E+01	5.181E+01	3.301E+01
5.00E+00	1.799E+02	7.936E+01	6.163E+01	6.542E+01	5.751E+01	4.662E+01	4.432E+01	2.878E+01
6.00E+00	1.542E+02	6.874E+01	5.336E+01	5.661E+01	5.003E+01	4.086E+01	3.890E+01	2.565E+01
7.00E+00	1.347E+02	6.084E+01	4.727E+01	5.011E+01	4.443E+01	3.650E+01	3.479E+01	2.321E+01
8.00E+00	1.231E+02	5.440E+01	4.545E+01	4.868E+01	4.007E+01	3.363E+01	3.210E+01	2.131E+01
9.00E+00	1.115E+02	4.939E+01	4.132E+01	4.430E+01	3.661E+01	3.086E+01	2.948E+01	1.980E+01
1.00E+01	1.020E+02	4.530E+01	3.794E+01	4.071E+01	3.377E+01	2.856E+01	2.730E+01	1.842E+01
1.50E+01	7.189E+01	3.243E+01	2.692E+01	2.929E+01	2.454E+01	2.109E+01	2.000E+01	1.411E+01
2.00E+01	5.640E+01	2.555E+01	2.128E+01	2.319E+01	1.958E+01	1.696E+01	1.612E+01	1.156E+01
3.00E+01	4.013E+01	1.828E+01	1.528E+01	1.669E+01	1.423E+01	1.244E+01	1.186E+01	8.674E+00
4.00E+01	3.160E+01	1.444E+01	1.210E+01	1.324E+01	1.136E+01	9.985E+00	9.531E+00	7.057E+00
5.00E+01	2.631E+01	1.206E+01	1.012E+01	1.108E+01	9.543E+00	8.426E+00	8.052E+00	6.012E+00
6.00E+01	2.270E+01	1.042E+01	8.760E+00	9.597E+00	8.291E+00	7.343E+00	7.023E+00	5.276E+00
7.00E+01	2.007E+01	9.228E+00	7.765E+00	8.512E+00	7.371E+00	6.544E+00	6.263E+00	4.728E+00
8.00E+01	1.807E+01	8.317E+00	7.005E+00	7.682E+00	6.666E+00	5.929E+00	5.678E+00	4.303E+00
9.00E+01	1.649E+01	7.599E+00	6.404E+00	7.026E+00	6.107E+00	5.440E+00	5.213E+00	3.963E+00
1.00E+02	1.521E+01	7.017E+00	5.917E+00	6.494E+00	5.652E+00	5.042E+00	4.833E+00	3.685E+00
1.50E+02	1.129E+01	5.227E+00	4.418E+00	4.854E+00	4.246E+00	3.806E+00	3.653E+00	2.813E+00
2.00E+02	9.282E+00	4.306E+00	3.644E+00	4.007E+00	3.516E+00	3.161E+00	3.037E+00	2.352E+00
3.00E+02	7.239E+00	3.368E+00	2.856E+00	3.143E+00	2.770E+00	2.499E+00	2.403E+00	1.875E+00
4.00E+02	6.216E+00	2.898E+00	2.460E+00	2.709E+00	2.394E+00	2.165E+00	2.083E+00	1.634E+00
5.00E+02	5.611E+00	2.620E+00	2.226E+00	2.453E+00	2.172E+00	1.967E+00	1.894E+00	1.490E+00
6.00E+02	5.217E+00	2.439E+00	2.074E+00	2.286E+00	2.027E+00	1.839E+00	1.771E+00	1.398E+00
7.00E+02	4.945E+00	2.314E+00	1.969E+00	2.171E+00	1.928E+00	1.751E+00	1.687E+00	1.335E+00
8.00E+02	4.748E+00	2.224E+00	1.894E+00	2.089E+00	1.857E+00	1.688E+00	1.627E+00	1.290E+00
9.00E+02	4.603E+00	2.158E+00	1.834E+00	2.025E+00	1.802E+00	1.639E+00	1.581E+00	1.257E+00
1.00E+03	4.492E+00	2.107E+00	1.788E+00	1.976E+00	1.759E+00	1.602E+00	1.546E+00	1.233E+00
1.50E+03	4.212E+00	1.982E+00	1.666E+00	1.847E+00	1.652E+00	1.508E+00	1.457E+00	1.177E+00
2.00E+03	4.126E+00	1.946E+00	1.624E+00	1.804E+00	1.618E+00	1.480E+00	1.432E+00	1.166E+00
3.00E+03	4.121E+00	1.950E+00	1.606E+00	1.789E+00	1.613E+00	1.480E+00	1.434E+00	1.181E+00
4.00E+03	4.177E+00	1.981E+00	1.616E+00	1.802E+00	1.632E+00	1.499E+00	1.455E+00	1.206E+00
5.00E+03	4.246E+00	2.016E+00	1.631E+00	1.821E+00	1.655E+00	1.523E+00	1.479E+00	1.231E+00
6.00E+03	4.314E+00	2.052E+00	1.647E+00	1.841E+00	1.678E+00	1.545E+00	1.502E+00	1.254E+00
7.00E+03	4.378E+00	2.085E+00	1.663E+00	1.860E+00	1.700E+00	1.567E+00	1.523E+00	1.276E+00
8.00E+03	4.439E+00	2.115E+00	1.679E+00	1.878E+00	1.720E+00	1.586E+00	1.542E+00	1.295E+00
9.00E+03	4.495E+00	2.144E+00	1.693E+00	1.894E+00	1.738E+00	1.604E+00	1.560E+00	1.313E+00
1.00E+04	4.546E+00	2.170E+00	1.706E+00	1.909E+00	1.755E+00	1.621E+00	1.577E+00	1.329E+00

 * Muon (2/2) *

target	Lead	Uranium	LiF(TLD-100)	LiF(TLD-700)	Phantom	Water	SSNTD
1.00E-05	1.123E+00	9.896E-01	1.222E+01	1.221E+01	2.194E+01	3.062E+01	2.377E+01
1.50E-05	1.375E+00	1.212E+00	1.484E+01	1.482E+01	2.698E+01	3.604E+01	2.819E+01
2.00E-05	1.588E+00	1.399E+00	1.702E+01	1.701E+01	2.947E+01	4.041E+01	3.180E+01
3.00E-05	1.944E+00	1.713E+00	2.066E+01	2.064E+01	3.497E+01	4.743E+01	3.765E+01
4.00E-05	2.245E+00	1.978E+00	2.369E+01	2.367E+01	3.948E+01	5.311E+01	4.242E+01
5.00E-05	2.509E+00	2.211E+00	2.635E+01	2.633E+01	4.337E+01	5.797E+01	4.654E+01
6.00E-05	2.748E+00	2.422E+00	2.873E+01	2.871E+01	4.683E+01	6.226E+01	5.019E+01
7.00E-05	2.968E+00	2.616E+00	3.092E+01	3.090E+01	4.998E+01	6.615E+01	5.351E+01
8.00E-05	3.173E+00	2.796E+00	3.295E+01	3.292E+01	5.287E+01	6.971E+01	5.657E+01
9.00E-05	3.365E+00	2.966E+00	3.484E+01	3.482E+01	5.575E+01	7.301E+01	5.941E+01
1.00E-04	3.547E+00	3.126E+00	3.663E+01	3.661E+01	5.857E+01	7.611E+01	6.208E+01
1.50E-04	4.343E+00	3.828E+00	4.442E+01	4.440E+01	6.903E+01	8.938E+01	7.357E+01
2.00E-04	5.014E+00	4.419E+00	5.094E+01	5.091E+01	7.809E+01	1.003E+02	8.308E+01
3.00E-04	6.138E+00	5.411E+00	6.179E+01	6.177E+01	9.307E+01	1.183E+02	9.879E+01
4.00E-04	7.086E+00	6.246E+00	7.089E+01	7.086E+01	1.056E+02	1.333E+02	1.119E+02
5.00E-04	7.921E+00	6.982E+00	7.886E+01	7.884E+01	1.165E+02	1.464E+02	1.234E+02
6.00E-04	8.676E+00	7.648E+00	8.606E+01	8.603E+01	1.264E+02	1.582E+02	1.337E+02
7.00E-04	9.370E+00	8.260E+00	9.266E+01	9.263E+01	1.355E+02	1.691E+02	1.432E+02
8.00E-04	1.002E+01	8.829E+00	9.879E+01	9.877E+01	1.439E+02	1.792E+02	1.521E+02
9.00E-04	1.062E+01	9.364E+00	1.045E+02	1.045E+02	1.518E+02	1.887E+02	1.604E+02
1.00E-03	1.120E+01	9.869E+00	1.100E+02	1.100E+02	1.593E+02	1.977E+02	1.682E+02
1.50E-03	1.371E+01	1.208E+01	1.337E+02	1.337E+02	1.921E+02	2.372E+02	2.026E+02
2.00E-03	1.582E+01	1.395E+01	1.537E+02	1.537E+02	2.199E+02	2.708E+02	2.318E+02
3.00E-03	1.937E+01	1.708E+01	1.872E+02	1.872E+02	2.666E+02	3.275E+02	2.809E+02
4.00E-03	2.236E+01	2.044E+01	2.155E+02	2.155E+02	3.061E+02	3.756E+02	3.224E+02
5.00E-03	2.499E+01	2.204E+01	2.403E+02	2.403E+02	3.410E+02	4.182E+02	3.592E+02
6.00E-03	2.737E+01	2.414E+01	2.629E+02	2.628E+02	3.727E+02	4.567E+02	3.924E+02
7.00E-03	2.956E+01	2.607E+01	2.836E+02	2.833E+02	4.018E+02	4.923E+02	4.230E+02
8.00E-03	3.160E+01	2.787E+01	3.028E+02	3.028E+02	4.289E+02	5.254E+02	4.516E+02
9.00E-03	3.351E+01	2.955E+01	3.209E+02	3.209E+02	4.544E+02	5.566E+02	4.784E+02
1.00E-02	3.535E+01	3.118E+01	3.380E+02	3.380E+02	4.784E+02	5.859E+02	5.036E+02
1.50E-02	4.508E+01	3.975E+01	4.019E+02	4.019E+02	5.654E+02	6.906E+02	5.947E+02
2.00E-02	5.283E+01	4.660E+01	4.473E+02	4.472E+02	6.264E+02	7.631E+02	6.585E+02
3.00E-02	6.446E+01	5.694E+01	5.037E+02	5.037E+02	7.034E+02	8.526E+02	7.384E+02
4.00E-02	7.274E+01	6.434E+01	5.391E+02	5.391E+02	7.457E+02	8.996E+02	7.818E+02
5.00E-02	7.884E+01	6.983E+01	5.822E+02	5.822E+02	7.682E+02	9.228E+02	8.045E+02
6.00E-02	8.343E+01	7.399E+01	5.683E+02	5.683E+02	7.785E+02	9.315E+02	8.144E+02
7.00E-02	8.693E+01	7.718E+01	5.726E+02	5.726E+02	7.811E+02	9.312E+02	8.163E+02
8.00E-02	8.961E+01	7.965E+01	5.730E+02	5.730E+02	7.785E+02	9.251E+02	8.129E+02
9.00E-02	9.166E+01	8.156E+01	5.706E+02	5.706E+02	7.724E+02	9.151E+02	8.059E+02

Total
 (MeV/(g/cm2))

target	Lead	Uranium	LiF(TLD-100)	LiF(TLD-700)	Phantom	Water	SSNTD
Energy (MeV/amu)	Total (MeV/(g/cm2))						
1.00E-01	9.323E+01	8.303E+01	5.664E+02	5.664E+02	7.641E+02	9.026E+02	7.966E+02
1.50E-01	9.658E+01	8.636E+01	5.321E+02	5.321E+02	7.074E+02	8.259E+02	7.351E+02
2.00E-01	9.619E+01	8.628E+01	4.928E+02	4.928E+02	6.474E+02	7.493E+02	6.712E+02
3.00E-01	9.190E+01	8.282E+01	4.235E+02	4.235E+02	5.459E+02	6.239E+02	5.639E+02
4.00E-01	8.663E+01	7.835E+01	3.679E+02	3.679E+02	4.695E+02	5.320E+02	4.838E+02
5.00E-01	8.162E+01	7.402E+01	3.256E+02	3.256E+02	4.114E+02	4.632E+02	4.232E+02
6.00E-01	7.710E+01	7.008E+01	2.921E+02	2.921E+02	3.663E+02	4.104E+02	3.762E+02
7.00E-01	7.309E+01	6.657E+01	2.650E+02	2.650E+02	3.303E+02	3.687E+02	3.389E+02
8.00E-01	6.953E+01	6.344E+01	2.427E+02	2.427E+02	3.010E+02	3.349E+02	3.083E+02
9.00E-01	6.636E+01	6.064E+01	2.241E+02	2.241E+02	2.767E+02	3.071E+02	2.834E+02
1.00E+00	6.352E+01	5.813E+01	2.083E+02	2.083E+02	2.562E+02	2.837E+02	2.623E+02
1.50E+00	5.287E+01	4.864E+01	1.550E+02	1.550E+02	1.884E+02	2.074E+02	1.923E+02
2.00E+00	4.580E+01	4.230E+01	1.246E+02	1.246E+02	1.504E+02	1.631E+02	1.533E+02
3.00E+00	3.679E+01	3.415E+01	9.079E+01	9.079E+01	1.090E+02	1.194E+02	1.111E+02
4.00E+00	3.116E+01	2.902E+01	7.231E+01	7.231E+01	8.663E+01	9.498E+01	8.836E+01
5.00E+00	2.723E+01	2.544E+01	6.057E+01	6.057E+01	7.256E+01	7.960E+01	7.401E+01
6.00E+00	2.431E+01	2.275E+01	5.242E+01	5.242E+01	6.281E+01	6.895E+01	6.409E+01
7.00E+00	2.203E+01	2.066E+01	4.640E+01	4.640E+01	5.564E+01	6.110E+01	5.677E+01
8.00E+00	2.021E+01	1.894E+01	4.385E+01	4.385E+01	5.174E+01	5.503E+01	5.257E+01
9.00E+00	1.881E+01	1.767E+01	3.993E+01	3.993E+01	4.708E+01	5.009E+01	4.783E+01
1.00E+01	1.749E+01	1.642E+01	3.672E+01	3.672E+01	4.327E+01	4.603E+01	4.395E+01
1.50E+01	1.342E+01	1.274E+01	2.645E+01	2.645E+01	3.242E+01	3.318E+01	3.170E+01
2.00E+01	1.101E+01	1.047E+01	2.097E+01	2.097E+01	2.564E+01	2.625E+01	2.509E+01
3.00E+01	8.285E+00	7.898E+00	1.512E+01	1.512E+01	1.843E+01	1.888E+01	1.804E+01
4.00E+01	6.447E+00	6.447E+00	1.201E+01	1.201E+01	1.461E+01	1.497E+01	1.430E+01
5.00E+01	5.760E+00	5.505E+00	1.006E+01	1.006E+01	1.222E+01	1.252E+01	1.197E+01
6.00E+01	5.060E+00	4.840E+00	8.714E+00	8.714E+00	1.058E+01	1.084E+01	1.036E+01
7.00E+01	4.538E+00	4.344E+00	7.732E+00	7.732E+00	9.377E+00	9.611E+00	9.187E+00
8.00E+01	4.133E+00	3.958E+00	6.980E+00	6.980E+00	8.460E+00	8.672E+00	8.290E+00
9.00E+01	3.809E+00	3.650E+00	6.386E+00	6.386E+00	7.736E+00	7.930E+00	7.581E+00
1.00E+02	3.543E+00	3.396E+00	5.904E+00	5.904E+00	7.148E+00	7.328E+00	7.005E+00
2.00E+02	2.709E+00	2.600E+00	4.417E+00	4.417E+00	5.339E+00	5.474E+00	5.234E+00
3.00E+02	2.267E+00	2.178E+00	3.648E+00	3.648E+00	4.405E+00	4.517E+00	4.319E+00
4.00E+02	1.810E+00	1.740E+00	2.864E+00	2.864E+00	3.453E+00	3.541E+00	3.386E+00
5.00E+02	1.578E+00	1.518E+00	2.470E+00	2.470E+00	2.975E+00	3.051E+00	2.918E+00
6.00E+02	1.440E+00	1.387E+00	2.237E+00	2.237E+00	2.692E+00	2.762E+00	2.641E+00
7.00E+02	1.351E+00	1.302E+00	2.085E+00	2.085E+00	2.509E+00	2.573E+00	2.461E+00
8.00E+02	1.291E+00	1.243E+00	1.981E+00	1.981E+00	2.382E+00	2.444E+00	2.337E+00
9.00E+02	1.248E+00	1.202E+00	1.906E+00	1.906E+00	2.291E+00	2.350E+00	2.248E+00
1.00E+03	1.194E+00	1.151E+00	1.845E+00	1.845E+00	2.205E+00	2.271E+00	2.159E+00
2.00E+03	1.142E+00	1.102E+00	1.671E+00	1.671E+00	1.944E+00	2.043E+00	1.885E+00
3.00E+03	1.157E+00	1.115E+00	1.627E+00	1.627E+00	1.867E+00	1.981E+00	1.802E+00
4.00E+03	1.166E+00	1.142E+00	1.616E+00	1.616E+00	1.807E+00	1.953E+00	1.727E+00
5.00E+03	1.215E+00	1.168E+00	1.631E+00	1.631E+00	1.812E+00	1.968E+00	1.729E+00
6.00E+03	1.241E+00	1.192E+00	1.647E+00	1.647E+00	1.822E+00	1.985E+00	1.736E+00
7.00E+03	1.264E+00	1.214E+00	1.663E+00	1.663E+00	1.834E+00	2.002E+00	1.745E+00
8.00E+03	1.284E+00	1.234E+00	1.678E+00	1.678E+00	1.846E+00	2.019E+00	1.755E+00
9.00E+03	1.303E+00	1.251E+00	1.692E+00	1.692E+00	1.858E+00	2.034E+00	1.765E+00
1.00E+04	1.320E+00	1.267E+00	1.705E+00	1.705E+00	1.869E+00	2.049E+00	1.775E+00

 * Proton (1/5) *

target	Hydrogen			Helium			Beryllium			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-05	2.689E+02	3.865E+02	6.555E+02	6.555E+02	8.212E+01	6.762E+01	1.497E+02	1.007E+02	2.313E+01	1.239E+02
1.50E-05	2.976E+02	4.136E+02	7.112E+02	7.112E+02	9.088E+01	7.341E+01	1.643E+02	1.115E+02	2.583E+01	1.373E+02
2.00E-05	3.198E+02	4.286E+02	7.484E+02	7.484E+02	9.765E+01	7.693E+01	1.746E+02	1.198E+02	2.765E+01	1.474E+02
3.00E-05	3.539E+02	4.419E+02	7.959E+02	7.959E+02	1.071E+02	8.071E+01	1.888E+02	1.326E+02	2.998E+01	1.625E+02
4.00E-05	3.803E+02	4.49E+02	8.292E+02	8.292E+02	1.161E+02	8.235E+01	1.985E+02	1.424E+02	3.138E+01	1.738E+02
5.00E-05	4.022E+02	4.430E+02	8.451E+02	8.451E+02	1.228E+02	8.293E+01	2.057E+02	1.506E+02	3.228E+01	1.829E+02
6.00E-05	4.209E+02	4.385E+02	8.595E+02	8.595E+02	1.285E+02	8.291E+01	2.114E+02	1.576E+02	3.287E+01	1.905E+02
7.00E-05	4.375E+02	4.328E+02	8.702E+02	8.702E+02	1.336E+02	8.252E+01	2.161E+02	1.638E+02	3.326E+01	1.971E+02
8.00E-05	4.523E+02	4.263E+02	8.786E+02	8.786E+02	1.381E+02	8.191E+01	2.200E+02	1.694E+02	3.350E+01	2.029E+02
9.00E-05	4.658E+02	4.194E+02	8.853E+02	8.853E+02	1.422E+02	8.115E+01	2.234E+02	1.745E+02	3.364E+01	2.081E+02
1.00E-04	4.783E+02	4.125E+02	8.907E+02	8.907E+02	1.460E+02	8.031E+01	2.263E+02	1.791E+02	3.370E+01	2.128E+02
1.50E-04	5.293E+02	3.787E+02	9.079E+02	9.079E+02	1.616E+02	7.559E+01	2.372E+02	1.982E+02	3.335E+01	2.316E+02
2.00E-04	5.687E+02	3.493E+02	9.180E+02	9.180E+02	1.737E+02	7.098E+01	2.446E+02	2.130E+02	3.252E+01	2.455E+02
3.00E-04	6.294E+02	3.031E+02	9.326E+02	9.326E+02	1.922E+02	6.314E+01	2.553E+02	2.357E+02	3.054E+01	2.663E+02
4.00E-04	6.763E+02	2.691E+02	9.454E+02	9.454E+02	2.065E+02	5.698E+01	2.635E+02	2.533E+02	2.863E+01	2.819E+02
5.00E-04	7.152E+02	2.428E+02	9.580E+02	9.580E+02	2.184E+02	5.205E+01	2.704E+02	2.678E+02	2.691E+01	2.947E+02
6.00E-04	7.485E+02	2.220E+02	9.705E+02	9.705E+02	2.285E+02	4.803E+01	2.766E+02	2.803E+02	2.540E+01	3.057E+02
7.00E-04	7.779E+02	2.049E+02	9.828E+02	9.828E+02	2.375E+02	4.467E+01	2.822E+02	2.913E+02	2.407E+01	3.154E+02
8.00E-04	8.043E+02	1.907E+02	9.950E+02	9.950E+02	2.456E+02	4.182E+01	2.874E+02	3.012E+02	2.289E+01	3.241E+02
9.00E-04	8.284E+02	1.785E+02	1.007E+03	1.007E+03	2.529E+02	3.937E+01	2.923E+02	3.102E+02	2.183E+01	3.321E+02
1.00E-03	8.505E+02	1.681E+02	1.019E+03	1.019E+03	2.597E+02	3.723E+01	2.969E+02	3.185E+02	2.088E+01	3.394E+02
1.50E-03	9.412E+02	1.316E+02	1.073E+03	1.073E+03	2.874E+02	2.960E+01	3.170E+02	3.525E+02	1.729E+01	3.698E+02
2.00E-03	1.011E+03	1.094E+02	1.121E+03	1.121E+03	3.088E+02	2.485E+01	3.337E+02	3.788E+02	1.489E+01	3.937E+02
3.00E-03	1.119E+03	8.315E+01	1.202E+03	1.202E+03	3.418E+02	1.912E+01	3.609E+02	4.192E+02	1.182E+01	4.310E+02
4.00E-03	1.203E+03	6.726E+01	1.270E+03	1.270E+03	3.672E+02	1.572E+01	3.830E+02	4.504E+02	9.910E+00	4.604E+02
5.00E-03	1.272E+03	5.725E+01	1.329E+03	1.329E+03	3.883E+02	1.332E+01	4.016E+02	4.763E+02	8.591E+00	4.849E+02
6.00E-03	1.331E+03	5.005E+01	1.381E+03	1.381E+03	4.064E+02	1.169E+01	4.181E+02	4.985E+02	7.616E+00	5.061E+02
7.00E-03	1.383E+03	4.460E+01	1.428E+03	1.428E+03	4.224E+02	1.045E+01	4.328E+02	5.181E+02	6.862E+00	5.249E+02
8.00E-03	1.430E+03	4.031E+01	1.471E+03	1.471E+03	4.367E+02	9.474E+00	4.462E+02	5.357E+02	6.259E+00	5.419E+02
9.00E-03	1.473E+03	3.684E+01	1.510E+03	1.510E+03	4.498E+02	8.677E+00	4.585E+02	5.517E+02	5.764E+00	5.574E+02
1.00E-02	1.512E+03	3.397E+01	1.546E+03	1.546E+03	4.618E+02	8.016E+00	4.698E+02	5.664E+02	5.300E+00	5.717E+02
1.50E-02	1.674E+03	2.473E+01	1.698E+03	1.698E+03	5.110E+02	5.872E+00	5.169E+02	6.268E+02	3.951E+00	6.308E+02
2.00E-02	1.799E+03	1.966E+01	1.818E+03	1.818E+03	5.492E+02	4.686E+00	5.538E+02	6.736E+02	3.185E+00	6.768E+02
3.00E-02	2.045E+03	1.415E+01	2.059E+03	2.059E+03	6.178E+02	3.388E+00	6.212E+02	7.356E+02	2.332E+00	7.265E+02
4.00E-02	2.267E+03	1.116E+01	2.279E+03	2.279E+03	6.778E+02	2.682E+00	6.804E+02	7.860E+02	1.860E+00	7.375E+02
5.00E-02	2.423E+03	9.275E+00	2.432E+03	2.432E+03	7.234E+02	2.233E+00	7.256E+02	8.360E+02	1.557E+00	7.375E+02
6.00E-02	2.529E+03	7.963E+00	2.537E+03	2.537E+03	7.593E+02	1.920E+00	7.602E+02	8.820E+02	1.344E+00	7.305E+02
7.00E-02	2.595E+03	6.996E+00	2.602E+03	2.602E+03	7.847E+02	1.689E+00	7.863E+02	9.176E+02	1.186E+00	7.188E+02
8.00E-02	2.630E+03	6.250E+00	2.636E+03	2.636E+03	8.040E+02	1.510E+00	8.055E+02	9.532E+02	1.064E+00	7.042E+02
9.00E-02	2.640E+03	5.656E+00	2.646E+03	2.646E+03	8.174E+02	1.368E+00	8.188E+02	9.870E+02	9.656E-01	6.879E+02

target	Hydrogen			Helium			Beryllium		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	2.631E+03	5.172E+00	2.636E+03	8.259E+02	1.252E+00	8.272E+02	6.699E+02	8.853E-01	6.708E+02
1.50E-01	2.429E+03	3.656E+00	2.432E+03	8.184E+02	8.874E-01	8.193E+02	5.863E+02	6.319E-01	5.870E+02
2.00E-01	2.147E+03	2.853E+00	2.150E+03	7.677E+02	6.937E-01	7.684E+02	5.190E+02	4.961E-01	5.195E+02
3.00E-01	1.673E+03	2.006E+00	1.675E+03	6.434E+02	4.889E-01	6.439E+02	4.280E+02	3.516E-01	4.284E+02
4.00E-01	1.355E+03	1.560E+00	1.357E+03	5.406E+02	3.807E-01	5.410E+02	3.700E+02	2.748E-01	3.703E+02
5.00E-01	1.143E+03	1.283E+00	1.144E+03	4.649E+02	3.133E-01	4.652E+02	2.267E-01	1.936E-01	2.290E+02
6.00E-01	9.925E+02	1.092E+00	9.936E+02	4.089E+02	2.670E-01	4.092E+02	2.973E+02	1.508E-01	2.975E+02
7.00E-01	8.812E+02	9.531E-01	8.821E+02	3.665E+02	2.332E-01	3.667E+02	2.722E+02	1.694E-01	2.723E+02
8.00E-01	7.950E+02	8.469E-01	7.959E+02	3.331E+02	2.073E-01	3.333E+02	2.515E+02	1.508E-01	2.516E+02
9.00E-01	7.262E+02	7.629E-01	7.269E+02	3.062E+02	1.868E-01	3.064E+02	2.341E+02	1.360E-01	2.342E+02
1.00E+00	6.696E+02	6.947E-01	6.703E+02	2.840E+02	1.702E-01	2.841E+02	2.192E+02	1.241E-01	2.193E+02
1.50E+00	4.895E+02	4.840E-01	4.900E+02	2.117E+02	1.188E-01	2.119E+02	1.678E+02	8.688E-02	1.679E+02
2.00E+00	3.907E+02	3.741E-01	3.911E+02	1.709E+02	9.189E-02	1.710E+02	1.372E+02	6.738E-02	1.373E+02
3.00E+00	2.826E+02	2.598E-01	2.829E+02	1.250E+02	6.390E-02	1.251E+02	1.016E+02	4.700E-02	1.017E+02
4.00E+00	2.236E+02	2.004E-01	2.238E+02	9.940E+01	4.933E-02	9.945E+01	8.143E+01	3.636E-02	8.147E+01
5.00E+00	1.861E+02	1.638E-01	1.862E+02	8.285E+01	4.034E-02	8.289E+01	6.826E+01	2.978E-02	6.829E+01
6.00E+00	1.599E+02	1.388E-01	1.600E+02	7.122E+01	3.421E-02	7.125E+01	5.895E+01	2.528E-02	5.898E+01
7.00E+00	1.405E+02	1.207E-01	1.406E+02	6.257E+01	2.975E-02	6.260E+01	5.200E+01	2.201E-02	5.202E+01
8.00E+00	1.255E+02	1.069E-01	1.256E+02	5.587E+01	2.636E-02	5.590E+01	4.659E+01	1.952E-02	4.661E+01
9.00E+00	1.136E+02	9.601E-02	1.137E+02	5.032E+01	2.369E-02	5.035E+01	4.226E+01	1.755E-02	4.228E+01
1.00E+01	1.039E+02	8.722E-02	1.040E+02	4.614E+01	2.152E-02	4.617E+01	3.870E+01	1.596E-02	3.872E+01
1.50E+01	7.185E+01	7.185E+01	7.185E+01	3.241E+01	3.241E+01	3.241E+01	2.691E+01	2.691E+01	2.691E+01
2.00E+01	5.636E+01	5.636E+01	5.636E+01	2.533E+01	2.533E+01	2.533E+01	2.127E+01	2.127E+01	2.127E+01
3.00E+01	4.011E+01	4.011E+01	4.011E+01	1.827E+01	1.827E+01	1.827E+01	1.527E+01	1.527E+01	1.527E+01
4.00E+01	3.158E+01	3.158E+01	3.158E+01	1.443E+01	1.443E+01	1.443E+01	1.210E+01	1.210E+01	1.210E+01
5.00E+01	2.630E+01	2.630E+01	2.630E+01	1.205E+01	1.205E+01	1.205E+01	1.012E+01	1.012E+01	1.012E+01
6.00E+01	2.269E+01	2.269E+01	2.269E+01	1.042E+01	1.042E+01	1.042E+01	8.756E+00	8.756E+00	8.756E+00
7.00E+01	2.006E+01	2.006E+01	2.006E+01	9.223E+00	9.223E+00	9.223E+00	7.762E+00	7.762E+00	7.762E+00
8.00E+01	1.806E+01	1.806E+01	1.806E+01	8.313E+00	8.313E+00	8.313E+00	7.002E+00	7.002E+00	7.002E+00
9.00E+01	1.648E+01	1.648E+01	1.648E+01	7.595E+00	7.595E+00	7.595E+00	6.401E+00	6.401E+00	6.401E+00
1.00E+02	1.520E+01	1.520E+01	1.520E+01	7.013E+00	7.013E+00	7.013E+00	5.915E+00	5.915E+00	5.915E+00
1.50E+02	1.129E+01	1.129E+01	1.129E+01	5.225E+00	5.225E+00	5.225E+00	4.416E+00	4.416E+00	4.416E+00
2.00E+02	9.277E+00	9.277E+00	9.277E+00	4.304E+00	4.304E+00	4.304E+00	3.643E+00	3.643E+00	3.643E+00
3.00E+02	7.236E+00	7.236E+00	7.236E+00	3.367E+00	3.367E+00	3.367E+00	2.855E+00	2.855E+00	2.855E+00
4.00E+02	6.214E+00	6.214E+00	6.214E+00	2.897E+00	2.897E+00	2.897E+00	2.460E+00	2.460E+00	2.460E+00
5.00E+02	5.609E+00	5.609E+00	5.609E+00	2.619E+00	2.619E+00	2.619E+00	2.226E+00	2.226E+00	2.226E+00
6.00E+02	5.216E+00	5.216E+00	5.216E+00	2.438E+00	2.438E+00	2.438E+00	2.074E+00	2.074E+00	2.074E+00
7.00E+02	4.944E+00	4.944E+00	4.944E+00	2.314E+00	2.314E+00	2.314E+00	1.969E+00	1.969E+00	1.969E+00
8.00E+02	4.747E+00	4.747E+00	4.747E+00	2.224E+00	2.224E+00	2.224E+00	1.894E+00	1.894E+00	1.894E+00
9.00E+02	4.602E+00	4.602E+00	4.602E+00	2.157E+00	2.157E+00	2.157E+00	1.834E+00	1.834E+00	1.834E+00
1.00E+03	4.491E+00	4.491E+00	4.491E+00	2.107E+00	2.107E+00	2.107E+00	1.788E+00	1.788E+00	1.788E+00
1.50E+03	4.211E+00	4.211E+00	4.211E+00	1.982E+00	1.982E+00	1.982E+00	1.666E+00	1.666E+00	1.666E+00
2.00E+03	4.126E+00	4.126E+00	4.126E+00	1.946E+00	1.946E+00	1.946E+00	1.624E+00	1.624E+00	1.624E+00
3.00E+03	4.121E+00	4.121E+00	4.121E+00	1.950E+00	1.950E+00	1.950E+00	1.606E+00	1.606E+00	1.606E+00
4.00E+03	4.177E+00	4.177E+00	4.177E+00	1.981E+00	1.981E+00	1.981E+00	1.616E+00	1.616E+00	1.616E+00
5.00E+03	4.246E+00	4.246E+00	4.246E+00	2.017E+00	2.017E+00	2.017E+00	1.631E+00	1.631E+00	1.631E+00
6.00E+03	4.314E+00	4.314E+00	4.314E+00	2.052E+00	2.052E+00	2.052E+00	1.648E+00	1.648E+00	1.648E+00
7.00E+03	4.379E+00	4.379E+00	4.379E+00	2.085E+00	2.085E+00	2.085E+00	1.664E+00	1.664E+00	1.664E+00
8.00E+03	4.439E+00	4.439E+00	4.439E+00	2.116E+00	2.116E+00	2.116E+00	1.679E+00	1.679E+00	1.679E+00
9.00E+03	4.495E+00	4.495E+00	4.495E+00	2.144E+00	2.144E+00	2.144E+00	1.693E+00	1.693E+00	1.693E+00
1.00E+04	4.547E+00	4.547E+00	4.547E+00	2.170E+00	2.170E+00	2.170E+00	1.706E+00	1.706E+00	1.706E+00

 * Proton (2/5) *

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-05	8.294E+01	1.655E+01	9.949E+01	1.218E+01	4.879E+00	1.706E+01	6.151E+00	1.346E+00	7.497E+00
1.50E-05	9.179E+01	1.880E+01	1.106E+02	1.462E+01	5.706E+00	2.032E+01	7.382E+00	1.612E+00	8.994E+00
2.00E-05	9.863E+01	2.038E+01	1.190E+02	1.664E+01	6.324E+00	2.296E+01	8.402E+00	1.818E+00	1.022E+01
3.00E-05	1.092E+02	2.252E+01	1.317E+02	1.997E+01	7.222E+00	2.719E+01	1.008E+01	2.132E+00	1.222E+01
4.00E-05	1.173E+02	2.392E+01	1.412E+02	2.273E+01	7.862E+00	3.059E+01	1.148E+01	2.368E+00	1.385E+01
5.00E-05	1.240E+02	2.490E+01	1.489E+02	2.513E+01	8.351E+00	3.348E+01	1.269E+01	2.557E+00	1.525E+01
6.00E-05	1.298E+02	2.562E+01	1.554E+02	2.728E+01	8.741E+00	3.602E+01	1.378E+01	2.713E+00	1.649E+01
7.00E-05	1.349E+02	2.616E+01	1.611E+02	2.924E+01	9.060E+00	3.830E+01	1.476E+01	2.846E+00	1.761E+01
8.00E-05	1.395E+02	2.657E+01	1.661E+02	3.105E+01	9.326E+00	4.037E+01	1.568E+01	2.960E+00	1.864E+01
9.00E-05	1.437E+02	2.688E+01	1.705E+02	3.274E+01	9.552E+00	4.229E+01	1.653E+01	3.061E+00	1.959E+01
1.00E-04	1.475E+02	2.712E+01	1.746E+02	3.433E+01	9.746E+00	4.407E+01	1.734E+01	3.151E+00	2.049E+01
1.50E-04	1.632E+02	2.762E+01	1.908E+02	4.120E+01	1.040E+01	5.160E+01	2.081E+01	3.483E+00	2.429E+01
2.00E-04	1.754E+02	2.754E+01	2.029E+02	4.689E+01	1.075E+01	5.764E+01	2.368E+01	3.700E+00	2.738E+01
3.00E-04	1.941E+02	2.675E+01	2.209E+02	5.628E+01	1.105E+01	6.733E+01	2.842E+01	3.965E+00	3.239E+01
4.00E-04	2.086E+02	2.571E+01	2.343E+02	6.405E+01	1.110E+01	7.515E+01	3.255E+01	4.113E+00	3.646E+01
5.00E-04	2.205E+02	2.465E+01	2.452E+02	7.082E+01	1.102E+01	8.184E+01	3.577E+01	4.200E+00	3.997E+01
6.00E-04	2.308E+02	2.364E+01	2.545E+02	7.687E+01	1.089E+01	8.777E+01	3.882E+01	4.249E+00	4.307E+01
7.00E-04	2.399E+02	2.270E+01	2.626E+02	8.240E+01	1.073E+01	9.313E+01	4.161E+01	4.274E+00	4.589E+01
8.00E-04	2.480E+02	2.183E+01	2.699E+02	8.750E+01	1.056E+01	9.806E+01	4.419E+01	4.283E+00	4.847E+01
9.00E-04	2.553E+02	2.103E+01	2.765E+02	9.226E+01	1.037E+01	1.026E+02	4.659E+01	4.280E+00	5.087E+01
1.00E-03	2.623E+02	2.029E+01	2.826E+02	9.674E+01	1.019E+01	1.069E+02	4.888E+01	4.269E+00	5.313E+01
1.50E-03	2.903E+02	1.734E+01	3.076E+02	1.161E+02	9.312E+00	1.254E+02	5.864E+01	4.150E+00	6.279E+01
2.00E-03	3.119E+02	1.523E+01	3.271E+02	1.322E+02	8.562E+00	1.407E+02	6.674E+01	3.991E+00	7.073E+01
3.00E-03	3.452E+02	1.240E+01	3.576E+02	1.586E+02	7.398E+00	1.650E+02	8.010E+01	3.673E+00	8.377E+01
4.00E-03	3.709E+02	1.056E+01	3.815E+02	1.805E+02	6.547E+00	1.871E+02	9.117E+01	3.394E+00	9.456E+01
5.00E-03	3.922E+02	9.259E+00	4.015E+02	1.996E+02	5.897E+00	2.055E+02	1.008E+02	3.155E+00	1.040E+02
6.00E-03	4.105E+02	8.277E+00	4.188E+02	2.167E+02	5.382E+00	2.220E+02	1.094E+02	2.952E+00	1.124E+02
7.00E-03	4.266E+02	7.507E+00	4.341E+02	2.322E+02	4.961E+00	2.372E+02	1.173E+02	2.777E+00	1.201E+02
8.00E-03	4.411E+02	6.884E+00	4.480E+02	2.466E+02	4.611E+00	2.512E+02	1.245E+02	2.624E+00	1.272E+02
9.00E-03	4.543E+02	6.369E+00	4.606E+02	2.600E+02	4.314E+00	2.643E+02	1.313E+02	2.490E+00	1.338E+02
1.00E-02	4.664E+02	5.934E+00	4.723E+02	2.727E+02	4.059E+00	2.767E+02	1.377E+02	2.371E+00	1.401E+02
2.00E-02	5.546E+02	3.609E+00	5.583E+02	3.725E+02	2.629E+00	3.751E+02	1.881E+02	1.646E+00	1.897E+02
3.00E-02	6.095E+02	2.670E+00	6.122E+02	4.321E+02	1.995E+00	4.341E+02	2.297E+02	1.290E+00	2.310E+02
4.00E-02	6.443E+02	2.143E+00	6.465E+02	4.588E+02	1.612E+00	4.604E+02	2.518E+02	1.074E+00	2.528E+02
5.00E-02	6.680E+02	1.802E+00	6.698E+02	4.724E+02	1.371E+00	4.785E+02	2.686E+02	9.255E-01	2.695E+02
6.00E-02	6.835E+02	1.561E+00	6.835E+02	4.773E+02	1.198E-00	4.785E+02	2.824E+02	8.171E-01	2.833E+02
7.00E-02	6.927E+02	1.381E+00	6.941E+02	4.762E+02	1.067E+00	4.773E+02	2.924E+02	7.338E-01	2.931E+02
8.00E-02	6.969E+02	1.241E+00	6.981E+02	4.714E+02	9.636E-01	4.744E+02	2.987E+02	6.614E-01	2.994E+02
9.00E-02	6.971E+02	1.123E+00	6.982E+02	4.644E+02	8.803E-01	4.652E+02	3.021E+02	6.079E-01	3.027E+02

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-01	6.942E+02	1.036E+00	6.952E+02	4.560E+02	8.114E-01	4.568E+02	3.031E+02	5.632E-01	3.037E+02
1.50E-01	6.514E+02	7.438E-01	6.522E+02	4.110E+02	5.901E-01	4.116E+02	2.913E+02	4.168E-01	2.917E+02
2.00E-01	5.918E+02	5.860E-01	5.924E+02	3.733E+02	4.687E-01	3.738E+02	2.711E+02	3.346E-01	2.714E+02
3.00E-01	4.844E+02	4.171E-01	4.848E+02	3.193E+02	3.371E-01	3.196E+02	2.342E+02	2.437E-01	2.345E+02
4.00E-01	4.082E+02	3.268E-01	4.082E+02	2.817E+02	2.659E-01	2.819E+02	2.062E+02	1.938E-01	2.064E+02
5.00E-01	3.551E+02	2.702E-01	3.554E+02	2.532E+02	2.208E-01	2.535E+02	1.848E+02	1.619E-01	1.849E+02
6.00E-01	3.166E+02	2.311E-01	3.168E+02	2.307E+02	1.895E-01	2.309E+02	1.680E+02	1.395E-01	1.681E+02
7.00E-01	2.872E+02	2.024E-01	2.872E+02	2.124E+02	1.665E-01	2.126E+02	1.545E+02	1.230E-01	1.546E+02
8.00E-01	2.638E+02	1.804E-01	2.640E+02	1.971E+02	1.487E-01	1.972E+02	1.433E+02	1.101E-01	1.434E+02
9.00E-01	2.447E+02	1.629E-01	2.449E+02	1.840E+02	1.348E-01	1.842E+02	1.339E+02	9.991E-02	1.340E+02
1.00E+00	2.287E+02	1.486E-01	2.288E+02	1.728E+02	1.230E-01	1.730E+02	1.259E+02	9.153E-02	1.260E+02
1.50E+00	1.749E+02	1.044E-01	1.750E+02	1.338E+02	8.692E-02	1.339E+02	9.831E+01	6.515E-02	9.837E+01
2.00E+00	1.434E+02	8.110E-02	1.435E+02	1.103E+02	6.781E-02	1.104E+02	8.185E+01	5.106E-02	8.191E+01
3.00E+00	1.069E+02	5.671E-02	1.069E+02	8.294E+01	4.766E-02	8.299E+01	6.267E+01	3.611E-02	6.271E+01
4.00E+00	8.600E+01	4.394E-02	8.604E+01	6.723E+01	3.706E-02	6.727E+01	5.157E+01	2.818E-02	5.160E+01
5.00E+00	7.233E+01	3.602E-02	7.236E+01	5.692E+01	3.048E-02	5.695E+01	4.422E+01	2.323E-02	4.424E+01
6.00E+00	6.262E+01	3.061E-02	6.265E+01	4.958E+01	2.593E-02	4.961E+01	3.893E+01	1.982E-02	3.895E+01
7.00E+00	5.534E+01	2.667E-02	5.537E+01	4.407E+01	2.263E-02	4.409E+01	3.492E+01	1.733E-02	3.494E+01
8.00E+00	4.966E+01	2.366E-02	4.969E+01	3.976E+01	2.010E-02	3.978E+01	3.176E+01	1.542E-02	3.178E+01
9.00E+00	4.511E+01	2.129E-02	4.513E+01	3.628E+01	1.811E-02	3.630E+01	2.920E+01	1.390E-02	2.921E+01
1.00E+01	4.136E+01	1.937E-02	4.138E+01	3.342E+01	1.649E-02	3.343E+01	2.707E+01	1.267E-02	2.708E+01
1.50E+01	2.927E+01	1.368E-02	2.927E+01	2.452E+01	1.195E-02	2.452E+01	2.108E+01	8.95E-03	2.108E+01
2.00E+01	2.318E+01	1.068E-02	2.318E+01	1.957E+01	9.37E-03	1.957E+01	1.695E+01	6.95E-03	1.695E+01
3.00E+01	1.668E+01	7.66E-03	1.668E+01	1.422E+01	6.82E-03	1.422E+01	1.243E+01	5.12E-03	1.243E+01
4.00E+01	1.323E+01	6.00E-03	1.323E+01	1.135E+01	5.38E-03	1.135E+01	9.979E+00	4.00E-03	9.979E+00
5.00E+01	1.107E+01	5.092E+00	1.107E+01	9.538E+00	4.62E-03	9.538E+00	8.421E+00	3.49E-03	8.421E+00
6.00E+01	9.592E+00	4.507E+00	9.592E+00	8.287E+00	4.00E-03	8.287E+00	7.339E+00	3.00E-03	7.339E+00
7.00E+01	8.507E+00	4.005E+00	8.507E+00	7.367E+00	3.515E+00	7.367E+00	6.540E+00	2.60E-03	6.540E+00
8.00E+01	7.678E+00	3.600E+00	7.678E+00	6.662E+00	3.150E+00	6.662E+00	5.926E+00	2.30E-03	5.926E+00
9.00E+01	7.022E+00	3.286E+00	7.022E+00	6.103E+00	2.850E+00	6.103E+00	5.438E+00	2.00E-03	5.438E+00
1.00E+02	6.490E+00	3.000E+00	6.490E+00	5.649E+00	2.600E+00	5.649E+00	5.040E+00	1.80E-03	5.040E+00
1.50E+02	4.852E+00	2.400E+00	4.852E+00	4.244E+00	2.100E+00	4.244E+00	3.804E+00	1.40E-03	3.804E+00
2.00E+02	4.005E+00	2.000E+00	4.005E+00	3.515E+00	1.700E+00	3.515E+00	3.160E+00	1.10E-03	3.160E+00
3.00E+02	3.142E+00	1.600E+00	3.142E+00	2.768E+00	1.300E+00	2.768E+00	2.498E+00	8.00E-04	2.498E+00
4.00E+02	2.709E+00	1.400E+00	2.709E+00	2.393E+00	1.100E+00	2.393E+00	2.164E+00	6.00E-04	2.164E+00
5.00E+02	2.452E+00	1.200E+00	2.452E+00	2.171E+00	9.50E-04	2.171E+00	1.967E+00	5.00E-04	1.967E+00
6.00E+02	2.286E+00	1.100E+00	2.286E+00	2.027E+00	8.50E-04	2.027E+00	1.839E+00	4.00E-04	1.839E+00
7.00E+02	2.171E+00	1.000E+00	2.171E+00	1.928E+00	7.50E-04	1.928E+00	1.751E+00	3.00E-04	1.751E+00
8.00E+02	2.088E+00	9.00E-04	2.088E+00	1.857E+00	6.50E-04	1.857E+00	1.688E+00	2.00E-04	1.688E+00
9.00E+02	2.025E+00	8.00E-04	2.025E+00	1.802E+00	5.50E-04	1.802E+00	1.639E+00	1.00E-04	1.639E+00
1.00E+03	1.975E+00	7.00E-04	1.975E+00	1.759E+00	4.50E-04	1.759E+00	1.602E+00	0.00E-04	1.602E+00
1.50E+03	1.847E+00	6.00E-04	1.847E+00	1.651E+00	3.50E-04	1.651E+00	1.508E+00	0.00E-04	1.508E+00
2.00E+03	1.804E+00	5.00E-04	1.804E+00	1.618E+00	2.50E-04	1.618E+00	1.480E+00	0.00E-04	1.480E+00
3.00E+03	1.789E+00	4.00E-04	1.789E+00	1.614E+00	1.50E-04	1.614E+00	1.480E+00	0.00E-04	1.480E+00
4.00E+03	1.802E+00	3.00E-04	1.802E+00	1.632E+00	5.00E-05	1.632E+00	1.499E+00	0.00E-04	1.499E+00
5.00E+03	1.821E+00	2.00E-04	1.821E+00	1.655E+00	0.00E-04	1.655E+00	1.523E+00	0.00E-04	1.523E+00
6.00E+03	1.841E+00	1.00E-04	1.841E+00	1.678E+00	0.00E-04	1.678E+00	1.545E+00	0.00E-04	1.545E+00
7.00E+03	1.860E+00	0.00E-04	1.860E+00	1.700E+00	0.00E-04	1.700E+00	1.567E+00	0.00E-04	1.567E+00
8.00E+03	1.878E+00	0.00E-04	1.878E+00	1.720E+00	0.00E-04	1.720E+00	1.586E+00	0.00E-04	1.586E+00
9.00E+03	1.894E+00	0.00E-04	1.894E+00	1.738E+00	0.00E-04	1.738E+00	1.604E+00	0.00E-04	1.604E+00
1.00E+04	1.909E+00	0.00E-04	1.909E+00	1.755E+00	0.00E-04	1.755E+00	1.621E+00	0.00E-04	1.621E+00

 * Proton (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	4.417E+00	1.125E+00	5.543E+00	2.523E+00	1.848E-01	2.707E+00	2.917E+00	1.489E-01	3.065E+00
1.50E-05	5.302E+00	1.352E+00	6.653E+00	3.027E+00	2.279E-01	3.255E+00	3.500E+00	1.841E-01	3.684E+00
2.00E-05	6.034E+00	1.529E+00	7.564E+00	3.446E+00	2.631E-01	3.709E+00	3.984E+00	2.128E-01	4.197E+00
3.00E-05	7.242E+00	1.800E+00	9.043E+00	4.136E+00	3.192E-01	4.455E+00	4.782E+00	2.590E-01	5.041E+00
4.00E-05	8.243E+00	2.006E+00	1.025E+01	4.707E+00	3.639E-01	5.071E+00	5.442E+00	2.960E-01	5.738E+00
5.00E-05	9.114E+00	2.170E+00	1.128E+01	5.204E+00	4.013E-01	5.606E+00	6.017E+00	3.270E-01	6.344E+00
6.00E-05	9.893E+00	2.308E+00	1.220E+01	5.649E+00	4.335E-01	6.083E+00	6.532E+00	3.537E-01	6.886E+00
7.00E-05	1.060E+01	2.425E+00	1.303E+01	6.055E+00	4.618E-01	6.517E+00	7.001E+00	3.774E-01	7.378E+00
8.00E-05	1.126E+01	2.527E+00	1.379E+01	6.430E+00	4.872E-01	6.917E+00	7.433E+00	3.986E-01	7.833E+00
9.00E-05	1.187E+01	2.616E+00	1.449E+01	6.780E+00	5.101E-01	7.290E+00	7.839E+00	4.178E-01	8.257E+00
1.00E-04	1.245E+01	2.696E+00	1.515E+01	7.109E+00	5.310E-01	7.640E+00	8.220E+00	4.353E-01	8.655E+00
1.50E-04	1.494E+01	2.996E+00	1.794E+01	8.533E+00	6.144E-01	9.147E+00	9.865E+00	5.058E-01	1.037E+01
2.00E-04	1.701E+01	3.195E+00	2.020E+01	9.712E+00	6.755E-01	1.039E+01	1.123E+01	5.578E-01	1.179E+01
3.00E-04	2.041E+01	3.444E+00	2.386E+01	1.166E+01	7.622E-01	1.242E+01	1.348E+01	6.323E-01	1.411E+01
4.00E-04	2.323E+01	3.590E+00	2.682E+01	1.327E+01	8.224E-01	1.409E+01	1.534E+01	6.845E-01	1.602E+01
5.00E-04	2.569E+01	3.679E+00	2.937E+01	1.467E+01	8.672E-01	1.554E+01	1.696E+01	7.238E-01	1.768E+01
6.00E-04	2.788E+01	3.734E+00	3.162E+01	1.592E+01	9.021E-01	1.682E+01	1.841E+01	7.547E-01	1.916E+01
7.00E-04	2.989E+01	3.768E+00	3.365E+01	1.707E+01	9.300E-01	1.800E+01	1.973E+01	7.796E-01	2.051E+01
8.00E-04	3.174E+01	3.785E+00	3.552E+01	1.812E+01	9.527E-01	1.908E+01	2.095E+01	8.002E-01	2.175E+01
9.00E-04	3.346E+01	3.792E+00	3.726E+01	1.911E+01	9.716E-01	2.008E+01	2.209E+01	8.173E-01	2.291E+01
1.00E-03	3.509E+01	3.791E+00	3.888E+01	2.004E+01	9.873E-01	2.102E+01	2.317E+01	8.318E-01	2.400E+01
1.50E-03	4.211E+01	3.719E+00	4.583E+01	2.405E+01	1.036E+00	2.508E+01	2.780E+01	8.787E-01	2.868E+01
2.00E-03	4.793E+01	3.601E+00	5.153E+01	2.737E+01	1.058E+00	2.843E+01	3.165E+01	9.014E-01	3.255E+01
3.00E-03	5.753E+01	3.348E+00	6.088E+01	3.285E+01	1.066E+00	3.392E+01	3.798E+01	9.151E-01	3.890E+01
4.00E-03	6.548E+01	3.116E+00	6.859E+01	3.739E+01	1.053E+00	3.844E+01	4.323E+01	9.099E-01	4.414E+01
5.00E-03	7.239E+01	2.913E+00	7.531E+01	4.134E+01	1.033E+00	4.237E+01	4.780E+01	8.969E-01	4.869E+01
6.00E-03	7.858E+01	2.738E+00	8.132E+01	4.488E+01	1.010E+00	4.599E+01	5.188E+01	8.803E-01	5.276E+01
7.00E-03	8.423E+01	2.584E+00	8.681E+01	4.810E+01	9.855E-01	4.908E+01	5.561E+01	8.622E-01	5.647E+01
8.00E-03	8.945E+01	2.450E+00	9.190E+01	5.108E+01	9.612E-01	5.204E+01	5.905E+01	8.436E-01	5.990E+01
9.00E-03	9.431E+01	2.331E+00	9.665E+01	5.386E+01	9.374E-01	5.480E+01	6.227E+01	8.230E-01	6.309E+01
1.00E-02	9.889E+01	2.224E+00	1.011E+02	5.647E+01	9.145E-01	5.739E+01	6.529E+01	8.069E-01	6.610E+01
1.50E-02	1.187E+02	1.827E+00	1.205E+02	6.778E+01	8.141E-01	6.859E+01	7.838E+01	7.254E-01	7.909E+01
2.00E-02	1.351E+02	1.564E+00	1.367E+02	7.714E+01	7.350E-01	7.788E+01	8.919E+01	6.593E-01	8.985E+01
3.00E-02	1.598E+02	1.234E+00	1.611E+02	9.576E+01	6.200E-01	9.638E+01	1.031E+02	5.611E-01	1.037E+02
4.00E-02	1.768E+02	1.031E+00	1.778E+02	1.105E+02	5.401E-01	1.110E+02	1.103E+02	4.916E-01	1.108E+02
5.00E-02	1.897E+02	8.908E-01	1.906E+02	1.191E+02	4.810E-01	1.194E+02	1.157E+02	4.395E-01	1.161E+02
6.00E-02	1.995E+02	7.881E-01	2.003E+02	1.239E+02	4.352E-01	1.244E+02	1.198E+02	3.989E-01	1.202E+02
7.00E-02	2.068E+02	7.089E-01	2.075E+02	1.266E+02	3.985E-01	1.270E+02	1.229E+02	3.662E-01	1.233E+02
8.00E-02	2.121E+02	6.457E-01	2.128E+02	1.280E+02	3.683E-01	1.283E+02	1.252E+02	3.391E-01	1.256E+02
9.00E-02	2.158E+02	5.885E-01	2.164E+02	1.286E+02	3.429E-01	1.289E+02	1.269E+02	3.163E-01	1.272E+02

target	Copper			Tungsten			Lead			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	2.183E+02	5.458E-01	2.188E+02	3.213E-01	1.286E+02	3.213E-01	1.290E+02	1.280E+02	2.968E-01	1.283E+02
1.50E-01	2.183E+02	4.053E-01	2.187E+02	1.253E-02	1.253E+02	2.473E-01	1.255E+02	1.282E+02	2.296E-01	1.284E+02
2.00E-01	2.097E+02	3.260E-01	2.101E+02	1.196E-02	1.196E+02	2.034E-01	1.198E+02	1.234E+02	1.895E-01	1.236E+02
3.00E-01	1.895E+02	2.381E-01	1.897E+02	1.895E-02	1.895E+02	1.514E-01	1.980E+02	1.099E+02	1.415E-01	1.101E+02
4.00E-01	1.724E+02	1.896E-01	1.726E+02	9.782E-01	9.782E+01	1.226E-01	9.794E+01	9.766E+01	1.149E-01	9.777E+01
5.00E-01	1.585E+02	1.585E-01	1.586E+02	8.962E-01	8.962E+01	1.038E-01	8.972E+01	8.806E+01	9.741E-02	8.815E+01
6.00E-01	1.470E+02	1.368E-01	1.471E+02	8.289E-01	8.289E+01	9.034E-02	8.298E+01	8.069E+01	8.490E-02	8.077E+01
7.00E-01	1.373E+02	1.206E-01	1.374E+02	7.730E-01	7.730E+01	8.023E-02	7.738E+01	7.494E+01	7.548E-02	7.501E+01
8.00E-01	1.290E+02	1.081E-01	1.291E+02	7.256E-01	7.256E+01	7.232E-02	7.264E+01	7.032E+01	6.809E-02	7.039E+01
9.00E-01	1.218E+02	9.808E-02	1.219E+02	6.851E-01	6.851E+01	6.594E-02	6.857E+01	6.652E+01	6.213E-02	6.658E+01
1.00E+00	1.155E+02	8.989E-02	1.155E+02	6.499E-01	6.499E+01	6.069E-02	6.505E+01	6.331E+01	5.721E-02	6.336E+01
2.00E+00	9.250E+01	6.407E-02	9.250E+01	5.253E-01	5.253E+01	4.389E-02	5.257E+01	5.225E+01	4.146E-02	5.230E+01
3.00E+00	6.028E+01	3.558E-02	6.031E+01	3.552E+01	3.552E+01	2.488E-02	3.534E+01	3.666E+01	2.356E-02	3.669E+01
4.00E+00	4.977E+01	2.779E-02	4.980E+01	2.997E+01	2.997E+01	1.957E-02	2.999E+01	3.121E+01	1.855E-02	3.122E+01
5.00E+00	4.272E+01	2.291E-02	4.274E+01	2.621E+01	2.621E+01	1.622E-02	2.622E+01	2.739E+01	1.539E-02	2.740E+01
6.00E+00	3.761E+01	1.956E-02	3.763E+01	2.346E+01	2.346E+01	1.390E-02	2.347E+01	2.453E+01	1.320E-02	2.454E+01
7.00E+00	3.373E+01	1.710E-02	3.375E+01	2.134E+01	2.134E+01	1.220E-02	2.135E+01	2.230E+01	1.158E-02	2.231E+01
8.00E+00	3.066E+01	1.522E-02	3.068E+01	1.964E+01	1.964E+01	1.088E-02	1.965E+01	2.050E+01	1.034E-02	2.051E+01
9.00E+00	2.817E+01	1.373E-02	2.818E+01	1.825E+01	1.825E+01	9.841E-03	1.826E+01	1.901E+01	9.352E-03	1.902E+01
1.00E+01	2.610E+01	1.252E-02	2.611E+01	1.709E+01	1.709E+01	8.990E-03	1.710E+01	1.775E+01	8.546E-03	1.776E+01
1.50E+01	1.999E+01		1.999E+01	1.383E+01	1.383E+01		1.383E+01	1.352E+01		1.352E+01
2.00E+01	1.611E+01		1.611E+01	1.135E+01	1.135E+01		1.135E+01	1.110E+01		1.110E+01
3.00E+01	1.185E+01		1.185E+01	8.536E+00	8.536E+00		8.536E+00	8.356E+00		8.356E+00
4.00E+01	9.526E+00		9.526E+00	6.955E+00	6.955E+00		6.955E+00	6.812E+00		6.812E+00
5.00E+01	8.048E+00		8.048E+00	5.929E+00	5.929E+00		5.929E+00	5.810E+00		5.810E+00
6.00E+01	7.019E+00		7.019E+00	5.206E+00	5.206E+00		5.206E+00	5.104E+00		5.104E+00
7.00E+01	6.260E+00		6.260E+00	4.667E+00	4.667E+00		4.667E+00	4.577E+00		4.577E+00
8.00E+01	5.675E+00		5.675E+00	4.249E+00	4.249E+00		4.249E+00	4.168E+00		4.168E+00
9.00E+01	5.210E+00		5.210E+00	3.914E+00	3.914E+00		3.914E+00	3.841E+00		3.841E+00
1.00E+02	4.831E+00		4.831E+00	3.640E+00	3.640E+00		3.640E+00	3.573E+00		3.573E+00
1.50E+02	3.652E+00		3.652E+00	2.779E+00	2.779E+00		2.779E+00	2.729E+00		2.729E+00
2.00E+02	3.035E+00		3.035E+00	2.324E+00	2.324E+00		2.324E+00	2.284E+00		2.284E+00
3.00E+02	2.402E+00		2.402E+00	1.852E+00	1.852E+00		1.852E+00	1.821E+00		1.821E+00
4.00E+02	2.083E+00		2.083E+00	1.612E+00	1.612E+00		1.612E+00	1.587E+00		1.587E+00
5.00E+02	1.894E+00		1.894E+00	1.470E+00	1.470E+00		1.470E+00	1.447E+00		1.447E+00
6.00E+02	1.771E+00		1.771E+00	1.377E+00	1.377E+00		1.377E+00	1.357E+00		1.357E+00
7.00E+02	1.687E+00		1.687E+00	1.314E+00	1.314E+00		1.314E+00	1.295E+00		1.295E+00
8.00E+02	1.627E+00		1.627E+00	1.268E+00	1.268E+00		1.268E+00	1.251E+00		1.251E+00
9.00E+02	1.581E+00		1.581E+00	1.235E+00	1.235E+00		1.235E+00	1.219E+00		1.219E+00
1.00E+03	1.545E+00		1.545E+00	1.210E+00	1.210E+00		1.210E+00	1.195E+00		1.195E+00
1.50E+03	1.432E+00		1.432E+00	1.150E+00	1.150E+00		1.150E+00	1.140E+00		1.140E+00
2.00E+03	1.434E+00		1.434E+00	1.137E+00	1.137E+00		1.137E+00	1.130E+00		1.130E+00
3.00E+03	1.434E+00		1.434E+00	1.148E+00	1.148E+00		1.148E+00	1.146E+00		1.146E+00
4.00E+03	1.479E+00		1.479E+00	1.172E+00	1.172E+00		1.172E+00	1.172E+00		1.172E+00
5.00E+03	1.479E+00		1.479E+00	1.196E+00	1.196E+00		1.196E+00	1.198E+00		1.198E+00
6.00E+03	1.502E+00		1.502E+00	1.219E+00	1.219E+00		1.219E+00	1.222E+00		1.222E+00
7.00E+03	1.523E+00		1.523E+00	1.240E+00	1.240E+00		1.240E+00	1.244E+00		1.244E+00
8.00E+03	1.543E+00		1.543E+00	1.259E+00	1.259E+00		1.259E+00	1.264E+00		1.264E+00
9.00E+03	1.560E+00		1.560E+00	1.277E+00	1.277E+00		1.277E+00	1.282E+00		1.282E+00
1.00E+04	1.577E+00		1.577E+00	1.292E+00	1.292E+00		1.292E+00	1.298E+00		1.298E+00

 * Proton (4/5) *

target	Uranium				LiF(TLD-100)				LiF(TLD-700)			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	2.140E+00	1.156E-01	2.255E+00	2.770E+01	1.464E+01	4.234E+01	2.762E+01	1.452E+01	4.214E+01			
1.50E-05	2.568E+00	1.433E-01	2.711E+00	3.132E+01	1.645E+01	4.778E+01	3.148E+01	1.651E+01	4.799E+01			
2.00E-05	2.923E+00	1.660E-01	3.089E+00	3.420E+01	1.771E+01	5.191E+01	3.436E+01	1.777E+01	5.213E+01			
3.00E-05	3.508E+00	2.027E-01	3.711E+00	3.875E+01	1.936E+01	5.811E+01	3.893E+01	1.942E+01	5.835E+01			
4.00E-05	3.993E+00	2.322E-01	4.225E+00	4.238E+01	2.040E+01	6.277E+01	4.257E+01	2.046E+01	6.303E+01			
5.00E-05	4.415E+00	2.570E-01	4.672E+00	4.544E+01	2.110E+01	6.654E+01	4.564E+01	2.116E+01	6.681E+01			
6.00E-05	4.792E+00	2.785E-01	5.071E+00	4.813E+01	2.159E+01	6.972E+01	4.834E+01	2.165E+01	6.999E+01			
7.00E-05	5.137E+00	2.976E-01	5.434E+00	5.054E+01	2.195E+01	7.248E+01	5.075E+01	2.201E+01	7.276E+01			
8.00E-05	5.455E+00	3.147E-01	5.769E+00	5.273E+01	2.220E+01	7.493E+01	5.295E+01	2.226E+01	7.521E+01			
9.00E-05	5.752E+00	3.303E-01	6.082E+00	5.474E+01	2.238E+01	7.712E+01	5.497E+01	2.244E+01	7.741E+01			
1.00E-04	6.031E+00	3.446E-01	6.375E+00	5.662E+01	2.250E+01	7.912E+01	5.685E+01	2.256E+01	7.941E+01			
1.50E-04	7.238E+00	4.021E-01	7.640E+00	6.452E+01	2.264E+01	8.716E+01	6.477E+01	2.269E+01	8.747E+01			
2.00E-04	8.238E+00	4.449E-01	8.683E+00	7.085E+01	2.238E+01	9.324E+01	7.112E+01	2.243E+01	9.355E+01			
3.00E-04	9.887E+00	5.068E-01	1.039E+01	8.096E+01	2.152E+01	1.025E+02	8.124E+01	2.156E+01	1.028E+02			
4.00E-04	1.125E+01	5.508E-01	1.180E+01	8.907E+01	2.056E+01	1.096E+02	8.937E+01	2.060E+01	1.100E+02			
5.00E-04	1.244E+01	5.842E-01	1.303E+01	9.597E+01	1.965E+01	1.156E+02	9.629E+01	1.969E+01	1.160E+02			
6.00E-04	1.351E+01	6.107E-01	1.412E+01	1.020E+02	1.881E+01	1.209E+02	1.024E+02	1.884E+01	1.212E+02			
7.00E-04	1.448E+01	6.323E-01	1.511E+01	1.075E+02	1.805E+01	1.256E+02	1.078E+02	1.807E+01	1.259E+02			
8.00E-04	1.537E+01	6.502E-01	1.602E+01	1.125E+02	1.735E+01	1.298E+02	1.128E+02	1.737E+01	1.302E+02			
9.00E-04	1.621E+01	6.654E-01	1.688E+01	1.171E+02	1.671E+01	1.338E+02	1.174E+02	1.673E+01	1.342E+02			
1.00E-03	1.700E+01	6.783E-01	1.768E+01	1.214E+02	1.612E+01	1.375E+02	1.217E+02	1.614E+01	1.379E+02			
1.50E-03	2.040E+01	7.215E-01	2.112E+01	1.396E+02	1.381E+01	1.534E+02	1.400E+02	1.382E+01	1.538E+02			
2.00E-03	2.322E+01	7.441E-01	2.395E+01	1.543E+02	1.216E+01	1.665E+02	1.547E+02	1.218E+01	1.669E+02			
3.00E-03	2.787E+01	7.616E-01	2.863E+01	1.779E+02	9.955E+00	1.879E+02	1.783E+02	9.962E+00	1.883E+02			
4.00E-03	3.172E+01	7.623E-01	3.248E+01	1.970E+02	8.513E+00	2.056E+02	1.975E+02	8.519E+00	2.060E+02			
5.00E-03	3.507E+01	7.554E-01	3.582E+01	2.134E+02	7.483E+00	2.209E+02	2.138E+02	7.489E+00	2.213E+02			
6.00E-03	3.807E+01	7.449E-01	3.881E+01	2.279E+02	6.708E+00	2.346E+02	2.283E+02	6.711E+00	2.350E+02			
7.00E-03	4.080E+01	7.324E-01	4.153E+01	2.409E+02	6.096E+00	2.470E+02	2.413E+02	6.099E+00	2.474E+02			
8.00E-03	4.333E+01	7.192E-01	4.405E+01	2.528E+02	5.585E+00	2.584E+02	2.533E+02	5.587E+00	2.589E+02			
9.00E-03	4.569E+01	7.056E-01	4.639E+01	2.639E+02	5.175E+00	2.691E+02	2.644E+02	5.177E+00	2.695E+02			
1.00E-02	4.790E+01	6.921E-01	4.860E+01	2.743E+02	4.828E+00	2.791E+02	2.747E+02	4.830E+00	2.795E+02			
1.50E-02	5.749E+01	6.290E-01	5.812E+01	3.183E+02	3.662E+00	3.220E+02	3.188E+02	3.663E+00	3.224E+02			
2.00E-02	6.544E+01	5.761E-01	6.602E+01	3.541E+02	2.986E+00	3.571E+02	3.546E+02	2.987E+00	3.576E+02			
3.00E-02	7.971E+01	4.953E-01	8.020E+01	4.041E+02	2.203E+00	4.063E+02	4.046E+02	2.204E+00	4.068E+02			
4.00E-02	9.217E+01	4.368E-01	9.261E+01	4.347E+02	1.773E+00	4.365E+02	4.352E+02	1.774E+00	4.370E+02			
5.00E-02	1.021E+02	3.925E-01	1.025E+02	4.575E+02	1.494E+00	4.590E+02	4.580E+02	1.494E+00	4.595E+02			
6.00E-02	1.100E+02	3.575E-01	1.104E+02	4.746E+02	1.296E+00	4.759E+02	4.752E+02	1.296E+00	4.756E+02			
7.00E-02	1.161E+02	3.291E-01	1.164E+02	4.873E+02	1.148E+00	4.884E+02	4.879E+02	1.148E+00	4.890E+02			
8.00E-02	1.207E+02	3.055E-01	1.210E+02	4.964E+02	1.032E+00	4.975E+02	4.970E+02	1.032E+00	4.980E+02			
9.00E-02	1.239E+02	2.855E-01	1.242E+02	5.026E+02	9.395E-01	5.036E+02	5.032E+02	9.395E-01	5.042E+02			

target	Uranium				LiF(TLD-100)				7LiF(TLD-700)				
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	1.262E+02	2.684E-01	1.264E+02	1.264E+02	5.065E+02	8.632E-01	5.073E+02	5.070E+02	8.633E-01	5.079E+02	5.070E+02	8.633E-01	5.079E+02
1.50E-01	1.269E+02	2.089E-01	1.271E+02	1.271E+02	5.017E+02	6.209E-01	5.023E+02	5.021E+02	6.209E-01	5.028E+02	5.021E+02	6.209E-01	5.028E+02
2.00E-01	1.200E+02	1.730E-01	1.202E+02	1.202E+02	4.766E+02	4.898E-01	4.771E+02	4.770E+02	4.898E-01	4.775E+02	4.770E+02	4.898E-01	4.775E+02
3.00E-01	1.044E+02	1.310E-01	1.045E+02	1.045E+02	4.142E+02	3.492E-01	4.146E+02	4.145E+02	3.492E-01	4.148E+02	4.145E+02	3.492E-01	4.148E+02
4.00E-01	9.252E+01	1.057E-01	9.262E+01	9.262E+01	3.594E+02	2.740E-01	3.597E+02	3.596E+02	2.740E-01	3.598E+02	3.596E+02	2.740E-01	3.598E+02
5.00E-01	8.396E+01	8.976E-02	8.405E+01	8.405E+01	3.163E+02	2.267E-01	3.165E+02	3.165E+02	2.267E-01	3.167E+02	3.165E+02	2.267E-01	3.167E+02
6.00E-01	7.748E+01	7.836E-02	7.748E+01	7.748E+01	2.829E+02	1.940E-01	2.831E+02	2.830E+02	1.940E-01	2.832E+02	2.830E+02	1.940E-01	2.832E+02
7.00E-01	7.233E+01	6.974E-02	7.240E+01	7.240E+01	2.565E+02	1.700E-01	2.567E+02	2.567E+02	1.700E-01	2.568E+02	2.567E+02	1.700E-01	2.568E+02
8.00E-01	6.808E+01	6.297E-02	6.814E+01	6.814E+01	2.354E+02	1.516E-01	2.356E+02	2.356E+02	1.515E-01	2.356E+02	2.355E+02	1.515E-01	2.356E+02
9.00E-01	6.448E+01	5.751E-02	6.448E+01	6.448E+01	2.180E+02	1.369E-01	2.181E+02	2.181E+02	1.369E-01	2.182E+02	2.181E+02	1.369E-01	2.182E+02
1.00E+00	6.137E+01	5.299E-02	6.142E+01	6.142E+01	2.034E+02	1.250E-01	2.035E+02	2.035E+02	1.250E-01	2.036E+02	2.035E+02	1.250E-01	2.036E+02
1.50E+00	5.027E+01	3.849E-02	5.031E+01	5.031E+01	1.551E+02	8.786E-02	1.552E+02	1.552E+02	8.786E-02	1.552E+02	1.551E+02	8.786E-02	1.552E+02
2.00E+00	4.324E+01	3.055E-02	4.327E+01	4.327E+01	1.271E+02	6.831E-02	1.272E+02	1.272E+02	6.831E-02	1.272E+02	1.272E+02	6.831E-02	1.272E+02
3.00E+00	3.454E+01	2.195E-02	3.456E+01	3.456E+01	9.501E+01	4.781E-02	9.506E+01	9.506E+01	4.781E-02	9.509E+01	9.504E+01	4.781E-02	9.509E+01
4.00E+00	2.923E+01	1.730E-02	2.924E+01	2.924E+01	7.665E+01	3.707E-02	7.668E+01	7.668E+01	3.706E-02	7.670E+01	7.667E+01	3.706E-02	7.670E+01
5.00E+00	2.557E+01	1.436E-02	2.559E+01	2.559E+01	6.459E+01	3.040E-02	6.462E+01	6.462E+01	3.040E-02	6.464E+01	6.461E+01	3.040E-02	6.464E+01
6.00E+00	2.288E+01	1.233E-02	2.290E+01	2.290E+01	5.601E+01	2.585E-02	5.604E+01	5.604E+01	2.584E-02	5.605E+01	5.603E+01	2.584E-02	5.605E+01
7.00E+00	2.080E+01	1.082E-02	2.081E+01	2.081E+01	4.957E+01	2.252E-02	4.959E+01	4.959E+01	2.252E-02	4.958E+01	4.958E+01	2.252E-02	4.960E+01
8.00E+00	1.913E+01	9.665E-03	1.914E+01	1.914E+01	4.454E+01	1.999E-02	4.456E+01	4.456E+01	1.999E-02	4.456E+01	4.454E+01	1.999E-02	4.456E+01
9.00E+00	1.776E+01	8.744E-03	1.777E+01	1.777E+01	4.049E+01	1.799E-02	4.051E+01	4.051E+01	1.798E-02	4.051E+01	4.050E+01	1.798E-02	4.051E+01
1.00E+01	1.661E+01	7.993E-03	1.662E+01	1.662E+01	3.716E+01	1.637E-02	3.717E+01	3.717E+01	1.636E-02	3.718E+01	3.716E+01	1.636E-02	3.718E+01
1.50E+01	1.285E+01	6.283E-03	1.285E+01	1.285E+01	2.643E+01	1.057E+01	2.643E+01	2.643E+01	1.057E+01	2.643E+01	2.643E+01	1.057E+01	2.643E+01
2.00E+01	1.057E+01	5.057E-03	1.057E+01	1.057E+01	2.096E+01	8.111E+01	2.096E+01	2.096E+01	8.111E+01	2.096E+01	8.111E+01	8.111E+01	2.096E+01
3.00E+01	7.978E+00	3.797E-03	7.978E+00	7.978E+00	1.511E+01	6.100E+01	1.511E+01	1.511E+01	6.100E+01	1.511E+01	6.100E+01	6.100E+01	1.511E+01
4.00E+01	6.513E+00	3.054E-03	6.513E+00	6.513E+00	1.200E+01	4.870E+01	1.200E+01	1.200E+01	4.870E+01	1.200E+01	4.870E+01	4.870E+01	1.200E+01
5.00E+01	5.564E+00	2.564E-03	5.564E+00	5.564E+00	1.005E+01	3.909E+01	1.005E+01	1.005E+01	3.909E+01	1.005E+01	3.909E+01	3.909E+01	1.005E+01
6.00E+01	4.892E+00	2.197E-03	4.892E+00	4.892E+00	8.709E+00	3.288E+01	8.709E+00	8.709E+00	3.288E+01	8.709E+00	3.288E+01	3.288E+01	8.709E+00
7.00E+01	4.390E+00	1.890E-03	4.390E+00	4.390E+00	7.728E+00	2.863E+01	7.728E+00	7.728E+00	2.863E+01	7.728E+00	2.863E+01	2.863E+01	7.728E+00
8.00E+01	4.000E+00	1.662E-03	4.000E+00	4.000E+00	6.976E+00	2.590E+01	6.976E+00	6.976E+00	2.590E+01	6.976E+00	2.590E+01	2.590E+01	6.976E+00
9.00E+01	3.687E+00	1.483E-03	3.687E+00	3.687E+00	6.383E+00	2.366E+01	6.383E+00	6.383E+00	2.366E+01	6.383E+00	2.366E+01	2.366E+01	6.383E+00
1.00E+02	3.431E+00	1.331E-03	3.431E+00	3.431E+00	5.901E+00	2.085E+01	5.901E+00	5.901E+00	2.085E+01	5.901E+00	2.085E+01	2.085E+01	5.901E+00
1.50E+02	2.625E+00	1.057E-03	2.625E+00	2.625E+00	4.415E+00	1.845E+01	4.415E+00	4.415E+00	1.845E+01	4.415E+00	1.845E+01	1.845E+01	4.415E+00
2.00E+02	2.197E+00	8.709E-04	2.197E+00	2.197E+00	3.647E+00	1.671E+01	3.647E+00	3.647E+00	1.671E+01	3.647E+00	1.671E+01	1.671E+01	3.647E+00
3.00E+02	1.753E+00	7.288E-04	1.753E+00	1.753E+00	2.863E+00	1.627E+01	2.863E+00	2.863E+00	1.627E+01	2.863E+00	1.627E+01	1.627E+01	2.863E+00
4.00E+02	1.527E+00	6.459E-04	1.527E+00	1.527E+00	2.469E+00	1.607E+01	2.469E+00	2.469E+00	1.607E+01	2.469E+00	1.607E+01	1.607E+01	2.469E+00
5.00E+02	1.393E+00	5.892E-04	1.393E+00	1.393E+00	2.236E+00	1.616E+01	2.236E+00	2.236E+00	1.616E+01	2.236E+00	1.616E+01	1.616E+01	2.236E+00
6.00E+02	1.306E+00	5.366E-04	1.306E+00	1.306E+00	2.085E+00	1.631E+01	2.085E+00	2.085E+00	1.631E+01	2.085E+00	1.631E+01	1.631E+01	2.085E+00
7.00E+02	1.246E+00	4.966E-04	1.246E+00	1.246E+00	1.981E+00	1.647E+01	1.981E+00	1.981E+00	1.647E+01	1.981E+00	1.647E+01	1.647E+01	1.981E+00
8.00E+02	1.203E+00	4.641E-04	1.203E+00	1.203E+00	1.906E+00	1.663E+01	1.906E+00	1.906E+00	1.663E+01	1.906E+00	1.663E+01	1.663E+01	1.906E+00
9.00E+02	1.172E+00	4.390E-04	1.172E+00	1.172E+00	1.845E+00	1.678E+01	1.845E+00	1.845E+00	1.678E+01	1.845E+00	1.678E+01	1.678E+01	1.845E+00
1.00E+03	1.150E+00	4.155E-04	1.150E+00	1.150E+00	1.797E+00	1.692E+01	1.797E+00	1.797E+00	1.692E+01	1.797E+00	1.692E+01	1.692E+01	1.797E+00
1.50E+03	1.098E+00	3.849E-04	1.098E+00	1.098E+00	1.671E+00	1.705E+01	1.671E+00	1.671E+00	1.705E+01	1.671E+00	1.705E+01	1.705E+01	1.671E+00
2.00E+03	1.089E+00	3.647E-04	1.089E+00	1.089E+00	1.627E+00	1.631E+01	1.627E+00	1.627E+00	1.631E+01	1.627E+00	1.631E+01	1.631E+01	1.627E+00
3.00E+03	1.103E+00	3.459E-04	1.103E+00	1.103E+00	1.607E+00	1.647E+01	1.607E+00	1.607E+00	1.647E+01	1.607E+00	1.647E+01	1.647E+01	1.607E+00
4.00E+03	1.128E+00	3.288E-04	1.128E+00	1.128E+00	1.616E+00	1.663E+01	1.616E+00	1.616E+00	1.663E+01	1.616E+00	1.663E+01	1.663E+01	1.616E+00
5.00E+03	1.153E+00	3.137E-04	1.153E+00	1.153E+00	1.631E+00	1.678E+01	1.631E+00	1.631E+00	1.678E+01	1.631E+00	1.678E+01	1.678E+01	1.631E+00
6.00E+03	1.177E+00	3.000E-04	1.177E+00	1.177E+00	1.647E+00	1.692E+01	1.647E+00	1.647E+00	1.692E+01	1.647E+00	1.692E+01	1.692E+01	1.647E+00
7.00E+03	1.198E+00	2.863E-04	1.198E+00	1.198E+00	1.663E+00	1.705E+01	1.663E+00	1.663E+00	1.705E+01	1.663E+00	1.705E+01	1.705E+01	1.663E+00
8.00E+03	1.217E+00	2.744E-04	1.217E+00	1.217E+00	1.678E+00	1.718E+01	1.678E+00	1.678E+00	1.718E+01	1.678E+00	1.718E+01	1.718E+01	1.678E+00
9.00E+03	1.234E+00	2.643E-04	1.234E+00	1.234E+00	1.692E+00	1.731E+01	1.692E+00	1.692E+00	1.731E+01	1.692E+00	1.731E+01	1.731E+01	1.692E+00
1.00E+04	1.250E+00	2.557E-04	1.250E+00	1.250E+00	1.705E+00	1.744E+01	1.705E+00	1.705E+00	1.744E+01	1.705E+00	1.744E+01	1.744E+01	1.705E+00

 * Proton (5/5) *

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))
1.00E-05	7.555E+01	4.474E+01	1.203E+02	4.122E+01	5.298E+01	9.419E+01	6.648E+01	3.868E+01	1.052E+02
1.50E-05	8.399E+01	4.880E+01	1.328E+02	4.665E+01	5.745E+01	1.041E+02	7.405E+01	4.232E+01	1.164E+02
2.00E-05	9.056E+01	5.134E+01	1.419E+02	5.098E+01	6.017E+01	1.112E+02	7.997E+01	4.462E+01	1.246E+02
3.00E-05	1.007E+02	5.423E+01	1.550E+02	5.784E+01	6.312E+01	1.210E+02	8.915E+01	4.729E+01	1.364E+02
4.00E-05	1.087E+02	5.566E+01	1.643E+02	6.331E+01	6.444E+01	1.278E+02	9.633E+01	4.867E+01	1.450E+02
5.00E-05	1.153E+02	5.636E+01	1.716E+02	6.795E+01	6.494E+01	1.329E+02	1.023E+02	4.940E+01	1.517E+02
6.00E-05	1.210E+02	5.663E+01	1.776E+02	7.201E+01	6.500E+01	1.370E+02	1.075E+02	4.973E+01	1.572E+02
7.00E-05	1.260E+02	5.664E+01	1.826E+02	7.565E+01	6.478E+01	1.404E+02	1.121E+02	4.984E+01	1.619E+02
8.00E-05	1.305E+02	5.649E+01	1.870E+02	7.896E+01	6.440E+01	1.434E+02	1.162E+02	4.978E+01	1.660E+02
9.00E-05	1.347E+02	5.622E+01	1.909E+02	8.202E+01	6.391E+01	1.459E+02	1.200E+02	4.962E+01	1.697E+02
1.00E-04	1.385E+02	5.588E+01	1.944E+02	8.486E+01	6.335E+01	1.482E+02	1.235E+02	4.939E+01	1.729E+02
1.50E-04	1.544E+02	5.367E+01	2.080E+02	9.684E+01	6.022E+01	1.571E+02	1.495E+02	4.772E+01	1.858E+02
2.00E-04	1.667E+02	5.132E+01	2.180E+02	1.065E+02	5.714E+01	1.636E+02	1.672E+02	4.583E+01	1.953E+02
3.00E-04	1.860E+02	4.706E+01	2.330E+02	1.218E+02	5.185E+01	1.737E+02	1.812E+02	4.231E+01	2.096E+02
4.00E-04	2.010E+02	4.353E+01	2.445E+02	1.342E+02	4.763E+01	1.818E+02	1.929E+02	3.932E+01	2.297E+02
5.00E-04	2.136E+02	4.060E+01	2.525E+02	1.447E+02	4.421E+01	1.889E+02	2.031E+02	3.682E+01	2.497E+02
6.00E-04	2.244E+02	3.812E+01	2.625E+02	1.540E+02	4.136E+01	1.953E+02	2.031E+02	3.468E+01	2.697E+02
7.00E-04	2.341E+02	3.599E+01	2.701E+02	1.623E+02	3.895E+01	2.012E+02	2.121E+02	3.282E+01	2.849E+02
8.00E-04	2.428E+02	3.414E+01	2.769E+02	1.699E+02	3.687E+01	2.068E+02	2.203E+02	3.120E+01	2.977E+02
9.00E-04	2.507E+02	3.251E+01	2.832E+02	1.769E+02	3.505E+01	2.120E+02	2.277E+02	2.977E+01	3.067E+02
1.00E-03	2.581E+02	3.107E+01	2.891E+02	1.835E+02	3.345E+01	2.170E+02	2.347E+02	2.849E+01	3.164E+02
1.50E-03	2.886E+02	2.568E+01	3.143E+02	2.113E+02	2.753E+01	2.389E+02	2.635E+02	2.369E+01	3.383E+02
2.00E-03	3.125E+02	2.212E+01	3.347E+02	2.338E+02	2.367E+01	2.575E+02	2.862E+02	2.048E+01	3.640E+02
3.00E-03	3.499E+02	1.760E+01	3.675E+02	2.701E+02	1.881E+01	2.889E+02	3.220E+02	1.376E+01	3.859E+02
4.00E-03	3.794E+02	1.474E+01	3.941E+02	2.994E+02	1.572E+01	3.152E+02	3.502E+02	1.198E+01	4.053E+02
5.00E-03	4.040E+02	1.281E+01	4.168E+02	3.246E+02	1.366E+01	3.382E+02	3.740E+02	1.066E+01	4.227E+02
6.00E-03	4.254E+02	1.137E+01	4.368E+02	3.468E+02	1.213E+01	3.589E+02	3.946E+02	9.626E+00	4.387E+02
7.00E-03	4.444E+02	1.026E+01	4.547E+02	3.668E+02	1.094E+01	3.778E+02	4.131E+02	8.800E+00	4.534E+02
8.00E-03	4.616E+02	9.370E+00	4.710E+02	3.852E+02	9.925E+00	3.952E+02	4.299E+02	8.119E+00	4.671E+02
9.00E-03	4.774E+02	8.639E+00	4.861E+02	4.023E+02	9.212E+00	4.115E+02	4.452E+02	7.548E+00	4.839E+02
1.00E-02	4.920E+02	8.026E+00	5.001E+02	4.182E+02	8.558E+00	4.268E+02	4.595E+02	6.634E+00	5.024E+02
1.50E-02	5.529E+02	5.974E+00	5.589E+02	4.861E+02	6.398E+00	4.925E+02	5.192E+02	5.634E+00	5.712E+02
2.00E-02	6.010E+02	4.828E+00	6.058E+02	5.413E+02	5.171E+00	5.465E+02	5.667E+02	4.561E+00	6.395E+02
3.00E-02	6.729E+02	3.540E+00	6.765E+02	6.218E+02	3.780E+00	6.256E+02	6.361E+02	3.348E+00	6.839E+02
4.00E-02	7.214E+02	2.829E+00	7.242E+02	6.732E+02	3.022E+00	6.763E+02	6.813E+02	2.679E+00	7.152E+02
5.00E-02	7.553E+02	2.371E+00	7.576E+02	7.102E+02	2.514E+00	7.128E+02	7.130E+02	1.944E+00	7.367E+02
6.00E-02	7.783E+02	2.050E+00	7.804E+02	7.365E+02	2.191E+00	7.387E+02	7.348E+02	1.717E+00	7.505E+02
7.00E-02	7.930E+02	1.810E+00	7.948E+02	7.544E+02	1.935E+00	7.564E+02	7.488E+02	1.542E+00	7.583E+02
8.00E-02	8.010E+02	1.625E+00	8.027E+02	7.658E+02	1.737E+00	7.675E+02	7.575E+02	1.401E+00	7.612E+02
9.00E-02	8.038E+02	1.476E+00	8.053E+02	7.719E+02	1.578E+00	7.734E+02	7.598E+02	1.241E+00	7.612E+02

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-01	8.023E+02	1.354E+00	8.037E+02	7.737E+02	1.447E+00	7.752E+02	7.590E+02	1.286E+00	7.603E+02
1.50E-01	7.579E+02	9.680E-01	7.589E+02	7.445E+02	1.035E+00	7.455E+02	7.201E+02	9.202E-01	7.210E+02
2.00E-01	6.904E+02	7.630E-01	6.912E+02	6.883E+02	8.139E-01	6.891E+02	6.588E+02	7.237E-01	6.595E+02
3.00E-01	5.656E+02	5.400E-01	5.661E+02	5.742E+02	5.777E-01	5.748E+02	5.430E+02	5.141E-01	5.435E+02
4.00E-01	4.750E+02	4.224E-01	4.754E+02	4.854E+02	4.520E-01	4.859E+02	4.575E+02	4.023E-01	4.579E+02
5.00E-01	4.110E+02	3.488E-01	4.114E+02	4.203E+02	3.732E-01	4.207E+02	3.966E+02	3.323E-01	3.969E+02
6.00E-01	3.643E+02	2.980E-01	3.646E+02	3.719E+02	3.189E-01	3.723E+02	3.522E+02	2.840E-01	3.525E+02
7.00E-01	3.288E+02	2.608E-01	3.291E+02	3.350E+02	2.791E-01	3.352E+02	3.178E+02	2.486E-01	3.180E+02
8.00E-01	3.008E+02	2.322E-01	3.011E+02	3.058E+02	2.485E-01	3.060E+02	2.909E+02	2.214E-01	2.911E+02
9.00E-01	2.780E+02	2.096E-01	2.782E+02	2.822E+02	2.243E-01	2.824E+02	2.689E+02	1.999E-01	2.691E+02
1.00E+00	2.590E+02	1.912E-01	2.592E+02	2.625E+02	2.048E-01	2.627E+02	2.507E+02	1.823E-01	2.508E+02
1.50E+00	1.964E+02	1.340E-01	1.965E+02	1.985E+02	1.435E-01	1.986E+02	1.903E+02	1.279E-01	1.905E+02
2.00E+00	1.603E+02	1.040E-01	1.604E+02	1.621E+02	1.113E-01	1.622E+02	1.556E+02	9.927E-02	1.557E+02
3.00E+00	1.191E+02	7.261E-02	1.192E+02	1.206E+02	7.774E-02	1.207E+02	1.137E+02	6.933E-02	1.138E+02
4.00E+00	9.568E+01	5.620E-02	9.573E+01	9.708E+01	6.018E-02	9.714E+01	9.310E+01	5.368E-02	9.315E+01
5.00E+00	8.041E+01	4.604E-02	8.045E+01	8.172E+01	4.931E-02	8.176E+01	7.830E+01	4.399E-02	7.834E+01
6.00E+00	6.959E+01	3.910E-02	6.963E+01	7.081E+01	4.188E-02	7.086E+01	6.780E+01	3.737E-02	6.784E+01
7.00E+00	6.149E+01	3.405E-02	6.152E+01	6.264E+01	3.647E-02	6.268E+01	5.994E+01	3.254E-02	5.997E+01
8.00E+00	5.518E+01	3.020E-02	5.521E+01	5.627E+01	3.234E-02	5.630E+01	5.380E+01	2.886E-02	5.383E+01
9.00E+00	5.011E+01	2.716E-02	5.014E+01	5.114E+01	2.909E-02	5.117E+01	4.888E+01	2.596E-02	4.891E+01
1.00E+01	4.595E+01	2.470E-02	4.598E+01	4.693E+01	2.646E-02	4.696E+01	4.483E+01	2.361E-02	4.485E+01
1.50E+01	3.240E+01	1.700E-02	3.240E+01	3.316E+01	1.930E-02	3.316E+01	3.169E+01	1.690E-02	3.169E+01
2.00E+01	2.563E+01	1.300E-02	2.563E+01	2.624E+01	1.487E-02	2.624E+01	2.508E+01	1.280E-02	2.508E+01
3.00E+01	1.842E+01	9.00E-03	1.842E+01	1.887E+01	1.093E-02	1.887E+01	1.803E+01	8.00E-03	1.803E+01
4.00E+01	1.460E+01	6.800E-03	1.460E+01	1.496E+01	8.100E-03	1.496E+01	1.430E+01	6.00E-03	1.430E+01
5.00E+01	1.221E+01	5.600E-03	1.221E+01	1.251E+01	6.800E-03	1.251E+01	1.196E+01	5.00E-03	1.196E+01
6.00E+01	1.057E+01	4.800E-03	1.057E+01	1.083E+01	5.800E-03	1.083E+01	1.036E+01	4.300E-03	1.036E+01
7.00E+01	9.372E+00	4.200E-03	9.372E+00	9.606E+00	5.000E-03	9.606E+00	9.184E+00	3.800E-03	9.184E+00
8.00E+01	8.456E+00	3.700E-03	8.456E+00	8.667E+00	4.400E-03	8.667E+00	8.287E+00	3.400E-03	8.287E+00
9.00E+01	7.732E+00	3.300E-03	7.732E+00	7.925E+00	3.900E-03	7.925E+00	7.578E+00	3.000E-03	7.578E+00
1.00E+02	7.144E+00	3.000E-03	7.144E+00	7.324E+00	3.500E-03	7.324E+00	7.003E+00	2.700E-03	7.003E+00
1.50E+02	5.336E+00	2.200E-03	5.336E+00	5.471E+00	2.600E-03	5.471E+00	5.232E+00	2.000E-03	5.232E+00
2.00E+02	4.403E+00	1.800E-03	4.403E+00	4.515E+00	2.100E-03	4.515E+00	4.318E+00	1.600E-03	4.318E+00
3.00E+02	3.452E+00	1.400E-03	3.452E+00	3.540E+00	1.600E-03	3.540E+00	3.385E+00	1.200E-03	3.385E+00
4.00E+02	2.974E+00	1.100E-03	2.974E+00	3.050E+00	1.300E-03	3.050E+00	2.918E+00	1.000E-03	2.918E+00
5.00E+02	2.692E+00	9.00E-04	2.692E+00	2.761E+00	1.000E-03	2.761E+00	2.641E+00	8.00E-04	2.641E+00
6.00E+02	2.508E+00	8.00E-04	2.508E+00	2.573E+00	9.00E-04	2.573E+00	2.461E+00	7.00E-04	2.461E+00
7.00E+02	2.382E+00	7.00E-04	2.382E+00	2.443E+00	8.00E-04	2.443E+00	2.337E+00	6.00E-04	2.337E+00
8.00E+02	2.291E+00	6.00E-04	2.291E+00	2.350E+00	7.00E-04	2.350E+00	2.248E+00	5.00E-04	2.248E+00
9.00E+02	2.204E+00	5.00E-04	2.204E+00	2.271E+00	6.00E-04	2.271E+00	2.159E+00	4.00E-04	2.159E+00
1.00E+03	2.134E+00	4.00E-04	2.134E+00	2.209E+00	5.00E-04	2.209E+00	2.086E+00	3.00E-04	2.086E+00
1.50E+03	1.944E+00	3.00E-04	1.944E+00	2.042E+00	4.00E-04	2.042E+00	1.885E+00	2.00E-04	1.885E+00
2.00E+03	1.866E+00	2.500E-04	1.866E+00	1.981E+00	3.500E-04	1.981E+00	1.802E+00	1.500E-04	1.802E+00
3.00E+03	1.815E+00	2.000E-04	1.815E+00	1.948E+00	3.000E-04	1.948E+00	1.741E+00	1.000E-04	1.741E+00
4.00E+03	1.807E+00	1.800E-04	1.807E+00	1.953E+00	2.800E-04	1.953E+00	1.727E+00	9.00E-05	1.727E+00
5.00E+03	1.812E+00	1.812E-04	1.812E+00	1.968E+00	2.700E-04	1.968E+00	1.729E+00	8.00E-05	1.729E+00
6.00E+03	1.822E+00	1.822E-04	1.822E+00	1.985E+00	2.600E-04	1.985E+00	1.736E+00	7.00E-05	1.736E+00
7.00E+03	1.834E+00	1.834E-04	1.834E+00	2.002E+00	2.500E-04	2.002E+00	1.745E+00	6.00E-05	1.745E+00
8.00E+03	1.846E+00	1.846E-04	1.846E+00	2.019E+00	2.400E-04	2.019E+00	1.755E+00	5.00E-05	1.755E+00
9.00E+03	1.858E+00	1.858E-04	1.858E+00	2.035E+00	2.300E-04	2.035E+00	1.765E+00	4.00E-05	1.765E+00
1.00E+04	1.870E+00	1.870E-04	1.870E+00	2.049E+00	2.200E-04	2.049E+00	1.775E+00	3.00E-05	1.775E+00

 * Deuteron (1/5) *

target	Hydrogen			Helium			Beryllium			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-05	2.689E+02	5.417E+02	8.106E+02	8.106E+02	8.212E+01	1.244E+02	2.065E+02	1.007E+02	4.913E+01	1.499E+02
1.50E-05	2.976E+02	5.713E+02	8.688E+02	8.688E+02	9.088E+01	1.318E+02	2.227E+02	1.115E+02	5.350E+01	1.650E+02
2.00E-05	3.198E+02	5.853E+02	9.051E+02	9.051E+02	9.765E+01	1.355E+02	2.331E+02	1.198E+02	5.619E+01	1.760E+02
3.00E-05	3.539E+02	5.930E+02	9.470E+02	9.470E+02	1.081E+02	1.380E+02	2.461E+02	1.326E+02	5.917E+01	1.917E+02
4.00E-05	3.803E+02	5.888E+02	9.691E+02	9.691E+02	1.161E+02	1.376E+02	2.537E+02	1.424E+02	6.054E+01	2.030E+02
5.00E-05	4.022E+02	5.796E+02	9.818E+02	9.818E+02	1.238E+02	1.359E+02	2.587E+02	1.506E+02	6.111E+01	2.117E+02
6.00E-05	4.209E+02	5.683E+02	9.892E+02	9.892E+02	1.285E+02	1.337E+02	2.622E+02	1.576E+02	6.122E+01	2.189E+02
7.00E-05	4.375E+02	5.561E+02	9.935E+02	9.935E+02	1.336E+02	1.311E+02	2.647E+02	1.638E+02	6.104E+01	2.249E+02
8.00E-05	4.523E+02	5.436E+02	9.959E+02	9.959E+02	1.381E+02	1.285E+02	2.666E+02	1.694E+02	6.069E+01	2.301E+02
9.00E-05	4.658E+02	5.313E+02	9.971E+02	9.971E+02	1.422E+02	1.258E+02	2.681E+02	1.745E+02	6.021E+01	2.347E+02
1.00E-04	4.783E+02	5.193E+02	9.975E+02	9.975E+02	1.460E+02	1.232E+02	2.692E+02	1.791E+02	5.966E+01	2.388E+02
1.50E-04	5.293E+02	4.656E+02	9.949E+02	9.949E+02	1.616E+02	1.113E+02	2.729E+02	1.982E+02	5.646E+01	2.547E+02
2.00E-04	5.687E+02	4.225E+02	9.912E+02	9.912E+02	1.737E+02	1.014E+02	2.751E+02	2.130E+02	5.323E+01	2.662E+02
3.00E-04	6.294E+02	3.587E+02	9.881E+02	9.881E+02	1.922E+02	8.668E+01	2.789E+02	2.357E+02	4.761E+01	2.833E+02
4.00E-04	6.763E+02	3.138E+02	9.902E+02	9.902E+02	2.065E+02	7.615E+01	2.827E+02	2.533E+02	4.312E+01	2.964E+02
5.00E-04	7.152E+02	2.803E+02	9.954E+02	9.954E+02	2.184E+02	6.822E+01	2.865E+02	2.678E+02	3.950E+01	3.073E+02
6.00E-04	7.485E+02	2.542E+02	1.003E+03	1.003E+03	2.285E+02	6.201E+01	2.906E+02	2.803E+02	3.653E+01	3.169E+02
7.00E-04	7.779E+02	2.332E+02	1.011E+03	1.011E+03	2.375E+02	5.698E+01	2.945E+02	2.913E+02	3.403E+01	3.254E+02
8.00E-04	8.043E+02	2.158E+02	1.020E+03	1.020E+03	2.456E+02	5.282E+01	2.984E+02	3.012E+02	3.191E+01	3.331E+02
9.00E-04	8.284E+02	2.012E+02	1.030E+03	1.030E+03	2.529E+02	4.931E+01	3.022E+02	3.102E+02	3.007E+01	3.403E+02
1.00E-03	8.505E+02	1.887E+02	1.039E+03	1.039E+03	2.597E+02	4.630E+01	3.060E+02	3.185E+02	2.847E+01	3.470E+02
1.50E-03	9.412E+02	1.456E+02	1.087E+03	1.087E+03	2.874E+02	3.590E+01	3.233E+02	3.525E+02	2.272E+01	3.752E+02
2.00E-03	1.011E+03	1.202E+02	1.132E+03	1.132E+03	3.088E+02	2.967E+01	3.385E+02	3.788E+02	1.911E+01	3.979E+02
3.00E-03	1.119E+03	1.029E+02	1.209E+03	1.209E+03	3.418E+02	2.219E+01	3.639E+02	4.192E+02	1.475E+01	4.339E+02
4.00E-03	1.203E+03	7.280E+01	1.276E+03	1.276E+03	3.672E+02	1.805E+01	3.853E+02	4.504E+02	1.215E+01	4.626E+02
5.00E-03	1.272E+03	6.168E+01	1.333E+03	1.333E+03	3.883E+02	1.531E+01	4.036E+02	4.763E+02	1.040E+01	4.867E+02
6.00E-03	1.331E+03	5.374E+01	1.385E+03	1.385E+03	4.064E+02	1.335E+01	4.198E+02	4.985E+02	9.055E+00	5.076E+02
7.00E-03	1.383E+03	4.776E+01	1.431E+03	1.431E+03	4.224E+02	1.188E+01	4.343E+02	5.181E+02	8.101E+00	5.262E+02
8.00E-03	1.430E+03	4.308E+01	1.473E+03	1.473E+03	4.367E+02	1.072E+01	4.474E+02	5.357E+02	7.346E+00	5.430E+02
9.00E-03	1.473E+03	3.930E+01	1.512E+03	1.512E+03	4.498E+02	9.784E+00	4.596E+02	5.517E+02	6.732E+00	5.584E+02
1.00E-02	1.512E+03	3.618E+01	1.549E+03	1.549E+03	4.618E+02	9.012E+00	4.708E+02	5.664E+02	6.221E+00	5.726E+02
2.00E-02	1.799E+03	2.076E+01	1.700E+03	1.700E+03	5.110E+02	6.537E+00	5.176E+02	6.268E+02	4.564E+00	6.314E+02
3.00E-02	2.045E+03	1.488E+01	1.819E+03	1.819E+03	6.178E+02	3.720E+00	6.216E+02	7.241E+02	2.639E+00	7.268E+02
4.00E-02	2.267E+03	1.172E+01	2.278E+03	2.278E+03	6.778E+02	2.931E+00	6.807E+02	7.356E+02	2.090E+00	7.377E+02
5.00E-02	2.423E+03	9.718E+00	2.433E+03	2.433E+03	7.234E+02	2.432E+00	7.258E+02	7.360E+02	1.741E+00	7.377E+02
6.00E-02	2.529E+03	8.333E+00	2.537E+03	2.537E+03	7.583E+02	2.086E+00	7.604E+02	7.291E+02	1.498E+00	7.306E+02
7.00E-02	2.595E+03	7.312E+00	2.602E+03	2.602E+03	7.847E+02	1.831E+00	7.865E+02	7.176E+02	1.318E+00	7.189E+02
8.00E-02	2.630E+03	6.527E+00	2.636E+03	2.636E+03	8.040E+02	1.635E+00	8.056E+02	7.032E+02	1.179E+00	7.044E+02
9.00E-02	2.640E+03	5.902E+00	2.646E+03	2.646E+03	8.174E+02	1.479E+00	8.189E+02	6.870E+02	1.068E+00	6.880E+02

target	Energy (MeV/amu)	Hydrogen			Helium			Beryllium		
		Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	2.631E+03	5.393E+00	2.637E+03	8.259E+02	1.351E+00	8.273E+02	6.699E+02	9.774E-01	6.708E+02	
1.50E-01	2.429E+03	3.804E+00	2.432E+03	8.184E+02	9.539E-01	8.194E+02	5.863E+02	6.933E-01	5.870E+02	
2.00E-01	2.147E+03	2.964E+00	2.150E+03	7.677E+02	7.435E-01	7.684E+02	5.190E+02	5.422E-01	5.196E+02	
3.00E-01	1.673E+03	2.080E+00	1.675E+03	6.434E+02	5.221E-01	6.439E+02	4.280E+02	3.823E-01	4.284E+02	
4.00E-01	1.355E+03	1.616E+00	1.357E+03	5.406E+02	4.057E-01	5.410E+02	3.700E+02	2.978E-01	3.703E+02	
5.00E-01	1.143E+03	1.327E+00	1.144E+03	4.649E+02	3.332E-01	4.652E+02	3.288E+02	2.451E-01	3.290E+02	
6.00E-01	9.925E+02	9.825E+02	9.937E+02	4.092E+02	2.836E-01	4.092E+02	2.973E+02	2.090E-01	2.975E+02	
7.00E-01	8.812E+02	9.848E-01	8.822E+02	3.665E+02	2.474E-01	3.667E+02	2.722E+02	1.825E-01	2.724E+02	
8.00E-01	7.950E+02	8.746E-01	7.959E+02	3.331E+02	2.198E-01	3.334E+02	2.515E+02	1.623E-01	2.517E+02	
9.00E-01	7.262E+02	7.875E-01	7.269E+02	3.062E+02	1.979E-01	3.064E+02	2.341E+02	1.463E-01	2.342E+02	
1.00E+00	6.696E+02	7.168E-01	6.703E+02	2.840E+02	1.802E-01	2.841E+02	2.192E+02	1.333E-01	2.193E+02	
1.50E+00	4.895E+02	4.987E-01	4.900E+02	2.117E+02	1.254E-01	2.118E+02	1.678E+02	9.302E-02	1.679E+02	
2.00E+00	3.907E+02	3.851E-01	3.911E+02	1.709E+02	9.687E-02	1.710E+02	1.372E+02	7.198E-02	1.372E+02	
3.00E+00	2.826E+02	2.672E-01	2.829E+02	1.250E+02	6.722E-02	1.251E+02	1.016E+02	5.007E-02	1.017E+02	
4.00E+00	2.236E+02	2.059E-01	2.239E+02	9.940E+01	5.182E-02	9.945E+01	8.143E+01	3.866E-02	8.147E+01	
5.00E+00	1.861E+02	1.682E-01	1.862E+02	8.285E+01	4.233E-02	8.289E+01	6.826E+01	3.162E-02	6.829E+01	
6.00E+00	1.599E+02	1.425E-01	1.600E+02	7.123E+01	3.587E-02	7.125E+01	5.895E+01	2.682E-02	5.898E+01	
7.00E+00	1.405E+02	1.238E-01	1.406E+02	6.257E+01	3.118E-02	6.260E+01	5.200E+01	2.333E-02	5.202E+01	
8.00E+00	1.255E+02	1.096E-01	1.256E+02	5.587E+01	2.761E-02	5.590E+01	4.659E+01	2.067E-02	4.661E+01	
9.00E+00	1.136E+02	9.847E-02	1.137E+02	5.052E+01	2.479E-02	5.055E+01	4.226E+01	1.857E-02	4.228E+01	
1.00E+01	1.039E+02	8.944E-02	1.040E+02	4.614E+01	2.252E-02	4.617E+01	3.870E+01	1.688E-02	3.872E+01	
1.50E+01	7.187E+01	7.187E+01	7.187E+01	3.242E+01	3.242E+01	3.242E+01	2.692E+01	2.692E+01	2.692E+01	
2.00E+01	5.638E+01	5.638E+01	5.638E+01	2.554E+01	2.554E+01	2.554E+01	2.127E+01	2.127E+01	2.127E+01	
3.00E+01	4.012E+01	4.012E+01	4.012E+01	1.827E+01	1.827E+01	1.827E+01	1.528E+01	1.528E+01	1.528E+01	
4.00E+01	3.159E+01	3.159E+01	3.159E+01	1.444E+01	1.444E+01	1.444E+01	1.210E+01	1.210E+01	1.210E+01	
5.00E+01	2.631E+01	2.631E+01	2.631E+01	1.205E+01	1.205E+01	1.205E+01	1.012E+01	1.012E+01	1.012E+01	
6.00E+01	2.270E+01	2.270E+01	2.270E+01	1.042E+01	1.042E+01	1.042E+01	8.758E+00	8.758E+00	8.758E+00	
7.00E+01	2.007E+01	2.007E+01	2.007E+01	9.226E+00	9.226E+00	9.226E+00	7.763E+00	7.763E+00	7.763E+00	
8.00E+01	1.806E+01	1.806E+01	1.806E+01	8.316E+00	8.316E+00	8.316E+00	7.003E+00	7.003E+00	7.003E+00	
9.00E+01	1.649E+01	1.649E+01	1.649E+01	7.597E+00	7.597E+00	7.597E+00	6.403E+00	6.403E+00	6.403E+00	
1.00E+02	1.521E+01	1.521E+01	1.521E+01	7.015E+00	7.015E+00	7.015E+00	5.916E+00	5.916E+00	5.916E+00	
1.50E+02	1.129E+01	1.129E+01	1.129E+01	5.226E+00	5.226E+00	5.226E+00	4.417E+00	4.417E+00	4.417E+00	
2.00E+02	9.280E+00	9.280E+00	9.280E+00	4.305E+00	4.305E+00	4.305E+00	3.644E+00	3.644E+00	3.644E+00	
3.00E+02	7.238E+00	7.238E+00	7.238E+00	3.368E+00	3.368E+00	3.368E+00	2.856E+00	2.856E+00	2.856E+00	
4.00E+02	6.215E+00	6.215E+00	6.215E+00	2.898E+00	2.898E+00	2.898E+00	2.460E+00	2.460E+00	2.460E+00	
5.00E+02	5.610E+00	5.610E+00	5.610E+00	2.619E+00	2.619E+00	2.619E+00	2.226E+00	2.226E+00	2.226E+00	
6.00E+02	5.217E+00	5.217E+00	5.217E+00	2.439E+00	2.439E+00	2.439E+00	2.074E+00	2.074E+00	2.074E+00	
7.00E+02	4.944E+00	4.944E+00	4.944E+00	2.314E+00	2.314E+00	2.314E+00	1.969E+00	1.969E+00	1.969E+00	
8.00E+02	4.748E+00	4.748E+00	4.748E+00	2.224E+00	2.224E+00	2.224E+00	1.894E+00	1.894E+00	1.894E+00	
9.00E+02	4.602E+00	4.602E+00	4.602E+00	2.158E+00	2.158E+00	2.158E+00	1.834E+00	1.834E+00	1.834E+00	
1.00E+03	4.491E+00	4.491E+00	4.491E+00	2.107E+00	2.107E+00	2.107E+00	1.788E+00	1.788E+00	1.788E+00	
1.50E+03	4.212E+00	4.212E+00	4.212E+00	1.982E+00	1.982E+00	1.982E+00	1.666E+00	1.666E+00	1.666E+00	
2.00E+03	4.126E+00	4.126E+00	4.126E+00	1.946E+00	1.946E+00	1.946E+00	1.624E+00	1.624E+00	1.624E+00	
3.00E+03	4.121E+00	4.121E+00	4.121E+00	1.950E+00	1.950E+00	1.950E+00	1.606E+00	1.606E+00	1.606E+00	
4.00E+03	4.177E+00	4.177E+00	4.177E+00	1.981E+00	1.981E+00	1.981E+00	1.616E+00	1.616E+00	1.616E+00	
5.00E+03	4.246E+00	4.246E+00	4.246E+00	2.017E+00	2.017E+00	2.017E+00	1.631E+00	1.631E+00	1.631E+00	
6.00E+03	4.314E+00	4.314E+00	4.314E+00	2.052E+00	2.052E+00	2.052E+00	1.647E+00	1.647E+00	1.647E+00	
7.00E+03	4.378E+00	4.378E+00	4.378E+00	2.085E+00	2.085E+00	2.085E+00	1.664E+00	1.664E+00	1.664E+00	
8.00E+03	4.439E+00	4.439E+00	4.439E+00	2.115E+00	2.115E+00	2.115E+00	1.679E+00	1.679E+00	1.679E+00	
9.00E+03	4.495E+00	4.495E+00	4.495E+00	2.144E+00	2.144E+00	2.144E+00	1.693E+00	1.693E+00	1.693E+00	
1.00E+04	4.547E+00	4.547E+00	4.547E+00	2.170E+00	2.170E+00	2.170E+00	1.706E+00	1.706E+00	1.706E+00	

 * Deuteron (2/5) *

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	8.294E+01	3.705E+01	1.200E+02	1.218E+01	1.205E+01	2.423E+01	6.151E+00	3.548E+00	9.699E+00
1.50E-05	9.179E+01	4.107E+01	1.329E+02	1.462E+01	1.378E+01	2.839E+01	7.382E+00	4.164E+00	1.155E+01
2.00E-05	9.863E+01	4.372E+01	1.424E+02	1.664E+01	1.501E+01	3.165E+01	8.402E+00	4.627E+00	1.303E+01
3.00E-05	1.092E+02	4.700E+01	1.562E+02	1.997E+01	1.672E+01	3.668E+01	1.008E+01	5.303E+00	1.539E+01
4.00E-05	1.173E+02	4.887E+01	1.662E+02	2.278E+01	1.786E+01	4.058E+01	1.148E+01	5.789E+00	1.727E+01
5.00E-05	1.240E+02	5.000E+01	1.740E+02	2.513E+01	1.868E+01	4.380E+01	1.269E+01	6.164E+00	1.885E+01
6.00E-05	1.298E+02	5.068E+01	1.805E+02	2.728E+01	1.929E+01	4.657E+01	1.378E+01	6.463E+00	2.024E+01
7.00E-05	1.349E+02	5.106E+01	1.850E+02	2.924E+01	1.977E+01	4.900E+01	1.476E+01	6.710E+00	2.148E+01
8.00E-05	1.395E+02	5.123E+01	1.907E+02	3.105E+01	2.014E+01	5.119E+01	1.568E+01	6.918E+00	2.260E+01
9.00E-05	1.437E+02	5.127E+01	1.949E+02	3.274E+01	2.044E+01	5.317E+01	1.653E+01	7.095E+00	2.363E+01
1.00E-04	1.475E+02	5.120E+01	1.987E+02	3.433E+01	2.067E+01	5.500E+01	1.734E+01	7.248E+00	2.458E+01
1.50E-04	1.632E+02	5.001E+01	2.132E+02	4.120E+01	2.129E+01	6.249E+01	2.081E+01	7.774E+00	2.858E+01
2.00E-04	1.754E+02	4.827E+01	2.237E+02	4.689E+01	2.141E+01	6.830E+01	2.368E+01	8.069E+00	3.175E+01
3.00E-04	1.941E+02	4.466E+01	2.388E+02	5.628E+01	2.108E+01	7.735E+01	2.842E+01	8.343E+00	3.676E+01
4.00E-04	2.086E+02	4.142E+01	2.500E+02	6.403E+01	2.047E+01	8.452E+01	3.235E+01	8.417E+00	4.077E+01
5.00E-04	2.205E+02	3.863E+01	2.592E+02	7.082E+01	1.978E+01	9.060E+01	3.577E+01	8.396E+00	4.416E+01
6.00E-04	2.308E+02	3.622E+01	2.671E+02	7.687E+01	1.910E+01	9.598E+01	3.882E+01	8.325E+00	4.715E+01
7.00E-04	2.399E+02	3.414E+01	2.740E+02	8.240E+01	1.845E+01	1.008E+02	4.161E+01	8.227E+00	4.984E+01
8.00E-04	2.480E+02	3.231E+01	2.804E+02	8.750E+01	1.783E+01	1.053E+02	4.419E+01	8.113E+00	5.230E+01
9.00E-04	2.555E+02	3.070E+01	2.862E+02	9.226E+01	1.725E+01	1.095E+02	4.659E+01	7.991E+00	5.459E+01
1.00E-03	2.623E+02	2.927E+01	2.913E+02	9.674E+01	1.671E+01	1.134E+02	4.886E+01	7.866E+00	5.672E+01
1.50E-03	2.903E+02	2.395E+01	3.142E+02	1.161E+02	1.448E+01	1.306E+02	5.864E+01	7.250E+00	6.589E+01
2.00E-03	3.119E+02	2.046E+01	3.324E+02	1.322E+02	1.284E+01	1.450E+02	6.674E+01	6.705E+00	7.345E+01
3.00E-03	3.452E+02	1.609E+01	3.613E+02	1.586E+02	1.058E+01	1.692E+02	8.010E+01	5.841E+00	8.594E+01
4.00E-03	3.709E+02	1.341E+01	3.843E+02	1.805E+02	9.076E+00	1.896E+02	9.117E+01	5.197E+00	9.637E+01
5.00E-03	3.922E+02	1.158E+01	4.038E+02	1.996E+02	7.997E+00	2.076E+02	1.008E+02	4.699E+00	1.053E+02
6.00E-03	4.105E+02	1.023E+01	4.207E+02	2.167E+02	7.177E+00	2.238E+02	1.094E+02	4.301E+00	1.137E+02
7.00E-03	4.266E+02	9.198E+00	4.358E+02	2.322E+02	6.529E+00	2.388E+02	1.173E+02	3.975E+00	1.213E+02
8.00E-03	4.411E+02	8.373E+00	4.495E+02	2.466E+02	6.003E+00	2.526E+02	1.245E+02	3.702E+00	1.282E+02
9.00E-03	4.543E+02	7.628E+00	4.619E+02	2.600E+02	5.563E+00	2.656E+02	1.313E+02	3.469E+00	1.348E+02
1.00E-02	4.664E+02	7.071E+00	4.735E+02	2.727E+02	5.193E+00	2.779E+02	1.377E+02	3.268E+00	1.410E+02
1.50E-02	5.162E+02	5.243E+00	5.214E+02	3.272E+02	3.947E+00	3.312E+02	1.653E+02	2.564E+00	1.678E+02
2.00E-02	5.546E+02	4.213E+00	5.589E+02	3.725E+02	3.191E+00	3.757E+02	1.881E+02	2.134E+00	1.902E+02
3.00E-02	6.095E+02	3.073E+00	6.126E+02	4.321E+02	2.373E+00	4.344E+02	2.297E+02	1.625E+00	2.313E+02
4.00E-02	6.443E+02	2.445E+00	6.468E+02	4.588E+02	1.911E+00	4.670E+02	2.518E+02	1.316E+00	2.531E+02
5.00E-02	6.680E+02	2.043E+00	6.700E+02	4.724E+02	1.610E+00	4.741E+02	2.686E+02	1.121E+00	2.697E+02
6.00E-02	6.835E+02	1.762E+00	6.853E+02	4.773E+02	1.397E+00	4.787E+02	2.824E+02	9.807E-01	2.834E+02
7.00E-02	6.927E+02	1.554E+00	6.942E+02	4.762E+02	1.237E+00	4.775E+02	2.924E+02	8.743E-01	2.933E+02
8.00E-02	6.969E+02	1.392E+00	6.983E+02	4.714E+02	1.113E+00	4.726E+02	2.987E+02	7.905E-01	2.995E+02
9.00E-02	6.971E+02	1.263E+00	6.984E+02	4.644E+02	1.013E+00	4.654E+02	3.021E+02	7.227E-01	3.028E+02

target	Carbon			Aluminium			Iron		
	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	6.942E+02	1.157E+00	6.953E+02	4.560E+02	9.309E-01	4.569E+02	3.031E+02	6.665E-01	3.038E+02
1.50E-01	6.514E+02	8.243E-01	6.523E+02	4.110E+02	6.698E-01	4.117E+02	2.913E+02	4.857E-01	2.918E+02
2.00E-01	5.918E+02	6.463E-01	5.924E+02	3.733E+02	5.285E-01	3.738E+02	2.711E+02	3.863E-01	2.715E+02
3.00E-01	4.844E+02	4.573E-01	4.848E+02	3.193E+02	3.769E-01	3.196E+02	2.342E+02	2.782E-01	2.345E+02
4.00E-01	4.082E+02	3.570E-01	4.086E+02	2.817E+02	2.958E-01	2.819E+02	2.062E+02	2.196E-01	2.064E+02
5.00E-01	3.551E+02	2.944E-01	3.554E+02	2.532E+02	2.447E-01	2.535E+02	1.848E+02	1.825E-01	1.850E+02
6.00E-01	3.166E+02	2.512E-01	3.168E+02	2.307E+02	2.095E-01	2.310E+02	1.680E+02	1.568E-01	1.682E+02
7.00E-01	2.872E+02	2.197E-01	2.874E+02	2.124E+02	1.835E-01	2.126E+02	1.543E+02	1.377E-01	1.546E+02
8.00E-01	2.638E+02	1.953E-01	2.640E+02	1.971E+02	1.636E-01	1.972E+02	1.433E+02	1.231E-01	1.434E+02
9.00E-01	2.447E+02	1.763E-01	2.449E+02	1.840E+02	1.478E-01	1.842E+02	1.339E+02	1.114E-01	1.340E+02
1.00E+00	2.287E+02	1.607E-01	2.288E+02	1.728E+02	1.350E-01	1.730E+02	1.259E+02	1.019E-01	1.260E+02
1.50E+00	1.749E+02	1.124E-01	1.750E+02	1.338E+02	9.489E-02	1.339E+02	9.831E-01	7.204E-02	9.838E+01
2.00E+00	1.434E+02	8.714E-02	1.435E+02	1.103E+02	7.378E-02	1.104E+02	8.185E+01	5.623E-02	8.191E+01
3.00E+00	1.069E+02	6.073E-02	1.069E+02	8.234E+01	5.165E-02	8.239E+01	6.267E+01	3.955E-02	6.271E+01
4.00E+00	8.600E+01	4.696E-02	8.605E+01	6.723E+01	4.004E-02	6.727E+01	5.157E+01	3.076E-02	5.160E+01
5.00E+00	7.233E+01	3.844E-02	7.236E+01	5.692E+01	3.285E-02	5.695E+01	4.422E+01	2.529E-02	4.424E+01
6.00E+00	6.262E+01	3.262E-02	6.265E+01	4.958E+01	2.792E-02	4.961E+01	3.893E+01	2.154E-02	3.895E+01
7.00E+00	5.534E+01	2.839E-02	5.537E+01	4.407E+01	2.434E-02	4.409E+01	3.492E+01	1.880E-02	3.494E+01
8.00E+00	4.966E+01	2.517E-02	4.969E+01	3.976E+01	2.160E-02	3.978E+01	3.176E+01	1.671E-02	3.178E+01
9.00E+00	4.511E+01	2.263E-02	4.513E+01	3.628E+01	1.944E-02	3.630E+01	2.920E+01	1.505E-02	2.921E+01
1.00E+01	4.136E+01	2.057E-02	4.138E+01	3.342E+01	1.768E-02	3.343E+01	2.707E+01	1.371E-02	2.708E+01
1.50E+01	2.928E+01	1.600E-02	2.928E+01	2.453E+01	1.533E-02	2.453E+01	2.109E+01	1.109E-02	2.109E+01
2.00E+01	2.318E+01	1.218E-02	2.318E+01	1.958E+01	1.135E-02	1.958E+01	1.696E+01	8.169E-03	1.696E+01
3.00E+01	1.669E+01	8.444E-03	1.669E+01	1.423E+01	7.928E-03	1.423E+01	1.244E+01	5.844E-03	1.244E+01
4.00E+01	1.324E+01	6.463E-03	1.324E+01	1.135E+01	5.958E-03	1.135E+01	9.983E+00	4.444E-03	9.983E+00
5.00E+01	1.108E+01	5.534E-03	1.108E+01	9.541E+00	5.165E-03	9.541E+00	8.424E+00	3.844E-03	8.424E+00
6.00E+01	9.595E+00	4.839E-03	9.595E+00	8.289E+00	4.516E-03	8.289E+00	7.341E+00	3.416E-03	7.341E+00
7.00E+01	8.510E+00	4.316E-03	8.510E+00	7.370E+00	4.004E-03	7.370E+00	6.542E+00	3.076E-03	6.542E+00
8.00E+01	7.680E+00	3.966E-03	7.680E+00	6.664E+00	3.664E-03	6.664E+00	5.928E+00	2.828E-03	5.928E+00
9.00E+01	7.024E+00	3.649E-03	7.024E+00	6.106E+00	3.342E-03	6.106E+00	5.439E+00	2.543E-03	5.439E+00
1.00E+02	6.493E+00	3.342E-03	6.493E+00	5.651E+00	3.076E-03	5.651E+00	5.042E+00	2.342E-03	5.042E+00
1.50E+02	4.853E+00	2.444E-03	4.853E+00	4.246E+00	2.246E-03	4.246E+00	3.805E+00	1.746E-03	3.805E+00
2.00E+02	4.006E+00	2.006E-03	4.006E+00	3.516E+00	1.816E-03	3.516E+00	3.161E+00	1.416E-03	3.161E+00
3.00E+02	3.143E+00	1.543E-03	3.143E+00	2.769E+00	1.369E-03	2.769E+00	2.498E+00	1.069E-03	2.498E+00
4.00E+02	2.709E+00	1.342E-03	2.709E+00	2.394E+00	1.142E-03	2.394E+00	2.164E+00	9.142E-04	2.164E+00
5.00E+02	2.453E+00	1.142E-03	2.453E+00	2.171E+00	1.017E-03	2.171E+00	1.967E+00	8.171E-04	1.967E+00
6.00E+02	2.286E+00	1.017E-03	2.286E+00	2.027E+00	9.286E-04	2.027E+00	1.839E+00	7.286E-04	1.839E+00
7.00E+02	2.171E+00	9.286E-04	2.171E+00	1.928E+00	8.571E-04	1.928E+00	1.751E+00	6.571E-04	1.751E+00
8.00E+02	2.089E+00	8.571E-04	2.089E+00	1.857E+00	7.857E-04	1.857E+00	1.688E+00	6.857E-04	1.688E+00
9.00E+02	2.025E+00	7.857E-04	2.025E+00	1.802E+00	7.302E-04	1.802E+00	1.639E+00	6.302E-04	1.639E+00
1.00E+03	1.975E+00	7.302E-04	1.975E+00	1.759E+00	6.759E-04	1.759E+00	1.602E+00	5.759E-04	1.602E+00
1.50E+03	1.847E+00	6.759E-04	1.847E+00	1.651E+00	6.151E-04	1.651E+00	1.508E+00	5.151E-04	1.508E+00
2.00E+03	1.804E+00	6.151E-04	1.804E+00	1.618E+00	5.618E-04	1.618E+00	1.480E+00	4.618E-04	1.480E+00
3.00E+03	1.789E+00	5.618E-04	1.789E+00	1.613E+00	5.163E-04	1.613E+00	1.480E+00	4.163E-04	1.480E+00
4.00E+03	1.802E+00	5.163E-04	1.802E+00	1.632E+00	4.632E-04	1.632E+00	1.499E+00	3.632E-04	1.499E+00
5.00E+03	1.821E+00	4.632E-04	1.821E+00	1.655E+00	4.155E-04	1.655E+00	1.523E+00	3.155E-04	1.523E+00
6.00E+03	1.841E+00	4.155E-04	1.841E+00	1.678E+00	3.678E-04	1.678E+00	1.545E+00	2.678E-04	1.545E+00
7.00E+03	1.860E+00	3.678E-04	1.860E+00	1.700E+00	3.170E-04	1.700E+00	1.567E+00	2.170E-04	1.567E+00
8.00E+03	1.878E+00	3.170E-04	1.878E+00	1.738E+00	2.638E-04	1.738E+00	1.586E+00	1.638E-04	1.586E+00
9.00E+03	1.894E+00	2.638E-04	1.894E+00	1.773E+00	2.103E-04	1.773E+00	1.604E+00	1.103E-04	1.604E+00
1.00E+04	1.909E+00	2.103E-04	1.909E+00	1.755E+00	1.555E-04	1.755E+00	1.621E+00	5.55E-05	1.621E+00

 * Deuteron (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	4.417E+00	2.991E+00	7.408E+00	2.523E+00	5.213E-01	3.044E+00	2.917E+00	4.221E-01	3.339E+00
1.50E-05	5.302E+00	3.523E+00	8.825E+00	3.027E+00	6.327E-01	3.660E+00	3.500E+00	5.139E-01	4.014E+00
2.00E-05	6.034E+00	3.926E+00	9.961E+00	3.446E+00	7.214E-01	4.167E+00	3.984E+00	5.872E-01	4.571E+00
3.00E-05	7.242E+00	4.520E+00	1.176E+01	4.136E+00	8.594E-01	4.995E+00	4.782E+00	7.019E-01	5.483E+00
4.00E-05	8.243E+00	4.950E+00	1.319E+01	4.707E+00	9.660E-01	5.673E+00	5.442E+00	7.910E-01	6.233E+00
5.00E-05	9.114E+00	5.284E+00	1.440E+01	5.204E+00	1.053E+00	6.257E+00	6.017E+00	8.640E-01	6.881E+00
6.00E-05	9.893E+00	5.554E+00	1.543E+01	5.649E+00	1.126E+00	6.776E+00	6.532E+00	9.259E-01	7.458E+00
7.00E-05	1.060E+01	5.778E+00	1.638E+01	6.055E+00	1.190E+00	7.245E+00	7.001E+00	9.796E-01	7.981E+00
8.00E-05	1.126E+01	5.967E+00	1.723E+01	6.430E+00	1.246E+00	7.676E+00	7.435E+00	1.069E+00	8.462E+00
9.00E-05	1.187E+01	6.129E+00	1.802E+01	6.780E+00	1.295E+00	8.076E+00	7.839E+00	1.107E+00	8.908E+00
1.00E-04	1.245E+01	6.270E+00	1.872E+01	7.109E+00	1.340E+00	8.450E+00	8.220E+00	1.125E+00	9.327E+00
1.50E-04	1.494E+01	6.764E+00	2.171E+01	8.533E+00	1.512E+00	1.004E+01	9.865E+00	1.255E+00	1.112E+01
2.00E-04	1.701E+01	7.053E+00	2.406E+01	9.712E+00	1.632E+00	1.134E+01	1.123E+01	1.359E+00	1.259E+01
3.00E-04	2.041E+01	7.344E+00	2.776E+01	1.166E+01	1.791E+00	1.345E+01	1.348E+01	1.499E+00	1.498E+01
4.00E-04	2.323E+01	7.449E+00	3.068E+01	1.327E+01	1.961E+00	1.516E+01	1.534E+01	1.653E+00	1.693E+01
5.00E-04	2.569E+01	7.465E+00	3.315E+01	1.467E+01	1.892E+00	1.663E+01	1.696E+01	1.590E+00	1.861E+01
6.00E-04	2.788E+01	7.431E+00	3.531E+01	1.592E+01	2.010E+00	1.793E+01	1.841E+01	1.699E+00	2.011E+01
7.00E-04	2.989E+01	7.369E+00	3.725E+01	1.707E+01	2.043E+00	1.911E+01	1.973E+01	1.733E+00	2.146E+01
8.00E-04	3.174E+01	7.289E+00	3.903E+01	1.812E+01	2.071E+00	2.019E+01	2.095E+01	1.758E+00	2.271E+01
9.00E-04	3.346E+01	7.200E+00	4.066E+01	1.911E+01	2.089E+00	2.120E+01	2.209E+01	1.778E+00	2.387E+01
1.00E-03	3.509E+01	7.105E+00	4.219E+01	2.004E+01	2.102E+00	2.214E+01	2.317E+01	1.792E+00	2.496E+01
1.50E-03	4.211E+01	6.614E+00	4.873E+01	2.405E+01	2.119E+00	2.617E+01	2.780E+01	1.820E+00	2.962E+01
2.00E-03	4.793E+01	6.161E+00	5.409E+01	2.737E+01	2.095E+00	2.947E+01	3.165E+01	1.810E+00	3.346E+01
3.00E-03	5.753E+01	5.420E+00	6.295E+01	3.285E+01	2.009E+00	3.486E+01	3.798E+01	1.752E+00	3.973E+01
4.00E-03	6.548E+01	4.854E+00	7.033E+01	3.739E+01	1.913E+00	3.930E+01	4.323E+01	1.679E+00	4.491E+01
5.00E-03	7.239E+01	4.410E+00	7.681E+01	4.134E+01	1.820E+00	4.316E+01	4.780E+01	1.607E+00	4.940E+01
6.00E-03	7.858E+01	4.052E+00	8.264E+01	4.488E+01	1.733E+00	4.661E+01	5.188E+01	1.538E+00	5.342E+01
7.00E-03	8.423E+01	3.755E+00	8.799E+01	4.810E+01	1.658E+00	4.976E+01	5.561E+01	1.475E+00	5.709E+01
8.00E-03	8.943E+01	3.506E+00	9.295E+01	5.108E+01	1.587E+00	5.266E+01	5.905E+01	1.417E+00	6.047E+01
9.00E-03	9.431E+01	3.292E+00	9.761E+01	5.386E+01	1.523E+00	5.538E+01	6.227E+01	1.363E+00	6.363E+01
1.00E-02	9.889E+01	3.107E+00	1.020E+02	5.647E+01	1.464E+00	5.794E+01	6.529E+01	1.314E+00	6.661E+01
1.50E-02	1.187E+02	2.453E+00	1.211E+02	6.778E+01	1.236E+00	6.901E+01	7.836E+01	1.119E+00	7.948E+01
2.00E-02	1.351E+02	2.049E+00	1.371E+02	7.714E+01	1.077E+00	7.822E+01	8.919E+01	9.803E-01	9.017E+01
3.00E-02	1.598E+02	1.568E+00	1.614E+02	9.576E+01	8.680E-01	9.662E+01	1.031E+02	7.958E-01	1.039E+02
4.00E-02	1.768E+02	1.285E+00	1.781E+02	1.105E+02	7.347E-01	1.112E+02	1.103E+02	6.766E-01	1.110E+02
5.00E-02	1.897E+02	1.087E+00	1.908E+02	1.191E+02	6.411E-02	1.197E+02	1.157E+02	5.923E-01	1.163E+02
6.00E-02	1.995E+02	9.522E-01	2.004E+02	1.239E+02	5.712E-01	1.245E+02	1.198E+02	5.289E-01	1.203E+02
7.00E-02	2.068E+02	8.500E-01	2.004E+02	1.266E+02	5.166E-01	1.271E+02	1.229E+02	4.793E-01	1.234E+02
8.00E-02	2.121E+02	7.693E-01	2.129E+02	1.280E+02	4.727E-01	1.284E+02	1.252E+02	4.393E-01	1.257E+02
9.00E-02	2.158E+02	7.039E-01	2.165E+02	1.286E+02	4.365E-01	1.290E+02	1.269E+02	4.062E-01	1.273E+02

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	2.183E+02	6.497E-01	2.189E+02	1.286E+02	4.061E-01	1.291E+02	1.280E+02	3.783E-01	1.284E+02
1.50E-01	2.183E+02	4.746E-01	2.188E+02	1.253E+02	3.022E-01	1.256E+02	1.252E+02	2.825E-01	1.285E+02
2.00E-01	2.097E+02	3.780E-01	2.101E+02	1.196E+02	2.449E-01	1.199E+02	1.234E+02	2.295E-01	1.236E+02
3.00E-01	1.895E+02	2.727E-01	1.898E+02	1.079E+02	1.804E-01	1.080E+02	1.089E+02	1.696E-01	1.101E+02
4.00E-01	1.724E+02	2.156E-01	1.726E+02	9.782E+01	1.444E-01	9.779E+01	9.766E+01	1.360E-01	9.779E+01
5.00E-01	1.585E+02	1.793E-01	1.586E+02	8.962E+01	1.212E-01	8.974E+01	8.806E+01	1.143E-01	8.817E+01
6.00E-01	1.470E+02	1.541E-01	1.471E+02	8.289E+01	1.049E-01	8.300E+01	8.069E+01	8.896E-01	8.079E+01
7.00E-01	1.373E+02	1.354E-01	1.374E+02	7.730E+01	9.268E-02	7.739E+01	7.494E+01	8.753E-02	7.502E+01
8.00E-01	1.290E+02	1.211E-01	1.291E+02	7.256E+01	8.321E-02	7.265E+01	7.032E+01	7.863E-02	7.040E+01
9.00E-01	1.218E+02	1.096E-01	1.219E+02	6.851E+01	7.563E-02	6.858E+01	6.652E+01	7.150E-02	6.659E+01
1.00E+00	1.155E+02	1.003E-01	1.156E+02	6.499E+01	6.940E-02	6.506E+01	6.331E+01	6.564E-02	6.337E+01
1.50E+00	9.250E+01	7.100E-02	9.257E+01	5.253E+01	4.970E-02	5.258E+01	5.225E+01	4.708E-02	5.230E+01
2.00E+00	7.795E+01	5.945E-02	7.801E+01	4.481E+01	3.910E-02	4.485E+01	4.535E+01	3.707E-02	4.539E+01
3.00E+00	6.028E+01	3.904E-02	6.032E+01	3.552E+01	2.778E-02	3.555E+01	3.666E+01	2.637E-02	3.669E+01
4.00E+00	4.977E+01	3.038E-02	4.980E+01	2.997E+01	2.175E-02	2.999E+01	3.121E+01	2.066E-02	3.123E+01
5.00E+00	4.272E+01	2.499E-02	4.274E+01	2.621E+01	1.797E-02	2.623E+01	2.738E+01	1.708E-02	2.740E+01
6.00E+00	3.761E+01	2.129E-02	3.764E+01	2.346E+01	1.536E-02	2.347E+01	2.453E+01	1.460E-02	2.454E+01
7.00E+00	3.373E+01	1.859E-02	3.375E+01	2.134E+01	1.344E-02	2.135E+01	2.230E+01	1.279E-02	2.231E+01
8.00E+00	3.066E+01	1.652E-02	3.068E+01	1.964E+01	1.197E-02	1.966E+01	2.050E+01	1.139E-02	2.051E+01
9.00E+00	2.817E+01	1.489E-02	2.818E+01	1.825E+01	1.081E-02	1.826E+01	1.901E+01	1.029E-02	1.902E+01
1.00E+01	2.610E+01	1.356E-02	2.611E+01	1.709E+01	9.862E-03	1.710E+01	1.775E+01	9.389E-03	1.776E+01
1.50E+01	1.999E+01	1.000E-02	1.999E+01	1.384E+01	7.350E-03	1.384E+01	1.352E+01	7.000E-03	1.352E+01
2.00E+01	1.611E+01	7.500E-03	1.611E+01	1.136E+01	5.500E-03	1.136E+01	1.110E+01	5.200E-03	1.110E+01
3.00E+01	1.185E+01	5.500E-03	1.185E+01	8.539E+00	4.000E-03	8.539E+00	8.358E+00	3.800E-03	8.358E+00
4.00E+01	9.529E+00	4.000E-03	9.529E+00	6.957E+00	3.000E-03	6.957E+00	6.814E+00	2.800E-03	6.814E+00
5.00E+01	8.050E+00	3.000E-03	8.050E+00	5.931E+00	2.200E-03	5.931E+00	5.811E+00	2.100E-03	5.811E+00
6.00E+01	7.022E+00	2.200E-03	7.022E+00	5.208E+00	1.600E-03	5.208E+00	5.106E+00	1.500E-03	5.106E+00
7.00E+01	6.262E+00	1.600E-03	6.262E+00	4.669E+00	1.200E-03	4.669E+00	4.579E+00	1.100E-03	4.579E+00
8.00E+01	5.677E+00	1.200E-03	5.677E+00	4.250E+00	9.000E-04	4.250E+00	4.169E+00	8.500E-04	4.169E+00
9.00E+01	5.212E+00	9.000E-04	5.212E+00	3.916E+00	7.000E-04	3.916E+00	3.842E+00	6.500E-04	3.842E+00
1.00E+02	4.832E+00	7.000E-04	4.832E+00	3.641E+00	5.500E-04	3.641E+00	3.574E+00	5.000E-04	3.574E+00
1.50E+02	3.653E+00	5.000E-04	3.653E+00	2.780E+00	4.000E-04	2.780E+00	2.730E+00	3.800E-04	2.730E+00
2.00E+02	3.036E+00	4.000E-04	3.036E+00	2.325E+00	3.000E-04	2.325E+00	2.284E+00	2.800E-04	2.284E+00
3.00E+02	2.403E+00	3.000E-04	2.403E+00	1.853E+00	2.200E-04	1.853E+00	1.822E+00	2.100E-04	1.822E+00
4.00E+02	2.083E+00	2.200E-04	2.083E+00	1.613E+00	1.600E-04	1.613E+00	1.587E+00	1.500E-04	1.587E+00
5.00E+02	1.894E+00	1.600E-04	1.894E+00	1.470E+00	1.200E-04	1.470E+00	1.448E+00	1.100E-04	1.448E+00
6.00E+02	1.771E+00	1.200E-04	1.771E+00	1.378E+00	9.000E-05	1.378E+00	1.357E+00	8.500E-05	1.357E+00
7.00E+02	1.687E+00	9.000E-05	1.687E+00	1.314E+00	7.000E-05	1.314E+00	1.295E+00	6.500E-05	1.295E+00
8.00E+02	1.627E+00	7.000E-05	1.627E+00	1.268E+00	5.500E-05	1.268E+00	1.251E+00	5.000E-05	1.251E+00
9.00E+02	1.581E+00	5.500E-05	1.581E+00	1.235E+00	4.500E-05	1.235E+00	1.219E+00	4.000E-05	1.219E+00
1.00E+03	1.545E+00	4.000E-05	1.545E+00	1.210E+00	3.500E-05	1.210E+00	1.195E+00	3.000E-05	1.195E+00
1.50E+03	1.457E+00	3.000E-05	1.457E+00	1.150E+00	2.500E-05	1.150E+00	1.140E+00	2.000E-05	1.140E+00
2.00E+03	1.432E+00	2.200E-05	1.432E+00	1.137E+00	1.800E-05	1.137E+00	1.130E+00	1.500E-05	1.130E+00
3.00E+03	1.434E+00	1.600E-05	1.434E+00	1.148E+00	1.300E-05	1.148E+00	1.146E+00	1.000E-05	1.146E+00
4.00E+03	1.455E+00	1.000E-05	1.455E+00	1.172E+00	9.000E-06	1.172E+00	1.172E+00	8.000E-06	1.172E+00
5.00E+03	1.479E+00	7.000E-06	1.479E+00	1.196E+00	7.000E-06	1.196E+00	1.198E+00	6.000E-06	1.198E+00
6.00E+03	1.502E+00	5.000E-06	1.502E+00	1.219E+00	5.000E-06	1.219E+00	1.222E+00	4.000E-06	1.222E+00
7.00E+03	1.523E+00	4.000E-06	1.523E+00	1.240E+00	4.000E-06	1.240E+00	1.244E+00	3.000E-06	1.244E+00
8.00E+03	1.543E+00	3.000E-06	1.543E+00	1.259E+00	3.000E-06	1.259E+00	1.264E+00	2.000E-06	1.264E+00
9.00E+03	1.560E+00	2.200E-06	1.560E+00	1.276E+00	2.200E-06	1.276E+00	1.282E+00	1.500E-06	1.282E+00
1.00E+04	1.577E+00	1.600E-06	1.577E+00	1.292E+00	1.600E-06	1.292E+00	1.298E+00	1.000E-06	1.298E+00

 * Deuteron (4/5) *

Energy (MeV/amu)	Uranium			LiF(TLD-100)			LiF(TLD-700)		
	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	2.140E+00	3.296E-01	2.469E+00	2.770E+01	3.177E+01	5.947E+01	2.762E+01	3.153E+01	5.916E+01
1.50E-05	2.568E+00	4.025E-01	2.971E+00	3.132E+01	3.490E+01	6.622E+01	3.148E+01	3.500E+01	6.648E+01
2.00E-05	2.923E+00	4.610E-01	3.384E+00	3.420E+01	3.691E+01	7.111E+01	3.436E+01	3.701E+01	7.138E+01
3.00E-05	3.508E+00	5.531E-01	4.061E+00	3.875E+01	3.930E+01	7.805E+01	3.893E+01	3.940E+01	7.833E+01
4.00E-05	3.993E+00	6.251E-01	4.618E+00	4.238E+01	4.057E+01	8.295E+01	4.257E+01	4.068E+01	8.324E+01
5.00E-05	4.415E+00	6.844E-01	5.099E+00	4.544E+01	4.128E+01	8.672E+01	4.564E+01	4.138E+01	8.702E+01
6.00E-05	4.792E+00	7.348E-01	5.527E+00	4.813E+01	4.164E+01	8.977E+01	4.834E+01	4.174E+01	9.008E+01
7.00E-05	5.137E+00	7.788E-01	5.915E+00	5.054E+01	4.179E+01	9.233E+01	5.075E+01	4.188E+01	9.264E+01
8.00E-05	5.455E+00	8.176E-01	6.272E+00	5.273E+01	4.180E+01	9.452E+01	5.295E+01	4.189E+01	9.484E+01
9.00E-05	5.752E+00	8.525E-01	6.604E+00	5.474E+01	4.170E+01	9.645E+01	5.497E+01	4.179E+01	9.676E+01
1.00E-04	6.031E+00	8.840E-01	6.915E+00	5.662E+01	4.154E+01	9.816E+01	5.685E+01	4.163E+01	9.848E+01
1.50E-04	7.238E+00	1.007E+00	8.245E+00	6.452E+01	4.023E+01	1.047E+02	6.477E+01	4.030E+01	1.051E+02
2.00E-04	8.238E+00	1.095E+00	9.338E+00	7.085E+01	3.863E+01	1.095E+02	7.112E+01	3.871E+01	1.098E+02
3.00E-04	9.887E+00	1.214E+00	1.110E+01	8.096E+01	3.560E+01	1.166E+02	8.124E+01	3.565E+01	1.169E+02
4.00E-04	1.124E+01	1.293E+00	1.255E+01	8.907E+01	3.298E+01	1.221E+02	8.937E+01	3.303E+01	1.224E+02
5.00E-04	1.244E+01	1.349E+00	1.379E+01	9.597E+01	3.076E+01	1.267E+02	9.629E+01	3.080E+01	1.271E+02
6.00E-04	1.351E+01	1.390E+00	1.490E+01	1.020E+02	2.887E+01	1.309E+02	1.024E+02	2.890E+01	1.313E+02
7.00E-04	1.446E+01	1.422E+00	1.590E+01	1.075E+02	2.724E+01	1.347E+02	1.078E+02	2.726E+01	1.351E+02
8.00E-04	1.537E+01	1.446E+00	1.682E+01	1.125E+02	2.581E+01	1.383E+02	1.128E+02	2.583E+01	1.387E+02
9.00E-04	1.621E+01	1.465E+00	1.768E+01	1.171E+02	2.455E+01	1.417E+02	1.174E+02	2.457E+01	1.420E+02
1.00E-03	1.700E+01	1.480E+00	1.848E+01	1.214E+02	2.343E+01	1.448E+02	1.217E+02	2.345E+01	1.452E+02
1.50E-03	2.040E+01	1.516E+00	2.191E+01	1.396E+02	1.927E+01	1.589E+02	1.400E+02	1.928E+01	1.592E+02
2.00E-03	2.322E+01	1.517E+00	2.474E+01	1.543E+02	1.652E+01	1.708E+02	1.547E+02	1.653E+01	1.712E+02
3.00E-03	2.787E+01	1.483E+00	2.935E+01	1.779E+02	1.307E+01	1.910E+02	1.783E+02	1.307E+01	1.914E+02
4.00E-03	3.172E+01	1.432E+00	3.315E+01	1.970E+02	1.093E+01	2.080E+02	1.975E+02	1.094E+01	2.084E+02
5.00E-03	3.507E+01	1.379E+00	3.645E+01	2.134E+02	9.439E+00	2.228E+02	2.138E+02	9.442E+00	2.233E+02
6.00E-03	3.807E+01	1.326E+00	3.939E+01	2.279E+02	8.360E+00	2.362E+02	2.283E+02	8.363E+00	2.367E+02
7.00E-03	4.080E+01	1.277E+00	4.208E+01	2.409E+02	7.528E+00	2.484E+02	2.413E+02	7.530E+00	2.489E+02
8.00E-03	4.333E+01	1.231E+00	4.456E+01	2.528E+02	6.863E+00	2.597E+02	2.533E+02	6.864E+00	2.602E+02
9.00E-03	4.569E+01	1.188E+00	4.687E+01	2.639E+02	6.317E+00	2.702E+02	2.644E+02	6.319E+00	2.707E+02
1.00E-02	4.790E+01	1.148E+00	4.905E+01	2.743E+02	5.861E+00	2.801E+02	2.747E+02	5.862E+00	2.806E+02
1.50E-02	5.749E+01	9.876E-01	5.848E+01	3.183E+02	4.333E+00	3.226E+02	3.188E+02	4.334E+00	3.231E+02
2.00E-02	6.544E+01	8.713E-01	6.631E+01	3.541E+02	3.491E+00	3.576E+02	3.546E+02	3.492E+00	3.581E+02
3.00E-02	7.971E+01	7.133E-01	8.042E+01	4.041E+02	2.554E+00	4.067E+02	4.046E+02	2.555E+00	4.072E+02
4.00E-02	9.217E+01	6.097E-01	9.278E+01	4.347E+02	2.037E+00	4.367E+02	4.352E+02	2.037E+00	4.372E+02
5.00E-02	1.021E+02	5.356E-01	1.027E+02	4.575E+02	1.704E+00	4.592E+02	4.580E+02	1.704E+00	4.598E+02
6.00E-02	1.100E+02	4.797E-01	1.105E+02	4.746E+02	1.471E+00	4.761E+02	4.752E+02	1.471E+00	4.766E+02
7.00E-02	1.161E+02	4.357E-01	1.165E+02	4.873E+02	1.298E+00	4.886E+02	4.879E+02	1.298E+00	4.892E+02
8.00E-02	1.207E+02	4.000E-01	1.211E+02	4.964E+02	1.164E+00	4.976E+02	4.970E+02	1.164E+00	4.982E+02
9.00E-02	1.239E+02	3.704E-01	1.243E+02	5.026E+02	1.056E+00	5.037E+02	5.032E+02	1.056E+00	5.043E+02

target	Uranium				LiF(TLD-100)				7LiF(TLD-700)			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	1.262E+02	3.454E-01	1.265E+02	5.065E+02	9.685E-01	5.074E+02	5.070E+02	9.685E-01	5.080E+02			
1.50E-01	1.269E+02	2.615E-01	1.272E+02	5.017E+02	6.911E-01	5.024E+02	5.021E+02	6.910E-01	5.028E+02			
2.00E-01	1.200E+02	2.111E-01	1.202E+02	4.766E+02	5.424E-01	4.771E+02	4.770E+02	5.424E-01	4.775E+02			
3.00E-01	1.044E+02	1.565E-01	1.045E+02	4.142E+02	3.843E-01	4.146E+02	4.145E+02	3.843E-01	4.148E+02			
4.00E-01	9.252E+01	1.258E-01	9.264E+01	3.594E+02	3.003E-01	3.597E+02	3.596E+02	3.003E-01	3.599E+02			
5.00E-01	8.396E+01	1.059E-01	8.407E+01	3.163E+02	2.478E-01	3.166E+02	3.165E+02	2.477E-01	3.167E+02			
6.00E-01	7.748E+01	9.178E-02	7.757E+01	2.829E+02	2.116E-01	2.831E+02	2.830E+02	2.115E-01	2.832E+02			
7.00E-01	7.233E+01	8.124E-02	7.241E+01	2.566E+02	1.850E-01	2.568E+02	2.567E+02	1.850E-01	2.569E+02			
8.00E-01	6.808E+01	7.304E-02	6.815E+01	2.354E+02	1.647E-01	2.356E+02	2.355E+02	1.647E-01	2.357E+02			
9.00E-01	6.448E+01	6.645E-02	6.454E+01	2.180E+02	1.486E-01	2.181E+02	2.181E+02	1.486E-01	2.182E+02			
1.00E+00	6.137E+01	6.104E-02	6.143E+01	2.034E+02	1.355E-01	2.035E+02	2.035E+02	1.355E-01	2.036E+02			
1.50E+00	5.027E+01	4.386E-02	5.032E+01	1.551E+02	9.488E-02	1.552E+02	1.551E+02	9.487E-02	1.552E+02			
2.00E+00	4.324E+01	3.458E-02	4.328E+01	1.271E+02	7.358E-02	1.272E+02	1.272E+02	7.357E-02	1.272E+02			
3.00E+00	3.454E+01	2.463E-02	3.457E+01	9.501E+01	5.132E-02	9.507E+01	9.504E+01	5.131E-02	9.509E+01			
4.00E+00	2.923E+01	1.932E-02	2.924E+01	7.665E+01	3.970E-02	7.669E+01	7.667E+01	3.969E-02	7.671E+01			
5.00E+00	2.557E+01	1.597E-02	2.559E+01	6.459E+01	3.251E-02	6.462E+01	6.461E+01	3.250E-02	6.464E+01			
6.00E+00	2.288E+01	1.367E-02	2.290E+01	5.601E+01	2.760E-02	5.604E+01	5.603E+01	2.760E-02	5.605E+01			
7.00E+00	2.080E+01	1.197E-02	2.081E+01	4.957E+01	2.403E-02	4.959E+01	4.958E+01	2.402E-02	4.960E+01			
8.00E+00	1.913E+01	1.067E-02	1.914E+01	4.454E+01	2.130E-02	4.456E+01	4.454E+01	2.130E-02	4.457E+01			
9.00E+00	1.776E+01	9.639E-03	1.777E+01	4.049E+01	1.916E-02	4.051E+01	4.050E+01	1.915E-02	4.051E+01			
1.00E+01	1.661E+01	8.798E-03	1.662E+01	3.716E+01	1.742E-02	3.717E+01	3.716E+01	1.742E-02	3.718E+01			
1.50E+01	1.285E+01	6.444E-03	1.285E+01	2.644E+01	1.285E-02	2.644E+01	2.644E+01	1.285E-02	2.644E+01			
2.00E+01	1.057E+01	4.977E-03	1.057E+01	2.097E+01	9.77E-03	2.097E+01	2.097E+01	9.77E-03	2.097E+01			
3.00E+01	7.981E+00	3.617E-03	7.981E+00	1.512E+01	7.12E-03	1.512E+01	1.512E+01	7.12E-03	1.512E+01			
4.00E+01	6.517E+00	2.800E-03	6.517E+00	1.200E+01	5.65E-03	1.200E+01	1.200E+01	5.65E-03	1.200E+01			
5.00E+01	5.565E+00	2.355E-03	5.565E+00	1.005E+01	4.81E-03	1.005E+01	1.005E+01	4.81E-03	1.005E+01			
6.00E+01	4.894E+00	1.984E-03	4.894E+00	8.712E+00	4.12E-03	8.712E+00	8.712E+00	4.12E-03	8.712E+00			
7.00E+01	4.391E+00	1.730E-03	4.391E+00	7.730E+00	3.63E-03	7.730E+00	7.730E+00	3.63E-03	7.730E+00			
8.00E+01	4.001E+00	1.568E-03	4.001E+00	6.979E+00	3.25E-03	6.979E+00	6.979E+00	3.25E-03	6.979E+00			
9.00E+01	3.688E+00	1.432E-03	3.688E+00	6.385E+00	2.93E-03	6.385E+00	6.385E+00	2.93E-03	6.385E+00			
1.00E+02	3.432E+00	1.325E-03	3.432E+00	5.903E+00	2.76E-03	5.903E+00	5.903E+00	2.76E-03	5.903E+00			
2.00E+02	2.198E+00	8.41E-04	2.198E+00	4.416E+00	1.98E-03	4.416E+00	4.416E+00	1.98E-03	4.416E+00			
3.00E+02	1.754E+00	6.48E-04	1.754E+00	3.648E+00	1.53E-03	3.648E+00	3.648E+00	1.53E-03	3.648E+00			
4.00E+02	1.528E+00	5.28E-04	1.528E+00	2.863E+00	1.26E-03	2.863E+00	2.863E+00	1.26E-03	2.863E+00			
5.00E+02	1.393E+00	4.69E-04	1.393E+00	2.469E+00	1.08E-03	2.469E+00	2.469E+00	1.08E-03	2.469E+00			
6.00E+02	1.306E+00	4.23E-04	1.306E+00	2.236E+00	9.81E-04	2.236E+00	2.236E+00	9.81E-04	2.236E+00			
7.00E+02	1.246E+00	3.85E-04	1.246E+00	2.085E+00	9.06E-04	2.085E+00	2.085E+00	9.06E-04	2.085E+00			
8.00E+02	1.203E+00	3.56E-04	1.203E+00	1.981E+00	8.45E-04	1.981E+00	1.981E+00	8.45E-04	1.981E+00			
9.00E+02	1.172E+00	3.32E-04	1.172E+00	1.845E+00	7.97E-04	1.845E+00	1.845E+00	7.97E-04	1.845E+00			
1.00E+03	1.150E+00	3.15E-04	1.150E+00	1.797E+00	7.61E-04	1.797E+00	1.797E+00	7.61E-04	1.797E+00			
1.50E+03	1.098E+00	2.89E-04	1.098E+00	1.671E+00	7.12E-04	1.671E+00	1.671E+00	7.12E-04	1.671E+00			
2.00E+03	1.089E+00	2.77E-04	1.089E+00	1.627E+00	6.87E-04	1.627E+00	1.627E+00	6.87E-04	1.627E+00			
3.00E+03	1.103E+00	2.67E-04	1.103E+00	1.607E+00	6.70E-04	1.607E+00	1.607E+00	6.70E-04	1.607E+00			
4.00E+03	1.128E+00	2.58E-04	1.128E+00	1.616E+00	6.63E-04	1.616E+00	1.616E+00	6.63E-04	1.616E+00			
5.00E+03	1.153E+00	2.50E-04	1.153E+00	1.631E+00	6.56E-04	1.631E+00	1.631E+00	6.56E-04	1.631E+00			
6.00E+03	1.177E+00	2.43E-04	1.177E+00	1.647E+00	6.49E-04	1.647E+00	1.647E+00	6.49E-04	1.647E+00			
7.00E+03	1.198E+00	2.37E-04	1.198E+00	1.663E+00	6.43E-04	1.663E+00	1.663E+00	6.43E-04	1.663E+00			
8.00E+03	1.217E+00	2.31E-04	1.217E+00	1.678E+00	6.37E-04	1.678E+00	1.678E+00	6.37E-04	1.678E+00			
9.00E+03	1.234E+00	2.25E-04	1.234E+00	1.692E+00	6.31E-04	1.692E+00	1.692E+00	6.31E-04	1.692E+00			
1.00E+04	1.250E+00	2.20E-04	1.250E+00	1.705E+00	6.25E-04	1.705E+00	1.705E+00	6.25E-04	1.705E+00			

 * Deuteron (5/5) *

target	Phantom			Water			SSNTD		
	Electric	Nuclear	Total	Electric	Nuclear	Total	Electric	Nuclear	Total
Energy (MeV/amu)	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))
1.00E-05	7.555E+01	7.426E+01	1.498E+02	4.122E+01	8.326E+01	1.245E+02	6.648E+01	6.564E+01	1.321E+02
1.50E-05	8.399E+01	8.007E+01	1.641E+02	4.665E+01	8.933E+01	1.360E+02	7.405E+01	7.097E+01	1.450E+02
2.00E-05	9.056E+01	8.347E+01	1.740E+02	5.098E+01	9.278E+01	1.438E+02	7.997E+01	7.416E+01	1.541E+02
3.00E-05	1.007E+02	8.694E+01	1.877E+02	5.784E+01	9.608E+01	1.539E+02	8.915E+01	7.751E+01	1.667E+02
4.00E-05	1.087E+02	8.827E+01	1.969E+02	6.331E+01	9.712E+01	1.604E+02	9.633E+01	7.891E+01	1.752E+02
5.00E-05	1.153E+02	8.856E+01	2.038E+02	6.795E+01	9.709E+01	1.650E+02	1.023E+02	7.936E+01	1.817E+02
6.00E-05	1.210E+02	8.829E+01	2.092E+02	7.201E+01	9.650E+01	1.685E+02	1.075E+02	7.928E+01	1.868E+02
7.00E-05	1.260E+02	8.770E+01	2.137E+02	7.565E+01	9.559E+01	1.712E+02	1.121E+02	7.888E+01	1.910E+02
8.00E-05	1.305E+02	8.691E+01	2.175E+02	7.896E+01	9.452E+01	1.735E+02	1.162E+02	7.830E+01	1.945E+02
9.00E-05	1.347E+02	8.601E+01	2.207E+02	8.202E+01	9.334E+01	1.754E+02	1.200E+02	7.760E+01	1.976E+02
1.00E-04	1.385E+02	8.503E+01	2.236E+02	8.486E+01	9.212E+01	1.770E+02	1.235E+02	7.683E+01	2.004E+02
1.50E-04	1.544E+02	7.994E+01	2.343E+02	9.684E+01	8.602E+01	1.829E+02	1.381E+02	7.261E+01	2.107E+02
2.00E-04	1.667E+02	7.517E+01	2.419E+02	1.065E+02	8.054E+01	1.870E+02	1.495E+02	6.855E+01	2.180E+02
3.00E-04	1.860E+02	6.720E+01	2.532E+02	1.218E+02	7.164E+01	1.935E+02	1.672E+02	6.164E+01	2.289E+02
4.00E-04	2.010E+02	6.098E+01	2.620E+02	1.342E+02	6.483E+01	1.990E+02	1.812E+02	5.615E+01	2.374E+02
5.00E-04	2.136E+02	5.600E+01	2.696E+02	1.447E+02	5.945E+01	2.041E+02	1.929E+02	5.172E+01	2.446E+02
6.00E-04	2.244E+02	5.191E+01	2.763E+02	1.540E+02	5.505E+01	2.090E+02	2.031E+02	4.805E+01	2.511E+02
7.00E-04	2.341E+02	4.848E+01	2.825E+02	1.623E+02	5.138E+01	2.137E+02	2.121E+02	4.496E+01	2.571E+02
8.00E-04	2.428E+02	4.556E+01	2.883E+02	1.699E+02	4.827E+01	2.182E+02	2.203E+02	4.232E+01	2.626E+02
9.00E-04	2.507E+02	4.303E+01	2.938E+02	1.769E+02	4.557E+01	2.225E+02	2.277E+02	4.002E+01	2.678E+02
1.00E-03	2.581E+02	4.081E+01	2.989E+02	1.835E+02	4.322E+01	2.267E+02	2.347E+02	3.801E+01	2.727E+02
2.00E-03	3.125E+02	2.776E+01	3.403E+02	2.338E+02	2.941E+01	2.461E+02	2.635E+02	3.069E+01	2.942E+02
3.00E-03	3.499E+02	2.151E+01	3.715E+02	2.701E+02	2.278E+01	2.928E+02	2.862E+02	2.602E+01	3.123E+02
4.00E-03	3.794E+02	1.781E+01	3.972E+02	2.994E+02	1.887E+01	3.183E+02	3.502E+02	1.679E+01	3.670E+02
5.00E-03	4.040E+02	1.530E+01	4.193E+02	3.246E+02	1.622E+01	3.408E+02	3.740E+02	1.444E+01	3.884E+02
6.00E-03	4.254E+02	1.348E+01	4.389E+02	3.468E+02	1.429E+01	3.611E+02	3.946E+02	1.273E+01	4.074E+02
7.00E-03	4.444E+02	1.208E+01	4.565E+02	3.668E+02	1.281E+01	3.797E+02	4.131E+02	1.142E+01	4.245E+02
8.00E-03	4.616E+02	1.097E+01	4.726E+02	3.852E+02	1.164E+01	3.969E+02	4.299E+02	1.038E+01	4.402E+02
9.00E-03	4.774E+02	1.003E+01	4.875E+02	4.182E+02	9.891E+00	4.281E+02	4.595E+02	8.792E+00	4.547E+02
1.00E-02	4.920E+02	9.279E+00	5.013E+02	4.861E+02	7.260E+00	4.933E+02	5.192E+02	6.475E+00	4.683E+02
2.00E-02	6.010E+02	6.827E+00	5.597E+02	5.413E+02	5.819E+00	5.472E+02	5.667E+02	5.192E+00	5.257E+02
3.00E-02	6.729E+02	3.974E+00	6.065E+02	6.218E+02	4.231E+00	6.260E+02	6.361E+02	3.777E+00	6.399E+02
4.00E-02	7.214E+02	3.155E+00	7.245E+02	6.732E+02	3.360E+00	7.766E+02	6.813E+02	3.001E+00	6.843E+02
5.00E-02	7.553E+02	2.632E+00	7.795E+02	7.102E+02	2.604E+00	8.130E+02	7.130E+02	2.505E+00	7.155E+02
6.00E-02	7.783E+02	2.267E+00	7.806E+02	7.365E+02	2.416E+00	7.389E+02	7.348E+02	2.159E+00	7.369E+02
7.00E-02	7.930E+02	1.996E+00	7.950E+02	7.544E+02	2.128E+00	7.568E+02	7.488E+02	1.902E+00	7.507E+02
8.00E-02	8.010E+02	1.787E+00	8.028E+02	7.658E+02	1.906E+00	7.677E+02	7.567E+02	1.703E+00	7.584E+02
9.00E-02	8.038E+02	1.620E+00	8.054E+02	7.719E+02	1.728E+00	7.736E+02	7.598E+02	1.544E+00	7.613E+02

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-01	8.023E+02	1.484E+00	8.038E+02	7.737E+02	1.583E+00	7.753E+02	7.590E+02	1.414E+00	7.604E+02
1.50E-01	7.579E+02	1.055E+00	7.590E+02	7.445E+02	1.125E+00	7.456E+02	7.201E+02	1.006E+00	7.211E+02
2.00E-01	6.904E+02	8.260E-01	6.913E+02	6.883E+02	8.815E-01	6.892E+02	6.588E+02	7.882E-01	6.596E+02
3.00E-01	5.656E+02	5.834E-01	5.662E+02	5.742E+02	6.228E-01	5.749E+02	5.430E+02	5.570E-01	5.436E+02
4.00E-01	4.750E+02	4.550E-01	4.754E+02	4.854E+02	4.858E-01	4.859E+02	4.575E+02	4.346E-01	4.579E+02
5.00E-01	4.110E+02	3.748E-01	4.114E+02	4.203E+02	4.003E-01	4.207E+02	3.966E+02	3.581E-01	3.969E+02
6.00E-01	3.643E+02	3.197E-01	3.647E+02	3.719E+02	3.415E-01	3.723E+02	3.519E+02	3.055E-01	3.522E+02
7.00E-01	3.288E+02	2.794E-01	3.291E+02	3.350E+02	2.984E-01	3.353E+02	3.178E+02	2.670E-01	3.181E+02
8.00E-01	3.008E+02	2.485E-01	3.011E+02	3.058E+02	2.655E-01	3.061E+02	2.909E+02	2.375E-01	2.911E+02
9.00E-01	2.780E+02	2.241E-01	2.783E+02	2.822E+02	2.394E-01	2.824E+02	2.689E+02	2.142E-01	2.692E+02
1.00E+00	2.590E+02	2.042E-01	2.592E+02	2.625E+02	2.182E-01	2.628E+02	2.507E+02	1.952E-01	2.509E+02
1.50E+00	1.964E+02	1.427E-01	1.965E+02	1.985E+02	1.525E-01	1.987E+02	1.903E+02	1.365E-01	1.905E+02
2.00E+00	1.603E+02	1.105E-01	1.604E+02	1.621E+02	1.181E-01	1.622E+02	1.556E+02	1.057E-01	1.557E+02
3.00E+00	1.191E+02	7.695E-02	1.192E+02	1.206E+02	8.225E-02	1.207E+02	1.157E+02	7.363E-02	1.158E+02
4.00E+00	9.568E+01	5.945E-02	9.574E+01	9.708E+01	6.356E-02	9.714E+01	9.310E+01	5.690E-02	9.316E+01
5.00E+00	8.041E+01	4.864E-02	8.046E+01	8.172E+01	5.201E-02	8.177E+01	7.830E+01	4.657E-02	7.834E+01
6.00E+00	6.959E+01	4.127E-02	6.963E+01	7.081E+01	4.413E-02	7.086E+01	6.780E+01	3.951E-02	6.784E+01
7.00E+00	6.149E+01	3.591E-02	6.152E+01	6.264E+01	3.840E-02	6.268E+01	5.994E+01	3.438E-02	5.997E+01
8.00E+00	5.518E+01	3.183E-02	5.521E+01	5.627E+01	3.403E-02	5.630E+01	5.380E+01	3.048E-02	5.383E+01
9.00E+00	5.011E+01	2.861E-02	5.014E+01	5.114E+01	3.039E-02	5.117E+01	4.888E+01	2.740E-02	4.891E+01
1.00E+01	4.593E+01	2.600E-02	4.598E+01	4.693E+01	2.781E-02	4.696E+01	4.483E+01	2.490E-02	4.486E+01
1.50E+01	3.241E+01	1.845E-02	3.241E+01	3.317E+01	1.619E-02	3.317E+01	3.169E+01	1.699E-02	3.169E+01
2.00E+01	2.564E+01	1.460E-02	2.564E+01	2.625E+01	1.285E-02	2.625E+01	2.508E+01	1.285E-02	2.508E+01
3.00E+01	1.843E+01	1.060E-02	1.843E+01	1.888E+01	9.172E-03	1.888E+01	1.804E+01	9.172E-03	1.804E+01
4.00E+01	1.460E+01	8.041E-03	1.460E+01	1.496E+01	6.815E-03	1.496E+01	1.430E+01	6.815E-03	1.430E+01
5.00E+01	1.222E+01	6.959E-03	1.222E+01	1.252E+01	5.834E-03	1.252E+01	1.196E+01	5.834E-03	1.196E+01
6.00E+01	1.057E+01	6.008E-03	1.057E+01	1.084E+01	5.201E-03	1.084E+01	1.036E+01	5.201E-03	1.036E+01
7.00E+01	9.375E+00	5.518E-03	9.375E+00	9.609E+00	4.858E-03	9.609E+00	9.185E+00	4.858E-03	9.185E+00
8.00E+01	8.459E+00	5.011E-03	8.459E+00	8.670E+00	4.593E-03	8.670E+00	8.288E+00	4.593E-03	8.288E+00
9.00E+01	7.734E+00	4.593E-03	7.734E+00	7.928E+00	4.346E-03	7.928E+00	7.579E+00	4.346E-03	7.579E+00
1.00E+02	7.147E+00	4.110E-03	7.147E+00	7.326E+00	3.966E-03	7.326E+00	7.004E+00	3.966E-03	7.004E+00
1.50E+02	5.338E+00	3.241E-03	5.338E+00	5.473E+00	3.051E-03	5.473E+00	5.233E+00	3.051E-03	5.233E+00
2.00E+02	4.404E+00	2.780E-03	4.404E+00	4.516E+00	2.655E-03	4.516E+00	4.318E+00	2.655E-03	4.318E+00
3.00E+02	3.452E+00	2.241E-03	3.452E+00	3.541E+00	2.182E-03	3.541E+00	3.386E+00	2.182E-03	3.386E+00
4.00E+02	2.975E+00	1.964E-03	2.975E+00	3.051E+00	1.858E-03	3.051E+00	2.918E+00	1.858E-03	2.918E+00
5.00E+02	2.692E+00	1.603E-03	2.692E+00	2.761E+00	1.525E-03	2.761E+00	2.641E+00	1.525E-03	2.641E+00
6.00E+02	2.508E+00	1.427E-03	2.508E+00	2.573E+00	1.365E-03	2.573E+00	2.461E+00	1.365E-03	2.461E+00
7.00E+02	2.382E+00	1.278E-03	2.382E+00	2.443E+00	1.222E-03	2.443E+00	2.337E+00	1.222E-03	2.337E+00
8.00E+02	2.291E+00	1.191E-03	2.291E+00	2.350E+00	1.084E-03	2.350E+00	2.248E+00	1.084E-03	2.248E+00
9.00E+02	2.204E+00	1.105E-03	2.204E+00	2.271E+00	9.708E-04	2.271E+00	2.159E+00	9.708E-04	2.159E+00
1.00E+03	2.135E+00	1.057E-03	2.135E+00	2.209E+00	8.815E-04	2.209E+00	2.086E+00	8.815E-04	2.086E+00
1.50E+03	1.944E+00	8.041E-04	1.944E+00	2.043E+00	7.081E-04	2.043E+00	1.885E+00	7.081E-04	1.885E+00
2.00E+03	1.867E+00	7.695E-04	1.867E+00	1.981E+00	6.356E-04	1.981E+00	1.802E+00	6.356E-04	1.802E+00
3.00E+03	1.815E+00	7.201E-04	1.815E+00	1.948E+00	5.834E-04	1.948E+00	1.741E+00	5.834E-04	1.741E+00
4.00E+03	1.807E+00	6.959E-04	1.807E+00	1.953E+00	5.403E-04	1.953E+00	1.727E+00	5.403E-04	1.727E+00
5.00E+03	1.812E+00	6.608E-04	1.812E+00	1.968E+00	5.011E-04	1.968E+00	1.729E+00	5.011E-04	1.729E+00
6.00E+03	1.822E+00	6.346E-04	1.822E+00	1.985E+00	4.750E-04	1.985E+00	1.736E+00	4.750E-04	1.736E+00
7.00E+03	1.834E+00	6.149E-04	1.834E+00	1.985E+00	4.593E-04	1.985E+00	1.745E+00	4.593E-04	1.745E+00
8.00E+03	1.846E+00	6.008E-04	1.846E+00	2.002E+00	4.459E-04	2.002E+00	1.755E+00	4.459E-04	1.755E+00
9.00E+03	1.858E+00	5.938E-04	1.858E+00	2.019E+00	4.346E-04	2.019E+00	1.765E+00	4.346E-04	1.765E+00
1.00E+04	1.870E+00	5.834E-04	1.870E+00	2.034E+00	4.260E-04	2.034E+00	1.765E+00	4.260E-04	1.765E+00
1.50E+04	1.870E+00	5.834E-04	1.870E+00	2.049E+00	4.110E-04	2.049E+00	1.775E+00	4.110E-04	1.775E+00

 * Triton (1/5) *

target	Hydrogen			Helium			Beryllium		
	Electric (MeV/cm ²)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/cm ²)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/cm ²)	Nuclear (MeV/(g/cm ²))	Total
1.00E-05	2.689E+02	6.200E+02	8.889E+02	8.212E+01	1.659E+02	2.480E+02	1.007E+02	7.220E+01	1.729E+02
1.50E-05	2.976E+02	6.498E+02	9.474E+02	9.088E+01	1.734E+02	2.643E+02	1.115E+02	7.748E+01	1.889E+02
2.00E-05	3.198E+02	6.625E+02	9.823E+02	9.795E+01	1.764E+02	2.741E+02	1.198E+02	8.046E+01	2.002E+02
3.00E-05	3.539E+02	6.661E+02	1.020E+03	1.081E+02	1.769E+02	2.849E+02	1.326E+02	8.324E+01	2.158E+02
4.00E-05	3.803E+02	6.575E+02	1.038E+03	1.168E+02	1.741E+02	2.903E+02	1.424E+02	8.402E+01	2.265E+02
5.00E-05	4.022E+02	6.441E+02	1.046E+03	1.281E+02	1.703E+02	2.931E+02	1.506E+02	8.384E+01	2.345E+02
6.00E-05	4.209E+02	6.289E+02	1.050E+03	1.265E+02	1.660E+02	2.945E+02	1.576E+02	8.316E+01	2.408E+02
7.00E-05	4.375E+02	6.131E+02	1.051E+03	1.336E+02	1.616E+02	2.952E+02	1.638E+02	8.221E+01	2.460E+02
8.00E-05	4.523E+02	5.975E+02	1.050E+03	1.381E+02	1.573E+02	2.954E+02	1.694E+02	8.109E+01	2.505E+02
9.00E-05	4.658E+02	5.824E+02	1.048E+03	1.422E+02	1.531E+02	2.953E+02	1.745E+02	7.990E+01	2.544E+02
1.00E-04	4.783E+02	5.678E+02	1.046E+03	1.460E+02	1.491E+02	2.951E+02	1.791E+02	7.866E+01	2.578E+02
1.50E-04	5.293E+02	5.043E+02	1.034E+03	1.616E+02	1.319E+02	2.935E+02	1.982E+02	7.256E+01	2.708E+02
2.00E-04	5.687E+02	4.546E+02	1.023E+03	1.737E+02	1.186E+02	2.923E+02	2.130E+02	6.715E+01	2.802E+02
3.00E-04	6.294E+02	3.826E+02	1.012E+03	1.922E+02	9.952E+01	2.923E+02	2.357E+02	5.855E+01	2.943E+02
4.00E-04	6.763E+02	3.329E+02	1.009E+03	2.065E+02	8.639E+01	2.929E+02	2.533E+02	5.212E+01	3.054E+02
5.00E-04	7.152E+02	2.961E+02	1.011E+03	2.184E+02	7.674E+01	2.951E+02	2.678E+02	4.715E+01	3.150E+02
6.00E-04	7.485E+02	2.677E+02	1.016E+03	2.285E+02	6.930E+01	2.978E+02	2.803E+02	4.317E+01	3.235E+02
7.00E-04	7.779E+02	2.450E+02	1.023E+03	2.375E+02	6.336E+01	3.009E+02	2.913E+02	3.991E+01	3.312E+02
8.00E-04	8.043E+02	2.263E+02	1.031E+03	2.456E+02	5.848E+01	3.041E+02	3.012E+02	3.717E+01	3.384E+02
9.00E-04	8.284E+02	2.107E+02	1.039E+03	2.529E+02	5.440E+01	3.073E+02	3.102E+02	3.484E+01	3.451E+02
1.00E-03	8.505E+02	1.973E+02	1.048E+03	2.597E+02	5.093E+01	3.106E+02	3.185E+02	3.283E+01	3.513E+02
1.50E-03	9.412E+02	1.517E+02	1.093E+03	2.874E+02	3.908E+01	3.265E+02	3.525E+02	2.577E+01	3.783E+02
2.00E-03	1.011E+03	1.247E+02	1.136E+03	3.088E+02	3.209E+01	3.409E+02	3.788E+02	2.146E+01	4.002E+02
3.00E-03	1.119E+03	9.269E+01	1.212E+03	3.418E+02	2.382E+01	3.656E+02	4.192E+02	1.635E+01	4.355E+02
4.00E-03	1.203E+03	7.506E+01	1.278E+03	3.672E+02	1.927E+01	3.865E+02	4.504E+02	1.324E+01	4.637E+02
5.00E-03	1.272E+03	6.349E+01	1.335E+03	3.883E+02	1.629E+01	4.046E+02	4.763E+02	1.128E+01	4.876E+02
6.00E-03	1.331E+03	5.525E+01	1.385E+03	4.064E+02	1.417E+01	4.206E+02	4.985E+02	9.869E+00	5.084E+02
7.00E-03	1.383E+03	4.906E+01	1.432E+03	4.224E+02	1.258E+01	4.350E+02	5.181E+02	8.799E+00	5.269E+02
8.00E-03	1.430E+03	4.421E+01	1.475E+03	4.367E+02	1.133E+01	4.481E+02	5.357E+02	7.957E+00	5.436E+02
9.00E-03	1.473E+03	4.031E+01	1.513E+03	4.498E+02	1.033E+01	4.601E+02	5.517E+02	7.275E+00	5.590E+02
1.00E-02	1.512E+03	3.709E+01	1.549E+03	4.618E+02	9.500E+00	4.713E+02	5.664E+02	6.710E+00	5.731E+02
1.50E-02	1.674E+03	2.681E+01	1.701E+03	5.110E+02	6.862E+00	5.179E+02	6.268E+02	4.890E+00	6.317E+02
2.00E-02	1.799E+03	2.122E+01	1.820E+03	5.492E+02	5.428E+00	5.546E+02	6.736E+02	3.890E+00	6.775E+02
3.00E-02	2.045E+03	1.519E+01	2.060E+03	6.178E+02	3.893E+00	6.217E+02	7.241E+02	2.802E+00	7.269E+02
4.00E-02	2.267E+03	1.194E+01	2.279E+03	6.774E+02	3.053E+00	6.808E+02	7.356E+02	2.212E+00	7.378E+02
5.00E-02	2.423E+03	9.899E+00	2.433E+03	7.234E+02	2.530E+00	7.259E+02	7.360E+02	1.839E+00	7.378E+02
6.00E-02	2.529E+03	8.484E+00	2.537E+03	7.583E+02	2.167E+00	7.605E+02	7.291E+02	1.579E+00	7.307E+02
7.00E-02	2.595E+03	7.441E+00	2.602E+03	7.847E+02	1.901E+00	7.866E+02	7.176E+02	1.387E+00	7.190E+02
8.00E-02	2.630E+03	6.640E+00	2.636E+03	8.040E+02	1.696E+00	8.057E+02	7.032E+02	1.240E+00	7.044E+02
9.00E-02	2.640E+03	6.003E+00	2.646E+03	8.174E+02	1.533E+00	8.190E+02	6.870E+02	1.122E+00	6.881E+02

target	Hydrogen			Helium			Beryllium		
	Electric (MeV)	Nuclear (g/cm ²)	Total	Electric (MeV)	Nuclear (g/cm ²)	Total	Electric (MeV)	Nuclear (g/cm ²)	Total
1.00E-01	2.631E+03	5.484E+00	2.637E+03	8.259E+02	1.400E+00	8.273E+02	6.699E+02	1.026E+00	6.709E+02
1.50E-01	2.429E+03	3.864E+00	2.433E+03	8.184E+02	9.864E-01	8.194E+02	5.863E+02	7.259E-01	5.871E+02
2.00E-01	2.147E+03	3.009E+00	2.150E+03	7.677E+02	7.679E-01	7.684E+02	5.190E+02	5.666E-01	5.196E+02
3.00E-01	1.673E+03	2.110E+00	1.675E+03	6.434E+02	5.384E-01	6.440E+02	4.280E+02	3.986E-01	4.284E+02
4.00E-01	1.355E+03	1.638E+00	1.357E+03	5.406E+02	4.179E-01	5.411E+02	3.700E+02	3.100E-01	3.703E+02
5.00E-01	1.143E+03	1.345E+00	1.144E+03	4.646E+02	3.430E-01	4.652E+02	3.288E+02	2.549E-01	3.290E+02
6.00E-01	9.925E+02	1.144E+00	9.937E+02	4.089E+02	2.918E-01	4.092E+02	2.972E+02	2.171E-01	2.975E+02
7.00E-01	8.812E+02	8.859E-01	8.822E+02	3.665E+02	2.544E-01	3.667E+02	2.722E+02	1.895E-01	2.724E+02
8.00E-01	7.950E+02	7.977E-01	7.959E+02	3.331E+02	2.259E-01	3.334E+02	2.515E+02	1.684E-01	2.517E+02
9.00E-01	7.262E+02	7.975E-01	7.270E+02	3.062E+02	2.033E-01	3.064E+02	2.341E+02	1.517E-01	2.342E+02
1.00E+00	6.696E+02	7.259E-01	6.704E+02	2.840E+02	1.851E-01	2.842E+02	2.192E+02	1.382E-01	2.193E+02
1.50E+00	4.895E+02	5.048E-01	4.900E+02	2.117E+02	1.287E-01	2.118E+02	1.678E+02	9.628E-02	1.679E+02
2.00E+00	3.907E+02	3.897E-01	3.911E+02	1.709E+02	9.931E-02	1.710E+02	1.016E+02	5.170E-02	1.017E+02
3.00E+00	2.826E+02	2.702E-01	2.829E+02	1.250E+02	6.865E-02	1.251E+02	1.167E+02	3.989E-02	1.167E+02
4.00E+00	2.236E+02	2.082E-01	2.239E+02	9.940E-01	5.304E-02	9.945E+01	8.143E+01	3.989E-02	8.147E+01
5.00E+00	1.861E+02	1.700E-01	1.862E+02	8.285E+01	4.331E-02	8.289E+01	6.826E+01	3.260E-02	6.829E+01
6.00E+00	1.599E+02	1.440E-01	1.600E+02	7.122E+01	3.668E-02	7.126E+01	5.895E+01	2.763E-02	5.898E+01
7.00E+00	1.405E+02	1.251E-01	1.406E+02	6.257E+01	3.187E-02	6.260E+01	5.200E+01	2.403E-02	5.202E+01
8.00E+00	1.255E+02	1.108E-01	1.256E+02	5.587E+01	2.823E-02	5.590E+01	4.659E+01	2.128E-02	4.661E+01
9.00E+00	1.136E+02	9.948E-02	1.137E+02	5.052E+01	2.534E-02	5.055E+01	4.226E+01	1.912E-02	4.228E+01
1.00E+01	1.039E+02	9.034E-02	1.040E+02	4.614E+01	2.301E-02	4.617E+01	3.870E+01	1.737E-02	3.872E+01
1.50E+01	7.188E+01	7.188E+01	7.188E+01	3.242E+01	3.242E+01	3.242E+01	2.692E+01	2.692E+01	2.692E+01
2.00E+01	5.639E+01	5.639E+01	5.639E+01	2.554E+01	2.554E+01	2.554E+01	2.127E+01	2.127E+01	2.127E+01
3.00E+01	4.013E+01	4.013E+01	4.013E+01	1.827E+01	1.827E+01	1.827E+01	1.528E+01	1.528E+01	1.528E+01
4.00E+01	3.160E+01	3.160E+01	3.160E+01	1.444E+01	1.444E+01	1.444E+01	1.210E+01	1.210E+01	1.210E+01
5.00E+01	2.631E+01	2.631E+01	2.631E+01	1.205E+01	1.205E+01	1.205E+01	1.012E+01	1.012E+01	1.012E+01
6.00E+01	2.270E+01	2.270E+01	2.270E+01	1.042E+01	1.042E+01	1.042E+01	8.759E+00	8.759E+00	8.759E+00
7.00E+01	2.007E+01	2.007E+01	2.007E+01	9.227E+00	9.227E+00	9.227E+00	7.764E+00	7.764E+00	7.764E+00
8.00E+01	1.807E+01	1.807E+01	1.807E+01	8.316E+00	8.316E+00	8.316E+00	7.004E+00	7.004E+00	7.004E+00
9.00E+01	1.649E+01	1.649E+01	1.649E+01	7.598E+00	7.598E+00	7.598E+00	6.403E+00	6.403E+00	6.403E+00
1.00E+02	1.521E+01	1.521E+01	1.521E+01	7.016E+00	7.016E+00	7.016E+00	5.916E+00	5.916E+00	5.916E+00
1.50E+02	1.129E+01	1.129E+01	1.129E+01	5.227E+00	5.227E+00	5.227E+00	4.417E+00	4.417E+00	4.417E+00
2.00E+02	9.281E+00	9.281E+00	9.281E+00	4.305E+00	4.305E+00	4.305E+00	3.644E+00	3.644E+00	3.644E+00
3.00E+02	7.238E+00	7.238E+00	7.238E+00	3.368E+00	3.368E+00	3.368E+00	2.856E+00	2.856E+00	2.856E+00
4.00E+02	6.216E+00	6.216E+00	6.216E+00	2.898E+00	2.898E+00	2.898E+00	2.460E+00	2.460E+00	2.460E+00
5.00E+02	5.610E+00	5.610E+00	5.610E+00	2.620E+00	2.620E+00	2.620E+00	2.226E+00	2.226E+00	2.226E+00
6.00E+02	5.217E+00	5.217E+00	5.217E+00	2.439E+00	2.439E+00	2.439E+00	2.074E+00	2.074E+00	2.074E+00
7.00E+02	4.944E+00	4.944E+00	4.944E+00	2.314E+00	2.314E+00	2.314E+00	1.969E+00	1.969E+00	1.969E+00
8.00E+02	4.748E+00	4.748E+00	4.748E+00	2.224E+00	2.224E+00	2.224E+00	1.894E+00	1.894E+00	1.894E+00
9.00E+02	4.602E+00	4.602E+00	4.602E+00	2.158E+00	2.158E+00	2.158E+00	1.834E+00	1.834E+00	1.834E+00
1.00E+03	4.492E+00	4.492E+00	4.492E+00	2.107E+00	2.107E+00	2.107E+00	1.788E+00	1.788E+00	1.788E+00
1.50E+03	4.212E+00	4.212E+00	4.212E+00	1.982E+00	1.982E+00	1.982E+00	1.666E+00	1.666E+00	1.666E+00
2.00E+03	4.126E+00	4.126E+00	4.126E+00	1.946E+00	1.946E+00	1.946E+00	1.624E+00	1.624E+00	1.624E+00
3.00E+03	4.121E+00	4.121E+00	4.121E+00	1.950E+00	1.950E+00	1.950E+00	1.606E+00	1.606E+00	1.606E+00
4.00E+03	4.177E+00	4.177E+00	4.177E+00	1.981E+00	1.981E+00	1.981E+00	1.616E+00	1.616E+00	1.616E+00
5.00E+03	4.246E+00	4.246E+00	4.246E+00	2.016E+00	2.016E+00	2.016E+00	1.631E+00	1.631E+00	1.631E+00
6.00E+03	4.314E+00	4.314E+00	4.314E+00	2.052E+00	2.052E+00	2.052E+00	1.647E+00	1.647E+00	1.647E+00
7.00E+03	4.378E+00	4.378E+00	4.378E+00	2.085E+00	2.085E+00	2.085E+00	1.664E+00	1.664E+00	1.664E+00
8.00E+03	4.439E+00	4.439E+00	4.439E+00	2.115E+00	2.115E+00	2.115E+00	1.679E+00	1.679E+00	1.679E+00
9.00E+03	4.495E+00	4.495E+00	4.495E+00	2.144E+00	2.144E+00	2.144E+00	1.693E+00	1.693E+00	1.693E+00
1.00E+04	4.547E+00	4.547E+00	4.547E+00	2.170E+00	2.170E+00	2.170E+00	1.706E+00	1.706E+00	1.706E+00

 * Triton (2/5) *

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	8.294E+01	5.644E+01	1.394E+02	1.218E+01	1.972E+01	3.190E+01	6.151E+00	6.092E+00	1.224E+01
1.50E-05	9.179E+01	6.168E+01	1.535E+02	1.422E+01	2.224E+01	3.685E+01	7.382E+00	7.058E+00	1.444E+01
2.00E-05	9.863E+01	6.495E+01	1.636E+02	1.664E+01	2.398E+01	4.062E+01	8.402E+00	7.767E+00	1.617E+01
3.00E-05	1.092E+02	6.867E+01	1.778E+02	1.997E+01	2.629E+01	4.626E+01	1.008E+01	8.776E+00	1.886E+01
4.00E-05	1.173E+02	7.050E+01	1.878E+02	2.273E+01	2.776E+01	5.048E+01	1.148E+01	9.479E+00	2.096E+01
5.00E-05	1.240E+02	7.135E+01	1.954E+02	2.513E+01	2.875E+01	5.388E+01	1.269E+01	1.000E+01	2.269E+01
6.00E-05	1.298E+02	7.164E+01	2.014E+02	2.728E+01	2.945E+01	5.673E+01	1.378E+01	1.041E+01	2.419E+01
7.00E-05	1.349E+02	7.159E+01	2.065E+02	2.924E+01	2.996E+01	5.920E+01	1.476E+01	1.074E+01	2.551E+01
8.00E-05	1.395E+02	7.130E+01	2.108E+02	3.105E+01	3.032E+01	6.137E+01	1.568E+01	1.101E+01	2.669E+01
9.00E-05	1.437E+02	7.087E+01	2.145E+02	3.274E+01	3.058E+01	6.332E+01	1.653E+01	1.123E+01	2.777E+01
1.00E-04	1.475E+02	7.033E+01	2.178E+02	3.433E+01	3.077E+01	6.509E+01	1.734E+01	1.142E+01	2.876E+01
1.50E-04	1.632E+02	6.697E+01	2.388E+02	4.120E+01	3.097E+01	7.216E+01	2.081E+01	1.201E+01	3.282E+01
2.00E-04	1.754E+02	6.342E+01	2.602E+02	4.689E+01	3.059E+01	7.748E+01	2.368E+01	1.228E+01	3.596E+01
3.00E-04	1.941E+02	5.709E+01	2.512E+02	5.628E+01	2.929E+01	8.557E+01	2.842E+01	1.240E+01	4.082E+01
4.00E-04	2.086E+02	5.194E+01	2.605E+02	6.403E+01	2.786E+01	9.191E+01	3.235E+01	1.228E+01	4.463E+01
5.00E-04	2.205E+02	4.774E+01	2.683E+02	7.082E+01	2.648E+01	9.730E+01	3.577E+01	1.206E+01	4.783E+01
6.00E-04	2.308E+02	4.426E+01	2.731E+02	7.687E+01	2.523E+01	1.021E+02	3.882E+01	1.180E+01	5.063E+01
7.00E-04	2.399E+02	4.132E+01	2.812E+02	8.240E+01	2.408E+01	1.065E+02	4.161E+01	1.153E+01	5.314E+01
8.00E-04	2.480E+02	3.881E+01	2.859E+02	8.750E+01	2.305E+01	1.105E+02	4.419E+01	1.126E+01	5.545E+01
9.00E-04	2.555E+02	3.663E+01	2.921E+02	9.226E+01	2.210E+01	1.144E+02	4.659E+01	1.099E+01	5.758E+01
1.00E-03	2.623E+02	3.472E+01	2.970E+02	9.674E+01	2.125E+01	1.180E+02	4.866E+01	1.073E+01	5.958E+01
1.50E-03	2.903E+02	2.784E+01	3.181E+02	1.161E+02	1.790E+01	1.340E+02	5.864E+01	9.577E+00	6.821E+01
2.00E-03	3.119E+02	2.348E+01	3.354E+02	1.322E+02	1.559E+01	1.477E+02	6.674E+01	8.664E+00	7.540E+01
3.00E-03	3.452E+02	1.818E+01	3.634E+02	1.586E+02	1.235E+01	1.712E+02	8.010E+01	7.327E+00	8.743E+01
4.00E-03	3.709E+02	1.501E+01	3.859E+02	1.805E+02	1.061E+01	1.911E+02	9.117E+01	6.394E+00	9.756E+01
5.00E-03	3.922E+02	1.287E+01	4.051E+02	1.998E+02	9.256E+00	2.089E+02	1.008E+02	5.701E+00	1.065E+02
6.00E-03	4.105E+02	1.121E+01	4.217E+02	2.167E+02	8.243E+00	2.249E+02	1.094E+02	5.162E+00	1.146E+02
7.00E-03	4.266E+02	1.004E+01	4.367E+02	2.322E+02	7.454E+00	2.397E+02	1.173E+02	4.730E+00	1.220E+02
8.00E-03	4.411E+02	9.112E+00	4.502E+02	2.466E+02	6.819E+00	2.534E+02	1.245E+02	4.374E+00	1.289E+02
9.00E-03	4.543E+02	8.355E+00	4.626E+02	2.600E+02	6.296E+00	2.663E+02	1.313E+02	4.075E+00	1.354E+02
1.00E-02	4.664E+02	7.726E+00	4.741E+02	2.727E+02	5.856E+00	2.785E+02	1.377E+02	3.820E+00	1.415E+02
1.50E-02	5.162E+02	5.679E+00	5.218E+02	3.272E+02	4.355E+00	3.316E+02	1.653E+02	2.944E+00	1.682E+02
2.00E-02	5.546E+02	4.540E+00	5.592E+02	3.725E+02	3.528E+00	3.760E+02	1.881E+02	2.424E+00	1.905E+02
3.00E-02	6.095E+02	3.291E+00	6.128E+02	4.321E+02	2.597E+00	4.347E+02	2.297E+02	1.806E+00	2.315E+02
4.00E-02	6.443E+02	2.609E+00	6.469E+02	4.588E+02	2.079E+00	4.609E+02	2.518E+02	1.464E+00	2.532E+02
5.00E-02	6.680E+02	2.174E+00	6.702E+02	4.774E+02	1.744E+00	4.748E+02	2.686E+02	1.240E+00	2.698E+02
6.00E-02	6.835E+02	1.871E+00	6.854E+02	4.773E+02	1.509E+00	4.788E+02	2.824E+02	1.079E+00	2.835E+02
7.00E-02	6.927E+02	1.647E+00	6.943E+02	4.762E+02	1.333E+00	4.776E+02	2.924E+02	9.589E-01	2.934E+02
8.00E-02	6.969E+02	1.474E+00	6.984E+02	4.714E+02	1.197E+00	4.726E+02	2.987E+02	8.646E-01	2.996E+02
9.00E-02	6.971E+02	1.336E+00	6.984E+02	4.644E+02	1.088E+00	4.654E+02	3.021E+02	7.885E-01	3.028E+02

target	Carbon			Aluminium			Iron			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	6.942E+02	1.223E+00	1.223E+00	6.954E+02	4.560E+02	9.982E-01	4.570E+02	3.031E+02	7.258E-01	3.038E+02
1.50E-01	6.514E+02	8.679E-01	8.679E-01	6.523E+02	4.110E+02	7.146E-01	4.117E+02	2.913E+02	5.252E-01	2.918E+02
2.00E-01	5.918E+02	6.791E-01	6.791E-01	5.927E+02	3.733E+02	5.621E-01	3.739E+02	2.711E+02	4.159E-01	2.715E+02
3.00E-01	4.844E+02	4.791E-01	4.791E-01	4.849E+02	3.193E+02	3.993E-01	3.197E+02	2.342E+02	2.979E-01	2.345E+02
4.00E-01	4.082E+02	3.734E-01	3.734E-01	4.088E+02	2.817E+02	3.126E-01	2.820E+02	2.062E+02	2.344E-01	2.064E+02
5.00E-01	3.551E+02	3.074E-01	3.074E-01	3.556E+02	2.532E+02	2.582E-01	2.535E+02	1.848E+02	1.944E-01	1.850E+02
6.00E-01	3.166E+02	2.621E-01	2.621E-01	3.168E+02	2.307E+02	2.207E-01	2.310E+02	1.680E+02	1.666E-01	1.682E+02
7.00E-01	2.872E+02	2.290E-01	2.290E-01	2.874E+02	2.124E+02	1.931E-01	2.126E+02	1.545E+02	1.462E-01	1.546E+02
8.00E-01	2.638E+02	2.036E-01	2.036E-01	2.640E+02	1.971E+02	1.720E-01	1.972E+02	1.433E+02	1.305E-01	1.434E+02
9.00E-01	2.447E+02	1.836E-01	1.836E-01	2.449E+02	1.840E+02	1.553E-01	1.842E+02	1.339E+02	1.180E-01	1.340E+02
1.00E+00	2.287E+02	1.673E-01	1.673E-01	2.288E+02	1.728E+02	1.417E-01	1.730E+02	1.259E+02	1.078E-01	1.260E+02
1.50E+00	1.749E+02	1.168E-01	1.168E-01	1.750E+02	1.338E+02	9.937E-02	1.339E+02	9.831E+01	7.599E-02	9.838E+01
2.00E+00	1.434E+02	9.041E-02	9.041E-02	1.435E+02	1.103E+02	7.715E-02	1.104E+02	8.185E+01	5.919E-02	8.191E+01
3.00E+00	1.069E+02	6.291E-02	6.291E-02	1.069E+02	8.294E+01	5.389E-02	8.299E+01	6.287E+01	4.153E-02	6.271E+01
4.00E+00	8.600E+01	4.859E-02	4.859E-02	8.605E+01	6.723E+01	4.172E-02	6.727E+01	5.157E+01	3.225E-02	5.160E+01
5.00E+00	7.233E+01	3.975E-02	3.975E-02	7.237E+01	5.692E+01	3.419E-02	5.695E+01	4.422E+01	2.648E-02	4.424E+01
6.00E+00	6.262E+01	3.372E-02	3.372E-02	6.265E+01	4.958E+01	2.904E-02	4.961E+01	3.893E+01	2.253E-02	3.895E+01
7.00E+00	5.534E+01	2.933E-02	2.933E-02	5.537E+01	4.407E+01	2.530E-02	4.409E+01	3.492E+01	1.965E-02	3.494E+01
8.00E+00	4.968E+01	2.599E-02	2.599E-02	4.969E+01	3.976E+01	2.244E-02	3.978E+01	3.176E+01	1.745E-02	3.178E+01
9.00E+00	4.511E+01	2.336E-02	2.336E-02	4.513E+01	3.628E+01	2.018E-02	3.630E+01	2.920E+01	1.571E-02	2.921E+01
1.00E+01	4.136E+01	2.123E-02	2.123E-02	4.138E+01	3.342E+01	1.836E-02	3.343E+01	2.707E+01	1.430E-02	2.708E+01
1.50E+01	2.928E+01	1.500E-02	1.500E-02	2.928E+01	2.453E+01	1.360E-02	2.453E+01	2.109E+01	1.090E-02	2.109E+01
2.00E+01	2.319E+01	1.100E-02	1.100E-02	2.319E+01	1.958E+01	1.000E-02	1.958E+01	1.696E+01	8.000E-03	1.696E+01
3.00E+01	1.669E+01	7.500E-03	7.500E-03	1.669E+01	1.423E+01	5.500E-03	1.423E+01	1.244E+01	4.500E-03	1.244E+01
4.00E+01	1.324E+01	5.500E-03	5.500E-03	1.324E+01	1.135E+01	4.000E-03	1.135E+01	9.983E+00	3.000E-03	9.983E+00
5.00E+01	1.108E+01	4.500E-03	4.500E-03	1.108E+01	9.542E+00	3.500E-03	9.542E+00	8.425E+00	2.500E-03	8.425E+00
6.00E+01	9.596E+00	3.800E-03	3.800E-03	9.596E+00	8.290E+00	3.000E-03	8.290E+00	7.342E+00	2.500E-03	7.342E+00
7.00E+01	8.511E+00	3.300E-03	3.300E-03	8.511E+00	7.370E+00	2.600E-03	7.370E+00	6.543E+00	2.200E-03	6.543E+00
8.00E+01	7.681E+00	2.900E-03	2.900E-03	7.681E+00	6.665E+00	2.300E-03	6.665E+00	5.928E+00	1.900E-03	5.928E+00
9.00E+01	7.025E+00	2.600E-03	2.600E-03	7.025E+00	6.106E+00	2.100E-03	6.106E+00	5.440E+00	1.700E-03	5.440E+00
1.00E+02	6.493E+00	2.300E-03	2.300E-03	6.493E+00	5.652E+00	1.900E-03	5.652E+00	5.042E+00	1.500E-03	5.042E+00
1.50E+02	4.853E+00	1.700E-03	1.700E-03	4.853E+00	4.246E+00	1.400E-03	4.246E+00	3.806E+00	1.100E-03	3.806E+00
2.00E+02	4.007E+00	1.400E-03	1.400E-03	4.007E+00	3.516E+00	1.100E-03	3.516E+00	3.161E+00	9.000E-04	3.161E+00
3.00E+02	3.143E+00	1.100E-03	1.100E-03	3.143E+00	2.769E+00	8.000E-04	2.769E+00	2.498E+00	7.000E-04	2.498E+00
4.00E+02	2.709E+00	9.500E-04	9.500E-04	2.709E+00	2.394E+00	7.000E-04	2.394E+00	2.165E+00	6.000E-04	2.165E+00
5.00E+02	2.453E+00	8.500E-04	8.500E-04	2.453E+00	2.171E+00	6.000E-04	2.171E+00	1.967E+00	5.000E-04	1.967E+00
6.00E+02	2.286E+00	7.800E-04	7.800E-04	2.286E+00	2.027E+00	5.500E-04	2.027E+00	1.839E+00	4.500E-04	1.839E+00
7.00E+02	2.171E+00	7.200E-04	7.200E-04	2.171E+00	1.928E+00	5.000E-04	1.928E+00	1.751E+00	4.000E-04	1.751E+00
8.00E+02	2.089E+00	6.700E-04	6.700E-04	2.089E+00	1.857E+00	4.500E-04	1.857E+00	1.688E+00	3.500E-04	1.688E+00
9.00E+02	2.025E+00	6.300E-04	6.300E-04	2.025E+00	1.802E+00	4.200E-04	1.802E+00	1.639E+00	3.200E-04	1.639E+00
1.00E+03	1.975E+00	6.000E-04	6.000E-04	1.975E+00	1.759E+00	3.900E-04	1.759E+00	1.602E+00	3.000E-04	1.602E+00
1.50E+03	1.847E+00	5.600E-04	5.600E-04	1.847E+00	1.651E+00	3.600E-04	1.651E+00	1.508E+00	2.800E-04	1.508E+00
2.00E+03	1.804E+00	5.300E-04	5.300E-04	1.804E+00	1.618E+00	3.400E-04	1.618E+00	1.480E+00	2.700E-04	1.480E+00
3.00E+03	1.789E+00	5.100E-04	5.100E-04	1.789E+00	1.613E+00	3.300E-04	1.613E+00	1.480E+00	2.600E-04	1.480E+00
4.00E+03	1.802E+00	5.000E-04	5.000E-04	1.802E+00	1.632E+00	3.200E-04	1.632E+00	1.499E+00	2.500E-04	1.499E+00
5.00E+03	1.821E+00	4.900E-04	4.900E-04	1.821E+00	1.655E+00	3.100E-04	1.655E+00	1.523E+00	2.400E-04	1.523E+00
6.00E+03	1.841E+00	4.800E-04	4.800E-04	1.841E+00	1.678E+00	3.000E-04	1.678E+00	1.545E+00	2.300E-04	1.545E+00
7.00E+03	1.860E+00	4.700E-04	4.700E-04	1.860E+00	1.700E+00	2.900E-04	1.700E+00	1.567E+00	2.200E-04	1.567E+00
8.00E+03	1.878E+00	4.600E-04	4.600E-04	1.878E+00	1.720E+00	2.800E-04	1.720E+00	1.586E+00	2.100E-04	1.586E+00
9.00E+03	1.894E+00	4.500E-04	4.500E-04	1.894E+00	1.738E+00	2.700E-04	1.738E+00	1.604E+00	2.000E-04	1.604E+00
1.00E+04	1.909E+00	4.400E-04	4.400E-04	1.909E+00	1.755E+00	2.600E-04	1.755E+00	1.621E+00	1.900E-04	1.621E+00

 * Triton (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	4.417E+00	5.165E+00	9.583E+00	2.523E+00	9.393E-01	3.462E+00	2.917E+00	7.635E-01	3.680E+00
1.50E-03	5.302E+00	6.009E+00	1.131E+01	3.027E+00	1.128E+00	4.156E+00	3.500E+00	9.200E-01	4.420E+00
2.00E-05	6.034E+00	6.633E+00	1.267E+01	3.446E+00	1.276E+00	4.722E+00	3.984E+00	1.043E+00	5.027E+00
3.00E-05	7.242E+00	7.529E+00	1.477E+01	4.136E+00	1.502E+00	5.638E+00	4.782E+00	1.232E+00	6.014E+00
4.00E-05	8.243E+00	8.160E+00	1.640E+01	4.707E+00	1.673E+00	6.381E+00	5.442E+00	1.377E+00	6.819E+00
5.00E-05	9.114E+00	8.636E+00	1.775E+01	5.204E+00	1.811E+00	7.015E+00	6.017E+00	1.493E+00	7.510E+00
6.00E-05	9.893E+00	9.011E+00	1.890E+01	5.649E+00	1.925E+00	7.574E+00	6.532E+00	1.590E+00	8.122E+00
7.00E-05	1.060E+01	9.314E+00	1.992E+01	6.055E+00	2.022E+00	8.078E+00	7.001E+00	1.673E+00	8.674E+00
8.00E-05	1.126E+01	9.565E+00	2.083E+01	6.430E+00	2.107E+00	8.537E+00	7.435E+00	1.746E+00	9.180E+00
9.00E-05	1.187E+01	9.775E+00	2.165E+01	6.780E+00	2.182E+00	8.962E+00	7.839E+00	1.810E+00	9.649E+00
1.00E-04	1.245E+01	9.954E+00	2.240E+01	7.109E+00	2.248E+00	9.358E+00	8.220E+00	1.867E+00	1.009E+01
1.50E-04	1.494E+01	1.053E+01	2.548E+01	8.533E+00	2.498E+00	1.103E+01	9.865E+00	2.085E+00	1.195E+01
2.00E-04	1.701E+01	1.082E+01	2.783E+01	9.712E+00	2.663E+00	1.238E+01	1.123E+01	2.231E+00	1.346E+01
3.00E-04	2.041E+01	1.101E+01	3.142E+01	1.166E+01	2.870E+00	1.453E+01	1.348E+01	2.418E+00	1.589E+01
4.00E-04	2.323E+01	1.097E+01	3.420E+01	1.327E+01	2.990E+00	1.626E+01	1.534E+01	2.530E+00	1.787E+01
5.00E-04	2.569E+01	1.083E+01	3.652E+01	1.467E+01	3.064E+00	1.773E+01	1.696E+01	2.601E+00	1.956E+01
6.00E-04	2.788E+01	1.064E+01	3.853E+01	1.592E+01	3.110E+00	1.903E+01	1.841E+01	2.648E+00	2.106E+01
7.00E-04	2.989E+01	1.044E+01	4.032E+01	1.707E+01	3.137E+00	2.020E+01	1.973E+01	2.678E+00	2.241E+01
8.00E-04	3.174E+01	1.022E+01	4.196E+01	1.812E+01	3.152E+00	2.127E+01	2.095E+01	2.697E+00	2.365E+01
9.00E-04	3.346E+01	1.001E+01	4.347E+01	1.911E+01	3.157E+00	2.227E+01	2.209E+01	2.708E+00	2.480E+01
1.00E-03	3.509E+01	9.794E+00	4.488E+01	2.004E+01	3.156E+00	2.319E+01	2.317E+01	2.712E+00	2.588E+01
1.50E-03	4.211E+01	8.832E+00	5.094E+01	2.405E+01	3.094E+00	2.714E+01	2.780E+01	2.682E+00	3.049E+01
2.00E-03	4.793E+01	8.044E+00	5.598E+01	2.737E+01	2.995E+00	3.037E+01	3.165E+01	2.613E+00	3.426E+01
3.00E-03	5.753E+01	6.865E+00	6.439E+01	3.285E+01	2.783E+00	3.563E+01	3.798E+01	2.451E+00	4.043E+01
4.00E-03	6.548E+01	6.026E+00	7.150E+01	3.739E+01	2.590E+00	3.998E+01	4.323E+01	2.296E+00	4.555E+01
5.00E-03	7.239E+01	5.395E+00	7.779E+01	4.134E+01	2.421E+00	4.376E+01	4.780E+01	2.158E+00	4.996E+01
6.00E-03	7.858E+01	4.901E+00	8.349E+01	4.488E+01	2.274E+00	4.715E+01	5.188E+01	2.036E+00	5.392E+01
7.00E-03	8.423E+01	4.503E+00	8.873E+01	4.810E+01	2.146E+00	5.024E+01	5.561E+01	1.928E+00	5.754E+01
8.00E-03	8.945E+01	4.173E+00	9.362E+01	5.108E+01	2.034E+00	5.311E+01	5.905E+01	1.833E+00	6.089E+01
9.00E-03	9.431E+01	3.894E+00	9.821E+01	5.386E+01	1.935E+00	5.579E+01	6.227E+01	1.748E+00	6.402E+01
1.00E-02	9.889E+01	3.656E+00	1.025E+02	5.647E+01	1.847E+00	5.832E+01	6.529E+01	1.672E+00	6.696E+01
1.50E-02	1.187E+02	2.833E+00	1.215E+02	6.778E+01	1.516E+00	6.929E+01	7.836E+01	1.383E+00	7.975E+01
2.00E-02	1.351E+02	2.340E+00	1.374E+02	7.714E+01	1.298E+00	7.844E+01	8.919E+01	1.190E+00	9.038E+01
3.00E-02	1.598E+02	1.749E+00	1.616E+02	9.576E+01	1.023E+00	9.678E+01	1.031E+02	9.443E-01	1.041E+02
4.00E-02	1.768E+02	1.422E+00	1.782E+02	1.105E+02	8.546E-01	1.113E+02	1.103E+02	7.915E-01	1.111E+02
5.00E-02	1.897E+02	1.206E+00	1.909E+02	1.191E+02	7.386E-01	1.198E+02	1.157E+02	6.859E-01	1.164E+02
6.00E-02	1.995E+02	1.052E+00	2.005E+02	1.239E+02	6.533E-01	1.246E+02	1.198E+02	6.079E-01	1.204E+02
7.00E-02	2.068E+02	9.352E-01	2.077E+02	1.266E+02	5.877E-01	1.272E+02	1.229E+02	5.477E-01	1.235E+02
8.00E-02	2.121E+02	8.439E-01	2.130E+02	1.280E+02	5.353E-01	1.285E+02	1.252E+02	4.995E-01	1.257E+02
9.00E-02	2.158E+02	7.702E-01	2.166E+02	1.286E+02	4.878E-01	1.291E+02	1.269E+02	4.600E-01	1.274E+02

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-01	2.183E+02	7.093E-01	2.190E+02	1.286E+02	4.524E-01	1.291E+02	1.280E+02	4.229E-01	1.285E+02
1.50E-01	2.183E+02	5.143E-01	2.188E+02	1.253E+02	3.359E-01	1.256E+02	1.282E+02	3.151E-01	1.285E+02
2.00E-01	2.097E+02	4.078E-01	2.101E+02	1.196E+02	2.702E-01	1.199E+02	1.234E+02	2.540E-01	1.236E+02
3.00E-01	1.895E+02	2.926E-01	1.898E+02	1.079E+02	1.973E-01	1.081E+02	1.099E+02	1.859E-01	1.101E+02
4.00E-01	1.724E+02	2.305E-01	1.726E+02	9.782E+01	1.571E-01	9.797E+01	9.766E+01	1.482E-01	9.781E+01
5.00E-01	1.585E+02	1.912E-01	1.587E+02	8.962E+01	1.313E-01	8.975E+01	8.806E+01	1.241E-01	8.818E+01
6.00E-01	1.470E+02	1.640E-01	1.474E+02	8.289E+01	1.133E-01	8.301E+01	8.069E+01	1.071E-01	8.079E+01
7.00E-01	1.373E+02	1.440E-01	1.374E+02	7.730E+01	9.990E-02	7.739E+01	7.494E+01	9.452E-02	7.503E+01
8.00E-01	1.290E+02	1.285E-01	1.291E+02	7.256E+01	8.953E-02	7.265E+01	7.032E+01	8.475E-02	7.041E+01
9.00E-01	1.218E+02	1.163E-01	1.219E+02	6.815E+01	8.125E-02	6.859E+01	6.652E+01	7.694E-02	6.660E+01
1.00E+00	1.155E+02	1.062E-01	1.156E+02	6.499E+01	7.446E-02	6.506E+01	6.331E+01	7.054E-02	6.338E+01
1.50E+00	9.250E+01	7.497E-02	9.257E+01	5.253E+01	5.307E-02	5.258E+01	5.225E+01	5.034E-02	5.230E+01
2.00E+00	7.795E+01	5.844E-02	7.801E+01	4.481E+01	4.163E-02	4.485E+01	4.535E+01	4.539E-02	4.539E+01
3.00E+00	6.028E+01	4.103E-02	6.032E+01	3.552E+01	2.947E-02	3.555E+01	3.666E+01	2.801E-02	3.669E+01
4.00E+00	4.977E+01	3.188E-02	4.980E+01	2.997E+01	2.801E-02	2.999E+01	3.121E+01	2.189E-02	3.123E+01
5.00E+00	4.272E+01	2.619E-02	4.274E+01	2.621E+01	1.898E-02	2.623E+01	2.738E+01	1.806E-02	2.740E+01
6.00E+00	3.761E+01	2.229E-02	3.764E+01	2.346E+01	1.620E-02	2.347E+01	2.453E+01	1.542E-02	2.454E+01
7.00E+00	3.373E+01	1.944E-02	3.375E+01	2.134E+01	1.416E-02	2.135E+01	2.230E+01	1.349E-02	2.231E+01
8.00E+00	3.066E+01	1.727E-02	3.068E+01	1.964E+01	1.261E-02	1.966E+01	2.050E+01	1.201E-02	2.051E+01
9.00E+00	2.817E+01	1.555E-02	2.818E+01	1.825E+01	1.137E-02	1.827E+01	1.901E+01	1.083E-02	1.902E+01
1.00E+01	2.610E+01	1.416E-02	2.611E+01	1.709E+01	1.037E-02	1.710E+01	1.775E+01	9.879E-03	1.776E+01
1.50E+01	1.999E+01	1.199E-02	1.999E+01	1.411E+01	1.411E-02	1.411E+01	1.341E+01	1.341E-02	1.341E+01
2.00E+01	1.612E+01	1.156E-02	1.612E+01	1.156E+01	1.156E-02	1.156E+01	1.101E+01	1.101E-02	1.101E+01
3.00E+01	1.185E+01	1.185E-02	1.185E+01	8.673E+00	8.673E-02	8.673E+00	8.284E+00	8.284E-02	8.284E+00
4.00E+01	9.529E+00	4.000E-02	9.529E+00	7.056E+00	7.056E-02	7.056E+00	6.752E+00	6.752E-02	6.752E+00
5.00E+01	8.051E+00	8.051E-02	8.051E+00	6.011E+00	6.011E-02	6.011E+00	5.759E+00	5.759E-02	5.759E+00
6.00E+01	7.022E+00	7.022E-02	7.022E+00	5.275E+00	5.275E-02	5.275E+00	5.060E+00	5.060E-02	5.060E+00
7.00E+01	6.262E+00	6.262E-02	6.262E+00	4.727E+00	4.727E-02	4.727E+00	4.538E+00	4.538E-02	4.538E+00
8.00E+01	5.677E+00	5.677E-02	5.677E+00	4.303E+00	4.303E-02	4.303E+00	4.133E+00	4.133E-02	4.133E+00
9.00E+01	5.212E+00	5.212E-02	5.212E+00	3.963E+00	3.963E-02	3.963E+00	3.808E+00	3.808E-02	3.808E+00
1.00E+02	4.833E+00	4.833E-02	4.833E+00	3.685E+00	3.685E-02	3.685E+00	3.543E+00	3.543E-02	3.543E+00
2.00E+02	3.036E+00	3.036E-02	3.036E+00	2.352E+00	2.352E-02	2.352E+00	2.267E+00	2.267E-02	2.267E+00
3.00E+02	2.403E+00	2.403E-02	2.403E+00	1.875E+00	1.875E-02	1.875E+00	1.810E+00	1.810E-02	1.810E+00
4.00E+02	1.894E+00	1.894E-02	1.894E+00	1.490E+00	1.490E-02	1.490E+00	1.440E+00	1.440E-02	1.440E+00
5.00E+02	1.771E+00	1.771E-02	1.771E+00	1.398E+00	1.398E-02	1.398E+00	1.351E+00	1.351E-02	1.351E+00
6.00E+02	1.687E+00	1.687E-02	1.687E+00	1.335E+00	1.335E-02	1.335E+00	1.291E+00	1.291E-02	1.291E+00
7.00E+02	1.627E+00	1.627E-02	1.627E+00	1.290E+00	1.290E-02	1.290E+00	1.248E+00	1.248E-02	1.248E+00
8.00E+02	1.581E+00	1.581E-02	1.581E+00	1.257E+00	1.257E-02	1.257E+00	1.216E+00	1.216E-02	1.216E+00
9.00E+02	1.545E+00	1.545E-02	1.545E+00	1.233E+00	1.233E-02	1.233E+00	1.193E+00	1.193E-02	1.193E+00
1.00E+03	1.545E+00	1.545E-02	1.545E+00	1.177E+00	1.177E-02	1.177E+00	1.142E+00	1.142E-02	1.142E+00
1.50E+03	1.457E+00	1.457E-02	1.457E+00	1.166E+00	1.166E-02	1.166E+00	1.136E+00	1.136E-02	1.136E+00
2.00E+03	1.434E+00	1.434E-02	1.434E+00	1.181E+00	1.181E-02	1.181E+00	1.157E+00	1.157E-02	1.157E+00
3.00E+03	1.434E+00	1.434E-02	1.434E+00	1.206E+00	1.206E-02	1.206E+00	1.186E+00	1.186E-02	1.186E+00
4.00E+03	1.455E+00	1.455E-02	1.455E+00	1.231E+00	1.231E-02	1.231E+00	1.215E+00	1.215E-02	1.215E+00
5.00E+03	1.479E+00	1.479E-02	1.479E+00	1.254E+00	1.254E-02	1.254E+00	1.241E+00	1.241E-02	1.241E+00
6.00E+03	1.502E+00	1.502E-02	1.502E+00	1.276E+00	1.276E-02	1.276E+00	1.264E+00	1.264E-02	1.264E+00
7.00E+03	1.523E+00	1.523E-02	1.523E+00	1.276E+00	1.276E-02	1.276E+00	1.264E+00	1.264E-02	1.264E+00
8.00E+03	1.542E+00	1.542E-02	1.542E+00	1.295E+00	1.295E-02	1.295E+00	1.284E+00	1.284E-02	1.284E+00
9.00E+03	1.560E+00	1.560E-02	1.560E+00	1.313E+00	1.313E-02	1.313E+00	1.303E+00	1.303E-02	1.303E+00
1.00E+04	1.577E+00	1.577E-02	1.577E+00	1.329E+00	1.329E-02	1.329E+00	1.320E+00	1.320E-02	1.320E+00

 * Triton (4/5) *

target	Uranium			LiF(TLD-100)			LiF(TLD-700)		
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	2.140E+00	5.985E-01	2.738E+00	2.770E+01	4.760E+01	7.530E+01	2.762E+01	4.728E+01	7.490E+01
1.50E-05	2.568E+00	7.237E-01	3.292E+00	3.132E+01	5.160E+01	8.293E+01	3.148E+01	5.174E+01	8.322E+01
2.00E-05	2.923E+00	8.227E-01	3.746E+00	3.402E+01	5.403E+01	8.823E+01	3.436E+01	5.417E+01	8.853E+01
3.00E-05	3.508E+00	9.759E-01	4.484E+00	3.875E+01	5.665E+01	9.540E+01	3.893E+01	5.678E+01	9.571E+01
4.00E-05	3.993E+00	1.093E+00	5.086E+00	4.238E+01	5.779E+01	1.002E+02	4.257E+01	5.792E+01	1.005E+02
5.00E-05	4.415E+00	1.189E+00	5.603E+00	4.544E+01	5.822E+01	1.037E+02	4.564E+01	5.834E+01	1.040E+02
6.00E-05	4.792E+00	1.269E+00	6.061E+00	4.813E+01	5.824E+01	1.064E+02	4.834E+01	5.835E+01	1.067E+02
7.00E-05	5.137E+00	1.337E+00	6.474E+00	5.054E+01	5.801E+01	1.085E+02	5.075E+01	5.812E+01	1.089E+02
8.00E-05	5.455E+00	1.398E+00	6.852E+00	5.273E+01	5.716E+01	1.104E+02	5.295E+01	5.774E+01	1.107E+02
9.00E-05	5.752E+00	1.451E+00	7.203E+00	5.474E+01	5.763E+01	1.119E+02	5.497E+01	5.727E+01	1.122E+02
1.00E-04	6.031E+00	1.499E+00	7.530E+00	5.662E+01	5.683E+01	1.132E+02	5.685E+01	5.673E+01	1.136E+02
1.50E-04	7.238E+00	1.682E+00	8.920E+00	6.452E+01	5.363E+01	1.182E+02	6.477E+01	5.371E+01	1.185E+02
2.00E-04	8.238E+00	1.808E+00	1.005E+01	7.085E+01	5.067E+01	1.215E+02	7.112E+01	5.074E+01	1.219E+02
3.00E-04	9.887E+00	1.971E+00	1.186E+01	8.907E+01	4.558E+01	1.265E+02	8.124E+01	4.563E+01	1.269E+02
4.00E-04	1.125E+01	2.071E+00	1.336E+01	9.907E+01	4.311E+01	1.306E+02	8.937E+01	4.155E+01	1.309E+02
5.00E-04	1.244E+01	2.138E+00	1.458E+01	9.597E+01	3.821E+01	1.342E+02	8.9629E+01	3.825E+01	1.345E+02
6.00E-04	1.351E+01	2.184E+00	1.569E+01	1.020E+02	3.548E+01	1.375E+02	1.024E+02	3.551E+01	1.379E+02
7.00E-04	1.448E+01	2.215E+00	1.668E+01	1.075E+02	3.318E+01	1.407E+02	1.078E+02	3.321E+01	1.410E+02
8.00E-04	1.537E+01	2.237E+00	1.761E+01	1.125E+02	3.121E+01	1.437E+02	1.128E+02	3.124E+01	1.441E+02
9.00E-04	1.621E+01	2.251E+00	1.846E+01	1.171E+02	2.950E+01	1.466E+02	1.174E+02	2.953E+01	1.470E+02
1.00E-03	1.700E+01	2.260E+00	1.926E+01	1.214E+02	2.800E+01	1.494E+02	1.217E+02	2.802E+01	1.498E+02
1.50E-03	2.040E+01	2.255E+00	2.265E+01	1.396E+02	2.257E+01	1.622E+02	1.400E+02	2.258E+01	1.626E+02
2.00E-03	2.322E+01	2.213E+00	2.543E+01	1.543E+02	1.911E+01	1.734E+02	1.547E+02	1.912E+01	1.738E+02
3.00E-03	2.787E+01	2.098E+00	2.996E+01	1.779E+02	1.487E+01	1.928E+02	1.783E+02	1.488E+01	1.932E+02
4.00E-03	3.172E+01	1.981E+00	3.370E+01	1.970E+02	1.229E+01	2.093E+02	1.975E+02	1.229E+01	2.098E+02
5.00E-03	3.507E+01	1.872E+00	3.694E+01	2.134E+02	1.056E+01	2.240E+02	2.138E+02	1.056E+01	2.244E+02
6.00E-03	3.807E+01	1.775E+00	3.984E+01	2.279E+02	9.303E+00	2.372E+02	2.283E+02	9.305E+00	2.376E+02
7.00E-03	4.080E+01	1.688E+00	4.249E+01	2.409E+02	8.341E+00	2.492E+02	2.413E+02	8.343E+00	2.497E+02
8.00E-03	4.333E+01	1.610E+00	4.494E+01	2.528E+02	7.578E+00	2.604E+02	2.533E+02	7.579E+00	2.609E+02
9.00E-03	4.569E+01	1.540E+00	4.723E+01	2.639E+02	6.909E+00	2.708E+02	2.644E+02	6.910E+00	2.713E+02
1.00E-02	4.790E+01	1.476E+00	4.938E+01	2.743E+02	6.395E+00	2.806E+02	2.747E+02	6.396E+00	2.811E+02
1.50E-02	5.749E+01	1.233E+00	5.873E+01	3.183E+02	4.717E+00	3.230E+02	3.188E+02	4.718E+00	3.235E+02
2.00E-02	6.544E+01	1.067E+00	6.651E+01	3.541E+02	3.779E+00	3.579E+02	3.546E+02	3.780E+00	3.584E+02
3.00E-02	7.971E+01	8.527E-01	8.056E+01	4.041E+02	2.747E+00	4.069E+02	4.046E+02	2.747E+00	4.074E+02
4.00E-02	9.217E+01	7.179E-01	9.289E+01	4.347E+02	2.181E+00	4.369E+02	4.352E+02	2.181E+00	4.374E+02
5.00E-02	1.021E+02	6.241E-01	1.028E+02	4.575E+02	1.819E+00	4.593E+02	4.580E+02	1.819E+00	4.599E+02
6.00E-02	1.100E+02	5.545E-01	1.106E+02	4.746E+02	1.567E+00	4.762E+02	4.752E+02	1.567E+00	4.767E+02
7.00E-02	1.161E+02	5.005E-01	1.166E+02	4.873E+02	1.380E+00	4.887E+02	4.879E+02	1.380E+00	4.893E+02
8.00E-02	1.207E+02	4.571E-01	1.211E+02	4.964E+02	1.236E+00	4.977E+02	4.970E+02	1.236E+00	4.982E+02
9.00E-02	1.239E+02	4.215E-01	1.244E+02	5.026E+02	1.121E+00	5.038E+02	5.032E+02	1.120E+00	5.043E+02

target	Uranium			LiF(TLD-100)			7LiF(TLD-700)			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	1.262E+02	3.916E-01	1.266E+02	1.266E+02	5.065E+02	1.026E+00	5.075E+02	5.070E+02	1.026E+00	5.081E+02
1.50E-01	1.269E+02	2.901E-01	1.272E+02	1.272E+02	5.017E+02	7.295E-01	5.024E+02	5.021E+02	7.294E-01	5.029E+02
2.00E-01	1.200E+02	2.344E-01	1.203E+02	1.203E+02	4.766E+02	5.713E-01	4.772E+02	4.770E+02	5.712E-01	4.775E+02
3.00E-01	1.044E+02	1.721E-01	1.045E+02	1.045E+02	4.142E+02	4.035E-01	4.146E+02	4.145E+02	4.035E-01	4.149E+02
4.00E-01	9.252E+01	1.375E-01	9.266E+01	9.266E+01	3.594E+02	3.147E-01	3.597E+02	3.596E+02	3.147E-01	3.599E+02
5.00E-01	8.396E+01	1.152E-01	8.408E+01	8.408E+01	3.163E+02	2.593E-01	3.166E+02	3.165E+02	2.593E-01	3.167E+02
6.00E-01	7.748E+01	9.957E-02	7.758E+01	7.758E+01	2.829E+02	2.212E-01	2.831E+02	2.830E+02	2.211E-01	2.832E+02
7.00E-01	7.233E+01	8.792E-02	7.241E+01	7.241E+01	2.565E+02	1.933E-01	2.568E+02	2.567E+02	1.932E-01	2.569E+02
8.00E-01	6.808E+01	7.888E-02	6.816E+01	6.816E+01	2.354E+02	1.719E-01	2.356E+02	2.355E+02	1.719E-01	2.357E+02
9.00E-01	6.448E+01	7.165E-02	6.456E+01	6.456E+01	2.182E+02	1.550E-01	2.182E+02	2.181E+02	1.550E-01	2.182E+02
1.00E+00	6.137E+01	6.572E-02	6.143E+01	6.143E+01	2.040E+02	1.413E-01	2.036E+02	2.035E+02	1.413E-01	2.036E+02
1.50E+00	5.027E+01	4.697E-02	5.032E+01	5.032E+01	1.551E+02	9.873E-02	1.552E+02	1.551E+02	9.871E-02	1.552E+02
2.00E+00	4.324E+01	3.691E-02	4.328E+01	4.328E+01	1.271E+02	7.646E-02	1.272E+02	1.272E+02	7.645E-02	1.272E+02
3.00E+00	3.454E+01	2.619E-02	3.457E+01	3.457E+01	9.501E+01	5.324E-02	9.507E+01	9.504E+01	5.323E-02	9.509E+01
4.00E+00	2.923E+01	2.048E-02	2.925E+01	2.925E+01	7.665E+01	4.114E-02	7.669E+01	7.667E+01	4.113E-02	7.671E+01
5.00E+00	2.557E+01	1.691E-02	2.559E+01	2.559E+01	6.459E+01	3.366E-02	6.463E+01	6.461E+01	3.366E-02	6.464E+01
6.00E+00	2.288E+01	1.445E-02	2.290E+01	2.290E+01	5.601E+01	2.856E-02	5.604E+01	5.603E+01	2.856E-02	5.605E+01
7.00E+00	2.080E+01	1.264E-02	2.081E+01	2.081E+01	4.957E+01	2.485E-02	4.959E+01	4.958E+01	2.485E-02	4.960E+01
8.00E+00	1.913E+01	1.126E-02	1.914E+01	1.914E+01	4.454E+01	2.202E-02	4.456E+01	4.454E+01	2.202E-02	4.457E+01
9.00E+00	1.776E+01	1.016E-02	1.777E+01	1.777E+01	4.049E+01	1.980E-02	4.051E+01	4.050E+01	1.979E-02	4.052E+01
1.00E+01	1.661E+01	9.266E-03	1.662E+01	1.662E+01	3.716E+01	1.759E-02	3.717E+01	3.716E+01	1.759E-02	3.718E+01
1.50E+01	1.274E+01	6.91E-03	1.274E+01	1.274E+01	2.645E+01	1.271E-02	2.645E+01	2.645E+01	1.271E-02	2.645E+01
2.00E+01	1.047E+01	5.37E-03	1.047E+01	1.047E+01	2.097E+01	9.67E-03	2.097E+01	2.097E+01	9.67E-03	2.097E+01
3.00E+01	7.897E+00	4.04E-03	7.897E+00	7.897E+00	1.512E+01	7.29E-03	1.512E+01	1.512E+01	7.29E-03	1.512E+01
4.00E+01	6.446E+00	3.00E-03	6.446E+00	6.446E+00	1.200E+01	5.60E-03	1.200E+01	1.200E+01	5.60E-03	1.200E+01
5.00E+01	5.505E+00	2.48E-03	5.505E+00	5.505E+00	1.005E+01	4.45E-03	1.005E+01	1.005E+01	4.45E-03	1.005E+01
6.00E+01	4.840E+00	2.08E-03	4.840E+00	4.840E+00	8.713E+00	3.67E-03	8.713E+00	8.713E+00	3.67E-03	8.713E+00
7.00E+01	4.343E+00	1.77E-03	4.343E+00	4.343E+00	7.731E+00	3.26E-03	7.731E+00	7.731E+00	3.26E-03	7.731E+00
8.00E+01	3.958E+00	1.51E-03	3.958E+00	3.958E+00	6.979E+00	2.97E-03	6.979E+00	6.979E+00	2.97E-03	6.979E+00
9.00E+01	3.649E+00	1.29E-03	3.649E+00	3.649E+00	6.385E+00	2.76E-03	6.385E+00	6.385E+00	2.76E-03	6.385E+00
1.00E+02	3.396E+00	1.12E-03	3.396E+00	3.396E+00	5.903E+00	2.58E-03	5.903E+00	5.903E+00	2.58E-03	5.903E+00
2.00E+02	2.178E+00	7.00E-04	2.178E+00	2.178E+00	3.648E+00	1.63E-03	3.648E+00	3.648E+00	1.63E-03	3.648E+00
3.00E+02	1.740E+00	5.10E-04	1.740E+00	1.740E+00	2.863E+00	1.27E-03	2.863E+00	2.863E+00	1.27E-03	2.863E+00
4.00E+02	1.518E+00	4.00E-04	1.518E+00	1.518E+00	2.470E+00	9.60E-04	2.470E+00	2.470E+00	9.60E-04	2.470E+00
5.00E+02	1.386E+00	3.00E-04	1.386E+00	1.386E+00	2.236E+00	8.00E-04	2.236E+00	2.236E+00	8.00E-04	2.236E+00
6.00E+02	1.301E+00	2.40E-04	1.301E+00	1.301E+00	2.085E+00	7.00E-04	2.085E+00	2.085E+00	7.00E-04	2.085E+00
7.00E+02	1.243E+00	1.90E-04	1.243E+00	1.243E+00	1.981E+00	6.30E-04	1.981E+00	1.981E+00	6.30E-04	1.981E+00
8.00E+02	1.202E+00	1.50E-04	1.202E+00	1.202E+00	1.906E+00	5.80E-04	1.906E+00	1.906E+00	5.80E-04	1.906E+00
9.00E+02	1.173E+00	1.10E-04	1.173E+00	1.173E+00	1.845E+00	5.30E-04	1.845E+00	1.845E+00	5.30E-04	1.845E+00
1.00E+03	1.151E+00	8.00E-05	1.151E+00	1.151E+00	1.797E+00	4.90E-04	1.797E+00	1.797E+00	4.90E-04	1.797E+00
1.50E+03	1.102E+00	5.00E-05	1.102E+00	1.102E+00	1.671E+00	4.00E-04	1.671E+00	1.671E+00	4.00E-04	1.671E+00
2.00E+03	1.096E+00	3.00E-05	1.096E+00	1.096E+00	1.627E+00	3.00E-04	1.627E+00	1.627E+00	3.00E-04	1.627E+00
3.00E+03	1.115E+00	2.00E-05	1.115E+00	1.115E+00	1.607E+00	2.50E-04	1.607E+00	1.607E+00	2.50E-04	1.607E+00
4.00E+03	1.142E+00	1.50E-05	1.142E+00	1.142E+00	1.616E+00	2.00E-04	1.616E+00	1.616E+00	2.00E-04	1.616E+00
5.00E+03	1.168E+00	1.00E-05	1.168E+00	1.168E+00	1.631E+00	1.50E-04	1.631E+00	1.631E+00	1.50E-04	1.631E+00
6.00E+03	1.192E+00	7.00E-06	1.192E+00	1.192E+00	1.647E+00	1.00E-04	1.647E+00	1.647E+00	1.00E-04	1.647E+00
7.00E+03	1.214E+00	5.00E-06	1.214E+00	1.214E+00	1.663E+00	7.00E-05	1.663E+00	1.663E+00	7.00E-05	1.663E+00
8.00E+03	1.234E+00	3.00E-06	1.234E+00	1.234E+00	1.678E+00	5.00E-05	1.678E+00	1.678E+00	5.00E-05	1.678E+00
9.00E+03	1.251E+00	2.00E-06	1.251E+00	1.251E+00	1.692E+00	3.00E-05	1.692E+00	1.692E+00	3.00E-05	1.692E+00
1.00E+04	1.267E+00	1.50E-06	1.267E+00	1.267E+00	1.705E+00	2.00E-05	1.705E+00	1.705E+00	2.00E-05	1.705E+00

 * Triton (5/5) *

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	7.555E+01	9.687E+01	1.724E+02	4.122E+01	1.049E+02	1.461E+02	6.648E+01	8.691E+01	1.534E+02
1.50E-05	8.399E+01	1.038E+02	1.878E+02	4.665E+01	1.120E+02	1.586E+02	7.405E+01	9.365E+01	1.674E+02
2.00E-05	9.056E+01	1.077E+02	1.982E+02	5.098E+01	1.158E+02	1.668E+02	7.997E+01	9.705E+01	1.770E+02
3.00E-05	1.007E+02	1.113E+02	2.120E+02	5.784E+01	1.193E+02	1.771E+02	8.915E+01	1.006E+02	1.898E+02
4.00E-05	1.087E+02	1.123E+02	2.209E+02	6.331E+01	1.200E+02	1.833E+02	9.633E+01	1.018E+02	1.981E+02
5.00E-05	1.153E+02	1.121E+02	2.273E+02	6.795E+01	1.195E+02	1.874E+02	1.023E+02	1.018E+02	2.041E+02
6.00E-05	1.210E+02	1.112E+02	2.322E+02	7.201E+01	1.183E+02	1.903E+02	1.075E+02	1.012E+02	2.087E+02
7.00E-05	1.260E+02	1.100E+02	2.360E+02	7.565E+01	1.169E+02	1.925E+02	1.121E+02	1.003E+02	2.124E+02
8.00E-05	1.305E+02	1.086E+02	2.391E+02	7.896E+01	1.152E+02	1.942E+02	1.162E+02	9.915E+01	2.154E+02
9.00E-05	1.347E+02	1.071E+02	2.418E+02	8.202E+01	1.135E+02	1.955E+02	1.200E+02	9.791E+01	2.179E+02
1.00E-04	1.385E+02	1.056E+02	2.441E+02	8.486E+01	1.117E+02	1.966E+02	1.235E+02	9.661E+01	2.202E+02
1.50E-04	1.544E+02	9.792E+01	2.523E+02	9.684E+01	1.033E+02	2.002E+02	1.381E+02	9.004E+01	2.281E+02
2.00E-04	1.667E+02	9.112E+01	2.579E+02	1.065E+02	9.597E+01	2.024E+02	1.495E+02	8.408E+01	2.335E+02
3.00E-04	1.860E+02	8.021E+01	2.652E+02	1.218E+02	8.436E+01	2.062E+02	1.672E+02	7.437E+01	2.416E+02
4.00E-04	2.010E+02	7.196E+01	2.730E+02	1.342E+02	7.565E+01	2.098E+02	1.812E+02	6.693E+01	2.482E+02
5.00E-04	2.136E+02	6.550E+01	2.791E+02	1.447E+02	6.886E+01	2.135E+02	1.929E+02	6.107E+01	2.540E+02
6.00E-04	2.244E+02	6.028E+01	2.847E+02	1.540E+02	6.338E+01	2.173E+02	2.031E+02	5.631E+01	2.594E+02
7.00E-04	2.341E+02	5.597E+01	2.900E+02	1.623E+02	5.886E+01	2.212E+02	2.121E+02	5.233E+01	2.644E+02
8.00E-04	2.428E+02	5.233E+01	2.951E+02	1.693E+02	5.505E+01	2.250E+02	2.203E+02	4.901E+01	2.693E+02
9.00E-04	2.507E+02	4.921E+01	2.999E+02	1.769E+02	5.178E+01	2.287E+02	2.277E+02	4.613E+01	2.739E+02
1.00E-03	2.581E+02	4.650E+01	3.046E+02	1.835E+02	4.894E+01	2.324E+02	2.347E+02	4.363E+01	2.783E+02
1.50E-03	2.886E+02	3.688E+01	3.255E+02	2.113E+02	3.887E+01	2.502E+02	2.635E+02	3.471E+01	2.982E+02
2.00E-03	3.125E+02	3.092E+01	3.435E+02	2.338E+02	3.262E+01	2.665E+02	2.862E+02	2.916E+01	3.154E+02
3.00E-03	3.499E+02	2.369E+01	3.736E+02	2.701E+02	2.501E+01	2.951E+02	3.220E+02	2.240E+01	3.444E+02
4.00E-03	3.794E+02	1.947E+01	3.988E+02	2.994E+02	2.058E+01	3.200E+02	3.502E+02	1.844E+01	3.687E+02
5.00E-03	4.040E+02	1.665E+01	4.206E+02	3.246E+02	1.761E+01	3.422E+02	3.740E+02	1.578E+01	3.897E+02
6.00E-03	4.254E+02	1.454E+01	4.399E+02	3.468E+02	1.546E+01	3.622E+02	3.946E+02	1.380E+01	4.085E+02
7.00E-03	4.444E+02	1.300E+01	4.574E+02	3.668E+02	1.382E+01	3.807E+02	4.131E+02	1.235E+01	4.255E+02
8.00E-03	4.616E+02	1.175E+01	4.734E+02	3.852E+02	1.245E+01	3.977E+02	4.299E+02	1.116E+01	4.410E+02
9.00E-03	4.774E+02	1.076E+01	4.882E+02	4.023E+02	1.141E+01	4.137E+02	4.452E+02	1.023E+01	4.555E+02
1.00E-02	4.920E+02	9.943E+00	5.020E+02	4.182E+02	1.054E+01	4.287E+02	4.595E+02	9.449E+00	4.690E+02
1.50E-02	5.529E+02	7.284E+00	5.602E+02	4.861E+02	7.733E+00	4.938E+02	5.192E+02	6.931E+00	5.262E+02
2.00E-02	6.010E+02	5.812E+00	6.088E+02	5.413E+02	6.174E+00	5.475E+02	5.667E+02	5.534E+00	5.722E+02
3.00E-02	6.729E+02	4.202E+00	6.771E+02	6.218E+02	4.468E+00	6.263E+02	6.361E+02	4.005E+00	6.401E+02
4.00E-02	7.214E+02	3.326E+00	7.247E+02	6.732E+02	3.538E+00	6.768E+02	6.813E+02	3.172E+00	6.844E+02
5.00E-02	7.553E+02	2.769E+00	7.580E+02	7.102E+02	2.946E+00	7.132E+02	7.130E+02	2.642E+00	7.130E+02
6.00E-02	7.783E+02	2.381E+00	7.807E+02	7.361E+02	2.534E+00	7.390E+02	7.348E+02	2.272E+00	7.370E+02
7.00E-02	7.930E+02	2.094E+00	7.951E+02	7.544E+02	2.230E+00	7.567E+02	7.488E+02	1.999E+00	7.508E+02
8.00E-02	8.010E+02	1.873E+00	8.029E+02	7.658E+02	1.994E+00	7.678E+02	7.567E+02	1.788E+00	7.585E+02
9.00E-02	8.038E+02	1.697E+00	8.055E+02	7.719E+02	1.807E+00	7.737E+02	7.598E+02	1.620E+00	7.614E+02

target Energy (MeV/amu)	Phantom			Water			SSNTD		
	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	8.023E+02	1.552E+00	8.039E+02	7.737E+02	1.654E+00	7.754E+02	7.590E+02	1.483E+00	7.605E+02
1.50E-01	7.579E+02	1.100E+00	7.590E+02	7.445E+02	1.173E+00	7.457E+02	7.201E+02	1.052E+00	7.212E+02
2.00E-01	6.904E+02	8.602E-01	6.913E+02	6.883E+02	9.169E-01	6.892E+02	6.588E+02	8.223E-01	6.596E+02
3.00E-01	5.656E+02	6.063E-01	5.662E+02	5.742E+02	6.465E-01	5.749E+02	5.430E+02	5.798E-01	5.436E+02
4.00E-01	4.750E+02	4.721E-01	4.754E+02	4.854E+02	5.036E-01	4.859E+02	4.575E+02	4.516E-01	4.579E+02
5.00E-01	4.110E+02	3.885E-01	4.114E+02	4.203E+02	4.145E-01	4.207E+02	3.966E+02	3.717E-01	3.969E+02
6.00E-01	3.643E+02	3.311E-01	3.647E+02	3.719E+02	3.533E-01	3.723E+02	3.519E+02	3.169E-01	3.522E+02
7.00E-01	3.288E+02	2.892E-01	3.291E+02	3.350E+02	3.086E-01	3.353E+02	3.178E+02	2.768E-01	3.181E+02
8.00E-01	2.780E+02	2.571E-01	2.783E+02	3.058E+02	2.743E-01	3.061E+02	2.909E+02	2.461E-01	2.911E+02
9.00E-01	2.590E+02	2.111E-01	2.593E+02	2.822E+02	2.472E-01	2.824E+02	2.689E+02	2.218E-01	2.692E+02
1.00E+00	1.964E+02	1.473E-01	1.965E+02	2.625E+02	2.253E-01	2.628E+02	2.507E+02	2.021E-01	2.509E+02
1.50E+00	1.603E+02	1.139E-01	1.604E+02	1.985E+02	1.572E-01	1.987E+02	1.903E+02	1.410E-01	1.905E+02
2.00E+00	1.191E+02	7.923E-02	1.192E+02	1.621E+02	1.217E-01	1.622E+02	1.556E+02	1.091E-01	1.557E+02
3.00E+00	9.568E+01	6.117E-02	9.574E+01	1.206E+02	8.462E-02	1.207E+02	1.157E+02	7.591E-02	1.158E+02
4.00E+00	8.041E+01	5.001E-02	8.046E+01	9.708E+01	6.533E-02	9.715E+01	9.310E+01	5.861E-02	9.316E+01
5.00E+00	6.959E+01	4.241E-02	6.963E+01	8.172E+01	5.343E-02	8.177E+01	7.830E+01	4.793E-02	7.835E+01
6.00E+00	6.149E+01	3.689E-02	6.153E+01	7.081E+01	4.531E-02	7.086E+01	6.780E+01	4.065E-02	6.784E+01
7.00E+00	5.518E+01	3.268E-02	5.521E+01	6.264E+01	3.941E-02	6.268E+01	5.994E+01	3.536E-02	5.997E+01
8.00E+00	5.011E+01	2.937E-02	5.014E+01	5.114E+01	3.492E-02	5.117E+01	5.380E+01	3.133E-02	5.383E+01
1.00E+01	4.595E+01	2.669E-02	4.598E+01	4.693E+01	3.138E-02	4.696E+01	4.888E+01	2.815E-02	4.891E+01
1.50E+01	3.241E+01	2.564E-02	3.241E+01	3.317E+01	2.852E-02	3.317E+01	3.170E+01	2.559E-02	3.170E+01
2.00E+01	2.564E+01	1.843E-01	2.564E+01	2.625E+01	2.625E+01	2.625E+01	2.508E+01	2.508E+01	2.508E+01
3.00E+01	1.843E+01	1.460E+01	1.843E+01	1.888E+01	1.888E+01	1.888E+01	1.804E+01	1.804E+01	1.804E+01
4.00E+01	1.460E+01	1.222E+01	1.460E+01	1.496E+01	1.496E+01	1.496E+01	1.430E+01	1.430E+01	1.430E+01
5.00E+01	1.222E+01	1.058E+01	1.222E+01	1.252E+01	1.252E+01	1.252E+01	1.196E+01	1.196E+01	1.196E+01
6.00E+01	1.058E+01	9.376E+00	1.058E+01	1.084E+01	1.084E+01	1.084E+01	1.036E+01	1.036E+01	1.036E+01
7.00E+01	9.376E+00	8.459E+00	9.376E+00	9.610E+00	9.610E+00	9.610E+00	9.186E+00	9.186E+00	9.186E+00
8.00E+01	8.459E+00	7.735E+00	8.459E+00	8.671E+00	8.671E+00	8.671E+00	8.289E+00	8.289E+00	8.289E+00
1.00E+02	7.147E+00	5.338E+00	7.147E+00	7.929E+00	7.929E+00	7.929E+00	7.580E+00	7.580E+00	7.580E+00
1.50E+02	5.338E+00	4.404E+00	5.338E+00	5.473E+00	5.473E+00	5.473E+00	5.233E+00	5.233E+00	5.233E+00
2.00E+02	4.404E+00	3.453E+00	4.404E+00	4.516E+00	4.516E+00	4.516E+00	4.319E+00	4.319E+00	4.319E+00
3.00E+02	3.453E+00	2.975E+00	3.453E+00	3.541E+00	3.541E+00	3.541E+00	3.386E+00	3.386E+00	3.386E+00
4.00E+02	2.975E+00	2.692E+00	2.975E+00	3.051E+00	3.051E+00	3.051E+00	2.918E+00	2.918E+00	2.918E+00
5.00E+02	2.692E+00	2.509E+00	2.692E+00	2.761E+00	2.761E+00	2.761E+00	2.641E+00	2.641E+00	2.641E+00
6.00E+02	2.509E+00	2.382E+00	2.509E+00	2.573E+00	2.573E+00	2.573E+00	2.461E+00	2.461E+00	2.461E+00
7.00E+02	2.382E+00	2.291E+00	2.382E+00	2.443E+00	2.443E+00	2.443E+00	2.337E+00	2.337E+00	2.337E+00
8.00E+02	2.291E+00	2.205E+00	2.291E+00	2.350E+00	2.350E+00	2.350E+00	2.248E+00	2.248E+00	2.248E+00
9.00E+02	2.205E+00	2.135E+00	2.205E+00	2.271E+00	2.271E+00	2.271E+00	2.159E+00	2.159E+00	2.159E+00
1.50E+03	1.944E+00	1.867E+00	1.944E+00	2.043E+00	2.043E+00	2.043E+00	2.086E+00	2.086E+00	2.086E+00
2.00E+03	1.867E+00	1.815E+00	1.867E+00	1.981E+00	1.981E+00	1.981E+00	1.885E+00	1.885E+00	1.885E+00
3.00E+03	1.815E+00	1.807E+00	1.815E+00	1.948E+00	1.948E+00	1.948E+00	1.802E+00	1.802E+00	1.802E+00
4.00E+03	1.807E+00	1.812E+00	1.807E+00	1.953E+00	1.953E+00	1.953E+00	1.741E+00	1.741E+00	1.741E+00
5.00E+03	1.812E+00	1.822E+00	1.812E+00	1.968E+00	1.968E+00	1.968E+00	1.729E+00	1.729E+00	1.729E+00
6.00E+03	1.822E+00	1.834E+00	1.822E+00	1.985E+00	1.985E+00	1.985E+00	1.736E+00	1.736E+00	1.736E+00
7.00E+03	1.834E+00	1.846E+00	1.834E+00	2.002E+00	2.002E+00	2.002E+00	1.745E+00	1.745E+00	1.745E+00
8.00E+03	1.846E+00	1.858E+00	1.846E+00	2.019E+00	2.019E+00	2.019E+00	1.753E+00	1.753E+00	1.753E+00
9.00E+03	1.858E+00	1.869E+00	1.858E+00	2.034E+00	2.034E+00	2.034E+00	1.765E+00	1.765E+00	1.765E+00
1.00E+04	1.869E+00	1.869E+00	1.869E+00	2.049E+00	2.049E+00	2.049E+00	1.775E+00	1.775E+00	1.775E+00

 * Alpha (1/5) *

target	Hydrogen			Helium			Beryllium		
	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-05	8.474E+01	1.066E+03	1.151E+03	2.588E+01	3.211E+02	3.470E+02	3.174E+01	1.453E+02	1.771E+02
1.50E-05	1.038E+02	1.158E+03	1.262E+03	3.169E+01	3.464E+02	3.780E+02	3.887E+01	1.600E+02	1.988E+02
2.00E-05	1.198E+02	1.213E+03	1.333E+03	3.659E+01	3.611E+02	3.977E+02	4.488E+01	1.694E+02	2.142E+02
3.00E-05	1.468E+02	1.273E+03	1.420E+03	4.482E+01	3.759E+02	4.208E+02	5.497E+01	1.805E+02	2.355E+02
4.00E-05	1.695E+02	1.299E+03	1.469E+03	5.175E+01	3.813E+02	4.330E+02	6.348E+01	1.865E+02	2.500E+02
5.00E-05	1.895E+02	1.308E+03	1.497E+03	5.786E+01	3.820E+02	4.399E+02	7.097E+01	1.898E+02	2.608E+02
6.00E-05	2.076E+02	1.307E+03	1.515E+03	6.338E+01	3.803E+02	4.436E+02	7.774E+01	1.915E+02	2.692E+02
7.00E-05	2.242E+02	1.301E+03	1.526E+03	6.846E+01	3.770E+02	4.455E+02	8.397E+01	1.921E+02	2.761E+02
8.00E-05	2.397E+02	1.292E+03	1.531E+03	7.319E+01	3.729E+02	4.461E+02	8.977E+01	1.921E+02	2.818E+02
9.00E-05	2.542E+02	1.280E+03	1.534E+03	7.763E+01	3.684E+02	4.460E+02	9.521E+01	1.915E+02	2.868E+02
1.00E-04	2.680E+02	1.266E+03	1.534E+03	8.183E+01	3.635E+02	4.453E+02	1.004E+02	1.907E+02	2.911E+02
1.50E-04	3.282E+02	1.192E+03	1.520E+03	1.002E+02	3.383E+02	4.368E+02	1.229E+02	1.839E+02	3.068E+02
2.00E-04	3.790E+02	1.119E+03	1.498E+03	1.157E+02	3.150E+02	4.308E+02	1.419E+02	1.758E+02	3.177E+02
3.00E-04	4.642E+02	9.957E+02	1.460E+03	1.417E+02	2.771E+02	4.188E+02	1.738E+02	1.604E+02	3.342E+02
4.00E-04	5.360E+02	8.985E+02	1.434E+03	1.637E+02	2.481E+02	4.118E+02	2.007E+02	1.473E+02	3.480E+02
5.00E-04	5.922E+02	8.208E+02	1.420E+03	1.830E+02	2.254E+02	4.083E+02	2.244E+02	1.363E+02	3.607E+02
6.00E-04	6.564E+02	7.573E+02	1.414E+03	2.004E+02	2.070E+02	4.075E+02	2.458E+02	1.271E+02	3.729E+02
7.00E-04	7.090E+02	7.044E+02	1.413E+03	2.314E+02	1.791E+02	4.084E+02	2.655E+02	1.192E+02	3.847E+02
8.00E-04	7.580E+02	6.208E+02	1.425E+03	2.455E+02	1.682E+02	4.137E+02	3.011E+02	1.064E+02	4.075E+02
9.00E-04	8.040E+02	5.871E+02	1.435E+03	2.588E+02	1.587E+02	4.175E+02	3.174E+02	1.011E+02	4.185E+02
1.00E-03	1.082E+03	4.668E+02	1.549E+03	3.304E+02	1.253E+02	4.557E+02	4.053E+02	8.184E+01	4.871E+02
2.00E-03	1.277E+03	3.918E+02	1.668E+03	3.898E+02	1.047E+02	4.945E+02	4.781E+02	6.945E+01	5.476E+02
3.00E-03	1.598E+03	3.015E+02	1.900E+03	4.880E+02	8.008E+01	5.680E+02	5.985E+02	5.417E+01	6.527E+02
4.00E-03	1.860E+03	2.479E+02	2.108E+03	5.680E+02	6.563E+01	6.337E+02	6.967E+02	4.492E+01	7.417E+02
5.00E-03	2.082E+03	2.100E+02	2.292E+03	6.358E+02	5.549E+01	6.912E+02	7.788E+02	3.864E+01	8.184E+02
6.00E-03	2.274E+03	1.844E+02	2.459E+03	6.944E+02	4.862E+01	7.431E+02	8.518E+02	3.406E+01	8.858E+02
7.00E-03	2.444E+03	1.648E+02	2.609E+03	7.463E+02	4.339E+01	7.897E+02	9.153E+02	3.027E+01	9.456E+02
8.00E-03	2.596E+03	1.494E+02	2.745E+03	7.927E+02	3.927E+01	8.319E+02	9.723E+02	2.751E+01	9.998E+02
9.00E-03	2.734E+03	1.368E+02	2.871E+03	8.347E+02	3.593E+01	8.707E+02	1.024E+03	2.526E+01	1.049E+03
1.00E-02	2.860E+03	1.264E+02	2.986E+03	8.732E+02	3.317E+01	9.064E+02	1.071E+03	2.339E+01	1.094E+03
1.50E-02	3.371E+03	9.260E+01	3.464E+03	1.029E+03	2.422E+01	1.054E+03	1.263E+03	1.726E+01	1.280E+03
2.00E-02	3.763E+03	7.388E+01	3.837E+03	1.149E+03	1.929E+01	1.168E+03	1.409E+03	1.383E+01	1.423E+03
3.00E-02	4.497E+03	5.342E+01	4.550E+03	1.359E+03	1.392E+01	1.373E+03	1.593E+03	1.006E+01	1.603E+03
4.00E-02	5.175E+03	4.229E+01	5.217E+03	1.547E+03	1.100E+01	1.558E+03	1.679E+03	7.986E+00	1.687E+03
5.00E-02	5.716E+03	3.520E+01	5.752E+03	1.707E+03	9.151E+00	1.716E+03	1.736E+03	6.664E+00	1.743E+03
6.00E-02	6.152E+03	3.027E+01	6.183E+03	1.845E+03	7.864E+00	1.853E+03	1.774E+03	5.741E+00	1.780E+03
7.00E-02	6.501E+03	2.663E+01	6.528E+03	1.966E+03	6.912E+00	1.973E+03	1.798E+03	5.057E+00	1.803E+03
8.00E-02	6.776E+03	2.381E+01	6.800E+03	2.071E+03	6.179E+00	2.078E+03	1.812E+03	4.528E+00	1.816E+03
9.00E-02	6.987E+03	2.157E+01	7.009E+03	2.163E+03	5.595E+00	2.169E+03	1.818E+03	4.105E+00	1.822E+03

target	Hydrogen			Helium			Beryllium		
	Electric	Nuclear	Total	Electric	Nuclear	Total	Electric	Nuclear	Total
	(MeV/cm ²)	(MeV/(g/cm ²))		(MeV/cm ²)	(MeV/(g/cm ²))		(MeV/cm ²)	(MeV/(g/cm ²))	
1.00E-01	7.143E+03	1.974E+01	7.163E+03	2.242E+03	5.118E+00	2.247E+03	1.819E+03	3.760E+00	1.822E+03
1.50E-01	7.345E+03	1.399E+01	7.359E+03	2.475E+03	3.623E+00	2.479E+03	1.773E+03	2.673E+00	1.776E+03
2.00E-01	7.027E+03	1.094E+01	7.038E+03	2.512E+03	2.830E+00	2.515E+03	1.699E+03	2.094E+00	1.701E+03
3.00E-01	6.029E+03	7.709E+00	6.037E+03	2.319E+03	1.992E+00	2.321E+03	1.543E+03	1.479E+00	1.544E+03
4.00E-01	5.135E+03	6.004E+00	5.141E+03	2.048E+03	1.551E+00	2.050E+03	1.402E+03	1.154E+00	1.403E+03
5.00E-01	4.445E+03	4.940E+00	4.450E+03	1.809E+03	1.275E+00	1.810E+03	1.279E+03	9.507E-01	1.280E+03
6.00E-01	3.919E+03	4.211E+00	3.923E+03	1.615E+03	1.087E+00	1.616E+03	1.174E+03	8.110E-01	1.175E+03
7.00E-01	3.509E+03	3.677E+00	3.513E+03	1.459E+03	9.486E-01	1.460E+03	1.084E+03	7.087E-01	1.085E+03
8.00E-01	3.183E+03	3.269E+00	3.186E+03	1.334E+03	8.430E-01	1.335E+03	1.007E+03	6.304E-01	1.008E+03
9.00E-01	2.918E+03	2.946E+00	2.921E+03	1.231E+03	7.595E-01	1.231E+03	9.407E+02	5.685E-01	9.413E+02
1.00E+00	2.697E+03	2.684E+00	2.700E+03	1.144E+03	6.919E-01	1.145E+03	8.831E+02	5.181E-01	8.836E+02
1.50E+00	1.983E+03	1.873E+00	1.985E+03	8.578E+02	4.824E-01	8.582E+02	6.802E+02	3.621E-01	6.806E+02
2.00E+00	1.585E+03	1.449E+00	1.586E+03	6.933E+02	3.731E-01	6.937E+02	5.566E+02	2.804E-01	5.568E+02
3.00E+00	1.144E+03	1.008E+00	1.145E+03	5.062E+02	2.593E-01	5.065E+02	4.116E+02	1.953E-01	4.118E+02
4.00E+00	9.024E+02	7.779E-01	9.032E+02	4.011E+02	2.001E-01	4.013E+02	3.286E+02	1.509E-01	3.288E+02
5.00E+00	7.488E+02	6.360E-01	7.494E+02	3.334E+02	1.636E-01	3.336E+02	2.747E+02	1.235E-01	2.749E+02
6.00E+00	6.422E+02	5.394E-01	6.427E+02	2.861E+02	1.387E-01	2.862E+02	2.368E+02	1.048E-01	2.369E+02
7.00E+00	5.636E+02	4.691E-01	5.641E+02	2.510E+02	1.206E-01	2.511E+02	2.086E+02	9.117E-02	2.087E+02
8.00E+00	5.032E+02	4.156E-01	5.036E+02	2.240E+02	1.068E-01	2.241E+02	1.868E+02	8.081E-02	1.868E+02
9.00E+00	4.551E+02	3.735E-01	4.555E+02	2.024E+02	9.597E-02	2.025E+02	1.693E+02	7.264E-02	1.694E+02
1.00E+01	4.159E+02	3.394E-01	4.163E+02	1.848E+02	8.720E-02	1.849E+02	1.550E+02	6.602E-02	1.550E+02
1.50E+01	2.874E+02		2.874E+02	1.297E+02		1.297E+02	1.077E+02		1.077E+02
2.00E+01	2.255E+02		2.255E+02	1.022E+02		1.022E+02	8.510E+01		8.510E+01
3.00E+01	1.605E+02		1.605E+02	7.311E+01		7.311E+01	6.112E+01		6.112E+01
4.00E+01	1.264E+02		1.264E+02	5.777E+01		5.777E+01	4.842E+01		4.842E+01
5.00E+01	1.053E+02		1.053E+02	4.823E+01		4.823E+01	4.049E+01		4.049E+01
6.00E+01	9.081E+01		9.081E+01	4.169E+01		4.169E+01	3.505E+01		3.505E+01
7.00E+01	8.030E+01		8.030E+01	3.692E+01		3.692E+01	3.107E+01		3.107E+01
8.00E+01	7.228E+01		7.228E+01	3.328E+01		3.328E+01	2.803E+01		2.803E+01
9.00E+01	6.596E+01		6.596E+01	3.040E+01		3.040E+01	2.562E+01		2.562E+01
1.00E+02	6.086E+01		6.086E+01	2.807E+01		2.807E+01	2.368E+01		2.368E+01
1.50E+02	4.519E+01		4.519E+01	2.092E+01		2.092E+01	1.768E+01		1.768E+01
2.00E+02	3.714E+01		3.714E+01	1.723E+01		1.723E+01	1.458E+01		1.458E+01
3.00E+02	2.897E+01		2.897E+01	1.348E+01		1.348E+01	1.143E+01		1.143E+01
4.00E+02	2.488E+01		2.488E+01	1.160E+01		1.160E+01	9.849E+00		9.849E+00
5.00E+02	2.246E+01		2.246E+01	1.049E+01		1.049E+01	8.912E+00		8.912E+00
6.00E+02	2.088E+01		2.088E+01	9.764E+00		9.764E+00	8.304E+00		8.304E+00
7.00E+02	1.979E+01		1.979E+01	9.264E+00		9.264E+00	7.884E+00		7.884E+00
8.00E+02	1.901E+01		1.901E+01	8.905E+00		8.905E+00	7.583E+00		7.583E+00
9.00E+02	1.843E+01		1.843E+01	8.639E+00		8.639E+00	7.344E+00		7.344E+00
1.00E+03	1.798E+01		1.798E+01	8.437E+00		8.437E+00	7.158E+00		7.158E+00
2.00E+03	1.686E+01		1.686E+01	7.936E+00		7.936E+00	6.673E+00		6.673E+00
3.00E+03	1.652E+01		1.652E+01	7.792E+00		7.792E+00	6.501E+00		6.501E+00
4.00E+03	1.650E+01		1.650E+01	7.807E+00		7.807E+00	6.432E+00		6.432E+00
5.00E+03	1.672E+01		1.672E+01	7.930E+00		7.930E+00	6.469E+00		6.469E+00
6.00E+03	1.700E+01		1.700E+01	8.074E+00		8.074E+00	6.531E+00		6.531E+00
7.00E+03	1.727E+01		1.727E+01	8.214E+00		8.214E+00	6.597E+00		6.597E+00
8.00E+03	1.753E+01		1.753E+01	8.347E+00		8.347E+00	6.661E+00		6.661E+00
9.00E+03	1.777E+01		1.777E+01	8.469E+00		8.469E+00	6.721E+00		6.721E+00
1.00E+04	1.799E+01		1.799E+01	8.583E+00		8.583E+00	6.777E+00		6.777E+00
	1.820E+01		1.820E+01	8.688E+00		8.688E+00	6.829E+00		6.829E+00

 * Alpha (2/5) *

target	Carbon			Aluminium			Iron			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	2.613E+01	1.138E+02	1.399E+02	1.399E+02	9.640E+00	4.028E+01	4.992E+01	4.868E+00	1.245E+01	1.732E+01
1.50E-05	3.201E+01	1.272E+02	1.592E+02	1.592E+02	1.181E+01	4.627E+01	5.808E+01	5.963E+00	1.466E+01	2.062E+01
2.00E-05	3.696E+01	1.363E+02	1.732E+02	1.732E+02	1.363E+01	5.061E+01	6.426E+01	6.865E+00	1.632E+01	2.321E+01
3.00E-05	4.527E+01	1.479E+02	1.932E+02	1.932E+02	1.670E+01	5.665E+01	7.334E+01	8.432E+00	1.877E+01	2.720E+01
4.00E-05	5.227E+01	1.549E+02	2.072E+02	2.072E+02	1.928E+01	6.075E+01	8.003E+01	9.737E+00	2.054E+01	3.028E+01
5.00E-05	5.844E+01	1.595E+02	2.179E+02	2.179E+02	2.156E+01	6.375E+01	8.531E+01	1.089E+01	2.191E+01	3.280E+01
6.00E-05	6.402E+01	1.625E+02	2.265E+02	2.265E+02	2.361E+01	6.604E+01	8.965E+01	1.193E+01	2.302E+01	3.494E+01
7.00E-05	6.915E+01	1.645E+02	2.336E+02	2.336E+02	2.550E+01	6.783E+01	9.334E+01	1.288E+01	2.393E+01	3.681E+01
8.00E-05	7.392E+01	1.658E+02	2.397E+02	2.397E+02	2.727E+01	6.926E+01	9.653E+01	1.377E+01	2.471E+01	3.848E+01
9.00E-05	7.840E+01	1.665E+02	2.449E+02	2.449E+02	2.892E+01	7.042E+01	9.934E+01	1.461E+01	2.537E+01	3.997E+01
1.00E-04	8.264E+01	1.669E+02	2.495E+02	2.495E+02	3.048E+01	7.137E+01	1.019E+02	1.540E+01	2.594E+01	4.134E+01
1.50E-04	1.012E+02	1.654E+02	2.666E+02	2.666E+02	3.734E+01	7.407E+01	1.114E+02	1.866E+01	2.795E+01	4.680E+01
2.00E-04	1.169E+02	1.615E+02	2.784E+02	2.784E+02	4.311E+01	7.494E+01	1.181E+02	2.177E+01	2.911E+01	5.088E+01
3.00E-04	1.431E+02	1.519E+02	2.951E+02	2.951E+02	5.280E+01	7.446E+01	1.273E+02	2.667E+01	3.026E+01	5.692E+01
4.00E-04	1.653E+02	1.426E+02	3.079E+02	3.079E+02	6.097E+01	7.081E+01	1.338E+02	3.079E+01	3.065E+01	6.144E+01
5.00E-04	1.848E+02	1.342E+02	3.190E+02	3.190E+02	6.816E+01	7.081E+01	1.390E+02	3.442E+01	3.068E+01	6.510E+01
6.00E-04	2.024E+02	1.268E+02	3.292E+02	3.292E+02	7.467E+01	6.870E+01	1.434E+02	3.771E+01	3.051E+01	6.822E+01
7.00E-04	2.187E+02	1.202E+02	3.389E+02	3.389E+02	8.065E+01	6.662E+01	1.473E+02	4.073E+01	3.023E+01	7.096E+01
8.00E-04	2.338E+02	1.144E+02	3.481E+02	3.481E+02	8.622E+01	6.462E+01	1.508E+02	4.354E+01	2.988E+01	7.343E+01
9.00E-04	2.479E+02	1.091E+02	3.571E+02	3.571E+02	9.145E+01	6.271E+01	1.542E+02	4.619E+01	2.950E+01	7.568E+01
1.00E-03	2.613E+02	1.044E+02	3.658E+02	3.658E+02	9.640E+01	6.091E+01	1.573E+02	4.868E+01	2.909E+01	7.777E+01
1.50E-03	3.337E+02	8.662E+01	4.204E+02	4.204E+02	1.335E+02	5.334E+01	1.868E+02	6.742E+01	2.701E+01	9.443E+01
2.00E-03	3.937E+02	7.465E+01	4.684E+02	4.684E+02	1.668E+02	4.762E+01	2.144E+02	8.425E+01	2.512E+01	1.094E+02
3.00E-03	4.928E+02	5.934E+01	5.522E+02	5.522E+02	2.265E+02	3.959E+01	2.660E+02	1.144E+02	2.204E+01	1.364E+02
4.00E-03	5.737E+02	4.979E+01	6.235E+02	6.235E+02	2.792E+02	3.417E+01	3.134E+02	1.410E+02	1.971E+01	1.607E+02
5.00E-03	6.421E+02	4.319E+01	6.853E+02	6.853E+02	3.268E+02	3.023E+01	3.570E+02	1.650E+02	1.788E+01	1.829E+02
6.00E-03	7.014E+02	3.830E+01	7.397E+02	7.397E+02	3.702E+02	2.721E+01	3.974E+02	1.870E+02	1.642E+01	2.034E+02
7.00E-03	7.537E+02	3.452E+01	7.882E+02	7.882E+02	4.103E+02	2.482E+01	4.351E+02	2.072E+02	1.520E+01	2.244E+02
8.00E-03	8.006E+02	3.149E+01	8.321E+02	8.321E+02	4.476E+02	2.283E+01	4.705E+02	2.260E+02	1.418E+01	2.402E+02
9.00E-03	8.431E+02	2.901E+01	8.721E+02	8.721E+02	4.826E+02	2.123E+01	5.038E+02	2.437E+02	1.331E+01	2.570E+02
1.00E-02	1.040E+03	1.990E+01	1.060E+03	1.060E+03	5.156E+02	1.984E+01	5.354E+02	2.604E+02	1.256E+01	2.729E+02
2.00E-02	1.161E+03	1.605E+01	1.177E+03	1.177E+03	7.793E+02	1.240E+01	7.917E+02	3.329E+02	9.899E+00	3.428E+02
3.00E-02	1.341E+03	1.176E+01	1.352E+03	1.352E+03	9.502E+02	1.240E+01	9.594E+02	5.052E+02	8.263E+00	4.019E+02
4.00E-02	1.471E+03	9.379E+00	1.480E+03	1.480E+03	1.047E+03	7.402E+00	1.055E+03	5.747E+02	5.173E+00	5.799E+02
5.00E-02	1.576E+03	7.852E+00	1.584E+03	1.584E+03	1.115E+03	6.246E+00	1.121E+03	6.337E+02	4.371E+00	6.381E+02
6.00E-02	1.663E+03	6.781E+00	1.670E+03	1.670E+03	1.161E+03	5.426E+00	1.167E+03	6.871E+02	3.829E+00	6.910E+02
7.00E-02	1.735E+03	5.985E+00	1.741E+03	1.741E+03	1.193E+03	4.811E+00	1.198E+03	7.326E+02	3.416E+00	7.360E+02
8.00E-02	1.796E+03	5.367E+00	1.801E+03	1.801E+03	1.215E+03	4.331E+00	1.219E+03	7.697E+02	3.091E+00	7.728E+02
9.00E-02	1.845E+03	4.873E+00	1.850E+03	1.850E+03	1.229E+03	3.945E+00	1.233E+03	7.994E+02	2.828E+00	8.022E+02

target	Carbon			Aluminium			Iron			
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	1.885E+03	4.468E+00	1.889E+03	1.893E+03	1.238E+03	3.627E+00	1.242E+03	8.229E+02	2.610E+00	8.255E+02
1.50E-01	1.970E+03	3.190E+00	1.973E+03	1.976E+03	1.243E+03	2.615E+00	1.246E+03	8.809E+02	1.905E+00	8.828E+02
2.00E-01	1.937E+03	2.505E+00	1.939E+03	1.942E+03	1.222E+03	2.065E+00	1.224E+03	8.872E+02	1.517E+00	8.887E+02
3.00E-01	1.746E+03	1.776E+00	1.748E+03	1.751E+03	1.151E+03	1.475E+00	1.152E+03	8.444E+02	1.094E+00	8.455E+02
4.00E-01	1.547E+03	1.388E+00	1.548E+03	1.549E+03	1.067E+03	1.159E+00	1.068E+03	7.812E+02	8.644E-01	7.821E+02
5.00E-01	1.382E+03	1.145E+00	1.383E+03	1.383E+03	9.854E+02	9.596E-01	9.863E+02	7.191E+02	7.188E-01	7.198E+02
6.00E-01	1.250E+03	9.782E-01	1.251E+03	1.251E+03	9.113E+02	8.218E-01	9.121E+02	6.637E+02	6.176E-01	6.643E+02
7.00E-01	1.144E+03	8.556E-01	1.144E+03	1.144E+03	8.461E+02	7.204E-01	8.468E+02	6.157E+02	5.428E-01	6.162E+02
8.00E-01	1.057E+03	7.617E-01	1.057E+03	1.057E+03	7.849E+02	6.425E-01	7.900E+02	5.744E+02	4.852E-01	5.749E+02
9.00E-01	9.835E+02	6.873E-01	9.842E+02	9.842E+02	7.400E+02	5.806E-01	7.405E+02	5.388E+02	4.393E-01	5.392E+02
1.00E+00	9.214E+02	6.268E-01	9.220E+02	9.220E+02	6.967E+02	5.302E-01	6.972E+02	5.079E+02	4.018E-01	5.083E+02
1.50E+00	7.091E+02	4.390E-01	7.095E+02	7.095E+02	5.428E+02	3.731E-01	5.432E+02	3.992E+02	2.844E-01	3.995E+02
2.00E+00	5.819E+02	3.405E-01	5.823E+02	5.823E+02	4.481E+02	2.903E-01	4.484E+02	3.329E+02	2.221E-01	3.331E+02
3.00E+00	4.328E+02	2.376E-01	4.331E+02	4.331E+02	3.361E+02	2.034E-01	3.363E+02	2.542E+02	1.563E-01	2.544E+02
4.00E+00	3.471E+02	1.838E-01	3.473E+02	3.473E+02	2.715E+02	1.578E-01	2.716E+02	2.084E+02	1.216E-01	2.085E+02
5.00E+00	2.911E+02	1.505E-01	2.913E+02	2.913E+02	2.292E+02	1.295E-01	2.293E+02	1.781E+02	1.000E-01	1.782E+02
6.00E+00	2.516E+02	1.278E-01	2.517E+02	2.517E+02	1.992E+02	1.101E-01	1.994E+02	1.563E+02	8.523E-02	1.566E+02
7.00E+00	2.220E+02	1.113E-01	2.221E+02	2.221E+02	1.768E+02	9.596E-02	1.769E+02	1.402E+02	7.440E-02	1.402E+02
8.00E+00	1.991E+02	9.868E-02	1.992E+02	1.992E+02	1.594E+02	8.518E-02	1.595E+02	1.274E+02	6.612E-02	1.274E+02
9.00E+00	1.807E+02	8.874E-02	1.808E+02	1.808E+02	1.454E+02	7.667E-02	1.454E+02	1.170E+02	5.957E-02	1.170E+02
1.00E+01	1.656E+02	8.069E-02	1.657E+02	1.657E+02	1.338E+02	6.977E-02	1.338E+02	1.084E+02	5.426E-02	1.085E+02
1.50E+01	1.171E+02		1.171E+02	1.171E+02	9.823E+01		9.823E+01	8.451E+01		8.451E+01
2.00E+01	9.276E+01		9.276E+01	9.276E+01	7.838E+01		7.838E+01	6.793E+01		6.793E+01
3.00E+01	6.677E+01		6.677E+01	6.677E+01	5.696E+01		5.696E+01	4.981E+01		4.981E+01
4.00E+01	5.296E+01		5.296E+01	5.296E+01	4.544E+01		4.544E+01	3.997E+01		3.997E+01
5.00E+01	4.433E+01		4.433E+01	4.433E+01	3.819E+01		3.819E+01	3.372E+01		3.372E+01
6.00E+01	3.840E+01		3.840E+01	3.840E+01	3.318E+01		3.318E+01	2.939E+01		2.939E+01
7.00E+01	3.406E+01		3.406E+01	3.406E+01	2.950E+01		2.950E+01	2.619E+01		2.619E+01
8.00E+01	3.074E+01		3.074E+01	3.074E+01	2.667E+01		2.667E+01	2.373E+01		2.373E+01
9.00E+01	2.811E+01		2.811E+01	2.811E+01	2.444E+01		2.444E+01	2.177E+01		2.177E+01
1.00E+02	2.598E+01		2.598E+01	2.598E+01	2.262E+01		2.262E+01	2.018E+01		2.018E+01
1.50E+02	1.943E+01		1.943E+01	1.943E+01	1.699E+01		1.699E+01	1.523E+01		1.523E+01
2.00E+02	1.604E+01		1.604E+01	1.604E+01	1.407E+01		1.407E+01	1.265E+01		1.265E+01
3.00E+02	1.258E+01		1.258E+01	1.258E+01	1.109E+01		1.109E+01	1.000E+01		1.000E+01
4.00E+02	1.085E+01		1.085E+01	1.085E+01	9.584E+00		9.584E+00	8.667E+00		8.667E+00
5.00E+02	9.820E+00		9.820E+00	9.820E+00	8.694E+00		8.694E+00	7.877E+00		7.877E+00
6.00E+02	9.153E+00		9.153E+00	9.153E+00	8.117E+00		8.117E+00	7.364E+00		7.364E+00
8.00E+02	8.363E+00		8.363E+00	8.363E+00	7.436E+00		7.436E+00	7.012E+00		7.012E+00
9.00E+02	8.107E+00		8.107E+00	8.107E+00	7.215E+00		7.215E+00	6.761E+00		6.761E+00
1.00E+03	7.910E+00		7.910E+00	7.910E+00	7.045E+00		7.045E+00	6.565E+00		6.565E+00
1.50E+03	7.397E+00		7.397E+00	7.397E+00	6.614E+00		6.614E+00	6.415E+00		6.415E+00
2.00E+03	7.223E+00		7.223E+00	7.223E+00	6.479E+00		6.479E+00	5.926E+00		5.926E+00
3.00E+03	7.164E+00		7.164E+00	7.164E+00	6.461E+00		6.461E+00	5.926E+00		5.926E+00
4.00E+03	7.216E+00		7.216E+00	7.216E+00	6.536E+00		6.536E+00	6.005E+00		6.005E+00
5.00E+03	7.293E+00		7.293E+00	7.293E+00	6.628E+00		6.628E+00	6.098E+00		6.098E+00
6.00E+03	7.372E+00		7.372E+00	7.372E+00	6.720E+00		6.720E+00	6.189E+00		6.189E+00
7.00E+03	7.448E+00		7.448E+00	7.448E+00	6.807E+00		6.807E+00	6.274E+00		6.274E+00
8.00E+03	7.519E+00		7.519E+00	7.519E+00	6.886E+00		6.886E+00	6.352E+00		6.352E+00
9.00E+03	7.584E+00		7.584E+00	7.584E+00	6.960E+00		6.960E+00	6.423E+00		6.423E+00
1.00E+04	7.644E+00		7.644E+00	7.644E+00	7.027E+00		7.027E+00	6.489E+00		6.489E+00

 * Alpha (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	3.496E+00	1.055E+01	1.404E+01	1.997E+00	1.899E+00	3.895E+00	2.308E+00	1.541E+00	3.850E+00
1.50E-05	4.282E+00	1.246E+01	1.674E+01	2.445E+00	2.308E+00	4.754E+00	2.827E+00	1.879E+00	4.706E+00
2.00E-05	4.945E+00	1.391E+01	1.886E+01	3.248E+00	2.635E+00	5.458E+00	3.265E+00	2.150E+00	5.414E+00
3.00E-05	6.056E+00	1.607E+01	2.212E+01	3.458E+00	3.145E+00	6.603E+00	3.998E+00	2.574E+00	6.572E+00
4.00E-05	6.993E+00	1.764E+01	2.463E+01	3.993E+00	3.539E+00	7.533E+00	4.617E+00	2.904E+00	7.521E+00
5.00E-05	7.818E+00	1.886E+01	2.668E+01	4.465E+00	3.862E+00	8.327E+00	5.162E+00	3.176E+00	8.338E+00
6.00E-05	8.565E+00	1.986E+01	2.842E+01	4.891E+00	4.136E+00	9.026E+00	5.655E+00	3.406E+00	9.061E+00
7.00E-05	9.251E+00	2.069E+01	2.994E+01	5.283E+00	4.372E+00	9.655E+00	6.108E+00	3.607E+00	9.714E+00
8.00E-05	9.889E+00	2.139E+01	3.128E+01	5.647E+00	4.581E+00	1.023E+01	6.529E+00	3.784E+00	1.031E+01
9.00E-05	1.049E+01	2.199E+01	3.248E+01	5.990E+00	4.767E+00	1.076E+01	6.925E+00	3.942E+00	1.087E+01
1.00E-04	1.106E+01	2.252E+01	3.358E+01	6.314E+00	4.934E+00	1.125E+01	7.300E+00	4.085E+00	1.139E+01
1.50E-04	1.354E+01	2.440E+01	3.794E+01	7.733E+00	5.582E+00	1.331E+01	8.941E+00	4.642E+00	1.358E+01
2.00E-04	1.564E+01	2.552E+01	4.115E+01	8.929E+00	6.034E+00	1.496E+01	1.032E+01	5.035E+00	1.536E+01
3.00E-04	1.915E+01	2.670E+01	4.585E+01	1.094E+01	6.639E+00	1.757E+01	1.264E+01	5.567E+00	1.821E+01
4.00E-04	2.211E+01	2.719E+01	4.930E+01	1.263E+01	7.028E+00	1.966E+01	1.460E+01	5.915E+00	2.051E+01
5.00E-04	2.472E+01	2.733E+01	5.208E+01	1.412E+01	7.286E+00	2.141E+01	1.632E+01	6.159E+00	2.248E+01
6.00E-04	2.708E+01	2.729E+01	5.437E+01	1.547E+01	7.489E+00	2.295E+01	1.788E+01	6.339E+00	2.422E+01
7.00E-04	2.925E+01	2.712E+01	5.638E+01	1.670E+01	7.631E+00	2.434E+01	1.931E+01	6.474E+00	2.579E+01
8.00E-04	3.127E+01	2.689E+01	5.818E+01	1.786E+01	7.735E+00	2.559E+01	2.065E+01	6.577E+00	2.722E+01
9.00E-04	3.317E+01	2.661E+01	5.978E+01	1.894E+01	7.813E+00	2.675E+01	2.190E+01	6.655E+00	2.856E+01
1.00E-03	3.496E+01	2.631E+01	6.127E+01	1.997E+01	7.869E+00	2.784E+01	2.308E+01	6.715E+00	2.980E+01
1.50E-03	4.842E+01	2.467E+01	7.309E+01	2.765E+01	7.963E+00	3.561E+01	3.197E+01	6.846E+00	3.881E+01
2.00E-03	6.051E+01	2.310E+01	8.360E+01	3.455E+01	7.898E+00	4.245E+01	3.995E+01	6.829E+00	4.678E+01
3.00E-03	8.214E+01	2.046E+01	1.026E+02	4.690E+01	7.612E+00	5.452E+01	5.423E+01	6.640E+00	6.087E+01
4.00E-03	1.013E+02	1.842E+01	1.197E+02	5.783E+01	7.274E+00	6.511E+01	6.687E+01	6.387E+00	7.325E+01
5.00E-03	1.163E+02	1.679E+01	1.353E+02	6.768E+01	6.942E+00	7.463E+01	7.826E+01	6.127E+00	8.438E+01
6.00E-03	1.343E+02	1.547E+01	1.497E+02	7.668E+01	6.632E+00	8.331E+01	8.865E+01	5.879E+00	9.453E+01
7.00E-03	1.488E+02	1.437E+01	1.632E+02	8.498E+01	6.348E+00	9.133E+01	9.825E+01	5.648E+00	1.039E+02
8.00E-03	1.623E+02	1.344E+01	1.758E+02	9.271E+01	6.088E+00	9.879E+01	1.072E+02	5.433E+00	1.126E+02
9.00E-03	1.750E+02	1.264E+01	1.877E+02	9.995E+01	5.850E+00	1.058E+02	1.156E+02	5.235E+00	1.208E+02
1.00E-02	1.870E+02	1.194E+01	1.990E+02	1.068E+02	5.633E+00	1.124E+02	1.235E+02	5.053E+00	1.285E+02
1.50E-02	2.391E+02	9.473E+00	2.485E+02	1.365E+02	4.775E+00	1.413E+02	1.578E+02	4.321E+00	1.622E+02
2.00E-02	2.827E+02	7.937E+00	2.906E+02	1.614E+02	4.174E+00	1.656E+02	1.866E+02	3.799E+00	1.904E+02
3.00E-02	3.515E+02	6.095E+00	3.576E+02	2.106E+02	3.377E+00	2.140E+02	2.268E+02	3.095E+00	2.299E+02
4.00E-02	4.033E+02	5.007E+00	4.085E+02	2.522E+02	2.635E+00	2.551E+02	2.518E+02	2.638E+00	2.544E+02
5.00E-02	4.475E+02	4.238E+00	4.517E+02	2.810E+02	2.504E+00	2.835E+02	2.729E+02	2.313E+00	2.752E+02
6.00E-02	4.853E+02	3.718E+00	4.890E+02	3.015E+02	2.234E+00	3.038E+02	2.914E+02	2.068E+00	2.935E+02
7.00E-02	5.181E+02	3.322E+00	5.214E+02	3.171E+02	2.022E+00	3.192E+02	3.079E+02	1.876E+00	3.098E+02
8.00E-02	5.465E+02	3.009E+00	5.496E+02	3.297E+02	1.852E+00	3.316E+02	3.227E+02	1.721E+00	3.244E+02
9.00E-02	5.712E+02	2.755E+00	5.740E+02	3.402E+02	1.711E+00	3.420E+02	3.359E+02	1.592E+00	3.375E+02

target	Energy (MeV/amu)	Copper			Tungsten			Lead		
		Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	5.925E+02	2.544E+00	5.951E+02	3.493E+02	1.593E+00	3.508E+02	3.476E+02	1.484E+00	3.491E+02	
1.50E-01	6.603E+02	1.862E+00	6.622E+02	3.790E+02	1.188E+00	3.802E+02	3.878E+02	1.121E+00	3.889E+02	
2.00E-01	6.863E+02	1.485E+00	6.878E+02	3.915E+02	9.637E-01	3.924E+02	4.038E+02	9.030E-01	4.047E+02	
3.00E-01	6.832E+02	1.073E+00	6.842E+02	3.898E+02	7.110E-01	3.896E+02	3.963E+02	6.684E-01	3.970E+02	
4.00E-01	6.532E+02	8.487E-01	6.540E+02	3.708E+02	5.698E-01	3.714E+02	3.702E+02	5.366E-01	3.708E+02	
5.00E-01	6.168E+02	7.063E-01	6.175E+02	3.490E+02	4.785E-01	3.495E+02	3.430E+02	4.512E-01	3.434E+02	
6.00E-01	5.807E+02	6.072E-01	5.813E+02	3.278E+02	4.142E-01	3.282E+02	3.192E+02	3.909E-01	3.196E+02	
7.00E-01	5.473E+02	5.340E-01	5.478E+02	3.086E+02	3.652E-01	3.089E+02	2.925E+02	3.458E-01	2.996E+02	
8.00E-01	5.171E+02	4.775E-01	5.176E+02	2.914E+02	3.289E-01	2.918E+02	2.825E+02	3.108E-01	2.828E+02	
9.00E-01	4.901E+02	4.325E-01	4.905E+02	2.763E+02	2.990E-01	2.766E+02	2.684E+02	2.827E-01	2.687E+02	
1.00E+00	4.659E+02	3.957E-01	4.663E+02	2.630E+02	2.744E-01	2.632E+02	2.563E+02	2.596E-01	2.565E+02	
1.50E+00	3.757E+02	2.804E-01	3.760E+02	2.142E+02	1.967E-01	2.144E+02	2.133E+02	1.863E-01	2.135E+02	
2.00E+00	3.171E+02	2.191E-01	3.173E+02	1.831E+02	1.548E-01	1.833E+02	1.855E+02	1.468E-01	1.856E+02	
3.00E+00	2.446E+02	1.544E-01	2.447E+02	1.447E+02	1.101E-01	1.448E+02	1.494E+02	1.045E-01	1.495E+02	
4.00E+00	2.012E+02	1.202E-01	2.013E+02	1.215E+02	8.620E-02	1.216E+02	1.265E+02	8.191E-02	1.266E+02	
5.00E+00	1.721E+02	9.888E-02	1.722E+02	1.058E+02	7.122E-02	1.059E+02	1.106E+02	6.772E-02	1.107E+02	
6.00E+00	1.512E+02	8.427E-02	1.513E+02	9.442E-02	6.090E-02	9.448E+01	9.876E+01	5.792E-02	9.882E+01	
7.00E+00	1.354E+02	7.358E-02	1.355E+02	8.572E-02	5.331E-02	8.578E+01	8.960E+01	5.073E-02	8.965E+01	
8.00E+00	1.229E+02	6.541E-02	1.230E+02	7.882E-02	4.750E-02	7.887E+01	8.225E+01	4.521E-02	8.230E+01	
9.00E+00	1.129E+02	5.894E-02	1.129E+02	7.318E-02	4.288E-02	7.322E+01	7.621E+01	4.082E-02	7.625E+01	
1.00E+01	1.045E+02	5.369E-02	1.046E+02	6.846E-02	3.913E-02	6.850E+01	7.114E+01	3.726E-02	7.117E+01	
1.50E+01	8.015E+01	4.015E+01	8.015E+01	5.562E+01	3.562E+01	5.562E+01	5.436E+01	3.436E+01	5.436E+01	
2.00E+01	6.457E+01	3.457E+01	6.457E+01	4.561E+01	4.561E+01	4.561E+01	4.460E+01	4.460E+01	4.460E+01	
3.00E+01	4.747E+01	2.747E+01	4.747E+01	3.427E+01	3.427E+01	3.427E+01	3.355E+01	3.355E+01	3.355E+01	
4.00E+01	3.816E+01	2.816E+01	3.816E+01	2.791E+01	2.791E+01	2.791E+01	2.733E+01	2.733E+01	2.733E+01	
5.00E+01	3.223E+01	2.323E+01	3.223E+01	2.379E+01	2.379E+01	2.379E+01	2.331E+01	2.331E+01	2.331E+01	
6.00E+01	2.811E+01	2.811E+01	2.811E+01	2.088E+01	2.088E+01	2.088E+01	2.047E+01	2.047E+01	2.047E+01	
7.00E+01	2.507E+01	2.507E+01	2.507E+01	1.872E+01	1.872E+01	1.872E+01	1.836E+01	1.836E+01	1.836E+01	
8.00E+01	2.273E+01	2.273E+01	2.273E+01	1.704E+01	1.704E+01	1.704E+01	1.671E+01	1.671E+01	1.671E+01	
9.00E+01	2.086E+01	2.086E+01	2.086E+01	1.570E+01	1.570E+01	1.570E+01	1.540E+01	1.540E+01	1.540E+01	
1.00E+02	1.935E+01	1.935E+01	1.935E+01	1.460E+01	1.460E+01	1.460E+01	1.432E+01	1.432E+01	1.432E+01	
1.50E+02	1.462E+01	1.462E+01	1.462E+01	1.114E+01	1.114E+01	1.114E+01	1.094E+01	1.094E+01	1.094E+01	
2.00E+02	1.216E+01	1.216E+01	1.216E+01	9.317E+00	9.317E+00	9.317E+00	9.154E+00	9.154E+00	9.154E+00	
3.00E+02	9.620E+00	9.620E+00	9.620E+00	7.424E+00	7.424E+00	7.424E+00	7.300E+00	7.300E+00	7.300E+00	
4.00E+02	8.341E+00	8.341E+00	8.341E+00	6.463E+00	6.463E+00	6.463E+00	6.359E+00	6.359E+00	6.359E+00	
5.00E+02	7.584E+00	7.584E+00	7.584E+00	5.892E+00	5.892E+00	5.892E+00	5.801E+00	5.801E+00	5.801E+00	
6.00E+02	7.093E+00	7.093E+00	7.093E+00	5.521E+00	5.521E+00	5.521E+00	5.439E+00	5.439E+00	5.439E+00	
7.00E+02	6.757E+00	6.757E+00	6.757E+00	5.265E+00	5.265E+00	5.265E+00	5.191E+00	5.191E+00	5.191E+00	
8.00E+02	6.517E+00	6.517E+00	6.517E+00	5.083E+00	5.083E+00	5.083E+00	5.015E+00	5.015E+00	5.015E+00	
9.00E+02	6.331E+00	6.331E+00	6.331E+00	4.949E+00	4.949E+00	4.949E+00	4.886E+00	4.886E+00	4.886E+00	
1.00E+03	6.189E+00	6.189E+00	6.189E+00	4.848E+00	4.848E+00	4.848E+00	4.790E+00	4.790E+00	4.790E+00	
1.50E+03	5.837E+00	5.837E+00	5.837E+00	4.609E+00	4.609E+00	4.609E+00	4.567E+00	4.567E+00	4.567E+00	
2.00E+03	5.736E+00	5.736E+00	5.736E+00	4.536E+00	4.536E+00	4.536E+00	4.528E+00	4.528E+00	4.528E+00	
3.00E+03	5.745E+00	5.745E+00	5.745E+00	4.601E+00	4.601E+00	4.601E+00	4.590E+00	4.590E+00	4.590E+00	
4.00E+03	5.827E+00	5.827E+00	5.827E+00	4.695E+00	4.695E+00	4.695E+00	4.694E+00	4.694E+00	4.694E+00	
5.00E+03	5.922E+00	5.922E+00	5.922E+00	4.792E+00	4.792E+00	4.792E+00	4.798E+00	4.798E+00	4.798E+00	
6.00E+03	6.014E+00	6.014E+00	6.014E+00	4.884E+00	4.884E+00	4.884E+00	4.895E+00	4.895E+00	4.895E+00	
7.00E+03	6.099E+00	6.099E+00	6.099E+00	4.967E+00	4.967E+00	4.967E+00	4.983E+00	4.983E+00	4.983E+00	
8.00E+03	6.177E+00	6.177E+00	6.177E+00	5.044E+00	5.044E+00	5.044E+00	5.063E+00	5.063E+00	5.063E+00	
9.00E+03	6.249E+00	6.249E+00	6.249E+00	5.113E+00	5.113E+00	5.113E+00	5.135E+00	5.135E+00	5.135E+00	
1.00E+04	6.314E+00	6.314E+00	6.314E+00	5.177E+00	5.177E+00	5.177E+00	5.201E+00	5.201E+00	5.201E+00	

 * Alpha (4/5) *

target	Uranium				LiF(TLD-100)				7LiF(TLD-700)				
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	1.694E+00	1.207E+00	2.900E+00	1.209E+01	9.604E+01	1.081E+02	1.206E+01	1.486E+01	9.546E+01	1.075E+02	1.206E+01	1.486E+01	1.075E+02
1.50E-05	2.074E+00	1.476E+00	3.550E+00	1.476E+01	1.067E+02	1.215E+02	1.476E+01	1.486E+01	1.075E+02	1.218E+02	1.476E+01	1.486E+01	1.218E+02
2.00E-05	2.395E+00	1.692E+00	4.087E+00	1.711E+01	1.138E+02	1.309E+02	1.711E+01	1.716E+01	1.141E+02	1.312E+02	1.716E+01	1.141E+02	1.312E+02
3.00E-05	2.934E+00	2.033E+00	4.967E+00	2.095E+01	1.227E+02	1.436E+02	2.095E+01	2.101E+01	1.229E+02	1.440E+02	2.101E+01	1.229E+02	1.440E+02
4.00E-05	3.387E+00	2.301E+00	5.688E+00	2.419E+01	1.279E+02	1.521E+02	2.419E+01	2.426E+01	1.282E+02	1.524E+02	2.426E+01	1.282E+02	1.524E+02
5.00E-05	3.787E+00	2.521E+00	6.308E+00	2.705E+01	1.311E+02	1.582E+02	2.705E+01	2.713E+01	1.314E+02	1.585E+02	2.713E+01	1.314E+02	1.585E+02
6.00E-05	4.149E+00	2.709E+00	6.858E+00	2.963E+01	1.332E+02	1.628E+02	2.963E+01	2.972E+01	1.334E+02	1.632E+02	2.972E+01	1.334E+02	1.632E+02
7.00E-05	4.481E+00	2.874E+00	7.355E+00	3.200E+01	1.344E+02	1.664E+02	3.200E+01	3.210E+01	1.347E+02	1.668E+02	3.210E+01	1.347E+02	1.668E+02
8.00E-05	4.790E+00	3.019E+00	7.810E+00	3.421E+01	1.352E+02	1.694E+02	3.421E+01	3.431E+01	1.354E+02	1.697E+02	3.431E+01	1.354E+02	1.697E+02
9.00E-05	5.081E+00	3.150E+00	8.231E+00	3.629E+01	1.355E+02	1.718E+02	3.629E+01	3.640E+01	1.358E+02	1.722E+02	3.640E+01	1.358E+02	1.722E+02
1.00E-04	5.356E+00	3.268E+00	8.624E+00	3.825E+01	1.356E+02	1.738E+02	3.825E+01	3.836E+01	1.358E+02	1.742E+02	3.836E+01	1.358E+02	1.742E+02
1.50E-04	6.560E+00	3.731E+00	1.029E+01	4.685E+01	1.335E+02	1.804E+02	4.685E+01	4.699E+01	1.337E+02	1.807E+02	4.699E+01	1.337E+02	1.807E+02
2.00E-04	7.574E+00	4.062E+00	1.164E+01	5.410E+01	1.299E+02	1.840E+02	5.410E+01	5.425E+01	1.301E+02	1.843E+02	5.425E+01	1.301E+02	1.843E+02
3.00E-04	9.277E+00	4.515E+00	1.379E+01	6.626E+01	1.218E+02	1.880E+02	6.626E+01	6.645E+01	1.219E+02	1.884E+02	6.645E+01	1.219E+02	1.884E+02
4.00E-04	1.071E+01	4.817E+00	1.553E+01	7.651E+01	1.142E+02	1.907E+02	7.651E+01	7.673E+01	1.143E+02	1.911E+02	7.673E+01	1.143E+02	1.911E+02
5.00E-04	1.198E+01	5.034E+00	1.701E+01	8.554E+01	1.075E+02	1.930E+02	8.554E+01	8.578E+01	1.076E+02	1.934E+02	8.578E+01	1.076E+02	1.934E+02
6.00E-04	1.312E+01	5.195E+00	1.831E+01	9.370E+01	1.016E+02	1.953E+02	9.370E+01	9.397E+01	1.017E+02	1.957E+02	9.397E+01	1.017E+02	1.957E+02
7.00E-04	1.417E+01	5.319E+00	1.949E+01	1.012E+02	9.641E+01	1.976E+02	1.012E+02	1.015E+02	9.651E+01	1.980E+02	1.015E+02	9.651E+01	1.980E+02
8.00E-04	1.515E+01	5.416E+00	2.056E+01	1.082E+02	9.182E+01	2.000E+02	1.082E+02	1.085E+02	9.190E+01	2.004E+02	1.085E+02	9.190E+01	2.004E+02
9.00E-04	1.607E+01	5.492E+00	2.156E+01	1.148E+02	8.771E+01	2.025E+02	1.148E+02	1.151E+02	8.779E+01	2.029E+02	1.151E+02	8.779E+01	2.029E+02
1.00E-03	1.694E+01	5.553E+00	2.249E+01	1.210E+02	8.403E+01	2.050E+02	1.210E+02	1.213E+02	8.409E+01	2.054E+02	1.213E+02	8.409E+01	2.054E+02
1.50E-03	2.346E+01	5.706E+00	2.916E+01	1.605E+02	7.000E+01	2.305E+02	1.605E+02	1.609E+02	7.005E+01	2.310E+02	1.609E+02	7.005E+01	2.310E+02
2.00E-03	2.931E+01	5.728E+00	3.504E+01	1.948E+02	6.054E+01	2.353E+02	1.948E+02	1.953E+02	6.058E+01	2.358E+02	1.953E+02	6.058E+01	2.358E+02
3.00E-03	3.979E+01	5.623E+00	4.541E+01	2.540E+02	4.837E+01	3.024E+02	2.540E+02	2.546E+02	4.839E+01	3.030E+02	2.546E+02	4.839E+01	3.030E+02
4.00E-03	4.906E+01	5.448E+00	5.451E+01	3.048E+02	4.073E+01	3.455E+02	3.048E+02	3.054E+02	4.075E+01	3.462E+02	3.054E+02	4.075E+01	3.462E+02
5.00E-03	5.742E+01	5.257E+00	6.267E+01	3.494E+02	3.542E+01	3.848E+02	3.494E+02	3.501E+02	3.543E+01	3.855E+02	3.501E+02	3.543E+01	3.855E+02
6.00E-03	6.504E+01	5.069E+00	7.011E+01	3.893E+02	3.139E+01	4.207E+02	3.893E+02	3.901E+02	3.140E+01	4.215E+02	3.901E+02	3.140E+01	4.215E+02
7.00E-03	7.209E+01	4.889E+00	7.698E+01	4.256E+02	2.834E+01	4.540E+02	4.256E+02	4.264E+02	2.835E+01	4.547E+02	4.264E+02	2.835E+01	4.547E+02
8.00E-03	7.864E+01	4.720E+00	8.336E+01	4.589E+02	2.590E+01	4.848E+02	4.589E+02	4.597E+02	2.590E+01	4.856E+02	4.597E+02	2.590E+01	4.856E+02
9.00E-03	8.479E+01	4.563E+00	8.935E+01	4.898E+02	2.388E+01	5.137E+02	4.898E+02	4.906E+02	2.389E+01	5.145E+02	4.906E+02	2.389E+01	5.145E+02
1.00E-02	9.059E+01	4.416E+00	9.500E+01	5.186E+02	2.219E+01	5.408E+02	5.186E+02	5.195E+02	2.220E+01	5.417E+02	5.195E+02	2.220E+01	5.417E+02
1.50E-02	1.158E+02	3.815E+00	1.196E+02	6.411E+02	1.649E+01	6.576E+02	6.411E+02	6.421E+02	1.649E+01	6.586E+02	6.421E+02	1.649E+01	6.586E+02
2.00E-02	1.369E+02	3.375E+00	1.403E+02	7.410E+02	1.333E+01	7.543E+02	7.410E+02	7.419E+02	1.334E+01	7.553E+02	7.419E+02	1.334E+01	7.553E+02
3.00E-02	1.753E+02	2.774E+00	1.781E+02	8.888E+02	9.797E+00	8.986E+02	8.888E+02	8.899E+02	9.798E+00	8.997E+02	8.899E+02	9.798E+00	8.997E+02
4.00E-02	2.104E+02	2.377E+00	2.130E+02	9.923E+02	7.831E+00	1.000E+03	9.923E+02	9.935E+02	7.831E+00	1.001E+03	9.935E+02	7.831E+00	1.001E+03
5.00E-02	2.409E+02	2.092E+00	2.430E+02	1.079E+03	6.565E+00	1.006E+03	1.079E+03	1.081E+03	6.565E+00	1.087E+03	1.081E+03	6.565E+00	1.087E+03
6.00E-02	2.676E+02	1.876E+00	2.695E+02	1.155E+03	5.675E+00	1.160E+03	1.155E+03	1.156E+03	5.675E+00	1.162E+03	1.156E+03	5.675E+00	1.162E+03
7.00E-02	2.908E+02	1.705E+00	2.925E+02	1.221E+03	5.012E+00	1.226E+03	1.221E+03	1.222E+03	5.012E+00	1.227E+03	1.222E+03	5.012E+00	1.227E+03
8.00E-02	3.109E+02	1.567E+00	3.124E+02	1.279E+03	4.497E+00	1.284E+03	1.279E+03	1.281E+03	4.497E+00	1.285E+03	1.281E+03	4.497E+00	1.285E+03
9.00E-02	3.280E+02	1.452E+00	3.295E+02	1.330E+03	4.086E+00	1.334E+03	1.330E+03	1.332E+03	4.086E+00	1.336E+03	1.332E+03	4.086E+00	1.336E+03

target	Uranium			LiF (TLD-100)			7LiF (TLD-700)			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	3.425E+02	1.355E+00	3.439E+02	1.375E+03	3.748E+00	3.748E+00	1.379E+03	1.376E+03	3.748E+00	1.380E+03
1.50E-01	3.839E+02	1.028E+00	3.849E+02	1.517E+03	2.680E+00	2.680E+00	1.520E+03	1.519E+03	2.680E+00	1.521E+03
2.00E-01	3.928E+02	8.305E-01	3.937E+02	1.560E+03	2.107E+00	2.107E+00	1.562E+03	1.561E+03	2.107E+00	1.563E+03
3.00E-01	3.763E+02	6.169E-01	3.769E+02	1.493E+03	1.495E+00	1.495E+00	1.495E+03	1.494E+03	1.495E+00	1.496E+03
4.00E-01	3.508E+02	4.963E-01	3.513E+02	1.362E+03	1.170E+00	1.170E+00	1.363E+03	1.362E+03	1.170E+00	1.363E+03
5.00E-01	3.271E+02	4.180E-01	3.275E+02	1.231E+03	9.658E-01	9.658E-01	1.232E+03	1.231E+03	9.657E-01	1.232E+03
6.00E-01	3.065E+02	3.625E-01	3.069E+02	1.117E+03	8.252E-01	8.252E-01	1.118E+03	1.118E+03	8.251E-01	1.118E+03
7.00E-01	2.899E+02	3.210E-01	2.892E+02	1.022E+03	7.221E-01	7.221E-01	1.023E+03	1.022E+03	7.220E-01	1.023E+03
8.00E-01	2.736E+02	2.887E-01	2.739E+02	9.477E+02	6.431E-01	6.431E-01	9.434E+02	9.431E+02	6.430E-01	9.437E+02
9.00E-01	2.603E+02	2.628E-01	2.606E+02	8.762E+02	5.804E-01	5.804E-01	8.768E+02	8.765E+02	5.803E-01	8.771E+02
1.00E+00	2.486E+02	2.414E-01	2.488E+02	8.197E+02	5.294E-01	5.294E-01	8.202E+02	8.200E+02	5.294E-01	8.205E+02
1.50E+00	2.054E+02	1.736E-01	2.056E+02	6.286E+02	3.711E-01	3.711E-01	6.290E+02	6.288E+02	3.711E-01	6.292E+02
2.00E+00	1.770E+02	1.369E-01	1.771E+02	5.160E+02	2.880E-01	2.880E-01	5.163E+02	5.162E+02	2.880E-01	5.164E+02
3.00E+00	1.409E+02	9.761E-02	1.410E+02	3.848E+02	2.011E-01	2.011E-01	3.850E+02	3.849E+02	2.010E-01	3.851E+02
4.00E+00	1.186E+02	7.657E-02	1.187E+02	3.094E+02	1.556E-01	1.556E-01	3.095E+02	3.095E+02	1.556E-01	3.096E+02
5.00E+00	1.033E+02	6.335E-02	1.034E+02	2.600E+02	1.275E-01	1.275E-01	2.601E+02	2.601E+02	1.275E-01	2.602E+02
6.00E+00	9.217E+01	5.421E-02	9.222E+01	2.250E+02	1.083E-01	1.083E-01	2.251E+02	2.251E+02	1.083E-01	2.252E+02
7.00E+00	8.360E+01	4.750E-02	8.365E+01	1.999E+02	9.431E-02	9.431E-02	1.990E+02	1.989E+02	9.429E-02	1.990E+02
8.00E+00	7.679E+01	4.234E-02	7.683E+01	1.785E+02	8.364E-02	8.364E-02	1.786E+02	1.786E+02	8.363E-02	1.786E+02
9.00E+00	7.121E+01	3.825E-02	7.125E+01	1.622E+02	7.523E-02	7.523E-02	1.623E+02	1.622E+02	7.521E-02	1.623E+02
1.00E+01	6.655E+01	3.492E-02	6.658E+01	1.488E+02	6.841E-02	6.841E-02	1.489E+02	1.488E+02	6.840E-02	1.489E+02
1.50E+01	5.168E+01	3.168E+01	5.168E+01	1.058E+02	1.058E+02	1.058E+02	1.058E+02	1.058E+02	1.058E+02	1.058E+02
2.00E+01	4.248E+01	4.248E+01	4.248E+01	8.390E+01	8.390E+01	8.390E+01	8.390E+01	8.390E+01	8.390E+01	8.390E+01
3.00E+01	3.203E+01	3.203E+01	3.203E+01	6.049E+01	6.049E+01	6.049E+01	6.049E+01	6.049E+01	6.049E+01	6.049E+01
4.00E+01	2.614E+01	2.614E+01	2.614E+01	4.803E+01	4.803E+01	4.803E+01	4.803E+01	4.803E+01	4.803E+01	4.803E+01
5.00E+01	2.232E+01	2.232E+01	2.232E+01	4.023E+01	4.023E+01	4.023E+01	4.023E+01	4.023E+01	4.023E+01	4.023E+01
6.00E+01	1.962E+01	1.962E+01	1.962E+01	3.486E+01	3.486E+01	3.486E+01	3.486E+01	3.486E+01	3.486E+01	3.486E+01
7.00E+01	1.761E+01	1.761E+01	1.761E+01	3.094E+01	3.094E+01	3.094E+01	3.094E+01	3.094E+01	3.094E+01	3.094E+01
8.00E+01	1.604E+01	1.604E+01	1.604E+01	2.793E+01	2.793E+01	2.793E+01	2.793E+01	2.793E+01	2.793E+01	2.793E+01
9.00E+01	1.478E+01	1.478E+01	1.478E+01	2.555E+01	2.555E+01	2.555E+01	2.555E+01	2.555E+01	2.555E+01	2.555E+01
1.00E+02	1.376E+01	1.376E+01	1.376E+01	2.362E+01	2.362E+01	2.362E+01	2.362E+01	2.362E+01	2.362E+01	2.362E+01
1.50E+02	1.052E+01	1.052E+01	1.052E+01	1.768E+01	1.768E+01	1.768E+01	1.768E+01	1.768E+01	1.768E+01	1.768E+01
2.00E+02	8.807E+00	8.807E+00	8.807E+00	1.460E+01	1.460E+01	1.460E+01	1.460E+01	1.460E+01	1.460E+01	1.460E+01
3.00E+02	7.027E+00	7.027E+00	7.027E+00	1.146E+01	1.146E+01	1.146E+01	1.146E+01	1.146E+01	1.146E+01	1.146E+01
4.00E+02	6.122E+00	6.122E+00	6.122E+00	9.887E+00	9.887E+00	9.887E+00	9.887E+00	9.887E+00	9.887E+00	9.887E+00
5.00E+02	5.584E+00	5.584E+00	5.584E+00	8.954E+00	8.954E+00	8.954E+00	8.954E+00	8.954E+00	8.954E+00	8.954E+00
6.00E+02	5.235E+00	5.235E+00	5.235E+00	8.349E+00	8.349E+00	8.349E+00	8.349E+00	8.349E+00	8.349E+00	8.349E+00
7.00E+02	4.994E+00	4.994E+00	4.994E+00	7.931E+00	7.931E+00	7.931E+00	7.931E+00	7.931E+00	7.931E+00	7.931E+00
8.00E+02	4.823E+00	4.823E+00	4.823E+00	7.632E+00	7.632E+00	7.632E+00	7.632E+00	7.632E+00	7.632E+00	7.632E+00
9.00E+02	4.697E+00	4.697E+00	4.697E+00	7.387E+00	7.387E+00	7.387E+00	7.387E+00	7.387E+00	7.387E+00	7.387E+00
1.00E+03	4.607E+00	4.607E+00	4.607E+00	7.196E+00	7.196E+00	7.196E+00	7.196E+00	7.196E+00	7.196E+00	7.196E+00
1.50E+03	4.400E+00	4.400E+00	4.400E+00	6.693E+00	6.693E+00	6.693E+00	6.693E+00	6.693E+00	6.693E+00	6.693E+00
2.00E+03	4.362E+00	4.362E+00	4.362E+00	6.513E+00	6.513E+00	6.513E+00	6.513E+00	6.513E+00	6.513E+00	6.513E+00
3.00E+03	4.420E+00	4.420E+00	4.420E+00	6.436E+00	6.436E+00	6.436E+00	6.436E+00	6.436E+00	6.436E+00	6.436E+00
4.00E+03	4.520E+00	4.520E+00	4.520E+00	6.469E+00	6.469E+00	6.469E+00	6.469E+00	6.469E+00	6.469E+00	6.469E+00
5.00E+03	4.620E+00	4.620E+00	4.620E+00	6.529E+00	6.529E+00	6.529E+00	6.529E+00	6.529E+00	6.529E+00	6.529E+00
6.00E+03	4.713E+00	4.713E+00	4.713E+00	6.594E+00	6.594E+00	6.594E+00	6.594E+00	6.594E+00	6.594E+00	6.594E+00
7.00E+03	4.798E+00	4.798E+00	4.798E+00	6.658E+00	6.658E+00	6.658E+00	6.658E+00	6.658E+00	6.658E+00	6.658E+00
8.00E+03	4.875E+00	4.875E+00	4.875E+00	6.719E+00	6.719E+00	6.719E+00	6.719E+00	6.719E+00	6.719E+00	6.719E+00
9.00E+03	4.945E+00	4.945E+00	4.945E+00	6.775E+00	6.775E+00	6.775E+00	6.775E+00	6.775E+00	6.775E+00	6.775E+00
1.00E+04	5.008E+00	5.008E+00	5.008E+00	6.827E+00	6.827E+00	6.827E+00	6.827E+00	6.827E+00	6.827E+00	6.827E+00

 * Alpha (5/5) *

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	2.572E+01	1.806E+02	2.063E+02	1.829E+01	1.913E+02	2.096E+02	2.338E+01	1.633E+02	1.867E+02
1.50E-05	3.150E+01	1.994E+02	2.309E+02	2.239E+01	2.109E+02	2.333E+02	2.864E+01	1.807E+02	2.093E+02
2.00E-05	3.637E+01	2.117E+02	2.480E+02	2.586E+01	2.235E+02	2.494E+02	3.307E+01	1.921E+02	2.251E+02
3.00E-05	4.454E+01	2.266E+02	2.711E+02	3.167E+01	2.388E+02	2.705E+02	4.050E+01	2.061E+02	2.466E+02
4.00E-05	5.143E+01	2.349E+02	2.863E+02	3.657E+01	2.472E+02	2.838E+02	4.677E+01	2.140E+02	2.608E+02
5.00E-05	5.750E+01	2.397E+02	2.972E+02	4.089E+01	2.520E+02	2.928E+02	5.239E+01	2.187E+02	2.710E+02
6.00E-05	6.299E+01	2.424E+02	3.054E+02	4.479E+01	2.546E+02	2.994E+02	5.728E+01	2.215E+02	2.788E+02
7.00E-05	6.804E+01	2.438E+02	3.119E+02	4.838E+01	2.559E+02	3.042E+02	6.187E+01	2.230E+02	2.849E+02
8.00E-05	7.274E+01	2.443E+02	3.171E+02	5.172E+01	2.562E+02	3.079E+02	6.614E+01	2.237E+02	2.899E+02
9.00E-05	7.715E+01	2.442E+02	3.213E+02	5.486E+01	2.559E+02	3.107E+02	7.015E+01	2.238E+02	2.940E+02
1.00E-04	8.132E+01	2.436E+02	3.249E+02	5.782E+01	2.551E+02	3.129E+02	7.395E+01	2.235E+02	2.974E+02
1.50E-04	9.960E+01	2.370E+02	3.366E+02	7.082E+01	2.478E+02	3.186E+02	9.056E+01	2.182E+02	3.088E+02
2.00E-04	1.150E+02	2.283E+02	3.434E+02	8.177E+01	2.385E+02	3.202E+02	1.046E+02	2.108E+02	3.154E+02
3.00E-04	1.409E+02	2.110E+02	3.518E+02	1.002E+02	2.201E+02	3.203E+02	1.281E+02	1.956E+02	3.236E+02
4.00E-04	1.626E+02	1.957E+02	3.583E+02	1.156E+02	2.041E+02	3.198E+02	1.479E+02	1.819E+02	3.298E+02
5.00E-04	1.818E+02	1.826E+02	3.644E+02	1.293E+02	1.905E+02	3.198E+02	1.653E+02	1.701E+02	3.354E+02
6.00E-04	1.992E+02	1.713E+02	3.705E+02	1.416E+02	1.788E+02	3.205E+02	1.811E+02	1.599E+02	3.410E+02
7.00E-04	2.152E+02	1.616E+02	3.767E+02	1.530E+02	1.687E+02	3.217E+02	1.956E+02	1.510E+02	3.467E+02
8.00E-04	2.300E+02	1.531E+02	3.831E+02	1.635E+02	1.599E+02	3.235E+02	2.091E+02	1.432E+02	3.524E+02
9.00E-04	2.440E+02	1.456E+02	3.895E+02	1.735E+02	1.521E+02	3.256E+02	2.218E+02	1.364E+02	3.582E+02
1.00E-03	2.572E+02	1.389E+02	3.960E+02	1.829E+02	1.452E+02	3.281E+02	2.338E+02	1.302E+02	3.641E+02
1.50E-03	3.318E+02	1.140E+02	4.458E+02	2.430E+02	1.194E+02	3.624E+02	3.030E+02	1.072E+02	4.102E+02
2.00E-03	3.945E+02	9.764E+01	4.922E+02	2.952E+02	1.024E+02	3.976E+02	3.613E+02	9.204E+01	4.534E+02
3.00E-03	4.997E+02	7.705E+01	5.767E+02	3.856E+02	8.100E+01	4.666E+02	4.597E+02	7.282E+01	5.325E+02
4.00E-03	5.868E+02	6.438E+01	6.512E+02	4.631E+02	6.778E+01	5.309E+02	5.417E+02	6.094E+01	6.026E+02
5.00E-03	6.614E+02	5.551E+01	7.169E+02	5.314E+02	5.845E+01	5.898E+02	6.123E+02	5.263E+01	6.649E+02
6.00E-03	7.269E+02	4.914E+01	7.760E+02	5.925E+02	5.178E+01	6.443E+02	6.743E+02	4.662E+01	7.210E+02
7.00E-03	7.852E+02	4.422E+01	8.294E+02	6.481E+02	4.662E+01	6.947E+02	7.399E+02	4.198E+01	7.718E+02
8.00E-03	8.379E+02	4.029E+01	8.782E+02	6.992E+02	4.250E+01	7.417E+02	7.802E+02	3.827E+01	8.185E+02
9.00E-03	8.861E+02	3.707E+01	9.231E+02	7.466E+02	3.913E+01	7.857E+02	8.263E+02	3.523E+01	8.616E+02
1.00E-02	9.305E+02	3.423E+01	9.647E+02	7.908E+02	3.630E+01	8.271E+02	8.689E+02	3.255E+01	9.015E+02
1.50E-02	1.114E+03	2.538E+01	1.139E+03	9.791E+02	2.686E+01	1.006E+03	1.046E+03	2.416E+01	1.070E+03
2.00E-02	1.258E+03	2.043E+01	1.278E+03	1.133E+03	1.154E+01	1.154E+03	1.186E+03	1.946E+01	1.205E+03
3.00E-02	1.480E+03	1.493E+01	1.495E+03	1.368E+03	1.583E+01	1.383E+03	1.399E+03	1.424E+01	1.413E+03
4.00E-02	1.647E+03	1.190E+01	1.659E+03	1.537E+03	1.262E+01	1.550E+03	1.553E+03	1.135E+01	1.567E+03
5.00E-02	1.782E+03	9.950E+00	1.792E+03	1.676E+03	1.056E+01	1.686E+03	1.682E+03	9.497E+00	1.692E+03
6.00E-02	1.894E+03	8.586E+00	1.902E+03	1.792E+03	9.119E+00	1.801E+03	1.788E+03	8.198E+00	1.796E+03
7.00E-02	1.987E+03	7.573E+00	1.994E+03	1.890E+03	8.046E+00	1.893E+03	1.876E+03	7.233E+00	1.883E+03
8.00E-02	2.064E+03	6.788E+00	2.071E+03	1.973E+03	7.214E+00	1.980E+03	1.950E+03	6.485E+00	1.956E+03
9.00E-02	2.127E+03	6.161E+00	2.133E+03	2.043E+03	6.548E+00	2.049E+03	2.011E+03	5.886E+00	2.017E+03

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	2.178E+03	5.647E+00	2.184E+03	2.100E+03	6.003E+00	2.106E+03	2.060E+03	5.396E+00	2.066E+03
1.50E-01	2.292E+03	4.027E+00	2.296E+03	2.252E+03	4.284E+00	2.256E+03	2.178E+03	3.850E+00	2.182E+03
2.00E-01	2.359E+03	3.159E+00	2.362E+03	2.252E+03	3.362E+00	2.256E+03	2.156E+03	3.022E+00	2.159E+03
3.00E-01	2.039E+03	2.237E+00	2.041E+03	2.070E+03	2.382E+00	2.072E+03	1.957E+03	2.141E+00	1.960E+03
4.00E-01	1.800E+03	1.748E+00	1.801E+03	1.839E+03	1.862E+00	1.841E+03	1.733E+03	1.673E+00	1.735E+03
5.00E-01	1.599E+03	1.441E+00	1.601E+03	1.635E+03	1.536E+00	1.637E+03	1.543E+03	1.380E+00	1.544E+03
6.00E-01	1.439E+03	1.231E+00	1.440E+03	1.469E+03	1.311E+00	1.470E+03	1.389E+03	1.178E+00	1.391E+03
7.00E-01	1.310E+03	1.076E+00	1.311E+03	1.344E+03	1.147E+00	1.335E+03	1.266E+03	1.031E+00	1.267E+03
8.00E-01	1.205E+03	9.579E-01	1.205E+03	1.225E+03	1.021E+00	1.225E+03	1.165E+03	9.174E-01	1.166E+03
9.00E-01	1.117E+03	8.641E-01	1.118E+03	1.134E+03	9.211E-01	1.135E+03	1.081E+03	8.277E-01	1.082E+03
1.00E+00	1.044E+03	7.879E-01	1.045E+03	1.058E+03	8.400E-01	1.059E+03	1.010E+03	7.548E-01	1.011E+03
1.50E+00	7.960E+02	5.515E-01	7.965E+02	8.046E+02	5.881E-01	8.052E+02	7.715E+02	5.284E-01	7.721E+02
2.00E+00	6.506E+02	4.276E-01	6.510E+02	6.577E+02	4.561E-01	6.582E+02	6.314E+02	4.098E-01	6.318E+02
3.00E+00	4.822E+02	2.982E-01	4.825E+02	4.884E+02	3.181E-01	4.887E+02	4.687E+02	2.858E-01	4.690E+02
4.00E+00	3.862E+02	2.306E-01	3.864E+02	3.918E+02	2.461E-01	3.921E+02	3.758E+02	2.211E-01	3.760E+02
5.00E+00	3.237E+02	1.888E-01	3.238E+02	3.289E+02	2.015E-01	3.291E+02	3.152E+02	1.810E-01	3.153E+02
6.00E+00	2.796E+02	1.603E-01	2.797E+02	2.845E+02	1.711E-01	2.847E+02	2.724E+02	1.537E-01	2.725E+02
7.00E+00	2.467E+02	1.395E-01	2.468E+02	2.513E+02	1.489E-01	2.515E+02	2.405E+02	1.338E-01	2.406E+02
8.00E+00	2.212E+02	1.237E-01	2.213E+02	2.255E+02	1.321E-01	2.257E+02	2.157E+02	1.186E-01	2.158E+02
9.00E+00	2.008E+02	1.112E-01	2.009E+02	2.049E+02	1.187E-01	2.050E+02	1.958E+02	1.067E-01	1.959E+02
1.00E+01	1.840E+02	1.011E-01	1.841E+02	1.879E+02	1.080E-01	1.880E+02	1.795E+02	9.699E-02	1.796E+02
1.50E+01	1.297E+02	1.026E+02	1.297E+02	1.327E+02	1.050E+02	1.327E+02	1.268E+02	1.003E+02	1.268E+02
2.00E+01	1.026E+02	7.373E+01	1.026E+02	1.050E+02	7.552E+01	1.050E+02	1.003E+02	7.217E+01	1.003E+02
3.00E+01	5.843E+01	5.843E+01	5.843E+01	5.987E+01	5.987E+01	5.987E+01	5.722E+01	5.722E+01	5.722E+01
4.00E+01	4.888E+01	4.888E+01	4.888E+01	5.009E+01	5.009E+01	5.009E+01	4.787E+01	4.787E+01	4.787E+01
5.00E+01	4.232E+01	4.232E+01	4.232E+01	4.337E+01	4.337E+01	4.337E+01	4.145E+01	4.145E+01	4.145E+01
6.00E+01	3.752E+01	3.752E+01	3.752E+01	3.845E+01	3.845E+01	3.845E+01	3.676E+01	3.676E+01	3.676E+01
7.00E+01	3.385E+01	3.385E+01	3.385E+01	3.470E+01	3.470E+01	3.470E+01	3.317E+01	3.317E+01	3.317E+01
8.00E+01	3.095E+01	3.095E+01	3.095E+01	3.173E+01	3.173E+01	3.173E+01	3.033E+01	3.033E+01	3.033E+01
1.00E+02	2.860E+01	2.860E+01	2.860E+01	2.932E+01	2.932E+01	2.932E+01	2.803E+01	2.803E+01	2.803E+01
1.50E+02	2.136E+01	2.136E+01	2.136E+01	2.191E+01	2.191E+01	2.191E+01	2.094E+01	2.094E+01	2.094E+01
2.00E+02	1.763E+01	1.763E+01	1.763E+01	1.808E+01	1.808E+01	1.808E+01	1.729E+01	1.729E+01	1.729E+01
3.00E+02	1.382E+01	1.382E+01	1.382E+01	1.417E+01	1.417E+01	1.417E+01	1.355E+01	1.355E+01	1.355E+01
4.00E+02	1.191E+01	1.191E+01	1.191E+01	1.221E+01	1.221E+01	1.221E+01	1.168E+01	1.168E+01	1.168E+01
5.00E+02	1.078E+01	1.078E+01	1.078E+01	1.106E+01	1.106E+01	1.106E+01	1.057E+01	1.057E+01	1.057E+01
6.00E+02	1.004E+01	1.004E+01	1.004E+01	1.030E+01	1.030E+01	1.030E+01	9.854E+00	9.854E+00	9.854E+00
7.00E+02	9.537E+00	9.537E+00	9.537E+00	9.783E+00	9.783E+00	9.783E+00	9.358E+00	9.358E+00	9.358E+00
8.00E+02	9.173E+00	9.173E+00	9.173E+00	9.410E+00	9.410E+00	9.410E+00	9.001E+00	9.001E+00	9.001E+00
9.00E+02	8.827E+00	8.827E+00	8.827E+00	9.094E+00	9.094E+00	9.094E+00	8.644E+00	8.644E+00	8.644E+00
1.00E+03	8.548E+00	8.548E+00	8.548E+00	8.844E+00	8.844E+00	8.844E+00	8.353E+00	8.353E+00	8.353E+00
1.50E+03	7.784E+00	7.784E+00	7.784E+00	8.179E+00	8.179E+00	8.179E+00	7.549E+00	7.549E+00	7.549E+00
2.00E+03	7.474E+00	7.474E+00	7.474E+00	7.931E+00	7.931E+00	7.931E+00	7.214E+00	7.214E+00	7.214E+00
3.00E+03	7.267E+00	7.267E+00	7.267E+00	7.802E+00	7.802E+00	7.802E+00	6.973E+00	6.973E+00	6.973E+00
4.00E+03	7.234E+00	7.234E+00	7.234E+00	7.821E+00	7.821E+00	7.821E+00	6.918E+00	6.918E+00	6.918E+00
5.00E+03	7.256E+00	7.256E+00	7.256E+00	7.879E+00	7.879E+00	7.879E+00	6.922E+00	6.922E+00	6.922E+00
6.00E+03	7.296E+00	7.296E+00	7.296E+00	7.948E+00	7.948E+00	7.948E+00	6.950E+00	6.950E+00	6.950E+00
7.00E+03	7.343E+00	7.343E+00	7.343E+00	8.017E+00	8.017E+00	8.017E+00	6.987E+00	6.987E+00	6.987E+00
8.00E+03	7.392E+00	7.392E+00	7.392E+00	8.083E+00	8.083E+00	8.083E+00	7.028E+00	7.028E+00	7.028E+00
9.00E+03	7.440E+00	7.440E+00	7.440E+00	8.146E+00	8.146E+00	8.146E+00	7.069E+00	7.069E+00	7.069E+00
1.00E+04	7.486E+00	7.486E+00	7.486E+00	8.205E+00	8.205E+00	8.205E+00	7.110E+00	7.110E+00	7.110E+00

 * Lithium-6 (1/5) *

target	Hydrogen			Helium			Beryllium		
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))
1.00E-05	6.664E+02	1.481E+03	2.148E+03	2.677E+02	5.190E+02	7.868E+02	2.451E+02	2.584E+02	5.035E+02
1.50E-05	7.375E+02	1.636E+03	2.373E+03	2.963E+02	5.668E+02	8.631E+02	2.712E+02	2.866E+02	5.578E+02
2.00E-05	7.925E+02	1.736E+03	2.529E+03	3.184E+02	5.965E+02	9.149E+02	2.914E+02	3.053E+02	5.967E+02
3.00E-05	8.770E+02	1.858E+03	2.735E+03	3.524E+02	6.301E+02	9.825E+02	3.285E+02	3.284E+02	6.509E+02
4.00E-05	9.424E+02	1.925E+03	2.868E+03	3.786E+02	6.464E+02	1.025E+03	3.466E+02	3.417E+02	6.882E+02
5.00E-05	9.965E+02	1.964E+03	2.961E+03	4.004E+02	6.539E+02	1.054E+03	3.634E+02	3.497E+02	7.161E+02
6.00E-05	1.043E+03	1.986E+03	3.029E+03	4.190E+02	6.562E+02	1.075E+03	3.835E+02	3.545E+02	7.381E+02
7.00E-05	1.084E+03	1.996E+03	3.080E+03	4.355E+02	6.554E+02	1.091E+03	3.986E+02	3.573E+02	7.559E+02
8.00E-05	1.121E+03	1.999E+03	3.120E+03	4.503E+02	6.526E+02	1.103E+03	4.121E+02	3.587E+02	7.708E+02
9.00E-05	1.154E+03	1.997E+03	3.151E+03	4.637E+02	6.483E+02	1.112E+03	4.245E+02	3.590E+02	7.835E+02
1.00E-04	1.185E+03	1.991E+03	3.176E+03	4.761E+02	6.432E+02	1.119E+03	4.358E+02	3.586E+02	7.944E+02
1.50E-04	1.311E+03	1.931E+03	3.242E+03	5.269E+02	6.116E+02	1.139E+03	4.823E+02	3.507E+02	8.329E+02
2.00E-04	1.409E+03	1.854E+03	3.262E+03	5.662E+02	5.787E+02	1.145E+03	5.182E+02	3.387E+02	8.570E+02
3.00E-04	1.560E+03	1.702E+03	3.262E+03	6.266E+02	5.202E+02	1.147E+03	5.735E+02	3.138E+02	8.873E+02
4.00E-04	1.676E+03	1.570E+03	3.246E+03	6.733E+02	4.729E+02	1.146E+03	6.163E+02	2.913E+02	9.076E+02
5.00E-04	1.772E+03	1.458E+03	3.230E+03	7.120E+02	4.343E+02	1.146E+03	6.516E+02	2.718E+02	9.235E+02
6.00E-04	1.855E+03	1.363E+03	3.218E+03	7.452E+02	4.024E+02	1.148E+03	6.820E+02	2.550E+02	9.371E+02
7.00E-04	1.928E+03	1.281E+03	3.209E+03	7.744E+02	3.755E+02	1.150E+03	7.089E+02	2.404E+02	9.493E+02
8.00E-04	1.993E+03	1.210E+03	3.203E+03	8.007E+02	3.526E+02	1.153E+03	7.329E+02	2.277E+02	9.606E+02
9.00E-04	2.053E+03	1.147E+03	3.200E+03	8.246E+02	3.327E+02	1.157E+03	7.548E+02	2.164E+02	9.712E+02
1.00E-03	2.107E+03	1.092E+03	3.199E+03	8.467E+02	3.153E+02	1.162E+03	7.749E+02	2.063E+02	9.813E+02
1.50E-03	2.332E+03	8.881E+02	3.220E+03	9.370E+02	2.525E+02	1.189E+03	8.576E+02	1.690E+02	1.027E+03
2.00E-03	2.506E+03	7.559E+02	3.262E+03	1.007E+03	2.129E+02	1.220E+03	9.216E+02	1.445E+02	1.066E+03
3.00E-03	2.773E+03	5.917E+02	3.365E+03	1.114E+03	1.647E+02	1.279E+03	1.020E+03	1.137E+02	1.134E+03
4.00E-03	2.980E+03	4.919E+02	3.472E+03	1.197E+03	1.359E+02	1.333E+03	1.096E+03	9.481E+01	1.191E+03
5.00E-03	3.151E+03	4.238E+02	3.575E+03	1.266E+03	1.165E+02	1.383E+03	1.159E+03	8.187E+01	1.241E+03
6.00E-03	3.298E+03	3.740E+02	3.672E+03	1.325E+03	1.015E+02	1.427E+03	1.213E+03	7.238E+01	1.285E+03
7.00E-03	3.428E+03	3.358E+02	3.763E+03	1.377E+03	9.084E+01	1.468E+03	1.261E+03	6.507E+01	1.326E+03
8.00E-03	3.544E+03	3.025E+02	3.847E+03	1.424E+03	8.243E+01	1.506E+03	1.303E+03	5.924E+01	1.363E+03
9.00E-03	3.650E+03	2.760E+02	3.928E+03	1.466E+03	7.557E+01	1.542E+03	1.342E+03	5.398E+01	1.396E+03
1.00E-02	3.747E+03	2.575E+02	4.005E+03	1.506E+03	6.987E+01	1.575E+03	1.378E+03	5.004E+01	1.428E+03
1.50E-02	4.235E+03	1.904E+02	4.426E+03	1.666E+03	5.134E+01	1.718E+03	1.578E+03	3.711E+01	1.615E+03
2.00E-02	4.725E+03	1.528E+02	4.878E+03	1.790E+03	4.103E+01	1.832E+03	1.763E+03	2.983E+01	1.793E+03
3.00E-02	5.764E+03	1.112E+02	5.876E+03	2.005E+03	2.973E+01	2.035E+03	2.037E+03	2.177E+01	2.059E+03
4.00E-02	6.811E+03	8.843E+01	6.899E+03	2.227E+03	2.357E+01	2.250E+03	2.208E+03	1.732E+01	2.225E+03
5.00E-02	7.708E+03	7.384E+01	7.822E+03	2.437E+03	1.964E+01	2.457E+03	2.340E+03	1.448E+01	2.355E+03
6.00E-02	8.468E+03	6.364E+01	8.532E+03	2.635E+03	1.690E+01	2.652E+03	2.440E+03	1.249E+01	2.455E+03
7.00E-02	9.103E+03	5.608E+01	9.159E+03	2.816E+03	1.487E+01	2.841E+03	2.519E+03	1.101E+01	2.530E+03
8.00E-02	9.623E+03	5.022E+01	9.673E+03	2.981E+03	1.331E+01	2.995E+03	2.575E+03	9.865E+00	2.585E+03
9.00E-02	1.004E+04	4.555E+01	1.009E+04	3.129E+03	1.206E+01	3.141E+03	2.615E+03	8.950E+00	2.624E+03

target	Hydrogen			Helium			Beryllium		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	1.037E+04	4.173E+01	1.041E+04	3.260E+03	1.104E+01	3.271E+03	2.642E+03	8.202E+00	2.650E+03
1.50E-01	1.103E+04	2.969E+01	1.106E+04	3.685E+03	7.835E+00	3.693E+03	2.665E+03	5.843E+00	2.671E+03
2.00E-01	1.080E+04	2.327E+01	1.082E+04	3.823E+03	6.130E+00	3.829E+03	2.613E+03	4.582E+00	2.618E+03
3.00E-01	9.735E+03	1.645E+01	9.752E+03	3.711E+03	4.324E+00	3.715E+03	2.494E+03	3.242E+00	2.497E+03
4.00E-01	8.732E+03	1.284E+01	8.745E+03	3.469E+03	3.370E+00	3.473E+03	2.385E+03	2.532E+00	2.387E+03
5.00E-01	7.868E+03	1.058E+01	7.879E+03	3.194E+03	2.774E+00	3.197E+03	2.265E+03	2.087E+00	2.267E+03
6.00E-01	7.184E+03	9.026E+00	7.193E+03	2.956E+03	2.366E+00	2.958E+03	2.153E+03	1.782E+00	2.154E+03
7.00E-01	6.631E+03	7.890E+00	6.639E+03	2.756E+03	2.066E+00	2.758E+03	2.049E+03	1.558E+00	2.051E+03
8.00E-01	6.174E+03	7.019E+00	6.174E+03	2.586E+03	1.837E+00	2.588E+03	1.954E+03	1.396E+00	1.955E+03
9.00E-01	5.786E+03	6.330E+00	5.793E+03	2.440E+03	1.656E+00	2.441E+03	1.866E+03	1.250E+00	1.868E+03
1.00E+00	5.438E+03	5.770E+00	5.444E+03	2.306E+03	1.509E+00	2.307E+03	1.781E+03	1.140E+00	1.782E+03
1.50E+00	4.237E+03	4.034E+00	4.241E+03	1.831E+03	1.054E+00	1.832E+03	1.454E+03	7.975E-01	1.455E+03
2.00E+00	3.489E+03	3.126E+00	3.492E+03	1.526E+03	8.156E-01	1.527E+03	1.226E+03	6.181E-01	1.227E+03
3.00E+00	2.575E+03	2.177E+00	2.577E+03	1.139E+03	5.675E-01	1.140E+03	9.268E+02	4.308E-01	9.272E+02
4.00E+00	2.040E+03	1.683E+00	2.042E+03	9.069E+02	4.383E-01	9.073E+02	7.433E+02	3.331E-01	7.436E+02
5.00E+00	1.693E+03	1.377E+00	1.694E+03	7.540E+02	3.585E-01	7.543E+02	6.214E+02	2.727E-01	6.217E+02
6.00E+00	1.451E+03	1.169E+00	1.452E+03	6.463E+02	3.041E-01	6.466E+02	5.351E+02	2.315E-01	5.354E+02
7.00E+00	1.272E+03	1.017E+00	1.273E+03	5.666E+02	2.645E-01	5.669E+02	4.709E+02	2.015E-01	4.711E+02
8.00E+00	1.135E+03	9.016E-01	1.136E+03	5.051E+02	2.344E-01	5.053E+02	4.212E+02	1.786E-01	4.214E+02
9.00E+00	1.026E+03	8.105E-01	1.027E+03	4.562E+02	2.107E-01	4.564E+02	3.816E+02	1.606E-01	3.818E+02
1.00E+01	9.371E+02	7.368E-01	9.378E+02	4.163E+02	1.914E-01	4.165E+02	3.492E+02	1.460E-01	3.493E+02
1.50E+01	6.463E+02		6.463E+02	2.918E+02		2.918E+02	2.422E+02		2.422E+02
2.00E+01	5.072E+02		5.072E+02	2.299E+02		2.299E+02	1.914E+02		1.914E+02
3.00E+01	3.611E+02		3.611E+02	1.645E+02		1.645E+02	1.375E+02		1.375E+02
4.00E+01	2.844E+02		2.844E+02	1.300E+02		1.300E+02	1.090E+02		1.090E+02
5.00E+01	2.368E+02		2.368E+02	1.085E+02		1.085E+02	9.112E+01		9.112E+01
6.00E+01	2.044E+02		2.044E+02	9.383E+01		9.383E+01	7.887E+01		7.887E+01
7.00E+01	1.807E+02		1.807E+02	8.309E+01		8.309E+01	6.992E+01		6.992E+01
8.00E+01	1.627E+02		1.627E+02	7.490E+01		7.490E+01	6.308E+01		6.308E+01
9.00E+01	1.485E+02		1.485E+02	6.843E+01		6.843E+01	5.768E+01		5.768E+01
1.00E+02	1.370E+02		1.370E+02	6.319E+01		6.319E+01	5.329E+01		5.329E+01
1.50E+02	1.017E+02		1.017E+02	4.709E+01		4.709E+01	3.980E+01		3.980E+01
2.00E+02	8.362E+01		8.362E+01	3.880E+01		3.880E+01	3.284E+01		3.284E+01
3.00E+02	6.523E+01		6.523E+01	3.035E+01		3.035E+01	2.574E+01		2.574E+01
4.00E+02	5.602E+01		5.602E+01	2.612E+01		2.612E+01	2.218E+01		2.218E+01
5.00E+02	5.057E+01		5.057E+01	2.362E+01		2.362E+01	2.007E+01		2.007E+01
6.00E+02	4.703E+01		4.703E+01	2.199E+01		2.199E+01	1.870E+01		1.870E+01
7.00E+02	4.458E+01		4.458E+01	2.086E+01		2.086E+01	1.776E+01		1.776E+01
8.00E+02	4.281E+01		4.281E+01	2.006E+01		2.006E+01	1.708E+01		1.708E+01
9.00E+02	4.149E+01		4.149E+01	1.946E+01		1.946E+01	1.654E+01		1.654E+01
1.00E+03	4.050E+01		4.050E+01	1.900E+01		1.900E+01	1.612E+01		1.612E+01
1.50E+03	3.798E+01		3.798E+01	1.787E+01		1.787E+01	1.503E+01		1.503E+01
2.00E+03	3.721E+01		3.721E+01	1.755E+01		1.755E+01	1.464E+01		1.464E+01
3.00E+03	3.716E+01		3.716E+01	1.758E+01		1.758E+01	1.449E+01		1.449E+01
4.00E+03	3.766E+01		3.766E+01	1.786E+01		1.786E+01	1.457E+01		1.457E+01
5.00E+03	3.828E+01		3.828E+01	1.818E+01		1.818E+01	1.471E+01		1.471E+01
6.00E+03	3.889E+01		3.889E+01	1.850E+01		1.850E+01	1.486E+01		1.486E+01
7.00E+03	3.947E+01		3.947E+01	1.880E+01		1.880E+01	1.500E+01		1.500E+01
8.00E+03	4.002E+01		4.002E+01	1.907E+01		1.907E+01	1.514E+01		1.514E+01
9.00E+03	4.052E+01		4.052E+01	1.933E+01		1.933E+01	1.526E+01		1.526E+01
1.00E+04	4.099E+01		4.099E+01	1.957E+01		1.957E+01	1.538E+01		1.538E+01

 * Lithium-6 (2/5) *

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	2.080E+02	2.083E+02	4.163E+02	3.169E+01	7.919E+01	1.109E+02	1.587E+01	2.559E+01	4.146E+01
1.50E-05	2.302E+02	2.343E+02	4.645E+02	3.804E+01	9.130E+01	1.293E+02	1.905E+01	3.018E+01	4.922E+01
2.00E-05	2.473E+02	2.523E+02	4.996E+02	4.329E+01	1.001E+02	1.434E+02	2.168E+01	3.365E+01	5.533E+01
3.00E-05	2.737E+02	2.757E+02	5.495E+02	5.196E+01	1.125E+02	1.645E+02	2.602E+01	3.879E+01	6.481E+01
4.00E-05	2.941E+02	2.904E+02	5.846E+02	5.914E+01	1.210E+02	1.801E+02	2.961E+01	4.252E+01	7.214E+01
5.00E-05	3.110E+02	3.003E+02	6.113E+02	6.539E+01	1.273E+02	1.927E+02	3.274E+01	4.542E+01	7.817E+01
6.00E-05	3.255E+02	3.071E+02	6.327E+02	7.098E+01	1.321E+02	2.031E+02	3.554E+01	4.777E+01	8.331E+01
7.00E-05	3.383E+02	3.120E+02	6.503E+02	7.608E+01	1.359E+02	2.120E+02	3.809E+01	4.972E+01	8.781E+01
8.00E-05	3.498E+02	3.154E+02	6.652E+02	8.079E+01	1.390E+02	2.198E+02	4.045E+01	5.137E+01	9.182E+01
9.00E-05	3.603E+02	3.177E+02	6.780E+02	8.519E+01	1.416E+02	2.268E+02	4.266E+01	5.279E+01	9.545E+01
1.00E-04	3.699E+02	3.192E+02	6.891E+02	8.932E+01	1.437E+02	2.330E+02	4.473E+01	5.402E+01	9.875E+01
1.50E-04	4.093E+02	3.199E+02	7.292E+02	1.072E+02	1.499E+02	2.571E+02	5.368E+01	5.837E+01	1.121E+02
2.00E-04	4.399E+02	3.149E+02	7.547E+02	1.220E+02	1.524E+02	2.744E+02	6.110E+01	6.094E+01	1.220E+02
3.00E-04	4.868E+02	3.000E+02	7.867E+02	1.464E+02	1.524E+02	2.989E+02	7.333E+01	6.357E+01	1.369E+02
4.00E-04	5.231E+02	2.842E+02	8.072E+02	1.667E+02	1.438E+02	3.165E+02	8.346E+01	6.458E+01	1.480E+02
5.00E-04	5.531E+02	2.694E+02	8.224E+02	1.843E+02	1.463E+02	3.306E+02	9.228E+01	6.479E+01	1.571E+02
6.00E-04	5.789E+02	2.559E+02	8.348E+02	2.000E+02	1.425E+02	3.425E+02	1.074E+02	6.457E+01	1.647E+02
7.00E-04	6.016E+02	2.438E+02	8.454E+02	2.144E+02	1.386E+02	3.530E+02	1.140E+02	6.408E+01	1.714E+02
8.00E-04	6.220E+02	2.329E+02	8.550E+02	2.277E+02	1.348E+02	3.625E+02	1.202E+02	6.345E+01	1.775E+02
9.00E-04	6.406E+02	2.231E+02	8.637E+02	2.401E+02	1.311E+02	3.712E+02	1.261E+02	6.272E+01	1.829E+02
1.00E-03	6.577E+02	2.141E+02	8.719E+02	2.517E+02	1.276E+02	3.793E+02	1.313E+02	6.193E+01	1.880E+02
1.50E-03	7.279E+02	1.796E+02	9.075E+02	3.021E+02	1.126E+02	4.148E+02	1.513E+02	5.781E+01	2.091E+02
2.00E-03	7.822E+02	1.558E+02	9.380E+02	3.439E+02	1.011E+02	4.450E+02	1.722E+02	5.396E+01	2.262E+02
3.00E-03	8.656E+02	1.250E+02	9.906E+02	4.127E+02	8.463E+01	4.974E+02	2.067E+02	4.759E+01	2.543E+02
4.00E-03	9.302E+02	1.054E+02	1.036E+03	4.698E+02	7.336E+01	5.431E+02	2.352E+02	4.270E+01	2.779E+02
5.00E-03	9.835E+02	9.180E+01	1.075E+03	5.194E+02	6.511E+01	5.845E+02	2.601E+02	3.885E+01	2.989E+02
6.00E-03	1.029E+03	8.165E+01	1.111E+03	5.638E+02	5.375E+01	6.226E+02	2.823E+02	3.573E+01	3.180E+02
7.00E-03	1.070E+03	7.376E+01	1.144E+03	6.043E+02	5.368E+01	6.580E+02	3.026E+02	3.314E+01	3.357E+02
8.00E-03	1.106E+03	6.742E+01	1.174E+03	6.417E+02	4.952E+01	6.913E+02	3.213E+02	3.096E+01	3.523E+02
9.00E-03	1.139E+03	6.220E+01	1.201E+03	6.767E+02	4.605E+01	7.227E+02	3.389E+02	2.909E+01	3.679E+02
1.00E-02	1.170E+03	5.782E+01	1.227E+03	7.095E+02	4.309E+01	7.526E+02	3.553E+02	2.747E+01	3.827E+02
1.50E-02	1.312E+03	4.292E+01	1.355E+03	8.515E+02	3.303E+01	8.846E+02	4.264E+02	2.172E+01	4.481E+02
2.00E-02	1.462E+03	3.472E+01	1.497E+03	9.964E+02	2.710E+01	1.024E+03	5.012E+02	1.817E+01	5.194E+02
3.00E-02	1.722E+03	2.552E+01	1.748E+03	1.232E+03	2.010E+01	1.252E+03	6.533E+02	1.392E+01	6.672E+02
4.00E-02	1.938E+03	2.041E+01	1.959E+03	1.388E+03	1.625E+01	1.404E+03	7.603E+02	1.142E+01	7.718E+02
5.00E-02	2.126E+03	1.711E+01	2.143E+03	1.508E+03	1.373E+01	1.522E+03	8.568E+02	9.660E+00	8.665E+02
6.00E-02	2.289E+03	1.479E+01	2.304E+03	1.601E+03	1.194E+01	1.613E+03	9.468E+02	8.468E+00	9.553E+02
7.00E-02	2.429E+03	1.307E+01	2.442E+03	1.671E+03	1.059E+01	1.681E+03	1.026E+03	7.561E+00	1.033E+03
8.00E-02	2.549E+03	1.173E+01	2.561E+03	1.724E+03	9.543E+00	1.733E+03	1.092E+03	6.846E+00	1.099E+03
9.00E-02	2.650E+03	1.065E+01	2.660E+03	1.763E+03	8.697E+00	1.772E+03	1.147E+03	6.265E+00	1.153E+03

target	Carbon			Aluminium			Iron		
	Electric (MeV/amu)	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	2.733E+03	9.775E+00	2.743E+03	1.793E+03	8.000E+00	1.801E+03	1.192E+03	5.784E+00	1.198E+03
1.50E-01	2.955E+03	6.992E+00	2.962E+03	1.861E+03	5.776E+00	1.867E+03	1.319E+03	4.228E+00	1.324E+03
2.00E-01	2.974E+03	5.497E+00	2.979E+03	1.872E+03	4.567E+00	1.877E+03	1.360E+03	3.369E+00	1.364E+03
3.00E-01	2.818E+03	3.902E+00	2.822E+03	1.854E+03	3.266E+00	1.858E+03	1.361E+03	2.432E+00	1.363E+03
4.00E-01	2.629E+03	3.053E+00	2.632E+03	1.813E+03	2.567E+00	1.816E+03	1.328E+03	1.923E+00	1.330E+03
5.00E-01	2.446E+03	2.521E+00	2.448E+03	1.744E+03	2.127E+00	1.746E+03	1.273E+03	1.600E+00	1.275E+03
6.00E-01	2.292E+03	2.154E+00	2.294E+03	1.671E+03	1.822E+00	1.673E+03	1.218E+03	1.375E+00	1.219E+03
7.00E-01	2.162E+03	1.885E+00	2.164E+03	1.600E+03	1.598E+00	1.602E+03	1.165E+03	1.209E+00	1.167E+03
8.00E-01	2.050E+03	1.679E+00	2.052E+03	1.533E+03	1.425E+00	1.534E+03	1.117E+03	1.081E+00	1.118E+03
9.00E-01	1.952E+03	1.516E+00	1.953E+03	1.469E+03	1.288E+00	1.471E+03	1.072E+03	9.786E-01	1.073E+03
1.00E+00	1.859E+03	1.383E+00	1.860E+03	1.407E+03	1.177E+00	1.408E+03	1.027E+03	8.952E-01	1.028E+03
1.50E+00	1.516E+03	9.692E-01	1.517E+03	1.162E+03	8.288E-01	1.163E+03	8.571E+02	6.340E-01	8.578E+02
2.00E+00	1.283E+03	7.522E-01	1.283E+03	9.890E+02	6.451E-01	9.897E+02	7.369E+02	4.953E-01	7.374E+02
3.00E+00	9.751E+02	5.253E-01	9.756E+02	7.581E+02	4.522E-01	7.585E+02	5.749E+02	3.488E-01	5.752E+02
4.00E+00	7.853E+02	4.066E-01	7.857E+02	6.148E+02	3.509E-01	6.151E+02	4.728E+02	2.715E-01	4.731E+02
5.00E+00	6.586E+02	3.331E-01	6.589E+02	5.188E+02	2.880E-01	5.191E+02	4.038E+02	2.233E-01	4.040E+02
6.00E+00	5.685E+02	2.830E-01	5.688E+02	4.505E+02	2.450E-01	4.507E+02	3.542E+02	1.903E-01	3.543E+02
7.00E+00	5.012E+02	2.464E-01	5.015E+02	3.994E+02	2.136E-01	3.996E+02	3.167E+02	1.661E-01	3.169E+02
8.00E+00	4.491E+02	2.185E-01	4.493E+02	3.596E+02	1.896E-01	3.598E+02	2.875E+02	1.477E-01	2.876E+02
9.00E+00	4.073E+02	1.966E-01	4.075E+02	3.277E+02	1.707E-01	3.279E+02	2.638E+02	1.331E-01	2.640E+02
1.00E+01	3.732E+02	1.788E-01	3.734E+02	3.016E+02	1.554E-01	3.017E+02	2.443E+02	1.212E-01	2.445E+02
1.50E+01	2.635E+02	1.263E+00	2.635E+02	2.212E+02	1.111E+00	2.212E+02	1.904E+02	8.190E-01	1.904E+02
2.00E+01	2.087E+02	2.087E+02	2.087E+02	1.764E+02	1.764E+02	1.764E+02	1.530E+02	6.1530E+01	1.530E+02
3.00E+01	1.502E+02	1.502E+02	1.502E+02	1.282E+02	1.282E+02	1.282E+02	1.122E+02	4.1122E+01	1.122E+02
4.00E+01	1.192E+02	1.192E+02	1.192E+02	1.023E+02	1.023E+02	1.023E+02	8.999E+01	3.8999E+01	8.999E+01
5.00E+01	9.977E+01	9.977E+01	9.977E+01	8.596E+01	8.596E+01	8.596E+01	7.593E+01	6.617E+01	7.593E+01
6.00E+01	8.642E+01	8.642E+01	8.642E+01	7.469E+01	7.469E+01	7.469E+01	6.617E+01	5.897E+01	6.617E+01
7.00E+01	7.665E+01	7.665E+01	7.665E+01	6.640E+01	6.640E+01	6.640E+01	5.897E+01	5.343E+01	5.897E+01
8.00E+01	6.918E+01	6.918E+01	6.918E+01	6.005E+01	6.005E+01	6.005E+01	5.343E+01	4.903E+01	5.343E+01
9.00E+01	6.328E+01	6.328E+01	6.328E+01	5.502E+01	5.502E+01	5.502E+01	4.903E+01	4.544E+01	4.903E+01
1.00E+02	5.849E+01	5.849E+01	5.849E+01	5.093E+01	5.093E+01	5.093E+01	4.544E+01	4.331E+01	4.544E+01
1.50E+02	4.373E+01	4.373E+01	4.373E+01	3.827E+01	3.827E+01	3.827E+01	3.431E+01	3.253E+01	3.431E+01
2.00E+02	3.611E+01	3.611E+01	3.611E+01	3.169E+01	3.169E+01	3.169E+01	2.850E+01	2.850E+01	2.850E+01
3.00E+02	2.833E+01	2.833E+01	2.833E+01	2.497E+01	2.497E+01	2.497E+01	2.253E+01	2.253E+01	2.253E+01
4.00E+02	2.443E+01	2.443E+01	2.443E+01	2.158E+01	2.158E+01	2.158E+01	1.952E+01	1.952E+01	1.952E+01
5.00E+02	2.211E+01	2.211E+01	2.211E+01	1.958E+01	1.958E+01	1.958E+01	1.774E+01	1.774E+01	1.774E+01
6.00E+02	2.061E+01	2.061E+01	2.061E+01	1.828E+01	1.828E+01	1.828E+01	1.659E+01	1.659E+01	1.659E+01
7.00E+02	1.958E+01	1.958E+01	1.958E+01	1.739E+01	1.739E+01	1.739E+01	1.580E+01	1.580E+01	1.580E+01
8.00E+02	1.884E+01	1.884E+01	1.884E+01	1.675E+01	1.675E+01	1.675E+01	1.523E+01	1.523E+01	1.523E+01
9.00E+02	1.826E+01	1.826E+01	1.826E+01	1.625E+01	1.625E+01	1.625E+01	1.479E+01	1.479E+01	1.479E+01
1.00E+03	1.782E+01	1.782E+01	1.782E+01	1.587E+01	1.587E+01	1.587E+01	1.445E+01	1.445E+01	1.445E+01
1.50E+03	1.666E+01	1.666E+01	1.666E+01	1.490E+01	1.490E+01	1.490E+01	1.360E+01	1.360E+01	1.360E+01
2.00E+03	1.627E+01	1.627E+01	1.627E+01	1.459E+01	1.459E+01	1.459E+01	1.335E+01	1.335E+01	1.335E+01
3.00E+03	1.614E+01	1.614E+01	1.614E+01	1.455E+01	1.455E+01	1.455E+01	1.335E+01	1.335E+01	1.335E+01
4.00E+03	1.625E+01	1.625E+01	1.625E+01	1.472E+01	1.472E+01	1.472E+01	1.353E+01	1.353E+01	1.353E+01
5.00E+03	1.643E+01	1.643E+01	1.643E+01	1.493E+01	1.493E+01	1.493E+01	1.374E+01	1.374E+01	1.374E+01
6.00E+03	1.660E+01	1.660E+01	1.660E+01	1.514E+01	1.514E+01	1.514E+01	1.394E+01	1.394E+01	1.394E+01
7.00E+03	1.677E+01	1.677E+01	1.677E+01	1.533E+01	1.533E+01	1.533E+01	1.413E+01	1.413E+01	1.413E+01
8.00E+03	1.693E+01	1.693E+01	1.693E+01	1.551E+01	1.551E+01	1.551E+01	1.431E+01	1.431E+01	1.431E+01
9.00E+03	1.708E+01	1.708E+01	1.708E+01	1.568E+01	1.568E+01	1.568E+01	1.447E+01	1.447E+01	1.447E+01
1.00E+04	1.722E+01	1.722E+01	1.722E+01	1.583E+01	1.583E+01	1.583E+01	1.462E+01	1.462E+01	1.462E+01

 * Lithium-6 (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	1.080E+01	2.177E+01	3.257E+01	5.776E+00	4.036E+00	9.812E+00	7.757E+00	3.284E+00	1.104E+01
1.50E-05	1.296E+01	2.577E+01	3.872E+01	6.933E+00	4.911E+00	1.184E+01	9.309E+00	4.007E+00	1.332E+01
2.00E-05	1.475E+01	2.881E+01	4.356E+01	7.891E+00	5.610E+00	1.350E+01	1.060E+01	4.586E+00	1.518E+01
3.00E-05	1.770E+01	3.334E+01	5.104E+01	9.470E+00	6.703E+00	1.617E+01	1.272E+01	5.498E+00	1.821E+01
4.00E-05	2.015E+01	3.666E+01	5.681E+01	1.078E+01	7.508E+00	1.833E+01	1.447E+01	6.208E+00	2.068E+01
5.00E-05	2.228E+01	3.926E+01	6.153E+01	1.192E+01	8.244E+00	2.016E+01	1.600E+01	6.792E+00	2.280E+01
6.00E-05	2.418E+01	4.137E+01	6.555E+01	1.294E+01	8.833E+00	2.177E+01	1.737E+01	7.290E+00	2.466E+01
7.00E-05	2.592E+01	4.313E+01	6.905E+01	1.387E+01	9.343E+00	2.321E+01	1.862E+01	7.722E+00	2.634E+01
8.00E-05	2.752E+01	4.463E+01	7.216E+01	1.472E+01	9.793E+00	2.452E+01	1.977E+01	8.104E+00	2.788E+01
9.00E-05	3.043E+01	4.593E+01	7.639E+01	1.553E+01	1.019E+01	2.572E+01	2.085E+01	8.446E+00	2.930E+01
1.00E-04	3.652E+01	4.707E+01	8.375E+01	1.628E+01	1.056E+01	2.684E+01	2.186E+01	8.756E+00	3.062E+01
1.50E-04	4.157E+01	5.359E+01	9.517E+01	1.954E+01	1.196E+01	3.150E+01	2.624E+01	9.962E+00	3.620E+01
2.00E-04	4.989E+01	5.626E+01	1.062E+02	2.224E+01	1.294E+01	3.518E+01	2.986E+01	1.082E+01	4.068E+01
3.00E-04	5.679E+01	5.744E+01	1.142E+02	3.038E+01	1.512E+01	4.550E+01	3.584E+01	1.198E+01	4.782E+01
4.00E-04	6.279E+01	5.786E+01	1.206E+02	3.646E+01	1.614E+01	4.955E+01	4.896E+01	1.368E+01	5.354E+01
5.00E-04	6.815E+01	5.787E+01	1.260E+02	3.908E+01	1.646E+01	5.554E+01	5.248E+01	1.398E+01	6.264E+01
6.00E-04	7.305E+01	5.762E+01	1.307E+02	4.150E+01	1.669E+01	5.819E+01	5.573E+01	1.421E+01	6.994E+01
8.00E-04	7.757E+01	5.720E+01	1.348E+02	4.376E+01	1.687E+01	6.063E+01	5.876E+01	1.439E+01	7.315E+01
9.00E-04	8.180E+01	5.669E+01	1.385E+02	4.588E+01	1.700E+01	6.289E+01	6.161E+01	1.453E+01	7.614E+01
1.00E-03	8.577E+01	5.611E+01	1.419E+02	5.507E+01	1.725E+01	7.232E+01	7.395E+01	1.484E+01	8.879E+01
1.50E-03	1.029E+02	5.286E+01	1.558E+02	6.268E+01	1.714E+01	7.982E+01	8.417E+01	1.483E+01	9.900E+01
2.00E-03	1.172E+02	4.967E+01	1.668E+02	7.522E+01	1.657E+01	9.179E+01	1.010E+02	1.446E+01	1.155E+02
3.00E-03	1.406E+02	4.423E+01	1.848E+02	8.562E+01	1.586E+01	1.015E+02	1.150E+02	1.394E+01	1.289E+02
4.00E-03	1.600E+02	3.993E+01	2.000E+02	9.512E+01	1.517E+01	1.103E+02	1.271E+02	1.339E+01	1.405E+02
5.00E-03	1.770E+02	3.650E+01	2.135E+02	1.042E+02	1.451E+01	1.187E+02	1.380E+02	1.287E+01	1.509E+02
6.00E-03	1.921E+02	3.369E+01	2.258E+02	1.127E+02	1.390E+01	1.266E+02	1.479E+02	1.238E+01	1.603E+02
7.00E-03	2.059E+02	3.134E+01	2.372E+02	1.207E+02	1.335E+01	1.341E+02	1.571E+02	1.192E+01	1.690E+02
8.00E-03	2.186E+02	2.935E+01	2.480E+02	1.284E+02	1.284E+01	1.413E+02	1.656E+02	1.149E+01	1.771E+02
9.00E-03	2.305E+02	2.763E+01	2.582E+02	1.359E+02	1.237E+01	1.482E+02	1.737E+02	1.110E+01	1.848E+02
1.00E-02	2.417E+02	2.614E+01	2.679E+02	1.701E+02	1.052E+01	1.806E+02	2.084E+02	9.520E+00	2.179E+02
1.50E-02	2.922E+02	2.080E+01	3.200E+02	2.016E+02	9.210E+00	2.108E+02	2.414E+02	8.384E+00	2.498E+02
2.00E-02	3.538E+02	1.746E+01	3.713E+02	2.694E+02	7.469E+00	2.769E+02	2.961E+02	6.847E+00	3.030E+02
3.00E-02	4.498E+02	1.344E+01	4.632E+02	3.322E+02	6.346E+00	3.386E+02	3.351E+02	5.844E+00	3.409E+02
4.00E-02	5.306E+02	1.106E+01	5.417E+02	3.799E+02	5.552E+00	3.854E+02	3.704E+02	5.129E+00	3.753E+02
5.00E-02	6.032E+02	9.459E+00	6.126E+02	3.799E+02	4.936E+00	4.217E+02	4.024E+02	4.590E+00	4.070E+02
6.00E-02	6.680E+02	8.228E+00	6.730E+02	4.167E+02	4.463E+00	4.508E+02	4.316E+02	4.166E+00	4.337E+02
7.00E-02	7.256E+02	7.356E+00	7.330E+02	4.709E+02	4.490E+00	4.750E+02	4.580E+02	3.823E+00	4.618E+02
8.00E-02	7.766E+02	6.667E+00	7.833E+02	4.919E+02	4.114E+00	4.957E+02	4.819E+02	3.539E+00	4.854E+02
9.00E-02	8.214E+02	6.107E+00	8.275E+02	4.919E+02	3.803E+00	4.957E+02	4.819E+02	3.539E+00	4.854E+02

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-01	8.606E+02	5.642E+00	8.603E+02	5.101E+02	3.541E+00	5.1136E+02	5.033E+02	3.299E+00	5.066E+02
1.50E-01	9.921E+02	4.134E+00	9.926E+02	5.725E+02	2.643E+00	5.751E+02	5.800E+02	2.495E+00	5.824E+02
2.00E-01	1.056E+03	3.299E+00	1.059E+03	6.049E+02	2.147E+00	6.071E+02	6.183E+02	2.012E+00	6.203E+02
3.00E-01	1.104E+03	2.386E+00	1.106E+03	6.302E+02	1.585E+00	6.325E+02	6.383E+02	1.490E+00	6.398E+02
4.00E-01	1.112E+03	1.889E+00	1.113E+03	6.326E+02	1.271E+00	6.338E+02	6.295E+02	1.197E+00	6.307E+02
5.00E-01	1.093E+03	1.573E+00	1.095E+03	6.201E+02	1.068E+00	6.212E+02	6.082E+02	1.007E+00	6.092E+02
6.00E-01	1.066E+03	1.352E+00	1.068E+03	6.039E+02	9.246E-01	6.048E+02	5.874E+02	8.728E-01	5.883E+02
7.00E-01	1.037E+03	1.190E+00	1.038E+03	5.867E+02	8.177E-01	5.875E+02	5.688E+02	7.724E-01	5.695E+02
8.00E-01	1.006E+03	1.064E+00	1.007E+03	5.695E+02	7.345E-01	5.703E+02	5.523E+02	6.943E-01	5.530E+02
9.00E-01	9.753E+02	9.638E-01	9.762E+02	5.530E+02	6.679E-01	5.537E+02	5.375E+02	6.316E-01	5.381E+02
1.00E+00	9.430E+02	8.820E-01	9.439E+02	5.358E+02	6.131E-01	5.364E+02	5.225E+02	5.801E-01	5.231E+02
1.50E+00	8.074E+02	6.253E-01	8.080E+02	4.648E+02	4.966E-01	4.653E+02	4.632E+02	4.166E-01	4.637E+02
2.00E+00	7.025E+02	4.888E-01	7.030E+02	4.099E+02	3.461E-01	4.102E+02	4.157E+02	3.283E-01	4.161E+02
3.00E+00	5.534E+02	3.445E-01	5.538E+02	3.302E+02	2.462E-01	3.304E+02	3.415E+02	2.338E-01	3.418E+02
4.00E+00	4.566E+02	2.683E-01	4.569E+02	2.775E+02	1.929E-01	2.777E+02	2.894E+02	1.833E-01	2.896E+02
5.00E+00	3.903E+02	2.208E-01	3.905E+02	2.410E+02	1.594E-01	2.411E+02	2.521E+02	1.516E-01	2.522E+02
6.00E+00	3.423E+02	1.882E-01	3.425E+02	2.144E+02	1.363E-01	2.145E+02	2.244E+02	1.297E-01	2.245E+02
7.00E+00	3.060E+02	1.644E-01	3.062E+02	1.942E+02	1.193E-01	1.943E+02	2.030E+02	1.136E-01	2.031E+02
8.00E+00	2.775E+02	1.461E-01	2.777E+02	1.782E+02	1.063E-01	1.783E+02	1.860E+02	1.012E-01	1.861E+02
9.00E+00	2.546E+02	1.317E-01	2.547E+02	1.652E+02	9.601E-02	1.653E+02	1.721E+02	9.141E-02	1.722E+02
1.00E+01	2.356E+02	1.200E-01	2.357E+02	1.544E+02	8.761E-02	1.545E+02	1.605E+02	8.343E-02	1.606E+02
1.50E+01	1.807E+02	1.048E-02	1.807E+02	1.281E+02	1.281E+02	1.281E+02	1.218E+02	1.218E+02	1.218E+02
2.00E+01	1.455E+02	1.048E+02	1.455E+02	1.048E+02	1.048E+02	1.048E+02	9.986E+01	9.986E+01	9.986E+01
3.00E+01	1.069E+02	1.069E+02	1.069E+02	7.853E+01	7.853E+01	7.853E+01	7.502E+01	7.502E+01	7.502E+01
4.00E+01	8.592E+01	8.592E+01	8.592E+01	6.384E+01	6.384E+01	6.384E+01	6.110E+01	6.110E+01	6.110E+01
5.00E+01	7.258E+01	7.258E+01	7.258E+01	5.436E+01	5.436E+01	5.436E+01	5.209E+01	5.209E+01	5.209E+01
6.00E+01	6.330E+01	6.330E+01	6.330E+01	4.769E+01	4.769E+01	4.769E+01	4.575E+01	4.575E+01	4.575E+01
7.00E+01	5.645E+01	5.645E+01	5.645E+01	4.273E+01	4.273E+01	4.273E+01	4.102E+01	4.102E+01	4.102E+01
8.00E+01	5.117E+01	5.117E+01	5.117E+01	3.888E+01	3.888E+01	3.888E+01	3.735E+01	3.735E+01	3.735E+01
9.00E+01	4.698E+01	4.698E+01	4.698E+01	3.581E+01	3.581E+01	3.581E+01	3.442E+01	3.442E+01	3.442E+01
1.00E+02	4.356E+01	4.356E+01	4.356E+01	3.329E+01	3.329E+01	3.329E+01	3.201E+01	3.201E+01	3.201E+01
1.50E+02	3.293E+01	3.293E+01	3.293E+01	2.541E+01	2.541E+01	2.541E+01	2.447E+01	2.447E+01	2.447E+01
2.00E+02	2.738E+01	2.738E+01	2.738E+01	2.124E+01	2.124E+01	2.124E+01	2.048E+01	2.048E+01	2.048E+01
3.00E+02	2.167E+01	2.167E+01	2.167E+01	1.694E+01	1.694E+01	1.694E+01	1.634E+01	1.634E+01	1.634E+01
4.00E+02	1.879E+01	1.879E+01	1.879E+01	1.475E+01	1.475E+01	1.475E+01	1.425E+01	1.425E+01	1.425E+01
5.00E+02	1.708E+01	1.708E+01	1.708E+01	1.346E+01	1.346E+01	1.346E+01	1.301E+01	1.301E+01	1.301E+01
6.00E+02	1.598E+01	1.598E+01	1.598E+01	1.262E+01	1.262E+01	1.262E+01	1.221E+01	1.221E+01	1.221E+01
7.00E+02	1.522E+01	1.522E+01	1.522E+01	1.205E+01	1.205E+01	1.205E+01	1.166E+01	1.166E+01	1.166E+01
8.00E+02	1.468E+01	1.468E+01	1.468E+01	1.165E+01	1.165E+01	1.165E+01	1.127E+01	1.127E+01	1.127E+01
9.00E+02	1.426E+01	1.426E+01	1.426E+01	1.135E+01	1.135E+01	1.135E+01	1.099E+01	1.099E+01	1.099E+01
1.00E+03	1.394E+01	1.394E+01	1.394E+01	1.114E+01	1.114E+01	1.114E+01	1.078E+01	1.078E+01	1.078E+01
1.50E+03	1.315E+01	1.315E+01	1.315E+01	1.063E+01	1.063E+01	1.063E+01	1.032E+01	1.032E+01	1.032E+01
2.00E+03	1.292E+01	1.292E+01	1.292E+01	1.053E+01	1.053E+01	1.053E+01	1.026E+01	1.026E+01	1.026E+01
3.00E+03	1.294E+01	1.294E+01	1.294E+01	1.066E+01	1.066E+01	1.066E+01	1.045E+01	1.045E+01	1.045E+01
4.00E+03	1.313E+01	1.313E+01	1.313E+01	1.088E+01	1.088E+01	1.088E+01	1.071E+01	1.071E+01	1.071E+01
5.00E+03	1.334E+01	1.334E+01	1.334E+01	1.111E+01	1.111E+01	1.111E+01	1.097E+01	1.097E+01	1.097E+01
6.00E+03	1.355E+01	1.355E+01	1.355E+01	1.132E+01	1.132E+01	1.132E+01	1.120E+01	1.120E+01	1.120E+01
7.00E+03	1.374E+01	1.374E+01	1.374E+01	1.152E+01	1.152E+01	1.152E+01	1.141E+01	1.141E+01	1.141E+01
8.00E+03	1.391E+01	1.391E+01	1.391E+01	1.169E+01	1.169E+01	1.169E+01	1.159E+01	1.159E+01	1.159E+01
9.00E+03	1.408E+01	1.408E+01	1.408E+01	1.185E+01	1.185E+01	1.185E+01	1.176E+01	1.176E+01	1.176E+01
1.00E+04	1.422E+01	1.422E+01	1.422E+01	1.199E+01	1.199E+01	1.199E+01	1.191E+01	1.191E+01	1.191E+01

 * Lithium-6 (4/5) *

Energy (MeV/smu)	Uranium			LiF(TLD-100)			LiF(TLD-700)		
	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
target									
1.00E-05	5.313E+00	2.576E+00	7.889E+00	7.982E+01	1.745E+02	2.543E+02	7.959E+01	1.736E+02	2.532E+02
1.50E-05	6.376E+00	3.153E+00	9.530E+00	9.018E+01	1.954E+02	2.856E+02	9.064E+01	1.958E+02	2.865E+02
2.00E-05	7.258E+00	3.618E+00	1.088E+01	9.848E+01	2.098E+02	3.080E+02	9.888E+01	2.101E+02	3.090E+02
3.00E-05	8.710E+00	4.352E+00	1.306E+01	1.144E+02	2.280E+02	3.394E+02	1.119E+02	2.285E+02	3.404E+02
4.00E-05	9.914E+00	4.928E+00	1.484E+01	1.217E+02	2.393E+02	3.610E+02	1.223E+02	2.398E+02	3.621E+02
5.00E-05	1.096E+01	5.404E+00	1.636E+01	1.305E+02	2.467E+02	3.772E+02	1.311E+02	2.472E+02	3.783E+02
6.00E-05	1.190E+01	5.810E+00	1.771E+01	1.381E+02	2.518E+02	3.899E+02	1.388E+02	2.523E+02	3.910E+02
7.00E-05	1.275E+01	6.164E+00	1.892E+01	1.450E+02	2.552E+02	4.002E+02	1.456E+02	2.557E+02	4.013E+02
8.00E-05	1.354E+01	6.479E+00	2.002E+01	1.512E+02	2.576E+02	4.106E+02	1.519E+02	2.580E+02	4.099E+02
9.00E-05	1.428E+01	6.761E+00	2.104E+01	1.570E+02	2.591E+02	4.161E+02	1.576E+02	2.596E+02	4.172E+02
1.00E-04	1.497E+01	7.017E+00	2.198E+01	1.623E+02	2.600E+02	4.223E+02	1.630E+02	2.605E+02	4.234E+02
1.50E-04	1.797E+01	8.022E+00	2.599E+01	1.848E+02	2.593E+02	4.441E+02	1.855E+02	2.597E+02	4.452E+02
2.00E-04	2.045E+01	8.741E+00	2.920E+01	2.028E+02	2.545E+02	4.573E+02	2.035E+02	2.549E+02	4.584E+02
3.00E-04	2.455E+01	9.731E+00	3.428E+01	2.314E+02	2.418E+02	4.732E+02	2.323E+02	2.421E+02	4.744E+02
4.00E-04	2.794E+01	1.039E+01	3.833E+01	2.544E+02	2.289E+02	4.833E+02	2.553E+02	2.291E+02	4.845E+02
5.00E-04	3.089E+01	1.087E+01	4.176E+01	2.740E+02	2.170E+02	4.910E+02	2.749E+02	2.172E+02	4.921E+02
6.00E-04	3.353E+01	1.123E+01	4.476E+01	2.912E+02	2.063E+02	4.975E+02	2.922E+02	2.065E+02	4.986E+02
7.00E-04	3.594E+01	1.150E+01	4.745E+01	3.066E+02	1.967E+02	5.033E+02	3.076E+02	1.968E+02	5.045E+02
8.00E-04	3.817E+01	1.172E+01	4.989E+01	3.208E+02	1.880E+02	5.088E+02	3.218E+02	1.882E+02	5.100E+02
9.00E-04	4.025E+01	1.189E+01	5.214E+01	3.338E+02	1.802E+02	5.140E+02	3.348E+02	1.804E+02	5.152E+02
1.00E-03	4.220E+01	1.203E+01	5.423E+01	3.459E+02	1.732E+02	5.191E+02	3.470E+02	1.733E+02	5.203E+02
1.50E-03	5.065E+01	1.238E+01	6.303E+01	3.974E+02	1.458E+02	5.432E+02	3.985E+02	1.459E+02	5.444E+02
2.00E-03	5.765E+01	1.245E+01	7.010E+01	4.389E+02	1.270E+02	5.658E+02	4.400E+02	1.270E+02	5.670E+02
3.00E-03	6.919E+01	1.225E+01	8.144E+01	5.055E+02	1.023E+02	6.078E+02	5.067E+02	1.023E+02	6.091E+02
4.00E-03	7.875E+01	1.190E+01	9.065E+01	5.594E+02	8.659E+01	6.460E+02	5.607E+02	8.662E+01	6.473E+02
5.00E-03	8.707E+01	1.150E+01	9.857E+01	6.055E+02	7.557E+01	6.811E+02	6.068E+02	7.559E+01	6.824E+02
6.00E-03	9.451E+01	1.110E+01	1.056E+02	6.462E+02	6.734E+01	7.135E+02	6.475E+02	6.736E+01	7.149E+02
7.00E-03	1.013E+02	1.072E+01	1.120E+02	6.829E+02	6.076E+01	7.436E+02	6.842E+02	6.077E+01	7.450E+02
8.00E-03	1.076E+02	1.036E+01	1.179E+02	7.165E+02	5.562E+01	7.721E+02	7.179E+02	5.563E+01	7.735E+02
9.00E-03	1.134E+02	1.002E+01	1.235E+02	7.476E+02	5.137E+01	7.990E+02	7.490E+02	5.138E+01	8.004E+02
1.00E-02	1.189E+02	9.703E+00	1.285E+02	7.767E+02	4.780E+01	8.245E+02	7.781E+02	4.781E+01	8.259E+02
1.50E-02	1.456E+02	8.405E+00	1.540E+02	9.005E+02	3.592E+01	9.364E+02	9.019E+02	3.592E+01	9.378E+02
2.00E-02	1.720E+02	7.451E+00	1.795E+02	1.004E+03	2.892E+01	1.033E+03	1.005E+03	2.892E+01	1.034E+03
3.00E-02	2.248E+02	6.137E+00	2.309E+02	1.193E+03	2.132E+01	1.214E+03	1.194E+03	2.132E+01	1.216E+03
4.00E-02	2.770E+02	5.266E+00	2.823E+02	1.344E+03	1.708E+01	1.361E+03	1.346E+03	1.708E+01	1.363E+03
5.00E-02	3.249E+02	4.639E+00	3.295E+02	1.481E+03	1.434E+01	1.495E+03	1.483E+03	1.434E+01	1.497E+03
6.00E-02	3.684E+02	4.163E+00	3.725E+02	1.606E+03	1.241E+01	1.618E+03	1.608E+03	1.241E+01	1.620E+03
7.00E-02	4.072E+02	3.787E+00	4.110E+02	1.718E+03	1.097E+01	1.729E+03	1.720E+03	1.097E+01	1.731E+03
8.00E-02	4.415E+02	3.482E+00	4.445E+02	1.820E+03	9.849E+00	1.829E+03	1.822E+03	9.849E+00	1.832E+03
9.00E-02	4.713E+02	3.228E+00	4.745E+02	1.910E+03	8.953E+00	1.919E+03	1.912E+03	8.952E+00	1.921E+03

target	Uranium				LiF (TLD-100)				7LiF (TLD-700)			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-01	4.971E+02	3.012E+00	5.001E+02	1.991E+03	8.217E+00	1.999E+03	1.999E+03	1.993E+03	8.216E+00	2.001E+03		
1.50E-01	5.762E+02	2.288E+00	5.785E+02	2.265E+03	5.866E+00	2.270E+03	2.270E+03	2.267E+03	5.886E+00	2.273E+03		
2.00E-01	6.036E+02	1.850E+00	6.055E+02	2.383E+03	4.632E+00	2.387E+03	2.387E+03	2.384E+03	4.632E+00	2.389E+03		
3.00E-01	6.978E+02	1.376E+00	6.992E+02	2.999E+03	3.292E+00	2.402E+03	2.402E+03	2.400E+03	3.292E+00	2.403E+03		
4.00E-01	5.973E+02	1.108E+00	5.984E+02	2.310E+03	2.578E+00	2.310E+03	2.310E+03	2.311E+03	2.578E+00	2.314E+03		
5.00E-01	5.807E+02	9.331E-01	5.817E+02	2.176E+03	2.130E+00	2.176E+03	2.176E+03	2.177E+03	2.130E+00	2.179E+03		
6.00E-01	5.648E+02	8.096E-01	5.656E+02	2.047E+03	1.821E+00	2.047E+03	2.047E+03	2.048E+03	1.821E+00	2.049E+03		
7.00E-01	5.497E+02	7.171E-01	5.505E+02	1.931E+03	1.594E+00	1.931E+03	1.931E+03	1.932E+03	1.594E+00	1.933E+03		
8.00E-01	5.355E+02	6.451E-01	5.362E+02	1.829E+03	1.420E+00	1.830E+03	1.830E+03	1.830E+03	1.420E+00	1.831E+03		
9.00E-01	5.220E+02	5.872E-01	5.225E+02	1.739E+03	1.282E+00	1.740E+03	1.740E+03	1.739E+03	1.282E+00	1.740E+03		
1.00E+00	5.076E+02	5.395E-01	5.082E+02	1.653E+03	1.170E+00	1.653E+03	1.653E+03	1.654E+03	1.170E+00	1.655E+03		
1.50E+00	4.471E+02	3.882E-01	4.475E+02	1.344E+03	8.206E-01	1.345E+03	1.345E+03	1.344E+03	8.205E-01	1.345E+03		
2.00E+00	3.978E+02	3.063E-01	3.981E+02	1.137E+03	6.372E-01	1.138E+03	1.138E+03	1.138E+03	6.371E-01	1.138E+03		
3.00E+00	3.227E+02	2.184E-01	3.229E+02	8.670E+02	4.452E-01	8.674E+02	8.674E+02	8.672E+02	4.452E-01	8.677E+02		
4.00E+00	2.716E+02	1.714E-01	2.717E+02	7.001E+02	3.448E-01	7.004E+02	7.004E+02	7.002E+02	3.447E-01	7.006E+02		
5.00E+00	2.357E+02	1.418E-01	2.359E+02	5.833E+02	2.826E-01	5.866E+02	5.866E+02	5.884E+02	2.825E-01	5.887E+02		
6.00E+00	2.095E+02	1.214E-01	2.096E+02	5.086E+02	2.401E-01	5.089E+02	5.089E+02	5.087E+02	2.400E-01	5.090E+02		
7.00E+00	1.895E+02	1.063E-01	1.896E+02	4.490E+02	2.091E-01	4.492E+02	4.492E+02	4.491E+02	2.091E-01	4.493E+02		
8.00E+00	1.737E+02	9.481E-02	1.738E+02	4.027E+02	1.855E-01	4.029E+02	4.029E+02	4.028E+02	1.855E-01	4.030E+02		
9.00E+00	1.609E+02	8.566E-02	1.609E+02	3.657E+02	1.669E-01	3.658E+02	3.658E+02	3.657E+02	1.668E-01	3.659E+02		
1.00E+01	1.502E+02	7.820E-02	1.502E+02	3.353E+02	1.518E-01	3.354E+02	3.354E+02	3.353E+02	1.517E-01	3.355E+02		
1.50E+01	1.157E+02	1.157E+02	1.157E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02		
2.00E+01	9.498E+01	9.498E+01	9.498E+01	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02		
3.00E+01	7.152E+01	7.152E+01	7.152E+01	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02		
4.00E+01	5.834E+01	5.834E+01	5.834E+01	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02		
5.00E+01	4.979E+01	4.979E+01	4.979E+01	9.054E+01	9.054E+01	9.054E+01	9.054E+01	9.054E+01	9.054E+01	9.054E+01		
6.00E+01	4.376E+01	4.376E+01	4.376E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01		
7.00E+01	3.927E+01	3.927E+01	3.927E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01		
8.00E+01	3.577E+01	3.577E+01	3.577E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01		
9.00E+01	3.298E+01	3.298E+01	3.298E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01		
1.00E+02	3.069E+01	3.069E+01	3.069E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01		
1.50E+02	2.349E+01	2.349E+01	2.349E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01		
2.00E+02	1.967E+01	1.967E+01	1.967E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01		
3.00E+02	1.572E+01	1.572E+01	1.572E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01		
4.00E+02	1.371E+01	1.371E+01	1.371E+01	2.226E+01	2.226E+01	2.226E+01	2.226E+01	2.226E+01	2.226E+01	2.226E+01		
5.00E+02	1.252E+01	1.252E+01	1.252E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01		
6.00E+02	1.176E+01	1.176E+01	1.176E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01		
7.00E+02	1.123E+01	1.123E+01	1.123E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01		
8.00E+02	1.086E+01	1.086E+01	1.086E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01		
9.00E+02	1.059E+01	1.059E+01	1.059E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01		
1.00E+03	1.039E+01	1.039E+01	1.039E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01		
1.50E+03	9.955E+00	9.955E+00	9.955E+00	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01		
2.00E+03	9.899E+00	9.899E+00	9.899E+00	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01		
3.00E+03	1.007E+01	1.007E+01	1.007E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01		
4.00E+03	1.031E+01	1.031E+01	1.031E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01		
5.00E+03	1.055E+01	1.055E+01	1.055E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01		
6.00E+03	1.076E+01	1.076E+01	1.076E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01		
7.00E+03	1.096E+01	1.096E+01	1.096E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01		
8.00E+03	1.114E+01	1.114E+01	1.114E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01		
9.00E+03	1.129E+01	1.129E+01	1.129E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01		
1.00E+04	1.144E+01	1.144E+01	1.144E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01		

 * Lithium-6 (5/5) *

target	Phantom			Water			SSNTD			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	1.891E+02	2.939E+02	4.829E+02	1.031E+02	3.014E+02	4.045E+02	4.045E+02	1.665E+02	2.696E+02	4.362E+02
1.50E-05	2.102E+02	3.286E+02	5.387E+02	1.168E+02	3.369E+02	4.537E+02	4.537E+02	1.855E+02	3.019E+02	4.874E+02
2.00E-05	2.267E+02	3.521E+02	5.787E+02	1.277E+02	3.611E+02	4.888E+02	4.888E+02	2.003E+02	3.239E+02	5.242E+02
3.00E-05	2.521E+02	3.823E+02	6.344E+02	1.450E+02	3.921E+02	5.370E+02	5.370E+02	2.234E+02	3.523E+02	5.756E+02
4.00E-05	2.720E+02	4.006E+02	6.727E+02	1.587E+02	4.109E+02	5.697E+02	5.697E+02	2.414E+02	3.696E+02	6.110E+02
5.00E-05	2.886E+02	4.126E+02	7.011E+02	1.704E+02	4.232E+02	5.936E+02	5.936E+02	2.564E+02	3.810E+02	6.375E+02
6.00E-05	3.028E+02	4.205E+02	7.233E+02	1.807E+02	4.314E+02	6.121E+02	6.121E+02	2.694E+02	3.887E+02	6.582E+02
7.00E-05	3.155E+02	4.258E+02	7.413E+02	1.898E+02	4.369E+02	6.267E+02	6.267E+02	2.810E+02	3.939E+02	6.749E+02
8.00E-05	3.269E+02	4.293E+02	7.561E+02	1.982E+02	4.405E+02	6.387E+02	6.387E+02	2.914E+02	3.974E+02	6.888E+02
9.00E-05	3.373E+02	4.314E+02	7.687E+02	2.059E+02	4.427E+02	6.486E+02	6.486E+02	3.009E+02	3.996E+02	7.006E+02
1.00E-04	3.469E+02	4.325E+02	7.794E+02	2.131E+02	4.439E+02	6.570E+02	6.570E+02	3.097E+02	4.009E+02	7.106E+02
1.50E-04	3.866E+02	4.294E+02	8.160E+02	2.433E+02	4.411E+02	6.844E+02	6.844E+02	3.462E+02	3.991E+02	7.453E+02
2.00E-04	4.177E+02	4.199E+02	8.375E+02	2.676E+02	4.316E+02	6.993E+02	6.993E+02	3.749E+02	3.910E+02	7.658E+02
3.00E-04	4.659E+02	3.962E+02	8.621E+02	3.065E+02	4.080E+02	7.144E+02	7.144E+02	4.196E+02	3.700E+02	7.896E+02
4.00E-04	5.037E+02	3.729E+02	8.766E+02	3.377E+02	3.845E+02	7.223E+02	7.223E+02	4.547E+02	3.490E+02	8.038E+02
5.00E-04	5.352E+02	3.518E+02	8.870E+02	3.643E+02	3.633E+02	7.276E+02	7.276E+02	4.842E+02	3.298E+02	8.140E+02
6.00E-04	5.625E+02	3.331E+02	8.955E+02	3.878E+02	3.443E+02	7.321E+02	7.321E+02	5.097E+02	3.127E+02	8.224E+02
7.00E-04	5.867E+02	3.164E+02	9.031E+02	4.089E+02	3.274E+02	7.363E+02	7.363E+02	5.324E+02	2.973E+02	8.298E+02
8.00E-04	6.086E+02	3.015E+02	9.101E+02	4.282E+02	3.123E+02	7.405E+02	7.405E+02	5.530E+02	2.836E+02	8.366E+02
9.00E-04	6.286E+02	2.882E+02	9.167E+02	4.460E+02	2.987E+02	7.448E+02	7.448E+02	5.718E+02	2.713E+02	8.431E+02
1.00E-03	6.471E+02	2.761E+02	9.232E+02	4.626E+02	2.865E+02	7.492E+02	7.492E+02	5.892E+02	2.602E+02	8.494E+02
1.50E-03	7.237E+02	2.302E+02	9.539E+02	5.332E+02	2.396E+02	7.728E+02	7.728E+02	6.618E+02	2.175E+02	8.793E+02
2.00E-03	7.839E+02	1.991E+02	9.830E+02	5.903E+02	2.077E+02	7.979E+02	7.979E+02	7.192E+02	1.884E+02	9.076E+02
3.00E-03	8.780E+02	1.590E+02	1.037E+03	6.822E+02	1.663E+02	8.485E+02	8.485E+02	8.092E+02	1.508E+02	9.600E+02
4.00E-03	9.520E+02	1.338E+02	1.086E+03	7.567E+02	1.403E+02	8.970E+02	8.970E+02	8.804E+02	1.271E+02	1.007E+03
5.00E-03	1.014E+03	1.163E+02	1.130E+03	8.206E+02	1.221E+02	9.427E+02	9.427E+02	9.403E+02	1.106E+02	1.051E+03
6.00E-03	1.068E+03	1.033E+02	1.171E+03	8.770E+02	1.086E+02	9.856E+02	9.856E+02	9.925E+02	9.828E+01	1.091E+03
7.00E-03	1.116E+03	9.325E+01	1.209E+03	9.280E+02	9.806E+01	1.026E+03	1.026E+03	1.039E+03	8.875E+01	1.128E+03
8.00E-03	1.159E+03	8.494E+01	1.244E+03	9.748E+02	8.931E+01	1.064E+03	1.064E+03	1.081E+03	8.091E+01	1.162E+03
9.00E-03	1.199E+03	7.832E+01	1.277E+03	1.018E+03	8.240E+01	1.100E+03	1.100E+03	1.120E+03	7.463E+01	1.195E+03
1.00E-02	1.236E+03	7.277E+01	1.308E+03	1.059E+03	7.660E+01	1.135E+03	1.135E+03	1.156E+03	6.936E+01	1.226E+03
1.50E-02	1.407E+03	5.404E+01	1.461E+03	1.242E+03	5.703E+01	1.299E+03	1.299E+03	1.322E+03	5.155E+01	1.374E+03
2.00E-02	1.586E+03	4.367E+01	1.629E+03	1.433E+03	4.614E+01	1.479E+03	1.479E+03	1.499E+03	4.169E+01	1.538E+03
3.00E-02	1.902E+03	3.206E+01	1.934E+03	1.761E+03	3.392E+01	1.795E+03	1.795E+03	1.799E+03	3.063E+01	1.830E+03
4.00E-02	2.171E+03	2.562E+01	2.196E+03	2.028E+03	2.713E+01	2.055E+03	2.055E+03	2.051E+03	2.449E+01	2.075E+03
5.00E-02	2.404E+03	2.147E+01	2.426E+03	2.263E+03	2.275E+01	2.285E+03	2.285E+03	2.270E+03	2.053E+01	2.291E+03
6.00E-02	2.607E+03	1.855E+01	2.626E+03	2.468E+03	1.967E+01	2.487E+03	2.487E+03	2.461E+03	1.774E+01	2.479E+03
7.00E-02	2.781E+03	1.638E+01	2.798E+03	2.646E+03	1.737E+01	2.664E+03	2.664E+03	2.626E+03	1.567E+01	2.642E+03
8.00E-02	2.930E+03	1.470E+01	2.945E+03	2.801E+03	1.559E+01	2.816E+03	2.816E+03	2.768E+03	1.406E+01	2.782E+03
9.00E-02	3.055E+03	1.335E+01	3.068E+03	2.933E+03	1.417E+01	2.947E+03	2.947E+03	2.888E+03	1.278E+01	2.901E+03

target	Energy (MeV/amu)	Phantom			Water			SSNTD		
		Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	3.159E+03	1.225E+01	3.171E+03	3.046E+03	1.300E+01	3.059E+03	2.988E+03	1.172E+01	3.000E+03	
1.50E-01	3.438E+03	8.753E+00	3.447E+03	3.376E+03	9.297E+00	3.385E+03	3.266E+03	8.382E+00	3.275E+03	
2.00E-01	3.469E+03	6.879E+00	3.476E+03	3.457E+03	7.310E+00	3.464E+03	3.310E+03	6.589E+00	3.316E+03	
3.00E-01	3.299E+03	4.881E+00	3.295E+03	3.339E+03	5.190E+00	3.344E+03	3.158E+03	4.677E+00	3.163E+03	
4.00E-01	3.059E+03	3.817E+00	3.063E+03	3.126E+03	4.061E+00	3.130E+03	2.946E+03	3.659E+00	2.950E+03	
5.00E-01	2.830E+03	3.151E+00	2.833E+03	2.894E+03	3.353E+00	2.897E+03	2.731E+03	3.021E+00	2.734E+03	
6.00E-01	2.638E+03	2.692E+00	2.640E+03	2.692E+03	2.865E+00	2.695E+03	2.547E+03	2.581E+00	2.550E+03	
7.00E-01	2.476E+03	2.356E+00	2.478E+03	2.522E+03	2.508E+00	2.524E+03	2.392E+03	2.259E+00	2.395E+03	
8.00E-01	2.337E+03	2.098E+00	2.339E+03	2.376E+03	2.233E+00	2.378E+03	2.260E+03	2.012E+00	2.262E+03	
9.00E-01	2.217E+03	1.893E+00	2.219E+03	2.250E+03	2.016E+00	2.252E+03	2.145E+03	1.816E+00	2.146E+03	
1.00E+00	2.105E+03	1.727E+00	2.107E+03	2.134E+03	1.839E+00	2.136E+03	2.037E+03	1.656E+00	2.039E+03	
1.50E+00	1.702E+03	1.210E+00	1.703E+03	1.721E+03	1.289E+00	1.722E+03	1.650E+03	1.161E+00	1.651E+03	
2.00E+00	1.434E+03	9.390E-01	1.435E+03	1.450E+03	1.001E+00	1.451E+03	1.391E+03	9.009E-01	1.392E+03	
3.00E+00	1.086E+03	6.555E-01	1.087E+03	1.100E+03	6.987E-01	1.101E+03	1.056E+03	6.290E-01	1.057E+03	
4.00E+00	8.736E+02	5.073E-01	8.741E+02	8.855E+02	5.409E-01	8.871E+02	8.501E+02	4.869E-01	8.506E+02	
5.00E+00	7.322E+02	4.156E-01	7.326E+02	7.441E+02	4.431E-01	7.446E+02	7.130E+02	3.989E-01	7.134E+02	
6.00E+00	6.318E+02	3.529E-01	6.321E+02	6.429E+02	3.764E-01	6.433E+02	6.156E+02	3.388E-01	6.159E+02	
7.00E+00	5.569E+02	3.073E-01	5.572E+02	5.674E+02	3.278E-01	5.677E+02	5.429E+02	2.950E-01	5.432E+02	
8.00E+00	4.989E+02	2.726E-01	4.992E+02	5.088E+02	2.907E-01	5.090E+02	4.865E+02	2.617E-01	4.868E+02	
9.00E+00	4.526E+02	2.451E-01	4.528E+02	4.619E+02	2.615E-01	4.621E+02	4.414E+02	2.353E-01	4.416E+02	
1.00E+01	4.146E+02	2.229E-01	4.148E+02	4.234E+02	2.378E-01	4.237E+02	4.045E+02	2.140E-01	4.047E+02	
1.50E+01	2.917E+02	1.517E+00	2.917E+02	2.985E+02	2.985E+02	2.985E+02	2.852E+02	2.852E+02	2.852E+02	
2.00E+01	2.307E+02	1.165E+02	2.307E+02	2.362E+02	2.362E+02	2.362E+02	2.257E+02	2.257E+02	2.257E+02	
3.00E+01	1.659E+02	1.315E+02	1.659E+02	1.699E+02	1.699E+02	1.699E+02	1.624E+02	1.624E+02	1.624E+02	
4.00E+01	1.100E+02	9.524E+01	1.100E+02	1.127E+02	1.127E+02	1.127E+02	1.077E+02	1.077E+02	1.077E+02	
5.00E+01	9.524E+01	8.444E+01	9.524E+01	9.760E+01	9.760E+01	9.760E+01	9.329E+01	9.329E+01	9.329E+01	
6.00E+01	8.444E+01	7.619E+01	8.444E+01	8.655E+01	8.655E+01	8.655E+01	8.273E+01	8.273E+01	8.273E+01	
7.00E+01	7.619E+01	6.967E+01	7.619E+01	7.810E+01	7.810E+01	7.810E+01	7.466E+01	7.466E+01	7.466E+01	
8.00E+01	6.967E+01	6.438E+01	6.967E+01	7.142E+01	7.142E+01	7.142E+01	6.827E+01	6.827E+01	6.827E+01	
9.00E+01	6.438E+01	4.810E+01	6.438E+01	6.600E+01	6.600E+01	6.600E+01	6.310E+01	6.310E+01	6.310E+01	
1.50E+02	4.810E+01	3.969E+01	4.810E+01	4.932E+01	4.932E+01	4.932E+01	4.715E+01	4.715E+01	4.715E+01	
2.00E+02	3.969E+01	3.112E+01	3.969E+01	4.070E+01	4.070E+01	4.070E+01	3.892E+01	3.892E+01	3.892E+01	
3.00E+02	3.112E+01	2.682E+01	3.112E+01	3.192E+01	3.192E+01	3.192E+01	3.052E+01	3.052E+01	3.052E+01	
4.00E+02	2.682E+01	2.427E+01	2.682E+01	2.751E+01	2.751E+01	2.751E+01	2.631E+01	2.631E+01	2.631E+01	
5.00E+02	2.427E+01	2.262E+01	2.427E+01	2.490E+01	2.490E+01	2.490E+01	2.381E+01	2.381E+01	2.381E+01	
6.00E+02	2.262E+01	2.148E+01	2.262E+01	2.320E+01	2.320E+01	2.320E+01	2.219E+01	2.219E+01	2.219E+01	
7.00E+02	2.148E+01	2.066E+01	2.148E+01	2.203E+01	2.203E+01	2.203E+01	2.108E+01	2.108E+01	2.108E+01	
8.00E+02	2.066E+01	1.988E+01	2.066E+01	2.119E+01	2.119E+01	2.119E+01	2.027E+01	2.027E+01	2.027E+01	
9.00E+02	1.988E+01	1.925E+01	1.988E+01	2.048E+01	2.048E+01	2.048E+01	1.947E+01	1.947E+01	1.947E+01	
1.00E+03	1.925E+01	1.842E+01	1.925E+01	1.992E+01	1.992E+01	1.992E+01	1.881E+01	1.881E+01	1.881E+01	
1.50E+03	1.842E+01	1.753E+01	1.842E+01	1.842E+01	1.842E+01	1.842E+01	1.701E+01	1.701E+01	1.701E+01	
2.00E+03	1.753E+01	1.684E+01	1.753E+01	1.786E+01	1.786E+01	1.786E+01	1.625E+01	1.625E+01	1.625E+01	
3.00E+03	1.684E+01	1.637E+01	1.684E+01	1.757E+01	1.757E+01	1.757E+01	1.571E+01	1.571E+01	1.571E+01	
4.00E+03	1.637E+01	1.630E+01	1.630E+01	1.762E+01	1.762E+01	1.762E+01	1.558E+01	1.558E+01	1.558E+01	
5.00E+03	1.630E+01	1.634E+01	1.630E+01	1.790E+01	1.790E+01	1.790E+01	1.559E+01	1.559E+01	1.559E+01	
6.00E+03	1.634E+01	1.643E+01	1.634E+01	1.790E+01	1.790E+01	1.790E+01	1.566E+01	1.566E+01	1.566E+01	
7.00E+03	1.643E+01	1.654E+01	1.643E+01	1.806E+01	1.806E+01	1.806E+01	1.574E+01	1.574E+01	1.574E+01	
8.00E+03	1.654E+01	1.665E+01	1.654E+01	1.821E+01	1.821E+01	1.821E+01	1.583E+01	1.583E+01	1.583E+01	
9.00E+03	1.665E+01	1.676E+01	1.665E+01	1.835E+01	1.835E+01	1.835E+01	1.592E+01	1.592E+01	1.592E+01	
1.00E+04	1.676E+01	1.686E+01	1.676E+01	1.848E+01	1.848E+01	1.848E+01	1.601E+01	1.601E+01	1.601E+01	

 * Lithium-7 (1/5) *

target	Hydrogen			Helium			Beryllium			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-05	6.664E+02	1.521E+03	2.187E+03	2.187E+03	2.677E+02	5.581E+02	8.258E+02	2.451E+02	2.895E+02	5.346E+02
1.50E-05	7.375E+02	1.678E+03	2.415E+03	2.415E+03	2.935E+02	6.078E+02	9.041E+02	2.712E+02	3.199E+02	5.911E+02
2.00E-05	7.925E+02	1.780E+03	2.572E+03	2.572E+03	3.184E+02	6.384E+02	9.568E+02	2.914E+02	3.398E+02	6.312E+02
3.00E-05	8.770E+02	1.903E+03	2.780E+03	2.780E+03	3.524E+02	6.723E+02	1.025E+03	3.225E+02	3.640E+02	6.865E+02
4.00E-05	9.424E+02	1.970E+03	2.912E+03	2.912E+03	3.786E+02	6.881E+02	1.067E+03	3.466E+02	3.774E+02	7.240E+02
5.00E-05	9.965E+02	2.008E+03	3.005E+03	3.005E+03	4.004E+02	6.946E+02	1.095E+03	3.664E+02	3.852E+02	7.517E+02
6.00E-05	1.043E+03	2.029E+03	3.072E+03	3.072E+03	4.190E+02	6.959E+02	1.115E+03	3.835E+02	3.897E+02	7.732E+02
7.00E-05	1.084E+03	2.039E+03	3.123E+03	3.123E+03	4.355E+02	6.940E+02	1.129E+03	3.986E+02	3.919E+02	7.905E+02
8.00E-05	1.121E+03	2.041E+03	3.161E+03	3.161E+03	4.503E+02	6.900E+02	1.140E+03	4.121E+02	3.926E+02	8.047E+02
9.00E-05	1.154E+03	2.037E+03	3.192E+03	3.192E+03	4.637E+02	6.847E+02	1.148E+03	4.245E+02	3.923E+02	8.167E+02
1.00E-04	1.185E+03	2.030E+03	3.215E+03	3.215E+03	4.761E+02	6.785E+02	1.155E+03	4.358E+02	3.912E+02	8.270E+02
1.50E-04	1.311E+03	1.966E+03	3.278E+03	3.278E+03	5.263E+02	6.422E+02	1.169E+03	4.823E+02	3.800E+02	8.623E+02
2.00E-04	1.409E+03	1.886E+03	3.295E+03	3.295E+03	5.662E+02	6.055E+02	1.172E+03	5.182E+02	3.653E+02	8.835E+02
3.00E-04	1.560E+03	1.729E+03	3.288E+03	3.288E+03	6.266E+02	5.418E+02	1.168E+03	5.735E+02	3.359E+02	9.094E+02
4.00E-04	1.676E+03	1.593E+03	3.269E+03	3.269E+03	6.733E+02	4.908E+02	1.164E+03	6.163E+02	3.102E+02	9.265E+02
5.00E-04	1.772E+03	1.478E+03	3.250E+03	3.250E+03	7.120E+02	4.497E+02	1.162E+03	6.516E+02	2.883E+02	9.400E+02
6.00E-04	1.855E+03	1.380E+03	3.235E+03	3.235E+03	7.452E+02	4.158E+02	1.161E+03	6.820E+02	2.697E+02	9.517E+02
7.00E-04	1.928E+03	1.296E+03	3.224E+03	3.224E+03	7.744E+02	3.875E+02	1.162E+03	7.088E+02	2.536E+02	9.624E+02
8.00E-04	1.993E+03	1.224E+03	3.217E+03	3.217E+03	8.007E+02	3.633E+02	1.164E+03	7.329E+02	2.396E+02	9.725E+02
9.00E-04	2.053E+03	1.160E+03	3.213E+03	3.213E+03	8.246E+02	3.424E+02	1.167E+03	7.548E+02	2.273E+02	9.821E+02
1.00E-03	2.107E+03	1.104E+03	3.211E+03	3.211E+03	8.467E+02	3.242E+02	1.171E+03	7.749E+02	2.164E+02	9.914E+02
1.50E-03	2.332E+03	8.965E+02	3.229E+03	3.229E+03	9.370E+02	2.588E+02	1.196E+03	8.576E+02	1.762E+02	1.034E+03
2.00E-03	2.506E+03	7.625E+02	3.269E+03	3.269E+03	1.007E+03	2.177E+02	1.225E+03	9.216E+02	1.501E+02	1.072E+03
3.00E-03	2.773E+03	5.963E+02	3.370E+03	3.370E+03	1.114E+03	1.680E+02	1.282E+03	1.020E+03	1.176E+02	1.137E+03
4.00E-03	2.980E+03	4.954E+02	3.476E+03	3.476E+03	1.197E+03	1.384E+02	1.336E+03	1.096E+03	9.781E+01	1.194E+03
5.00E-03	3.151E+03	4.266E+02	3.578E+03	3.578E+03	1.266E+03	1.185E+02	1.385E+03	1.159E+03	8.431E+01	1.243E+03
6.00E-03	3.298E+03	3.764E+02	3.674E+03	3.674E+03	1.325E+03	1.032E+02	1.428E+03	1.213E+03	7.442E+01	1.287E+03
7.00E-03	3.428E+03	3.378E+02	3.766E+03	3.766E+03	1.377E+03	9.232E+01	1.469E+03	1.261E+03	6.683E+01	1.327E+03
8.00E-03	3.544E+03	3.043E+02	3.848E+03	3.848E+03	1.424E+03	8.372E+01	1.543E+03	1.342E+03	6.023E+01	1.364E+03
9.00E-03	3.650E+03	2.796E+02	3.930E+03	3.930E+03	1.466E+03	7.672E+01	1.576E+03	1.378E+03	5.536E+01	1.398E+03
1.00E-02	3.747E+03	2.590E+02	4.006E+03	4.006E+03	1.506E+03	7.090E+01	1.576E+03	1.378E+03	5.128E+01	1.429E+03
1.50E-02	4.235E+03	1.914E+02	4.427E+03	4.427E+03	1.666E+03	5.202E+01	1.718E+03	1.578E+03	3.794E+01	1.616E+03
2.00E-02	4.725E+03	1.535E+02	4.878E+03	4.878E+03	1.790E+03	4.155E+01	1.832E+03	1.763E+03	3.045E+01	1.793E+03
3.00E-02	5.764E+03	1.117E+02	5.878E+03	5.878E+03	2.005E+03	3.008E+01	2.035E+03	2.037E+03	2.218E+01	2.059E+03
4.00E-02	6.811E+03	8.878E+01	6.900E+03	6.900E+03	2.227E+03	2.383E+01	2.250E+03	2.037E+03	1.763E+01	2.250E+03
5.00E-02	7.708E+03	7.412E+01	7.822E+03	7.822E+03	2.437E+03	1.985E+01	2.457E+03	2.340E+03	1.473E+01	2.355E+03
6.00E-02	8.468E+03	6.388E+01	8.532E+03	8.532E+03	2.635E+03	1.707E+01	2.652E+03	2.442E+03	1.269E+01	2.455E+03
7.00E-02	9.103E+03	5.628E+01	9.159E+03	9.159E+03	2.816E+03	1.502E+01	2.831E+03	2.519E+03	1.119E+01	2.530E+03
8.00E-02	9.623E+03	5.040E+01	9.673E+03	9.673E+03	2.981E+03	1.344E+01	2.995E+03	2.575E+03	1.002E+01	2.585E+03
9.00E-02	1.004E+04	4.571E+01	1.009E+04	1.009E+04	3.129E+03	1.217E+01	3.142E+03	2.615E+03	9.088E+00	2.624E+03

target	Hydrogen			Helium			Beryllium		
	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	1.037E+04	4.187E+01	1.041E+04	3.260E+03	1.114E+01	3.271E+03	2.642E+03	8.326E+00	2.650E+03
1.50E-01	1.103E+04	2.979E+01	1.106E+04	3.685E+03	7.904E+00	3.693E+03	2.665E+03	5.926E+00	2.671E+03
2.00E-01	1.080E+04	2.334E+01	1.082E+04	3.613E+03	6.181E+00	3.619E+03	2.613E+03	4.644E+00	2.618E+03
3.00E-01	9.735E+03	1.650E+01	9.752E+03	3.711E+03	4.359E+00	3.715E+03	2.494E+03	3.284E+00	2.497E+03
4.00E-01	8.732E+03	1.287E+01	8.745E+03	3.469E+03	3.396E+00	3.473E+03	2.385E+03	2.563E+00	2.387E+03
5.00E-01	7.863E+03	1.061E+01	7.879E+03	3.194E+03	2.795E+00	3.197E+03	2.265E+03	2.112E+00	2.267E+03
6.00E-01	7.184E+03	9.050E+00	7.193E+03	2.956E+03	2.383E+00	2.958E+03	2.153E+03	1.802E+00	2.154E+03
7.00E-01	6.631E+03	7.910E+00	6.639E+03	2.756E+03	2.081E+00	2.758E+03	2.049E+03	1.575E+00	2.051E+03
8.00E-01	6.174E+03	7.037E+00	6.181E+03	2.586E+03	1.850E+00	2.588E+03	1.954E+03	1.402E+00	1.955E+03
9.00E-01	5.786E+03	6.346E+00	5.793E+03	2.440E+03	1.668E+00	2.441E+03	1.866E+03	1.264E+00	1.868E+03
1.00E+00	5.438E+03	5.785E+00	5.444E+03	2.306E+03	1.520E+00	2.307E+03	1.781E+03	1.152E+00	1.782E+03
1.50E+00	4.237E+03	4.044E+00	4.241E+03	1.831E+03	1.061E+00	1.832E+03	1.454E+03	8.058E-01	1.455E+03
2.00E+00	3.489E+03	3.133E+00	3.492E+03	1.526E+03	8.208E-01	1.527E+03	1.226E+03	6.243E-01	1.227E+03
3.00E+00	2.575E+03	2.182E+00	2.577E+03	1.139E+03	5.710E-01	1.140E+03	9.268E+02	4.350E-01	9.272E+02
4.00E+00	2.040E+03	1.687E+00	2.042E+03	9.069E+02	4.409E-01	9.073E+02	7.433E+02	3.362E-01	7.436E+02
5.00E+00	1.693E+03	1.380E+00	1.695E+03	7.540E+02	3.606E-01	7.543E+02	6.214E+02	2.752E-01	6.217E+02
6.00E+00	1.451E+03	1.171E+00	1.452E+03	6.463E+02	3.058E-01	6.467E+02	5.351E+02	2.335E-01	5.354E+02
7.00E+00	1.272E+03	1.019E+00	1.273E+03	5.666E+02	2.660E-01	5.669E+02	4.709E+02	2.032E-01	4.711E+02
8.00E+00	1.135E+03	9.034E-01	1.136E+03	5.051E+02	2.357E-01	5.053E+02	4.212E+02	1.801E-01	4.214E+02
9.00E+00	1.026E+03	8.121E-01	1.027E+03	4.562E+02	2.118E-01	4.564E+02	3.816E+02	1.619E-01	3.818E+02
1.00E+01	9.371E+02	7.382E-01	9.378E+02	4.163E+02	1.925E-01	4.165E+02	3.492E+02	1.472E-01	3.493E+02
1.50E+01	6.463E+02	5.072E+02	6.463E+02	2.918E+02	2.289E+02	2.918E+02	2.422E+02	2.422E+02	2.422E+02
2.00E+01	5.072E+02	3.611E+02	5.072E+02	2.299E+02	1.645E+02	2.299E+02	1.915E+02	1.915E+02	1.915E+02
3.00E+01	3.611E+02	2.844E+02	3.611E+02	1.645E+02	1.375E+02	1.645E+02	1.375E+02	1.375E+02	1.375E+02
4.00E+01	2.844E+02	2.369E+02	2.844E+02	1.300E+02	1.090E+02	1.300E+02	1.090E+02	1.090E+02	1.090E+02
5.00E+01	2.369E+02	2.044E+02	2.369E+02	1.085E+02	9.112E+01	1.085E+02	9.112E+01	9.112E+01	9.112E+01
6.00E+01	2.044E+02	1.807E+02	2.044E+02	9.383E+01	7.887E+01	9.383E+01	7.887E+01	7.887E+01	7.887E+01
7.00E+01	1.807E+02	1.627E+02	1.807E+02	8.309E+01	6.992E+01	8.309E+01	6.992E+01	6.992E+01	6.992E+01
8.00E+01	1.627E+02	1.485E+02	1.627E+02	7.490E+01	6.308E+01	7.490E+01	6.308E+01	6.308E+01	6.308E+01
9.00E+01	1.485E+02	1.370E+02	1.485E+02	6.843E+01	5.768E+01	6.843E+01	5.768E+01	5.768E+01	5.768E+01
1.00E+02	1.370E+02	1.017E+02	1.370E+02	6.320E+01	6.320E+01	6.320E+01	5.330E+01	5.330E+01	5.330E+01
1.50E+02	1.017E+02	8.362E+01	1.017E+02	4.709E+01	3.880E+01	4.709E+01	3.980E+01	3.980E+01	3.980E+01
2.00E+02	8.362E+01	6.523E+01	8.362E+01	3.036E+01	3.036E+01	3.036E+01	3.284E+01	3.284E+01	3.284E+01
3.00E+02	6.523E+01	5.602E+01	6.502E+01	2.612E+01	2.612E+01	2.612E+01	2.574E+01	2.574E+01	2.574E+01
4.00E+02	5.602E+01	5.057E+01	5.057E+01	2.362E+01	2.362E+01	2.362E+01	2.218E+01	2.218E+01	2.218E+01
5.00E+02	5.057E+01	4.703E+01	4.703E+01	2.199E+01	2.199E+01	2.199E+01	2.007E+01	2.007E+01	2.007E+01
6.00E+02	4.703E+01	4.458E+01	4.458E+01	2.086E+01	2.086E+01	2.086E+01	1.870E+01	1.870E+01	1.870E+01
7.00E+02	4.458E+01	4.281E+01	4.281E+01	2.006E+01	2.006E+01	2.006E+01	1.776E+01	1.776E+01	1.776E+01
8.00E+02	4.281E+01	4.149E+01	4.149E+01	1.946E+01	1.946E+01	1.946E+01	1.708E+01	1.708E+01	1.708E+01
9.00E+02	4.149E+01	4.050E+01	4.050E+01	1.900E+01	1.900E+01	1.900E+01	1.654E+01	1.654E+01	1.654E+01
1.00E+03	3.798E+01	3.798E+01	3.798E+01	1.787E+01	1.787E+01	1.787E+01	1.612E+01	1.612E+01	1.612E+01
1.50E+03	3.721E+01	3.721E+01	3.721E+01	1.755E+01	1.755E+01	1.755E+01	1.503E+01	1.503E+01	1.503E+01
2.00E+03	3.716E+01	3.716E+01	3.716E+01	1.738E+01	1.738E+01	1.738E+01	1.464E+01	1.464E+01	1.464E+01
3.00E+03	3.766E+01	3.766E+01	3.766E+01	1.786E+01	1.786E+01	1.786E+01	1.449E+01	1.449E+01	1.449E+01
4.00E+03	3.828E+01	3.828E+01	3.828E+01	1.818E+01	1.818E+01	1.818E+01	1.457E+01	1.457E+01	1.457E+01
5.00E+03	3.889E+01	3.889E+01	3.889E+01	1.850E+01	1.850E+01	1.850E+01	1.471E+01	1.471E+01	1.471E+01
6.00E+03	3.947E+01	3.947E+01	3.947E+01	1.880E+01	1.880E+01	1.880E+01	1.486E+01	1.486E+01	1.486E+01
7.00E+03	4.002E+01	4.002E+01	4.002E+01	1.907E+01	1.907E+01	1.907E+01	1.500E+01	1.500E+01	1.500E+01
8.00E+03	4.052E+01	4.052E+01	4.052E+01	1.933E+01	1.933E+01	1.933E+01	1.514E+01	1.514E+01	1.514E+01
9.00E+03	4.099E+01	4.099E+01	4.099E+01	1.957E+01	1.957E+01	1.957E+01	1.526E+01	1.526E+01	1.526E+01
1.00E+04	4.099E+01	4.099E+01	4.099E+01	1.957E+01	1.957E+01	1.957E+01	1.538E+01	1.538E+01	1.538E+01

 * Lithium-7 (2/5) *

target	Carbon			Aluminium			Iron			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	2.080E+02	2.373E+02	2.373E+02	4.453E+02	3.169E+01	9.378E+01	1.255E+02	1.587E+01	3.114E+01	4.701E+01
1.50E-05	2.302E+02	2.659E+02	2.659E+02	4.961E+02	3.804E+01	1.076E+02	1.457E+02	1.905E+01	3.656E+01	5.561E+01
2.00E-05	2.473E+02	2.854E+02	2.854E+02	5.327E+02	4.329E+01	1.176E+02	1.609E+02	2.168E+01	4.065E+01	6.232E+01
3.00E-05	2.737E+02	3.106E+02	3.106E+02	5.843E+02	5.196E+01	1.316E+02	1.835E+02	2.602E+01	4.662E+01	7.263E+01
4.00E-05	2.941E+02	3.260E+02	3.260E+02	6.202E+02	5.914E+01	1.410E+02	2.001E+02	2.961E+01	5.092E+01	8.053E+01
5.00E-05	3.110E+02	3.361E+02	3.361E+02	6.472E+02	6.539E+01	1.478E+02	2.132E+02	3.274E+01	5.423E+01	8.697E+01
6.00E-05	3.255E+02	3.430E+02	3.430E+02	6.685E+02	7.098E+01	1.531E+02	2.241E+02	3.554E+01	5.689E+01	9.243E+01
7.00E-05	3.383E+02	3.476E+02	3.476E+02	6.859E+02	7.608E+01	1.572E+02	2.332E+02	3.809E+01	5.908E+01	9.717E+01
8.00E-05	3.498E+02	3.507E+02	3.507E+02	7.005E+02	8.079E+01	1.604E+02	2.412E+02	4.045E+01	6.092E+01	1.014E+02
9.00E-05	3.603E+02	3.527E+02	3.527E+02	7.130E+02	8.519E+01	1.630E+02	2.482E+02	4.266E+01	6.250E+01	1.052E+02
1.00E-04	3.699E+02	3.538E+02	3.538E+02	7.237E+02	8.932E+01	1.652E+02	2.545E+02	4.473E+01	6.385E+01	1.086E+02
1.50E-04	4.093E+02	3.521E+02	3.521E+02	7.615E+02	1.072E+02	1.712E+02	2.784E+02	5.368E+01	6.854E+01	1.222E+02
2.00E-04	4.399E+02	3.448E+02	3.448E+02	7.847E+02	1.220E+02	1.730E+02	2.950E+02	6.110E+01	7.120E+01	1.323E+02
3.00E-04	4.868E+02	3.259E+02	3.259E+02	8.127E+02	1.464E+02	1.716E+02	3.180E+02	7.333E+01	7.369E+01	1.470E+02
4.00E-04	5.231E+02	3.070E+02	3.070E+02	8.300E+02	1.667E+02	1.676E+02	3.343E+02	8.346E+01	7.440E+01	1.579E+02
5.00E-04	5.531E+02	2.897E+02	2.897E+02	8.428E+02	1.843E+02	1.628E+02	3.471E+02	9.228E+01	7.427E+01	1.665E+02
6.00E-04	5.789E+02	2.742E+02	2.742E+02	8.531E+02	2.000E+02	1.578E+02	3.578E+02	1.002E+02	7.368E+01	1.739E+02
7.00E-04	6.016E+02	2.604E+02	2.604E+02	8.621E+02	2.144E+02	1.529E+02	3.673E+02	1.074E+02	7.285E+01	1.802E+02
8.00E-04	6.220E+02	2.482E+02	2.482E+02	8.702E+02	2.277E+02	1.482E+02	3.759E+02	1.140E+02	7.188E+01	1.859E+02
9.00E-04	6.406E+02	2.371E+02	2.371E+02	8.778E+02	2.401E+02	1.437E+02	3.838E+02	1.202E+02	7.083E+01	1.910E+02
1.00E-03	6.577E+02	2.272E+02	2.272E+02	8.849E+02	2.517E+02	1.395E+02	3.913E+02	1.261E+02	6.974E+01	1.958E+02
1.50E-03	7.279E+02	1.892E+02	1.892E+02	9.171E+02	3.021E+02	1.219E+02	4.241E+02	1.513E+02	6.437E+01	2.157E+02
2.00E-03	7.822E+02	1.635E+02	1.635E+02	9.456E+02	3.439E+02	1.087E+02	4.526E+02	1.722E+02	5.960E+01	2.318E+02
3.00E-03	8.656E+02	1.303E+02	1.303E+02	9.960E+02	4.127E+02	9.023E+01	5.030E+02	2.067E+02	5.199E+01	2.587E+02
4.00E-03	9.302E+02	1.096E+02	1.096E+02	1.040E+03	4.698E+02	7.779E+01	5.476E+02	2.352E+02	4.630E+01	2.815E+02
5.00E-03	9.835E+02	9.518E+01	9.518E+01	1.079E+03	5.194E+02	6.876E+01	5.882E+02	2.601E+02	4.189E+01	3.020E+02
6.00E-03	1.029E+03	8.450E+01	8.450E+01	1.114E+03	5.638E+02	6.186E+01	6.257E+02	2.823E+02	3.837E+01	3.207E+02
7.00E-03	1.070E+03	7.622E+01	7.622E+01	1.146E+03	6.043E+02	5.639E+01	6.607E+02	3.026E+02	3.547E+01	3.381E+02
8.00E-03	1.106E+03	6.959E+01	6.959E+01	1.176E+03	6.417E+02	5.193E+01	6.937E+02	3.213E+02	3.304E+01	3.544E+02
9.00E-03	1.139E+03	6.414E+01	6.414E+01	1.203E+03	6.767E+02	4.821E+01	7.249E+02	3.388E+02	3.098E+01	3.698E+02
1.00E-02	1.170E+03	5.957E+01	5.957E+01	1.229E+03	7.095E+02	4.505E+01	7.546E+02	3.553E+02	2.919E+01	3.845E+02
1.50E-02	1.312E+03	4.409E+01	4.409E+01	1.358E+03	8.515E+02	3.436E+01	8.859E+02	4.264E+02	2.292E+01	4.493E+02
2.00E-02	1.462E+03	3.560E+01	3.560E+01	1.498E+03	9.964E+02	2.784E+01	1.024E+03	5.012E+02	1.909E+01	5.203E+02
3.00E-02	1.722E+03	2.611E+01	2.611E+01	1.748E+03	1.232E+03	2.077E+01	1.253E+03	6.533E+02	1.455E+01	6.678E+02
4.00E-02	1.938E+03	2.085E+01	2.085E+01	1.959E+03	1.388E+03	1.676E+01	1.404E+03	7.603E+02	1.178E+01	7.721E+02
5.00E-02	2.126E+03	1.746E+01	1.746E+01	2.144E+03	1.508E+03	1.414E+01	1.523E+03	8.568E+02	1.004E+01	8.668E+02
6.00E-02	2.289E+03	1.509E+01	1.509E+01	2.304E+03	1.601E+03	1.228E+01	1.613E+03	9.468E+02	8.786E+00	9.556E+02
7.00E-02	2.429E+03	1.332E+01	1.332E+01	2.443E+03	1.671E+03	1.088E+01	1.682E+03	1.026E+03	7.834E+00	1.034E+03
8.00E-02	2.549E+03	1.195E+01	1.195E+01	2.561E+03	1.724E+03	9.797E+00	1.734E+03	1.092E+03	7.084E+00	1.092E+03
9.00E-02	2.650E+03	1.085E+01	1.085E+01	2.661E+03	1.763E+03	8.923E+00	1.772E+03	1.147E+03	6.477E+00	1.154E+03

target	Carbon			Aluminium			Iron			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	2.733E+03	9.950E+00	2.743E+03	1.793E+03	8.203E+00	1.801E+03	1.801E+03	1.192E+03	5.974E+00	1.198E+03
1.50E-01	2.955E+03	7.109E+00	2.962E+03	1.861E+03	5.911E+00	1.867E+03	1.867E+03	1.319E+03	4.355E+00	1.324E+03
2.00E-01	2.974E+03	5.585E+00	2.979E+03	1.872E+03	4.669E+00	1.877E+03	1.877E+03	1.360E+03	3.464E+00	1.364E+03
3.00E-01	2.818E+03	3.961E+00	2.822E+03	1.854E+03	3.334E+00	1.858E+03	1.858E+03	1.361E+03	2.495E+00	1.364E+03
4.00E-01	2.629E+03	3.097E+00	2.632E+03	1.813E+03	2.618E+00	1.816E+03	1.816E+03	1.328E+03	1.971E+00	1.330E+03
5.00E-01	2.446E+03	2.536E+00	2.449E+03	1.744E+03	2.167E+00	1.746E+03	1.746E+03	1.273E+03	1.638E+00	1.275E+03
6.00E-01	2.292E+03	2.184E+00	2.294E+03	1.671E+03	1.856E+00	1.673E+03	1.673E+03	1.218E+03	1.407E+00	1.219E+03
7.00E-01	2.162E+03	1.911E+00	2.164E+03	1.600E+03	1.627E+00	1.602E+03	1.602E+03	1.165E+03	1.236E+00	1.167E+03
8.00E-01	2.050E+03	1.701E+00	2.052E+03	1.533E+03	1.451E+00	1.534E+03	1.534E+03	1.117E+03	1.104E+00	1.118E+03
9.00E-01	1.952E+03	1.535E+00	1.953E+03	1.469E+03	1.311E+00	1.471E+03	1.471E+03	1.072E+03	9.998E-01	1.073E+03
1.00E+00	1.859E+03	1.400E+00	1.860E+03	1.407E+03	1.197E+00	1.408E+03	1.408E+03	1.027E+03	9.143E-01	1.028E+03
1.50E+00	1.516E+03	9.810E-01	1.517E+03	1.162E+03	8.423E-01	1.163E+03	1.163E+03	8.571E+02	6.467E-01	8.578E+02
2.00E+00	1.283E+03	7.610E-01	1.283E+03	9.890E+02	6.553E-01	9.897E+02	9.897E+02	7.369E+02	5.048E-01	7.374E+02
3.00E+00	9.751E+02	5.311E-01	9.756E+02	7.581E+02	4.590E-01	7.585E+02	7.585E+02	5.749E+02	3.552E-01	5.752E+02
4.00E+00	7.853E+02	4.110E-01	7.857E+02	6.148E+02	3.560E-01	6.151E+02	6.151E+02	4.728E+02	2.763E-01	4.731E+02
5.00E+00	6.586E+02	3.366E-01	6.589E+02	5.188E+02	2.921E-01	5.191E+02	5.191E+02	4.038E+02	2.272E-01	4.040E+02
6.00E+00	5.685E+02	2.859E-01	5.688E+02	4.505E+02	2.484E-01	4.507E+02	4.507E+02	3.542E+02	1.935E-01	3.543E+02
7.00E+00	5.012E+02	2.489E-01	5.015E+02	3.994E+02	2.165E-01	3.996E+02	3.996E+02	3.167E+02	1.689E-01	3.169E+02
8.00E+00	4.491E+02	2.207E-01	4.493E+02	3.596E+02	1.922E-01	3.598E+02	3.598E+02	2.875E+02	1.501E-01	2.876E+02
9.00E+00	4.073E+02	1.985E-01	4.075E+02	3.277E+02	1.730E-01	3.279E+02	3.279E+02	2.638E+02	1.352E-01	2.640E+02
1.00E+01	3.732E+02	1.805E-01	3.732E+02	3.016E+02	1.574E-01	3.017E+02	3.017E+02	2.443E+02	1.231E-01	2.443E+02
1.50E+01	2.635E+02	1.200E+00	2.635E+02	2.212E+02	1.000E+00	2.212E+02	2.212E+02	1.904E+02	8.000E-01	1.904E+02
2.00E+01	2.087E+02	8.000E-01	2.087E+02	1.764E+02	6.000E-01	1.764E+02	1.764E+02	1.530E+02	6.000E-01	1.530E+02
3.00E+01	1.502E+02	5.000E-01	1.502E+02	1.282E+02	4.000E-01	1.282E+02	1.282E+02	1.122E+02	4.000E-01	1.122E+02
4.00E+01	1.192E+02	4.000E-01	1.192E+02	1.023E+02	3.000E-01	1.023E+02	1.023E+02	8.999E+01	3.000E-01	8.999E+01
5.00E+01	9.977E+01	3.000E-01	9.977E+01	8.596E+01	2.000E-01	8.596E+01	8.596E+01	7.593E+01	2.000E-01	7.593E+01
6.00E+01	8.642E+01	2.000E-01	8.642E+01	7.469E+01	1.000E-01	7.469E+01	7.469E+01	6.617E+01	1.000E-01	6.617E+01
7.00E+01	7.665E+01	1.000E-01	7.665E+01	6.641E+01	5.000E-01	6.641E+01	6.641E+01	5.897E+01	5.000E-01	5.897E+01
8.00E+01	6.918E+01	5.000E-01	6.918E+01	6.005E+01	4.000E-01	6.005E+01	6.005E+01	5.343E+01	4.000E-01	5.343E+01
9.00E+01	6.328E+01	4.000E-01	6.328E+01	5.502E+01	3.000E-01	5.502E+01	5.502E+01	4.903E+01	3.000E-01	4.903E+01
1.00E+02	5.849E+01	3.000E-01	5.849E+01	5.093E+01	2.000E-01	5.093E+01	5.093E+01	4.544E+01	2.000E-01	4.544E+01
1.50E+02	4.373E+01	2.000E-01	4.373E+01	3.827E+01	1.000E-01	3.827E+01	3.827E+01	3.431E+01	1.000E-01	3.431E+01
2.00E+02	3.611E+01	1.000E-01	3.611E+01	3.169E+01	5.000E-01	3.169E+01	3.169E+01	2.850E+01	5.000E-01	2.850E+01
3.00E+02	2.833E+01	5.000E-01	2.833E+01	2.497E+01	3.000E-01	2.497E+01	2.497E+01	2.253E+01	3.000E-01	2.253E+01
4.00E+02	2.443E+01	4.000E-01	2.443E+01	2.158E+01	2.000E-01	2.158E+01	2.158E+01	1.952E+01	2.000E-01	1.952E+01
5.00E+02	2.211E+01	3.000E-01	2.211E+01	1.958E+01	1.000E-01	1.958E+01	1.958E+01	1.774E+01	1.000E-01	1.774E+01
6.00E+02	2.061E+01	2.000E-01	2.061E+01	1.828E+01	5.000E-01	1.828E+01	1.828E+01	1.659E+01	5.000E-01	1.659E+01
7.00E+02	1.958E+01	1.000E-01	1.958E+01	1.739E+01	4.000E-01	1.739E+01	1.739E+01	1.580E+01	4.000E-01	1.580E+01
8.00E+02	1.884E+01	5.000E-01	1.884E+01	1.675E+01	3.000E-01	1.675E+01	1.675E+01	1.523E+01	3.000E-01	1.523E+01
9.00E+02	1.826E+01	4.000E-01	1.826E+01	1.625E+01	2.000E-01	1.625E+01	1.625E+01	1.479E+01	2.000E-01	1.479E+01
1.00E+03	1.782E+01	3.000E-01	1.782E+01	1.587E+01	1.000E-01	1.587E+01	1.587E+01	1.445E+01	1.000E-01	1.445E+01
1.50E+03	1.666E+01	2.000E-01	1.666E+01	1.490E+01	5.000E-01	1.490E+01	1.490E+01	1.360E+01	5.000E-01	1.360E+01
2.00E+03	1.627E+01	1.000E-01	1.627E+01	1.459E+01	4.000E-01	1.459E+01	1.459E+01	1.335E+01	4.000E-01	1.335E+01
3.00E+03	1.614E+01	5.000E-01	1.614E+01	1.455E+01	3.000E-01	1.455E+01	1.455E+01	1.335E+01	3.000E-01	1.335E+01
4.00E+03	1.625E+01	4.000E-01	1.625E+01	1.472E+01	2.000E-01	1.472E+01	1.472E+01	1.353E+01	2.000E-01	1.353E+01
5.00E+03	1.643E+01	3.000E-01	1.643E+01	1.493E+01	1.000E-01	1.493E+01	1.493E+01	1.374E+01	1.000E-01	1.374E+01
6.00E+03	1.660E+01	2.000E-01	1.660E+01	1.514E+01	5.000E-01	1.514E+01	1.514E+01	1.394E+01	5.000E-01	1.394E+01
7.00E+03	1.677E+01	1.000E-01	1.677E+01	1.533E+01	4.000E-01	1.533E+01	1.533E+01	1.413E+01	4.000E-01	1.413E+01
8.00E+03	1.693E+01	5.000E-01	1.693E+01	1.551E+01	3.000E-01	1.551E+01	1.551E+01	1.431E+01	3.000E-01	1.431E+01
9.00E+03	1.708E+01	4.000E-01	1.708E+01	1.568E+01	2.000E-01	1.568E+01	1.568E+01	1.447E+01	2.000E-01	1.447E+01
1.00E+04	1.722E+01	3.000E-01	1.722E+01	1.583E+01	1.000E-01	1.583E+01	1.583E+01	1.462E+01	1.000E-01	1.462E+01

 * Lithium-7 (3/5) *

target	Copper			Tungsten			Lead			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total
1.00E-03	1.080E+01	1.080E+01	2.658E+01	3.738E+01	5.776E+00	5.038E+00	1.081E+01	7.757E+00	4.106E+00	1.186E+01
1.50E-05	1.296E+01	1.296E+01	3.132E+01	4.428E+01	6.933E+00	6.198E+00	1.304E+01	9.309E+00	4.993E+00	1.430E+01
2.00E-05	1.475E+01	1.475E+01	3.491E+01	4.966E+01	7.891E+00	6.957E+00	1.485E+01	1.060E+01	5.699E+00	1.630E+01
3.00E-05	1.770E+01	1.770E+01	4.020E+01	5.790E+01	9.470E+00	8.277E+00	1.775E+01	1.272E+01	6.803E+00	1.952E+01
4.00E-05	2.015E+01	2.015E+01	4.404E+01	6.419E+01	1.078E+01	9.293E+00	2.007E+01	1.447E+01	7.657E+00	2.213E+01
5.00E-05	2.228E+01	2.228E+01	4.702E+01	6.930E+01	1.192E+01	1.012E+01	2.204E+01	1.600E+01	8.357E+00	2.436E+01
6.00E-05	2.418E+01	2.418E+01	4.943E+01	7.361E+01	1.294E+01	1.082E+01	2.376E+01	1.737E+01	8.948E+00	2.632E+01
7.00E-05	2.592E+01	2.592E+01	5.143E+01	7.735E+01	1.387E+01	1.142E+01	2.529E+01	1.862E+01	9.461E+00	2.808E+01
8.00E-05	2.752E+01	2.752E+01	5.312E+01	8.064E+01	1.472E+01	1.195E+01	2.668E+01	1.977E+01	9.912E+00	2.969E+01
1.00E-04	3.043E+01	3.043E+01	5.457E+01	8.359E+01	1.553E+01	1.242E+01	2.795E+01	2.085E+01	1.032E+01	3.116E+01
1.50E-04	3.652E+01	3.652E+01	6.025E+01	9.678E+01	1.954E+01	1.447E+01	3.401E+01	2.624E+01	1.068E+01	3.254E+01
2.00E-04	4.157E+01	4.157E+01	6.285E+01	1.044E+02	2.224E+01	1.559E+01	3.783E+01	2.986E+01	1.208E+01	3.832E+01
3.00E-04	4.989E+01	4.989E+01	6.547E+01	1.154E+02	2.669E+01	1.707E+01	4.376E+01	3.584E+01	1.437E+01	4.293E+01
4.00E-04	5.679E+01	5.679E+01	6.644E+01	1.232E+02	3.038E+01	1.801E+01	4.839E+01	4.080E+01	1.522E+01	5.022E+01
5.00E-04	6.279E+01	6.279E+01	6.660E+01	1.294E+02	3.359E+01	1.864E+01	5.223E+01	4.510E+01	1.580E+01	5.609E+01
6.00E-04	6.815E+01	6.815E+01	6.631E+01	1.345E+02	3.646E+01	1.908E+01	5.554E+01	4.896E+01	1.622E+01	6.090E+01
7.00E-04	7.305E+01	7.305E+01	6.577E+01	1.388E+02	3.908E+01	1.940E+01	5.848E+01	5.248E+01	1.653E+01	6.518E+01
8.00E-04	7.757E+01	7.757E+01	6.508E+01	1.427E+02	4.150E+01	1.962E+01	6.112E+01	5.573E+01	1.676E+01	6.901E+01
9.00E-04	8.180E+01	8.180E+01	6.430E+01	1.461E+02	4.376E+01	1.978E+01	6.354E+01	5.876E+01	1.692E+01	7.248E+01
1.00E-03	8.577E+01	8.577E+01	6.346E+01	1.492E+02	4.588E+01	1.989E+01	6.578E+01	6.161E+01	1.705E+01	7.569E+01
1.50E-03	1.029E+02	1.029E+02	5.912E+01	1.621E+02	5.507E+01	1.998E+01	7.505E+01	7.395E+01	1.726E+01	9.120E+01
2.00E-03	1.172E+02	1.172E+02	5.510E+01	1.723E+02	6.268E+01	1.971E+01	8.239E+01	8.417E+01	1.712E+01	1.013E+02
3.00E-03	1.406E+02	1.406E+02	4.850E+01	1.891E+02	7.522E+01	1.884E+01	9.406E+01	1.010E+02	1.650E+01	1.175E+02
4.00E-03	1.600E+02	1.600E+02	4.346E+01	2.035E+02	8.562E+01	1.788E+01	1.035E+02	1.150E+02	1.577E+01	1.307E+02
5.00E-03	1.770E+02	1.770E+02	3.950E+01	2.165E+02	9.512E+01	1.698E+01	1.121E+02	1.271E+02	1.506E+01	1.422E+02
6.00E-03	1.921E+02	1.921E+02	3.630E+01	2.284E+02	1.042E+02	1.618E+01	1.204E+02	1.380E+02	1.439E+01	1.524E+02
7.00E-03	2.059E+02	2.059E+02	3.365E+01	2.395E+02	1.127E+02	1.541E+01	1.281E+02	1.479E+02	1.377E+01	1.617E+02
8.00E-03	2.186E+02	2.186E+02	3.142E+01	2.501E+02	1.207E+02	1.474E+01	1.355E+02	1.571E+02	1.321E+01	1.703E+02
9.00E-03	2.305E+02	2.305E+02	2.951E+01	2.600E+02	1.284E+02	1.413E+01	1.426E+02	1.656E+02	1.269E+01	1.783E+02
1.00E-02	2.417E+02	2.417E+02	2.785E+01	2.696E+02	1.359E+02	1.357E+01	1.494E+02	1.737E+02	1.222E+01	1.859E+02
1.50E-02	2.992E+02	2.992E+02	2.200E+01	3.212E+02	1.701E+02	1.141E+01	1.815E+02	2.084E+02	1.037E+01	2.188E+02
2.00E-02	3.538E+02	3.538E+02	1.839E+01	3.722E+02	2.016E+02	9.925E+00	2.115E+02	2.414E+02	9.061E+00	2.505E+02
3.00E-02	4.498E+02	4.498E+02	1.407E+01	4.638E+02	2.694E+02	7.977E+00	2.774E+02	2.961E+02	7.333E+00	3.035E+02
4.00E-02	5.306E+02	5.306E+02	1.154E+01	5.422E+02	3.322E+02	6.740E+00	3.390E+02	3.351E+02	6.222E+00	3.413E+02
5.00E-02	6.032E+02	6.032E+02	9.756E+00	6.129E+02	3.799E+02	5.874E+00	3.857E+02	3.704E+02	5.439E+00	3.758E+02
6.00E-02	6.680E+02	6.680E+02	8.550E+00	6.766E+02	4.167E+02	5.228E+00	4.219E+02	4.024E+02	4.852E+00	4.073E+02
7.00E-02	7.256E+02	7.256E+02	7.632E+00	7.333E+02	4.463E+02	4.726E+00	4.510E+02	4.316E+02	4.393E+00	4.360E+02
8.00E-02	7.766E+02	7.766E+02	6.909E+00	7.835E+02	4.709E+02	4.322E+00	4.752E+02	4.580E+02	4.024E+00	4.620E+02
9.00E-02	8.214E+02	8.214E+02	6.322E+00	8.277E+02	4.919E+02	3.989E+00	4.959E+02	4.819E+02	3.718E+00	4.856E+02

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-01	8.606E+02	5.835E+00	8.665E+02	5.101E+02	3.709E+00	5.138E+02	5.033E+02	3.461E+00	5.068E+02
1.50E-01	9.921E+02	4.263E+00	9.964E+02	5.735E+02	2.756E+00	5.752E+02	5.800E+02	2.580E+00	5.825E+02
2.00E-01	1.056E+03	3.396E+00	1.059E+03	6.049E+02	2.231E+00	6.072E+02	6.183E+02	2.094E+00	6.204E+02
3.00E-01	1.104E+03	2.450E+00	1.106E+03	6.309E+02	1.642E+00	6.325E+02	6.383E+02	1.545E+00	6.398E+02
4.00E-01	1.112E+03	1.937E+00	1.113E+03	6.326E+02	1.314E+00	6.339E+02	6.295E+02	1.238E+00	6.308E+02
5.00E-01	1.093E+03	1.611E+00	1.095E+03	6.201E+02	1.102E+00	6.212E+02	6.082E+02	1.040E+00	6.093E+02
6.00E-01	1.066E+03	1.385E+00	1.068E+03	6.039E+02	9.529E-01	6.049E+02	5.874E+02	9.002E-01	5.883E+02
7.00E-01	1.037E+03	1.217E+00	1.038E+03	5.867E+02	8.419E-01	5.876E+02	5.688E+02	7.959E-01	5.696E+02
8.00E-01	1.006E+03	1.088E+00	1.007E+03	5.696E+02	7.558E-01	5.704E+02	5.523E+02	7.149E-01	5.530E+02
9.00E-01	9.753E+02	9.853E-01	9.763E+02	5.530E+02	6.867E-01	5.537E+02	5.375E+02	6.499E-01	5.381E+02
1.00E+00	9.430E+02	9.013E-01	9.439E+02	5.358E+02	6.301E-01	5.364E+02	5.225E+02	5.965E-01	5.231E+02
1.50E+00	8.074E+02	6.382E-01	8.080E+02	4.648E+02	4.509E-01	4.653E+02	4.632E+02	4.275E-01	4.637E+02
2.00E+00	7.025E+02	4.985E-01	7.030E+02	4.099E+02	3.546E-01	4.102E+02	4.157E+02	3.365E-01	4.161E+02
3.00E+00	5.534E+02	3.510E-01	5.538E+02	3.302E+02	2.519E-01	3.305E+02	3.415E+02	2.393E-01	3.418E+02
4.00E+00	4.566E+02	2.732E-01	4.569E+02	2.775E+02	1.971E-01	2.777E+02	2.894E+02	1.874E-01	2.896E+02
5.00E+00	3.903E+02	2.247E-01	3.905E+02	2.410E+02	1.628E-01	2.411E+02	2.521E+02	1.549E-01	2.522E+02
6.00E+00	3.423E+02	1.914E-01	3.425E+02	2.144E+02	1.391E-01	2.145E+02	2.244E+02	1.324E-01	2.245E+02
7.00E+00	3.060E+02	1.671E-01	3.062E+02	1.942E+02	1.218E-01	1.943E+02	2.030E+02	1.159E-01	2.031E+02
8.00E+00	2.775E+02	1.485E-01	2.777E+02	1.782E+02	1.084E-01	1.783E+02	1.860E+02	1.033E-01	1.861E+02
9.00E+00	2.546E+02	1.338E-01	2.547E+02	1.652E+02	9.789E-02	1.653E+02	1.721E+02	9.324E-02	1.722E+02
1.00E+01	2.357E+02	1.219E-01	2.357E+02	1.544E+02	8.931E-02	1.545E+02	1.605E+02	8.508E-02	1.606E+02
1.50E+01	1.807E+02	1.071E-01	1.807E+02	1.281E+02	7.218E-02	1.281E+02	1.418E+02	6.718E-02	1.418E+02
2.00E+01	1.455E+02	8.55E-02	1.455E+02	1.048E+02	5.55E-02	1.048E+02	9.987E+01	4.218E-02	9.987E+01
3.00E+01	1.069E+02	6.06E-02	1.069E+02	7.853E+01	3.85E-02	7.853E+01	7.502E+01	2.502E-02	7.502E+01
4.00E+01	8.592E+01	4.592E-01	8.592E+01	6.384E+01	2.62E-01	6.384E+01	6.110E+01	1.611E-01	6.110E+01
5.00E+01	7.258E+01	3.258E-01	7.258E+01	5.436E+01	1.86E-01	5.436E+01	5.209E+01	1.209E-01	5.209E+01
6.00E+01	6.330E+01	2.330E-01	6.330E+01	4.769E+01	1.47E-01	4.769E+01	4.575E+01	1.075E-01	4.575E+01
7.00E+01	5.645E+01	1.645E-01	5.645E+01	4.273E+01	1.27E-01	4.273E+01	4.102E+01	1.02E-01	4.102E+01
8.00E+01	5.118E+01	1.118E-01	5.118E+01	3.888E+01	1.08E-01	3.888E+01	3.735E+01	9.35E-02	3.735E+01
9.00E+01	4.698E+01	8.698E-02	4.698E+01	3.581E+01	9.58E-02	3.581E+01	3.442E+01	8.44E-02	3.442E+01
1.00E+02	4.356E+01	7.356E-02	4.356E+01	3.330E+01	8.33E-02	3.330E+01	3.202E+01	7.20E-02	3.202E+01
1.50E+02	3.293E+01	5.293E-02	3.293E+01	2.541E+01	6.54E-02	2.541E+01	2.447E+01	5.44E-02	2.447E+01
2.00E+02	2.738E+01	4.738E-02	2.738E+01	2.124E+01	5.12E-02	2.124E+01	2.048E+01	4.04E-02	2.048E+01
3.00E+02	2.167E+01	3.167E-02	2.167E+01	1.694E+01	3.69E-02	1.694E+01	1.634E+01	2.63E-02	1.634E+01
4.00E+02	1.879E+01	2.879E-02	1.879E+01	1.475E+01	3.17E-02	1.475E+01	1.425E+01	2.25E-02	1.425E+01
5.00E+02	1.708E+01	2.708E-02	1.708E+01	1.346E+01	2.84E-02	1.346E+01	1.301E+01	2.01E-02	1.301E+01
6.00E+02	1.598E+01	2.598E-02	1.598E+01	1.262E+01	2.62E-02	1.262E+01	1.221E+01	1.82E-02	1.221E+01
7.00E+02	1.522E+01	2.522E-02	1.522E+01	1.205E+01	2.20E-02	1.205E+01	1.166E+01	1.66E-02	1.166E+01
8.00E+02	1.468E+01	2.468E-02	1.468E+01	1.165E+01	1.16E-02	1.165E+01	1.127E+01	1.12E-02	1.127E+01
9.00E+02	1.426E+01	2.426E-02	1.426E+01	1.135E+01	1.13E-02	1.135E+01	1.099E+01	1.09E-02	1.099E+01
1.00E+03	1.394E+01	2.394E-02	1.394E+01	1.114E+01	1.11E-02	1.114E+01	1.078E+01	1.07E-02	1.078E+01
1.50E+03	1.315E+01	2.315E-02	1.315E+01	1.063E+01	1.06E-02	1.063E+01	1.032E+01	1.03E-02	1.032E+01
2.00E+03	1.292E+01	2.292E-02	1.292E+01	1.053E+01	1.05E-02	1.053E+01	1.026E+01	1.02E-02	1.026E+01
3.00E+03	1.294E+01	2.294E-02	1.294E+01	1.066E+01	1.06E-02	1.066E+01	1.045E+01	1.04E-02	1.045E+01
4.00E+03	1.313E+01	2.313E-02	1.313E+01	1.088E+01	1.08E-02	1.088E+01	1.071E+01	1.07E-02	1.071E+01
5.00E+03	1.334E+01	2.334E-02	1.334E+01	1.111E+01	1.11E-02	1.111E+01	1.097E+01	1.09E-02	1.097E+01
6.00E+03	1.355E+01	2.355E-02	1.355E+01	1.132E+01	1.13E-02	1.132E+01	1.120E+01	1.12E-02	1.120E+01
7.00E+03	1.374E+01	2.374E-02	1.374E+01	1.152E+01	1.15E-02	1.152E+01	1.141E+01	1.14E-02	1.141E+01
8.00E+03	1.391E+01	2.391E-02	1.391E+01	1.169E+01	1.16E-02	1.169E+01	1.159E+01	1.15E-02	1.159E+01
9.00E+03	1.408E+01	2.408E-02	1.408E+01	1.185E+01	1.18E-02	1.185E+01	1.176E+01	1.17E-02	1.176E+01
1.00E+04	1.422E+01	2.422E-02	1.422E+01	1.199E+01	1.19E-02	1.199E+01	1.191E+01	1.19E-02	1.191E+01

 * Lithium-7 (4/5) *

Energy (MeV/amu)	Uranium			LiF(TLD-100)			7LiF(TLD-700)		
	Electric	Nuclear	Total	Electric	Nuclear	Total	Electric	Nuclear	Total
1.00E-05	5.313E+00	3.228E+00	8.541E+00	7.982E+01	1.982E+02	2.780E+02	7.959E+01	1.972E+02	2.768E+02
1.50E-05	6.376E+00	3.937E+00	1.031E+01	9.018E+01	2.211E+02	3.113E+02	9.064E+01	2.216E+02	3.122E+02
2.00E-05	7.258E+00	4.505E+00	1.176E+01	9.840E+01	2.366E+02	3.350E+02	9.888E+01	2.371E+02	3.360E+02
3.00E-05	8.710E+00	5.397E+00	1.411E+01	1.144E+02	2.564E+02	3.678E+02	1.119E+02	2.569E+02	3.688E+02
4.00E-05	9.914E+00	6.092E+00	1.601E+01	1.217E+02	2.683E+02	3.900E+02	1.223E+02	2.688E+02	3.911E+02
5.00E-05	1.096E+01	6.664E+00	1.762E+01	1.305E+02	2.759E+02	4.064E+02	1.311E+02	2.764E+02	4.075E+02
6.00E-05	1.190E+01	7.149E+00	1.905E+01	1.381E+02	2.809E+02	4.191E+02	1.388E+02	2.814E+02	4.202E+02
7.00E-05	1.275E+01	7.571E+00	2.032E+01	1.450E+02	2.842E+02	4.292E+02	1.456E+02	2.847E+02	4.304E+02
8.00E-05	1.354E+01	7.944E+00	2.149E+01	1.512E+02	2.864E+02	4.376E+02	1.519E+02	2.868E+02	4.387E+02
9.00E-05	1.428E+01	8.278E+00	2.256E+01	1.570E+02	2.876E+02	4.446E+02	1.576E+02	2.881E+02	4.457E+02
1.00E-04	1.497E+01	8.579E+00	2.355E+01	1.623E+02	2.882E+02	4.505E+02	1.630E+02	2.886E+02	4.516E+02
1.50E-04	1.797E+01	9.754E+00	2.733E+01	1.848E+02	2.857E+02	4.704E+02	1.855E+02	2.861E+02	4.716E+02
2.00E-04	2.045E+01	1.058E+01	3.104E+01	2.028E+02	2.791E+02	4.819E+02	2.035E+02	2.795E+02	4.830E+02
3.00E-04	2.455E+01	1.171E+01	3.626E+01	2.314E+02	2.633E+02	4.947E+02	2.323E+02	2.636E+02	4.959E+02
4.00E-04	2.794E+01	1.245E+01	4.039E+01	2.544E+02	2.480E+02	5.024E+02	2.553E+02	2.482E+02	5.035E+02
5.00E-04	3.089E+01	1.297E+01	4.386E+01	2.740E+02	2.341E+02	5.081E+02	2.749E+02	2.343E+02	5.092E+02
6.00E-04	3.353E+01	1.335E+01	4.689E+01	2.912E+02	2.218E+02	5.130E+02	2.922E+02	2.220E+02	5.141E+02
7.00E-04	3.594E+01	1.364E+01	4.959E+01	3.066E+02	2.109E+02	5.175E+02	3.076E+02	2.110E+02	5.187E+02
8.00E-04	3.817E+01	1.386E+01	5.203E+01	3.208E+02	2.011E+02	5.219E+02	3.218E+02	2.013E+02	5.230E+02
9.00E-04	4.025E+01	1.403E+01	5.428E+01	3.338E+02	1.924E+02	5.261E+02	3.348E+02	1.925E+02	5.273E+02
1.00E-03	4.220E+01	1.416E+01	5.636E+01	3.459E+02	1.845E+02	5.304E+02	3.470E+02	1.846E+02	5.316E+02
1.50E-03	5.065E+01	1.445E+01	6.510E+01	3.974E+02	1.542E+02	5.516E+02	3.985E+02	1.543E+02	5.528E+02
2.00E-03	5.765E+01	1.443E+01	7.208E+01	4.389E+02	1.337E+02	5.725E+02	4.400E+02	1.337E+02	5.738E+02
3.00E-03	6.919E+01	1.404E+01	8.323E+01	5.055E+02	1.071E+02	6.126E+02	5.067E+02	1.071E+02	6.139E+02
4.00E-03	7.875E+01	1.352E+01	9.227E+01	5.594E+02	9.031E+01	6.497E+02	5.607E+02	9.033E+01	6.510E+02
5.00E-03	8.707E+01	1.298E+01	1.000E+02	6.055E+02	7.861E+01	6.841E+02	6.068E+02	7.863E+01	6.854E+02
6.00E-03	9.451E+01	1.246E+01	1.070E+02	6.462E+02	6.991E+01	7.161E+02	6.475E+02	6.993E+01	7.174E+02
7.00E-03	1.013E+02	1.198E+01	1.133E+02	6.829E+02	6.299E+01	7.459E+02	6.842E+02	6.300E+01	7.472E+02
8.00E-03	1.076E+02	1.153E+01	1.191E+02	7.165E+02	5.758E+01	7.741E+02	7.179E+02	5.759E+01	7.755E+02
9.00E-03	1.134E+02	1.111E+01	1.245E+02	7.476E+02	5.313E+01	8.008E+02	7.490E+02	5.313E+01	8.022E+02
1.00E-02	1.189E+02	1.073E+01	1.297E+02	7.767E+02	4.938E+01	8.261E+02	7.781E+02	4.939E+01	8.275E+02
1.50E-02	1.456E+02	9.187E+00	1.548E+02	9.005E+02	3.674E+01	9.372E+02	9.019E+02	3.674E+01	9.387E+02
2.00E-02	1.720E+02	8.082E+00	1.801E+02	1.004E+03	2.973E+01	1.035E+03	1.005E+03	2.973E+01	1.035E+03
3.00E-02	2.248E+02	6.592E+00	2.314E+02	1.193E+03	2.186E+01	1.215E+03	1.194E+03	2.186E+01	1.216E+03
4.00E-02	2.770E+02	5.622E+00	2.826E+02	1.344E+03	1.748E+01	1.361E+03	1.346E+03	1.748E+01	1.363E+03
5.00E-02	3.249E+02	4.931E+00	3.298E+02	1.481E+03	1.466E+01	1.496E+03	1.483E+03	1.466E+01	1.498E+03
6.00E-02	3.684E+02	4.411E+00	3.728E+02	1.608E+03	1.268E+01	1.618E+03	1.608E+03	1.268E+01	1.620E+03
7.00E-02	4.072E+02	4.002E+00	4.112E+02	1.718E+03	1.120E+01	1.720E+03	1.720E+03	1.120E+01	1.732E+03
8.00E-02	4.415E+02	3.672E+00	4.451E+02	1.820E+03	1.005E+01	1.830E+03	1.822E+03	1.005E+01	1.832E+03
9.00E-02	4.713E+02	3.398E+00	4.747E+02	1.910E+03	9.131E+00	1.919E+03	1.912E+03	9.131E+00	1.922E+03

target	Uranium			LiF(TLD-100)			7LiF(TLD-700)			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-01	4.971E+02	3.167E+00	5.002E+02	1.991E+03	8.378E+00	1.999E+03	1.999E+03	1.993E+03	8.377E+00	2.001E+03
1.50E-01	5.762E+02	2.393E+00	5.786E+02	2.265E+03	5.994E+00	2.271E+03	2.271E+03	2.267E+03	5.993E+00	2.273E+03
2.00E-01	6.036E+02	1.929E+00	6.056E+02	2.383E+03	4.713E+00	2.387E+03	2.387E+03	2.384E+03	4.712E+00	2.389E+03
3.00E-01	6.078E+02	1.428E+00	6.092E+02	2.399E+03	3.346E+00	2.402E+03	2.402E+03	2.400E+03	3.346E+00	2.403E+03
4.00E-01	5.973E+02	1.147E+00	5.985E+02	2.310E+03	2.618E+00	2.313E+03	2.313E+03	2.311E+03	2.618E+00	2.314E+03
5.00E-01	5.807E+02	9.647E-01	5.817E+02	2.176E+03	2.162E+00	2.178E+03	2.178E+03	2.177E+03	2.162E+00	2.179E+03
6.00E-01	5.648E+02	8.359E-01	5.656E+02	2.047E+03	1.848E+00	2.049E+03	2.049E+03	2.048E+03	1.847E+00	2.049E+03
7.00E-01	5.497E+02	7.397E-01	5.505E+02	1.931E+03	1.617E+00	1.933E+03	1.933E+03	1.932E+03	1.617E+00	1.933E+03
8.00E-01	5.355E+02	6.648E-01	5.362E+02	1.829E+03	1.440E+00	1.830E+03	1.830E+03	1.830E+03	1.440E+00	1.831E+03
9.00E-01	5.220E+02	6.047E-01	5.226E+02	1.739E+03	1.300E+00	1.740E+03	1.740E+03	1.739E+03	1.300E+00	1.740E+03
1.00E+00	5.076E+02	5.553E-01	5.082E+02	1.653E+03	1.186E+00	1.655E+03	1.655E+03	1.654E+03	1.186E+00	1.655E+03
1.50E+00	4.471E+02	3.987E-01	4.475E+02	1.344E+03	8.314E-01	1.345E+03	1.345E+03	1.344E+03	8.312E-01	1.345E+03
2.00E+00	3.978E+02	3.142E-01	3.981E+02	1.137E+03	6.453E-01	1.138E+03	1.138E+03	1.138E+03	6.451E-01	1.138E+03
3.00E+00	3.227E+02	2.237E-01	3.229E+02	8.670E+02	4.506E-01	8.675E+02	8.675E+02	8.672E+02	4.503E-01	8.677E+02
4.00E+00	2.716E+02	1.753E-01	2.717E+02	7.001E+02	3.488E-01	7.004E+02	7.004E+02	7.002E+02	3.487E-01	7.006E+02
5.00E+00	2.357E+02	1.450E-01	2.359E+02	5.883E+02	2.858E-01	5.886E+02	5.886E+02	5.884E+02	2.857E-01	5.887E+02
6.00E+00	2.095E+02	1.240E-01	2.097E+02	5.086E+02	2.428E-01	5.089E+02	5.089E+02	5.087E+02	2.427E-01	5.090E+02
7.00E+00	1.895E+02	1.086E-01	1.896E+02	4.490E+02	2.114E-01	4.492E+02	4.492E+02	4.491E+02	2.114E-01	4.493E+02
8.00E+00	1.737E+02	9.679E-02	1.738E+02	4.027E+02	1.875E-01	4.029E+02	4.029E+02	4.028E+02	1.875E-01	4.030E+02
9.00E+00	1.609E+02	8.741E-02	1.610E+02	3.657E+02	1.686E-01	3.658E+02	3.658E+02	3.657E+02	1.686E-01	3.659E+02
1.00E+01	1.502E+02	7.978E-02	1.502E+02	3.353E+02	1.534E-01	3.354E+02	3.354E+02	3.353E+02	1.533E-01	3.355E+02
1.50E+01	1.157E+02	1.157E+02	1.157E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02	2.381E+02
2.00E+01	9.498E+01	9.498E+01	9.498E+01	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02
3.00E+01	7.153E+01	7.153E+01	7.153E+01	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02	1.361E+02
4.00E+01	5.834E+01	5.834E+01	5.834E+01	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02	1.081E+02
5.00E+01	4.979E+01	4.979E+01	4.979E+01	9.055E+01	9.055E+01	9.055E+01	9.055E+01	9.055E+01	9.055E+01	9.055E+01
6.00E+01	4.377E+01	4.377E+01	4.377E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01	7.847E+01
7.00E+01	3.927E+01	3.927E+01	3.927E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01	6.963E+01
8.00E+01	3.578E+01	3.578E+01	3.578E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01	6.287E+01
9.00E+01	3.298E+01	3.298E+01	3.298E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01	5.752E+01
1.00E+02	3.069E+01	3.069E+01	3.069E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01	5.318E+01
1.50E+02	2.349E+01	2.349E+01	2.349E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01	3.980E+01
2.00E+02	1.967E+01	1.967E+01	1.967E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01	3.288E+01
3.00E+02	1.572E+01	1.572E+01	1.572E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01	2.581E+01
4.00E+02	1.371E+01	1.371E+01	1.371E+01	2.227E+01	2.227E+01	2.227E+01	2.227E+01	2.227E+01	2.227E+01	2.227E+01
5.00E+02	1.252E+01	1.252E+01	1.252E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01	2.017E+01
6.00E+02	1.176E+01	1.176E+01	1.176E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01	1.880E+01
7.00E+02	1.123E+01	1.123E+01	1.123E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01	1.786E+01
8.00E+02	1.086E+01	1.086E+01	1.086E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01	1.719E+01
9.00E+02	1.059E+01	1.059E+01	1.059E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01	1.664E+01
1.00E+03	1.039E+01	1.039E+01	1.039E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01	1.621E+01
1.50E+03	9.953E+00	9.953E+00	9.953E+00	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01	1.508E+01
2.00E+03	9.899E+00	9.899E+00	9.899E+00	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01	1.467E+01
3.00E+03	1.007E+01	1.007E+01	1.007E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01	1.450E+01
4.00E+03	1.031E+01	1.031E+01	1.031E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01	1.457E+01
5.00E+03	1.055E+01	1.055E+01	1.055E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01	1.471E+01
6.00E+03	1.076E+01	1.076E+01	1.076E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01	1.485E+01
7.00E+03	1.096E+01	1.096E+01	1.096E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01	1.500E+01
8.00E+03	1.114E+01	1.114E+01	1.114E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01	1.513E+01
9.00E+03	1.129E+01	1.129E+01	1.129E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01	1.526E+01
1.00E+04	1.144E+01	1.144E+01	1.144E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01	1.538E+01

 * Lithium-7 (5/5) *

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	1.891E+02	3.221E+02	5.111E+02	1.031E+02	3.269E+02	4.301E+02	1.665E+02	2.972E+02	4.637E+02
1.50E-05	2.102E+02	3.593E+02	5.695E+02	1.168E+02	3.649E+02	4.817E+02	1.855E+02	3.320E+02	5.175E+02
2.00E-05	2.267E+02	3.844E+02	6.110E+02	1.277E+02	3.906E+02	5.183E+02	2.003E+02	3.555E+02	5.558E+02
3.00E-05	2.521E+02	4.163E+02	6.684E+02	1.450E+02	4.233E+02	5.683E+02	2.234E+02	3.856E+02	6.090E+02
4.00E-05	2.720E+02	4.354E+02	7.074E+02	1.587E+02	4.430E+02	6.017E+02	2.414E+02	4.037E+02	6.451E+02
5.00E-05	2.886E+02	4.475E+02	7.361E+02	1.704E+02	4.556E+02	6.261E+02	2.564E+02	4.154E+02	6.719E+02
6.00E-05	3.028E+02	4.555E+02	7.583E+02	1.807E+02	4.640E+02	6.446E+02	2.694E+02	4.231E+02	6.926E+02
7.00E-05	3.155E+02	4.606E+02	7.761E+02	1.898E+02	4.694E+02	6.592E+02	2.810E+02	4.282E+02	7.092E+02
8.00E-05	3.269E+02	4.638E+02	7.907E+02	1.982E+02	4.728E+02	6.710E+02	2.914E+02	4.315E+02	7.239E+02
9.00E-05	3.373E+02	4.656E+02	8.029E+02	2.059E+02	4.748E+02	6.807E+02	3.009E+02	4.334E+02	7.343E+02
1.00E-04	3.469E+02	4.663E+02	8.132E+02	2.131E+02	4.757E+02	6.888E+02	3.097E+02	4.343E+02	7.440E+02
1.50E-04	3.866E+02	4.610E+02	8.477E+02	2.433E+02	4.712E+02	7.145E+02	3.462E+02	4.304E+02	7.766E+02
2.00E-04	4.177E+02	4.493E+02	8.670E+02	2.676E+02	4.598E+02	7.275E+02	3.749E+02	4.201E+02	7.950E+02
3.00E-04	4.659E+02	4.218E+02	8.877E+02	3.065E+02	4.328E+02	7.393E+02	4.196E+02	4.151E+02	8.151E+02
4.00E-04	5.037E+02	3.955E+02	8.992E+02	3.377E+02	4.067E+02	7.444E+02	4.547E+02	3.955E+02	8.263E+02
5.00E-04	5.352E+02	3.720E+02	9.072E+02	3.643E+02	3.832E+02	7.475E+02	4.842E+02	3.500E+02	8.341E+02
6.00E-04	5.625E+02	3.512E+02	9.137E+02	3.878E+02	3.624E+02	7.501E+02	5.097E+02	3.308E+02	8.405E+02
7.00E-04	5.867E+02	3.329E+02	9.196E+02	4.089E+02	3.439E+02	7.528E+02	5.324E+02	3.139E+02	8.463E+02
8.00E-04	6.086E+02	3.167E+02	9.253E+02	4.282E+02	3.275E+02	7.557E+02	5.530E+02	2.989E+02	8.518E+02
9.00E-04	6.286E+02	3.022E+02	9.308E+02	4.460E+02	3.129E+02	7.589E+02	5.718E+02	2.854E+02	8.572E+02
1.00E-03	6.471E+02	2.892E+02	9.363E+02	4.626E+02	2.997E+02	7.623E+02	5.892E+02	2.733E+02	8.625E+02
1.50E-03	7.237E+02	2.399E+02	9.636E+02	5.332E+02	2.494E+02	7.826E+02	6.618E+02	2.272E+02	8.890E+02
2.00E-03	7.839E+02	2.067E+02	9.907E+02	5.903E+02	2.155E+02	8.058E+02	7.192E+02	1.961E+02	9.153E+02
3.00E-03	8.780E+02	1.644E+02	1.042E+03	6.822E+02	1.719E+02	8.541E+02	8.092E+02	1.562E+02	9.654E+02
4.00E-03	9.520E+02	1.380E+02	1.090E+03	7.567E+02	1.446E+02	9.013E+02	8.804E+02	1.313E+02	1.012E+03
5.00E-03	1.014E+03	1.197E+02	1.134E+03	8.208E+02	1.256E+02	9.462E+02	9.403E+02	1.140E+02	1.034E+03
6.00E-03	1.068E+03	1.062E+02	1.174E+03	8.770E+02	1.116E+02	9.886E+02	9.925E+02	1.012E+02	1.094E+03
7.00E-03	1.116E+03	9.574E+01	1.211E+03	9.280E+02	1.007E+02	1.029E+03	1.039E+03	9.126E+01	1.130E+03
8.00E-03	1.159E+03	8.714E+01	1.246E+03	9.748E+02	9.160E+01	1.066E+03	1.081E+03	8.313E+01	1.164E+03
9.00E-03	1.199E+03	8.029E+01	1.279E+03	1.018E+03	8.445E+01	1.103E+03	1.120E+03	7.661E+01	1.197E+03
1.00E-02	1.236E+03	7.454E+01	1.310E+03	1.059E+03	7.845E+01	1.137E+03	1.156E+03	7.115E+01	1.227E+03
1.50E-02	1.407E+03	5.524E+01	1.462E+03	1.242E+03	5.827E+01	1.300E+03	1.322E+03	5.275E+01	1.375E+03
2.00E-02	1.586E+03	4.456E+01	1.630E+03	1.433E+03	4.707E+01	1.480E+03	1.496E+03	4.259E+01	1.539E+03
3.00E-02	1.902E+03	3.266E+01	1.935E+03	1.761E+03	3.455E+01	1.796E+03	1.799E+03	3.123E+01	1.830E+03
4.00E-02	2.171E+03	2.606E+01	2.197E+03	2.028E+03	2.760E+01	2.056E+03	2.051E+03	2.494E+01	2.076E+03
5.00E-02	2.404E+03	2.182E+01	2.426E+03	2.263E+03	2.312E+01	2.286E+03	2.270E+03	2.089E+01	2.291E+03
6.00E-02	2.607E+03	1.885E+01	2.626E+03	2.468E+03	1.998E+01	2.488E+03	2.461E+03	1.805E+01	2.479E+03
7.00E-02	2.781E+03	1.664E+01	2.798E+03	2.646E+03	1.764E+01	2.664E+03	2.626E+03	1.593E+01	2.642E+03
8.00E-02	2.930E+03	1.492E+01	2.943E+03	2.801E+03	1.583E+01	2.817E+03	2.768E+03	1.429E+01	2.782E+03
9.00E-02	3.055E+03	1.355E+01	3.069E+03	2.933E+03	1.437E+01	2.948E+03	2.888E+03	1.298E+01	2.901E+03

target	Energy (MeV/amu)	Phantom			Water			SSNTD		
		Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	3.159E+03	1.242E+01	3.172E+03	3.046E+03	1.318E+01	3.059E+03	2.988E+03	1.190E+01	3.000E+03	
1.50E-01	3.438E+03	8.872E+00	3.447E+03	3.376E+03	9.422E+00	3.385E+03	3.266E+03	8.503E+00	3.275E+03	
2.00E-01	3.469E+03	6.968E+00	3.476E+03	3.457E+03	7.403E+00	3.464E+03	3.310E+03	6.679E+00	3.317E+03	
3.00E-01	3.290E+03	4.940E+00	3.295E+03	3.339E+03	5.252E+00	3.344E+03	3.158E+03	4.737E+00	3.163E+03	
4.00E-01	3.059E+03	3.862E+00	3.063E+03	3.268E+03	4.108E+00	3.130E+03	2.946E+03	3.704E+00	2.950E+03	
5.00E-01	2.830E+03	3.187E+00	2.833E+03	2.894E+03	3.391E+00	2.897E+03	2.731E+03	3.057E+00	2.734E+03	
6.00E-01	2.638E+03	2.722E+00	2.638E+03	2.693E+03	2.897E+00	2.695E+03	2.547E+03	2.611E+00	2.550E+03	
7.00E-01	2.476E+03	2.381E+00	2.478E+03	2.523E+03	2.534E+00	2.524E+03	2.392E+03	2.285E+00	2.395E+03	
8.00E-01	2.337E+03	2.120E+00	2.339E+03	2.376E+03	2.257E+00	2.378E+03	2.260E+03	2.034E+00	2.262E+03	
9.00E-01	2.217E+03	1.913E+00	2.219E+03	2.250E+03	2.037E+00	2.252E+03	2.145E+03	1.836E+00	2.147E+03	
1.00E+00	2.105E+03	1.745E+00	2.107E+03	2.134E+03	1.858E+00	2.136E+03	2.037E+03	1.674E+00	2.039E+03	
1.50E+00	1.702E+03	1.222E+00	1.703E+03	1.721E+03	1.302E+00	1.722E+03	1.650E+03	1.173E+00	1.651E+03	
2.00E+00	1.434E+03	9.480E-01	1.435E+03	1.450E+03	1.010E+00	1.451E+03	1.391E+03	9.100E-01	1.392E+03	
3.00E+00	1.086E+03	6.615E-01	1.087E+03	1.100E+03	7.050E-01	1.101E+03	1.056E+03	6.351E-01	1.057E+03	
4.00E+00	8.736E+02	5.118E-01	8.741E+02	8.865E+02	5.456E-01	8.871E+02	8.501E+02	4.914E-01	8.506E+02	
5.00E+00	7.322E+02	4.192E-01	7.326E+02	7.441E+02	4.469E-01	7.446E+02	7.130E+02	4.025E-01	7.134E+02	
6.00E+00	6.318E+02	3.559E-01	6.321E+02	6.429E+02	3.795E-01	6.433E+02	6.156E+02	3.418E-01	6.159E+02	
7.00E+00	5.569E+02	3.099E-01	5.572E+02	5.674E+02	3.305E-01	5.677E+02	5.429E+02	2.976E-01	5.432E+02	
8.00E+00	4.989E+02	2.748E-01	4.992E+02	5.088E+02	2.931E-01	5.090E+02	4.865E+02	2.639E-01	4.868E+02	
9.00E+00	4.526E+02	2.471E-01	4.528E+02	4.619E+02	2.636E-01	4.621E+02	4.414E+02	2.374E-01	4.416E+02	
1.00E+01	4.146E+02	2.247E-01	4.148E+02	4.234E+02	2.397E-01	4.237E+02	4.045E+02	2.158E-01	4.047E+02	
1.50E+01	2.917E+02	2.917E+02	2.917E+02	2.985E+02	2.985E+02	2.985E+02	2.852E+02	2.852E+02	2.852E+02	
2.00E+01	2.307E+02	2.307E+02	2.307E+02	2.363E+02	2.363E+02	2.363E+02	2.257E+02	2.257E+02	2.257E+02	
3.00E+01	1.659E+02	1.659E+02	1.659E+02	1.699E+02	1.699E+02	1.699E+02	1.624E+02	1.624E+02	1.624E+02	
4.00E+01	1.315E+02	1.315E+02	1.315E+02	1.347E+02	1.347E+02	1.347E+02	1.288E+02	1.288E+02	1.288E+02	
5.00E+01	1.100E+02	1.100E+02	1.100E+02	1.127E+02	1.127E+02	1.127E+02	1.077E+02	1.077E+02	1.077E+02	
6.00E+01	9.524E+01	9.524E+01	9.524E+01	9.761E+01	9.761E+01	9.761E+01	9.330E+01	9.330E+01	9.330E+01	
7.00E+01	8.444E+01	8.444E+01	8.444E+01	8.655E+01	8.655E+01	8.655E+01	8.273E+01	8.273E+01	8.273E+01	
8.00E+01	7.619E+01	7.619E+01	7.619E+01	7.810E+01	7.810E+01	7.810E+01	7.466E+01	7.466E+01	7.466E+01	
9.00E+01	6.967E+01	6.967E+01	6.967E+01	7.142E+01	7.142E+01	7.142E+01	6.828E+01	6.828E+01	6.828E+01	
1.00E+02	6.439E+01	6.439E+01	6.439E+01	6.600E+01	6.600E+01	6.600E+01	6.310E+01	6.310E+01	6.310E+01	
1.50E+02	4.810E+01	4.810E+01	4.810E+01	4.932E+01	4.932E+01	4.932E+01	4.715E+01	4.715E+01	4.715E+01	
2.00E+02	3.969E+01	3.969E+01	3.969E+01	4.070E+01	4.070E+01	4.070E+01	3.892E+01	3.892E+01	3.892E+01	
3.00E+02	3.112E+01	3.112E+01	3.112E+01	3.192E+01	3.192E+01	3.192E+01	3.052E+01	3.052E+01	3.052E+01	
4.00E+02	2.682E+01	2.682E+01	2.682E+01	2.751E+01	2.751E+01	2.751E+01	2.631E+01	2.631E+01	2.631E+01	
5.00E+02	2.427E+01	2.427E+01	2.427E+01	2.490E+01	2.490E+01	2.490E+01	2.381E+01	2.381E+01	2.381E+01	
6.00E+02	2.262E+01	2.262E+01	2.262E+01	2.320E+01	2.320E+01	2.320E+01	2.219E+01	2.219E+01	2.219E+01	
7.00E+02	2.148E+01	2.148E+01	2.148E+01	2.203E+01	2.203E+01	2.203E+01	2.108E+01	2.108E+01	2.108E+01	
8.00E+02	2.066E+01	2.066E+01	2.066E+01	2.119E+01	2.119E+01	2.119E+01	2.027E+01	2.027E+01	2.027E+01	
9.00E+02	1.988E+01	1.988E+01	1.988E+01	2.048E+01	2.048E+01	2.048E+01	1.947E+01	1.947E+01	1.947E+01	
1.00E+03	1.925E+01	1.925E+01	1.925E+01	1.992E+01	1.992E+01	1.992E+01	1.881E+01	1.881E+01	1.881E+01	
1.50E+03	1.753E+01	1.753E+01	1.753E+01	1.842E+01	1.842E+01	1.842E+01	1.701E+01	1.701E+01	1.701E+01	
2.00E+03	1.684E+01	1.684E+01	1.684E+01	1.786E+01	1.786E+01	1.786E+01	1.625E+01	1.625E+01	1.625E+01	
3.00E+03	1.637E+01	1.637E+01	1.637E+01	1.757E+01	1.757E+01	1.757E+01	1.571E+01	1.571E+01	1.571E+01	
4.00E+03	1.630E+01	1.630E+01	1.630E+01	1.762E+01	1.762E+01	1.762E+01	1.558E+01	1.558E+01	1.558E+01	
5.00E+03	1.634E+01	1.634E+01	1.634E+01	1.775E+01	1.775E+01	1.775E+01	1.559E+01	1.559E+01	1.559E+01	
6.00E+03	1.643E+01	1.643E+01	1.643E+01	1.790E+01	1.790E+01	1.790E+01	1.566E+01	1.566E+01	1.566E+01	
7.00E+03	1.654E+01	1.654E+01	1.654E+01	1.806E+01	1.806E+01	1.806E+01	1.574E+01	1.574E+01	1.574E+01	
8.00E+03	1.665E+01	1.665E+01	1.665E+01	1.821E+01	1.821E+01	1.821E+01	1.583E+01	1.583E+01	1.583E+01	
9.00E+03	1.676E+01	1.676E+01	1.676E+01	1.835E+01	1.835E+01	1.835E+01	1.592E+01	1.592E+01	1.592E+01	
1.00E+04	1.686E+01	1.686E+01	1.686E+01	1.848E+01	1.848E+01	1.848E+01	1.601E+01	1.601E+01	1.601E+01	

 * Carbon-12 (1/5) *

target	Hydrogen			Helium			Beryllium		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	2.256E+02	2.350E+03	2.576E+03	7.551E+01	1.024E+03	1.100E+03	8.673E+01	6.013E+02	6.880E+02
1.50E-05	2.768E+02	2.669E+03	2.946E+03	9.248E+01	1.145E+03	1.239E+03	1.062E+02	6.781E+02	7.843E+02
2.00E-05	3.191E+02	2.894E+03	3.213E+03	1.068E+02	1.227E+03	1.334E+03	1.227E+02	7.314E+02	8.540E+02
3.00E-05	3.908E+02	3.198E+03	3.589E+03	1.308E+02	1.332E+03	1.462E+03	1.502E+02	8.018E+02	9.521E+02
4.00E-05	4.512E+02	3.397E+03	3.848E+03	1.510E+02	1.395E+03	1.546E+03	1.735E+02	8.465E+02	1.020E+03
5.00E-05	5.045E+02	3.536E+03	4.041E+03	1.688E+02	1.436E+03	1.605E+03	1.939E+02	8.769E+02	1.071E+03
6.00E-05	5.526E+02	3.638E+03	4.191E+03	1.850E+02	1.463E+03	1.648E+03	2.125E+02	8.984E+02	1.111E+03
7.00E-05	5.969E+02	3.715E+03	4.312E+03	1.998E+02	1.481E+03	1.681E+03	2.295E+02	9.138E+02	1.143E+03
8.00E-05	6.381E+02	3.773E+03	4.411E+03	2.165E+02	1.492E+03	1.706E+03	2.453E+02	9.250E+02	1.170E+03
9.00E-05	6.768E+02	3.817E+03	4.494E+03	2.265E+02	1.499E+03	1.726E+03	2.602E+02	9.329E+02	1.193E+03
1.00E-04	7.134E+02	3.851E+03	4.564E+03	2.388E+02	1.503E+03	1.741E+03	2.743E+02	9.385E+02	1.213E+03
1.50E-04	8.738E+02	3.922E+03	4.796E+03	2.925E+02	1.489E+03	1.782E+03	3.359E+02	9.446E+02	1.281E+03
2.00E-04	1.009E+03	3.910E+03	4.919E+03	3.377E+02	1.454E+03	1.792E+03	3.879E+02	9.332E+02	1.321E+03
3.00E-04	1.236E+03	3.798E+03	5.034E+03	4.136E+02	1.368E+03	1.781E+03	4.751E+02	8.937E+02	1.369E+03
4.00E-04	1.427E+03	3.651E+03	5.078E+03	4.776E+02	1.284E+03	1.761E+03	5.485E+02	8.500E+02	1.399E+03
5.00E-04	1.595E+03	3.501E+03	5.096E+03	5.339E+02	1.208E+03	1.742E+03	6.133E+02	8.082E+02	1.422E+03
6.00E-04	1.748E+03	3.357E+03	5.105E+03	5.849E+02	1.141E+03	1.726E+03	6.718E+02	7.696E+02	1.442E+03
7.00E-04	1.888E+03	3.224E+03	5.111E+03	6.318E+02	1.082E+03	1.714E+03	7.257E+02	7.350E+02	1.461E+03
8.00E-04	2.018E+03	3.100E+03	5.118E+03	6.754E+02	1.030E+03	1.705E+03	7.758E+02	7.034E+02	1.479E+03
9.00E-04	2.140E+03	2.986E+03	5.127E+03	7.164E+02	9.827E+02	1.699E+03	8.228E+02	6.747E+02	1.497E+03
1.00E-03	2.256E+03	2.882E+03	5.138E+03	7.551E+02	9.404E+02	1.696E+03	8.673E+02	6.465E+02	1.516E+03
1.50E-03	2.763E+03	2.462E+03	5.225E+03	9.248E+02	7.799E+02	1.705E+03	1.062E+03	5.465E+02	1.609E+03
2.00E-03	3.191E+03	2.163E+03	5.353E+03	1.068E+03	6.721E+02	1.740E+03	1.227E+03	4.759E+02	1.702E+03
3.00E-03	3.908E+03	1.761E+03	5.669E+03	1.308E+03	5.343E+02	1.842E+03	1.502E+03	3.831E+02	1.885E+03
4.00E-03	4.512E+03	1.500E+03	6.012E+03	1.510E+03	4.483E+02	1.959E+03	1.735E+03	3.240E+02	2.059E+03
5.00E-03	5.045E+03	1.315E+03	6.359E+03	1.688E+03	3.888E+02	2.077E+03	1.939E+03	2.826E+02	2.222E+03
6.00E-03	5.526E+03	1.175E+03	6.701E+03	1.850E+03	3.449E+02	2.194E+03	2.125E+03	2.517E+02	2.376E+03
7.00E-03	5.969E+03	1.066E+03	7.035E+03	1.998E+03	3.108E+02	2.309E+03	2.295E+03	2.276E+02	2.522E+03
8.00E-03	6.381E+03	9.775E+02	7.359E+03	2.136E+03	2.836E+02	2.419E+03	2.453E+03	2.082E+02	2.661E+03
9.00E-03	6.768E+03	9.043E+02	7.672E+03	2.265E+03	2.612E+02	2.527E+03	2.602E+03	1.922E+02	2.794E+03
1.00E-02	7.134E+03	8.425E+02	7.977E+03	2.388E+03	2.402E+02	2.628E+03	2.743E+03	1.788E+02	2.922E+03
1.50E-02	8.505E+03	6.301E+02	9.135E+03	2.923E+03	1.792E+02	3.104E+03	3.175E+03	1.330E+02	3.308E+03
2.00E-02	9.605E+03	5.125E+02	1.012E+04	3.377E+03	1.445E+02	3.521E+03	3.588E+03	1.077E+02	3.695E+03
3.00E-02	1.196E+04	3.792E+02	1.234E+04	4.077E+03	1.059E+02	4.183E+03	4.229E+03	7.932E+01	4.309E+03
4.00E-02	1.438E+04	3.043E+02	1.468E+04	4.663E+03	8.446E+01	4.747E+03	4.662E+03	6.349E+01	4.725E+03
5.00E-02	1.652E+04	2.558E+02	1.677E+04	5.211E+03	7.071E+01	5.281E+03	5.015E+03	5.327E+01	5.068E+03
6.00E-02	1.838E+04	2.216E+02	1.861E+04	5.722E+03	6.106E+01	5.781E+03	5.302E+03	4.608E+01	5.348E+03
7.00E-02	2.000E+04	1.961E+02	2.019E+04	6.196E+03	5.389E+01	6.250E+03	5.533E+03	4.072E+01	5.574E+03
8.00E-02	2.137E+04	1.762E+02	2.155E+04	6.633E+03	4.833E+01	6.681E+03	5.719E+03	3.656E+01	5.755E+03
9.00E-02	2.252E+04	1.603E+02	2.268E+04	7.032E+03	4.388E+01	7.076E+03	5.867E+03	3.322E+01	5.900E+03

target	Hydrogen			Helium			Beryllium		
	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/amu)	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	2.348E+04	1.472E+02	2.363E+04	7.393E+03	4.023E+01	7.434E+03	5.985E+03	3.048E+01	6.015E+03
1.50E-01	2.602E+04	1.056E+02	2.612E+04	8.688E+03	2.873E+01	8.716E+03	6.290E+03	2.182E+01	6.312E+03
2.00E-01	2.636E+04	8.320E+01	2.644E+04	9.308E+03	2.256E+01	9.330E+03	6.290E+03	1.717E+01	6.397E+03
3.00E-01	2.491E+04	5.922E+01	2.497E+04	9.472E+03	1.599E+01	9.488E+03	6.383E+03	1.220E+01	6.396E+03
4.00E-01	2.313E+04	4.641E+01	2.319E+04	9.120E+03	1.250E+01	9.132E+03	6.330E+03	9.546E+00	6.330E+03
5.00E-01	2.185E+04	3.836E+01	2.189E+04	8.822E+03	1.031E+01	8.832E+03	6.292E+03	7.885E+00	6.300E+03
6.00E-01	2.067E+04	3.281E+01	2.070E+04	8.474E+03	8.808E+00	8.482E+03	6.195E+03	6.740E+00	6.201E+03
7.00E-01	1.957E+04	2.874E+01	1.959E+04	8.110E+03	7.705E+00	8.118E+03	6.052E+03	5.899E+00	6.052E+03
8.00E-01	1.859E+04	2.561E+01	1.861E+04	7.768E+03	6.859E+00	7.775E+03	5.881E+03	5.254E+00	5.887E+03
9.00E-01	1.772E+04	2.313E+01	1.774E+04	7.458E+03	6.189E+00	7.464E+03	5.714E+03	4.743E+00	5.719E+03
1.00E+00	1.694E+04	2.111E+01	1.696E+04	7.174E+03	5.644E+00	7.180E+03	5.548E+03	4.328E+00	5.552E+03
1.50E+00	1.390E+04	1.482E+01	1.391E+04	6.004E+03	3.953E+00	6.007E+03	4.767E+03	3.035E+00	4.770E+03
2.00E+00	1.184E+04	1.151E+01	1.185E+04	5.174E+03	3.066E+00	5.177E+03	4.158E+03	2.356E+00	4.160E+03
3.00E+00	9.197E+03	8.052E+00	9.205E+03	4.067E+03	2.139E+00	4.069E+03	3.308E+03	1.646E+00	3.310E+03
4.00E+00	7.542E+03	6.238E+00	7.548E+03	3.351E+03	1.655E+00	3.353E+03	2.746E+03	1.274E+00	2.748E+03
5.00E+00	6.403E+03	5.115E+00	6.408E+03	2.851E+03	1.355E+00	2.852E+03	2.349E+03	1.044E+00	2.351E+03
6.00E+00	5.572E+03	4.346E+00	5.578E+03	2.482E+03	1.151E+00	2.483E+03	2.055E+03	8.871E-01	2.056E+03
7.00E+00	4.938E+03	3.787E+00	4.942E+03	2.193E+03	1.002E+00	2.200E+03	1.828E+03	7.726E-01	1.828E+03
8.00E+00	4.438E+03	3.360E+00	4.441E+03	1.975E+03	8.885E-01	1.976E+03	1.647E+03	6.853E-01	1.648E+03
9.00E+00	4.033E+03	3.023E+00	4.036E+03	1.793E+03	7.990E-01	1.794E+03	1.500E+03	6.165E-01	1.501E+03
1.00E+01	3.699E+03	2.750E+00	3.701E+03	1.643E+03	7.265E-01	1.644E+03	1.378E+03	5.607E-01	1.379E+03
1.50E+01	2.573E+03	2.573E+03	2.573E+03	1.163E+03	1.163E+03	1.163E+03	9.644E+02	9.644E+02	9.644E+02
2.00E+01	2.022E+03	2.022E+03	2.022E+03	9.170E+02	9.170E+02	9.170E+02	7.634E+02	7.634E+02	7.634E+02
3.00E+01	1.442E+03	1.442E+03	1.442E+03	6.570E+02	6.570E+02	6.570E+02	5.492E+02	5.492E+02	5.492E+02
4.00E+01	1.136E+03	1.136E+03	1.136E+03	5.196E+02	5.196E+02	5.196E+02	4.354E+02	4.354E+02	4.354E+02
5.00E+01	9.469E+02	9.469E+02	9.469E+02	4.340E+02	4.340E+02	4.340E+02	3.644E+02	3.644E+02	3.644E+02
6.00E+01	8.173E+02	8.173E+02	8.173E+02	3.753E+02	3.753E+02	3.753E+02	3.155E+02	3.155E+02	3.155E+02
7.00E+01	7.229E+02	7.229E+02	7.229E+02	3.325E+02	3.325E+02	3.325E+02	2.798E+02	2.798E+02	2.798E+02
8.00E+01	6.509E+02	6.509E+02	6.509E+02	2.998E+02	2.998E+02	2.998E+02	2.525E+02	2.525E+02	2.525E+02
9.00E+01	5.942E+02	5.942E+02	5.942E+02	2.739E+02	2.739E+02	2.739E+02	2.309E+02	2.309E+02	2.309E+02
1.00E+02	5.483E+02	5.483E+02	5.483E+02	2.530E+02	2.530E+02	2.530E+02	2.134E+02	2.134E+02	2.134E+02
1.50E+02	4.074E+02	4.074E+02	4.074E+02	1.886E+02	1.886E+02	1.886E+02	1.594E+02	1.594E+02	1.594E+02
2.00E+02	3.350E+02	3.350E+02	3.350E+02	1.555E+02	1.555E+02	1.555E+02	1.316E+02	1.316E+02	1.316E+02
3.00E+02	2.614E+02	2.614E+02	2.614E+02	1.217E+02	1.217E+02	1.217E+02	1.032E+02	1.032E+02	1.032E+02
4.00E+02	2.246E+02	2.246E+02	2.246E+02	1.047E+02	1.047E+02	1.047E+02	8.893E+01	8.893E+01	8.893E+01
5.00E+02	2.028E+02	2.028E+02	2.028E+02	9.471E+01	9.471E+01	9.471E+01	8.050E+01	8.050E+01	8.050E+01
6.00E+02	1.886E+02	1.886E+02	1.886E+02	8.819E+01	8.819E+01	8.819E+01	7.501E+01	7.501E+01	7.501E+01
7.00E+02	1.788E+02	1.788E+02	1.788E+02	8.369E+01	8.369E+01	8.369E+01	7.123E+01	7.123E+01	7.123E+01
8.00E+02	1.717E+02	1.717E+02	1.717E+02	8.045E+01	8.045E+01	8.045E+01	6.851E+01	6.851E+01	6.851E+01
9.00E+02	1.664E+02	1.664E+02	1.664E+02	7.805E+01	7.805E+01	7.805E+01	6.636E+01	6.636E+01	6.636E+01
1.00E+03	1.624E+02	1.624E+02	1.624E+02	7.623E+01	7.623E+01	7.623E+01	6.469E+01	6.469E+01	6.469E+01
1.50E+03	1.523E+02	1.523E+02	1.523E+02	7.170E+01	7.170E+01	7.170E+01	6.030E+01	6.030E+01	6.030E+01
2.00E+03	1.492E+02	1.492E+02	1.492E+02	7.041E+01	7.041E+01	7.041E+01	5.876E+01	5.876E+01	5.876E+01
3.00E+03	1.450E+02	1.450E+02	1.450E+02	7.053E+01	7.053E+01	7.053E+01	5.814E+01	5.814E+01	5.814E+01
4.00E+03	1.511E+02	1.511E+02	1.511E+02	7.165E+01	7.165E+01	7.165E+01	5.846E+01	5.846E+01	5.846E+01
5.00E+03	1.535E+02	1.535E+02	1.535E+02	7.293E+01	7.293E+01	7.293E+01	5.902E+01	5.902E+01	5.902E+01
6.00E+03	1.560E+02	1.560E+02	1.560E+02	7.420E+01	7.420E+01	7.420E+01	5.961E+01	5.961E+01	5.961E+01
7.00E+03	1.583E+02	1.583E+02	1.583E+02	7.539E+01	7.539E+01	7.539E+01	6.019E+01	6.019E+01	6.019E+01
8.00E+03	1.605E+02	1.605E+02	1.605E+02	7.650E+01	7.650E+01	7.650E+01	6.073E+01	6.073E+01	6.073E+01
9.00E+03	1.625E+02	1.625E+02	1.625E+02	7.752E+01	7.752E+01	7.752E+01	6.123E+01	6.123E+01	6.123E+01
1.00E+04	1.644E+02	1.644E+02	1.644E+02	7.847E+01	7.847E+01	7.847E+01	6.170E+01	6.170E+01	6.170E+01

 * Carbon-12 (2/5) *

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	1.692E+02	5.131E+02	6.824E+02	4.387E+01	2.280E+02	2.719E+02	2.200E+01	8.215E+01	1.041E+02
1.50E-05	1.970E+02	5.852E+02	7.822E+02	5.373E+01	2.650E+02	3.187E+02	2.694E+01	9.733E+01	1.243E+02
2.00E-05	2.195E+02	6.365E+02	8.559E+02	6.205E+01	2.923E+02	3.544E+02	3.111E+01	1.089E+02	1.400E+02
3.00E-05	2.535E+02	7.066E+02	9.601E+02	7.599E+01	3.315E+02	4.075E+02	3.810E+01	1.262E+02	1.643E+02
4.00E-05	2.846E+02	7.531E+02	1.038E+03	8.775E+01	3.591E+02	4.468E+02	4.399E+01	1.389E+02	1.829E+02
5.00E-05	3.095E+02	7.863E+02	1.096E+03	9.810E+01	3.798E+02	4.779E+02	4.919E+01	1.489E+02	1.981E+02
6.00E-05	3.314E+02	8.110E+02	1.142E+03	1.075E+02	3.961E+02	5.036E+02	5.388E+01	1.570E+02	2.109E+02
7.00E-05	3.511E+02	8.298E+02	1.181E+03	1.161E+02	4.093E+02	5.254E+02	5.820E+01	1.638E+02	2.220E+02
8.00E-05	3.691E+02	8.445E+02	1.214E+03	1.241E+02	4.202E+02	5.442E+02	6.222E+01	1.696E+02	2.318E+02
9.00E-05	3.838E+02	8.559E+02	1.242E+03	1.316E+02	4.293E+02	5.609E+02	6.599E+01	1.746E+02	2.406E+02
1.00E-04	4.013E+02	8.649E+02	1.266E+03	1.387E+02	4.370E+02	5.757E+02	6.956E+01	1.790E+02	2.486E+02
1.50E-04	4.672E+02	8.870E+02	1.354E+03	1.699E+02	4.619E+02	6.318E+02	8.520E+01	1.948E+02	2.800E+02
2.00E-04	5.204E+02	8.891E+02	1.410E+03	1.962E+02	4.741E+02	6.703E+02	9.838E+01	2.044E+02	3.028E+02
3.00E-04	6.059E+02	8.707E+02	1.477E+03	2.403E+02	4.817E+02	7.220E+02	1.205E+02	2.151E+02	3.355E+02
4.00E-04	6.749E+02	8.422E+02	1.517E+03	2.775E+02	4.793E+02	7.568E+02	1.391E+02	2.199E+02	3.590E+02
5.00E-04	7.338E+02	8.116E+02	1.545E+03	3.102E+02	4.727E+02	7.829E+02	1.555E+02	2.218E+02	3.774E+02
6.00E-04	7.858E+02	7.816E+02	1.567E+03	3.398E+02	4.641E+02	8.040E+02	1.704E+02	2.221E+02	3.925E+02
7.00E-04	8.325E+02	7.531E+02	1.586E+03	3.671E+02	4.548E+02	8.218E+02	1.840E+02	2.214E+02	4.054E+02
8.00E-04	8.753E+02	7.264E+02	1.602E+03	3.924E+02	4.451E+02	8.375E+02	1.968E+02	2.200E+02	4.168E+02
9.00E-04	9.148E+02	7.016E+02	1.616E+03	4.162E+02	4.355E+02	8.517E+02	2.087E+02	2.182E+02	4.269E+02
1.00E-03	1.108E+03	5.847E+02	1.693E+03	5.373E+02	3.834E+02	9.207E+02	2.694E+02	2.043E+02	4.737E+02
2.00E-03	1.234E+03	5.166E+02	1.751E+03	6.205E+02	3.489E+02	9.692E+02	3.111E+02	1.924E+02	5.035E+02
3.00E-03	1.437E+03	4.236E+02	1.860E+03	7.599E+02	2.971E+02	1.057E+03	3.810E+02	1.718E+02	5.528E+02
4.00E-03	1.600E+03	3.625E+02	1.963E+03	8.775E+02	2.605E+02	1.138E+03	4.399E+02	1.555E+02	5.954E+02
5.00E-03	1.740E+03	3.187E+02	2.059E+03	9.810E+02	2.330E+02	1.214E+03	4.919E+02	1.423E+02	6.342E+02
6.00E-03	1.863E+03	2.856E+02	2.149E+03	1.075E+03	2.115E+02	1.286E+03	5.388E+02	1.315E+02	6.704E+02
7.00E-03	1.974E+03	2.595E+02	2.234E+03	1.161E+03	1.942E+02	1.355E+03	5.820E+02	1.225E+02	7.045E+02
8.00E-03	2.076E+03	2.363E+02	2.314E+03	1.241E+03	1.799E+02	1.421E+03	6.222E+02	1.148E+02	7.370E+02
9.00E-03	2.169E+03	2.208E+02	2.390E+03	1.316E+03	1.679E+02	1.484E+03	6.599E+02	1.082E+02	7.681E+02
1.00E-02	2.257E+03	2.059E+02	2.463E+03	1.387E+03	1.575E+02	1.545E+03	6.956E+02	1.024E+02	7.980E+02
1.50E-02	2.631E+03	1.560E+02	2.787E+03	1.699E+03	1.219E+02	1.821E+03	8.520E+02	8.163E+01	9.336E+02
2.00E-02	2.969E+03	1.260E+02	3.095E+03	2.017E+03	1.007E+02	2.118E+03	1.016E+03	6.863E+01	1.084E+03
3.00E-02	3.573E+03	9.351E+01	3.666E+03	2.553E+03	7.518E+01	2.628E+03	1.354E+03	5.291E+01	1.407E+03
4.00E-02	4.092E+03	7.519E+01	4.167E+03	2.929E+03	6.110E+01	2.930E+03	1.605E+03	4.357E+01	1.648E+03
5.00E-02	4.556E+03	6.330E+01	4.619E+03	3.232E+03	5.180E+01	3.284E+03	1.836E+03	3.730E+01	1.873E+03
6.00E-02	4.970E+03	5.488E+01	5.025E+03	3.476E+03	4.515E+01	3.521E+03	2.056E+03	3.246E+01	2.088E+03
7.00E-02	5.337E+03	4.859E+01	5.386E+03	3.672E+03	4.014E+01	3.712E+03	2.254E+03	2.254E+01	2.283E+03
8.00E-02	5.661E+03	4.369E+01	5.705E+03	3.829E+03	3.622E+01	3.865E+03	2.426E+03	2.632E+01	2.452E+03
9.00E-02	5.945E+03	3.976E+01	5.984E+03	3.956E+03	3.305E+01	3.990E+03	2.574E+03	2.412E+01	2.598E+03

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Total Nuclear (MeV/(g/cm2))	Electric (MeV/(g/cm2))	Total Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	6.191E+03	3.653E+01	6.227E+03	4.061E+03	3.044E-01	4.092E+03	2.700E+03	2.229E+01	2.723E+03
1.50E-01	6.973E+03	2.625E+01	6.999E+03	4.389E+03	2.206E-01	4.411E+03	3.112E+03	1.635E+01	3.128E+03
2.00E-01	7.257E+03	2.070E+01	7.277E+03	4.567E+03	1.749E-01	4.584E+03	3.318E+03	1.305E+01	3.331E+03
3.00E-01	7.210E+03	1.475E+01	7.224E+03	4.742E+03	1.254E-01	4.755E+03	3.481E+03	9.445E+00	3.490E+03
4.00E-01	6.961E+03	1.157E+01	6.972E+03	4.793E+03	9.878E+00	4.803E+03	3.510E+03	7.479E+00	3.518E+03
5.00E-01	6.789E+03	9.570E+00	6.798E+03	4.835E+03	8.194E+00	4.843E+03	3.529E+03	6.229E+00	3.535E+03
6.00E-01	6.591E+03	8.189E+00	6.599E+03	4.801E+03	7.028E+00	4.808E+03	3.497E+03	5.358E+00	3.502E+03
7.00E-01	6.376E+03	7.174E+00	6.383E+03	4.714E+03	6.168E+00	4.720E+03	3.430E+03	4.714E+00	3.435E+03
8.00E-01	6.168E+03	6.395E+00	6.174E+03	4.606E+03	5.506E+00	4.611E+03	3.351E+03	4.217E+00	3.356E+03
9.00E-01	5.972E+03	5.776E+00	5.978E+03	4.491E+03	4.980E+00	4.495E+03	3.270E+03	3.820E+00	3.274E+03
1.00E+00	5.787E+03	5.273E+00	5.792E+03	4.374E+03	4.551E+00	4.379E+03	3.188E+03	3.496E+00	3.192E+03
1.50E+00	4.968E+03	3.705E+00	4.971E+03	3.802E+03	3.211E+00	3.805E+03	2.796E+03	2.480E+00	2.798E+03
2.00E+00	4.346E+03	2.880E+00	4.349E+03	3.346E+03	2.502E+00	3.348E+03	2.485E+03	1.939E+00	2.487E+03
3.00E+00	3.479E+03	2.015E+00	3.481E+03	2.701E+03	1.757E+00	2.702E+03	2.043E+03	1.367E+00	2.044E+03
4.00E+00	2.901E+03	1.562E+00	2.902E+03	2.268E+03	1.365E+00	2.270E+03	1.741E+03	1.065E+00	1.742E+03
5.00E+00	2.489E+03	1.281E+00	2.491E+03	1.950E+03	1.121E+00	1.961E+03	1.523E+03	8.764E-01	1.524E+03
6.00E+00	2.183E+03	1.089E+00	2.184E+03	1.729E+03	9.540E-01	1.730E+03	1.358E+03	7.471E-01	1.358E+03
7.00E+00	1.945E+03	9.489E-01	1.946E+03	1.549E+03	8.321E-01	1.550E+03	1.228E+03	6.525E-01	1.229E+03
8.00E+00	1.756E+03	8.420E-01	1.757E+03	1.406E+03	7.390E-01	1.406E+03	1.123E+03	5.801E-01	1.124E+03
9.00E+00	1.601E+03	1.601E+03	1.602E+03	1.288E+03	6.655E-01	1.289E+03	1.037E+03	5.228E-01	1.037E+03
1.00E+01	1.473E+03	1.473E+03	1.474E+03	1.190E+03	6.058E-01	1.191E+03	9.640E+02	4.764E-01	9.640E+02
1.50E+01	1.049E+03	1.049E+03	1.049E+03	8.824E+02	8.824E+02	8.824E+02	7.611E+02	7.611E+02	7.611E+02
2.00E+01	8.322E+02	8.322E+02	8.322E+02	7.046E+02	7.046E+02	7.046E+02	6.118E+02	6.118E+02	6.118E+02
3.00E+01	6.000E+02	6.000E+02	6.000E+02	5.124E+02	5.124E+02	5.124E+02	4.487E+02	4.487E+02	4.487E+02
4.00E+01	4.764E+02	4.764E+02	4.764E+02	4.091E+02	4.091E+02	4.091E+02	3.602E+02	3.602E+02	3.602E+02
5.00E+01	3.990E+02	3.990E+02	3.990E+02	3.439E+02	3.439E+02	3.439E+02	3.040E+02	3.040E+02	3.040E+02
6.00E+01	3.457E+02	3.457E+02	3.457E+02	2.989E+02	2.989E+02	2.989E+02	2.650E+02	2.650E+02	2.650E+02
7.00E+01	3.067E+02	3.067E+02	3.067E+02	2.658E+02	2.658E+02	2.658E+02	2.362E+02	2.362E+02	2.362E+02
8.00E+01	2.769E+02	2.769E+02	2.769E+02	2.404E+02	2.404E+02	2.404E+02	2.140E+02	2.140E+02	2.140E+02
9.00E+01	2.533E+02	2.533E+02	2.533E+02	2.203E+02	2.203E+02	2.203E+02	1.964E+02	1.964E+02	1.964E+02
1.00E+02	2.342E+02	2.342E+02	2.342E+02	2.040E+02	2.040E+02	2.040E+02	1.821E+02	1.821E+02	1.821E+02
1.50E+02	1.752E+02	1.752E+02	1.752E+02	1.533E+02	1.533E+02	1.533E+02	1.375E+02	1.375E+02	1.375E+02
2.00E+02	1.447E+02	1.447E+02	1.447E+02	1.271E+02	1.271E+02	1.271E+02	1.143E+02	1.143E+02	1.143E+02
3.00E+02	1.136E+02	1.136E+02	1.136E+02	1.001E+02	1.001E+02	1.001E+02	9.038E+01	9.038E+01	9.038E+01
4.00E+02	9.795E+01	9.795E+01	9.795E+01	8.658E+01	8.658E+01	8.658E+01	7.833E+01	7.833E+01	7.833E+01
5.00E+02	8.870E+01	8.870E+01	8.870E+01	7.856E+01	7.856E+01	7.856E+01	7.120E+01	7.120E+01	7.120E+01
6.00E+02	8.269E+01	8.269E+01	8.269E+01	7.336E+01	7.336E+01	7.336E+01	6.658E+01	6.658E+01	6.658E+01
7.00E+02	7.853E+01	7.853E+01	7.853E+01	6.978E+01	6.978E+01	6.978E+01	6.340E+01	6.340E+01	6.340E+01
8.00E+02	7.557E+01	7.557E+01	7.557E+01	6.722E+01	6.722E+01	6.722E+01	6.114E+01	6.114E+01	6.114E+01
9.00E+02	7.326E+01	7.326E+01	7.326E+01	6.523E+01	6.523E+01	6.523E+01	5.937E+01	5.937E+01	5.937E+01
1.00E+03	7.148E+01	7.148E+01	7.148E+01	6.369E+01	6.369E+01	6.369E+01	5.801E+01	5.801E+01	5.801E+01
1.50E+03	6.686E+01	6.686E+01	6.686E+01	5.980E+01	5.980E+01	5.980E+01	5.461E+01	5.461E+01	5.461E+01
2.00E+03	6.528E+01	6.528E+01	6.528E+01	5.858E+01	5.858E+01	5.858E+01	5.360E+01	5.360E+01	5.360E+01
3.00E+03	6.475E+01	6.475E+01	6.475E+01	5.842E+01	5.842E+01	5.842E+01	5.359E+01	5.359E+01	5.359E+01
4.00E+03	6.522E+01	6.522E+01	6.522E+01	5.909E+01	5.909E+01	5.909E+01	5.430E+01	5.430E+01	5.430E+01
5.00E+03	6.591E+01	6.591E+01	6.591E+01	5.992E+01	5.992E+01	5.992E+01	5.514E+01	5.514E+01	5.514E+01
6.00E+03	6.662E+01	6.662E+01	6.662E+01	6.074E+01	6.074E+01	6.074E+01	5.595E+01	5.595E+01	5.595E+01
7.00E+03	6.730E+01	6.730E+01	6.730E+01	6.152E+01	6.152E+01	6.152E+01	5.672E+01	5.672E+01	5.672E+01
8.00E+03	6.794E+01	6.794E+01	6.794E+01	6.224E+01	6.224E+01	6.224E+01	5.742E+01	5.742E+01	5.742E+01
9.00E+03	6.853E+01	6.853E+01	6.853E+01	6.290E+01	6.290E+01	6.290E+01	5.807E+01	5.807E+01	5.807E+01
1.00E+04	6.907E+01	6.907E+01	6.907E+01	6.351E+01	6.351E+01	6.351E+01	5.866E+01	5.866E+01	5.866E+01

 * Carbon-12 (3/5) *

target	Copper			Tungsten			Lead			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total
1.00E-05	1.518E+01	7.071E+01	8.588E+01	8.588E+01	8.273E+00	1.415E+01	2.242E+01	1.071E+01	1.158E+01	2.288E+01
1.50E-05	1.859E+01	8.403E+01	1.026E+02	1.026E+02	1.013E+01	1.725E+01	2.739E+01	1.311E+01	1.416E+01	2.727E+01
2.00E-05	2.146E+01	9.428E+01	1.157E+02	1.157E+02	1.170E+01	1.974E+01	3.144E+01	1.514E+01	1.623E+01	3.137E+01
3.00E-05	2.629E+01	1.066E+02	1.359E+02	1.359E+02	1.433E+01	2.365E+01	3.797E+01	1.854E+01	1.950E+01	3.804E+01
4.00E-05	3.035E+01	1.210E+02	1.514E+02	1.514E+02	1.655E+01	2.669E+01	4.323E+01	2.141E+01	2.206E+01	4.347E+01
5.00E-05	3.394E+01	1.300E+02	1.639E+02	1.639E+02	1.850E+01	2.918E+01	4.768E+01	2.394E+01	2.417E+01	4.811E+01
6.00E-05	3.718E+01	1.373E+02	1.745E+02	1.745E+02	2.026E+01	3.131E+01	5.157E+01	2.622E+01	2.597E+01	5.219E+01
7.00E-05	4.016E+01	1.435E+02	1.836E+02	1.836E+02	2.189E+01	3.315E+01	5.504E+01	2.833E+01	2.754E+01	5.586E+01
8.00E-05	4.293E+01	1.487E+02	1.917E+02	1.917E+02	2.340E+01	3.478E+01	5.818E+01	3.028E+01	2.893E+01	5.921E+01
9.00E-05	4.553E+01	1.533E+02	1.989E+02	1.989E+02	2.482E+01	3.624E+01	6.106E+01	3.212E+01	3.017E+01	6.229E+01
1.00E-04	4.800E+01	1.574E+02	2.054E+02	2.054E+02	2.616E+01	3.756E+01	6.372E+01	3.386E+01	3.130E+01	6.516E+01
1.50E-04	5.878E+01	1.721E+02	2.309E+02	2.309E+02	3.204E+01	4.269E+01	7.473E+01	4.146E+01	3.573E+01	7.719E+01
2.00E-04	6.788E+01	1.813E+02	2.491E+02	2.491E+02	3.700E+01	4.632E+01	8.332E+01	4.788E+01	3.888E+01	8.676E+01
3.00E-04	8.313E+01	1.918E+02	2.749E+02	2.749E+02	4.531E+01	5.123E+01	9.654E+01	5.864E+01	4.320E+01	1.018E+02
4.00E-04	9.599E+01	1.969E+02	2.929E+02	2.929E+02	5.232E+01	5.445E+01	1.068E+02	6.771E+01	4.607E+01	1.138E+02
5.00E-04	1.073E+02	1.994E+02	3.067E+02	3.067E+02	5.850E+01	5.672E+01	1.152E+02	7.570E+01	4.813E+01	1.238E+02
6.00E-04	1.176E+02	2.003E+02	3.178E+02	3.178E+02	6.408E+01	5.839E+01	1.225E+02	8.293E+01	4.967E+01	1.326E+02
7.00E-04	1.270E+02	2.002E+02	3.271E+02	3.271E+02	6.921E+01	5.964E+01	1.289E+02	8.957E+01	5.084E+01	1.404E+02
8.00E-04	1.358E+02	1.994E+02	3.352E+02	3.352E+02	7.399E+01	6.060E+01	1.346E+02	9.576E+01	5.176E+01	1.475E+02
9.00E-04	1.440E+02	1.982E+02	3.422E+02	3.422E+02	7.848E+01	6.133E+01	1.398E+02	1.016E+02	5.247E+01	1.540E+02
1.00E-03	1.518E+02	1.968E+02	3.485E+02	3.485E+02	8.273E+01	6.189E+01	1.446E+02	1.071E+02	5.304E+01	1.601E+02
1.50E-03	1.859E+02	1.875E+02	3.734E+02	3.734E+02	1.013E+02	6.312E+01	1.644E+02	1.311E+02	5.447E+01	1.856E+02
2.00E-03	2.146E+02	1.777E+02	3.923E+02	3.923E+02	1.170E+02	6.301E+01	1.800E+02	1.514E+02	5.465E+01	2.061E+02
3.00E-03	2.629E+02	1.601E+02	4.230E+02	4.230E+02	1.433E+02	6.130E+01	2.046E+02	1.854E+02	5.360E+01	2.390E+02
4.00E-03	3.035E+02	1.457E+02	4.493E+02	4.493E+02	1.655E+02	5.899E+01	2.244E+02	2.141E+02	5.191E+01	2.660E+02
5.00E-03	3.394E+02	1.340E+02	4.734E+02	4.734E+02	1.882E+02	5.662E+01	2.448E+02	2.394E+02	5.007E+01	2.895E+02
6.00E-03	3.718E+02	1.243E+02	4.960E+02	4.960E+02	2.066E+02	5.435E+01	2.610E+02	2.622E+02	4.825E+01	3.105E+02
7.00E-03	4.016E+02	1.161E+02	5.176E+02	5.176E+02	2.240E+02	5.222E+01	2.762E+02	2.833E+02	4.653E+01	3.298E+02
8.00E-03	4.293E+02	1.090E+02	5.383E+02	5.383E+02	2.406E+02	5.025E+01	2.908E+02	3.028E+02	4.491E+01	3.477E+02
9.00E-03	4.553E+02	1.029E+02	5.583E+02	5.583E+02	2.565E+02	4.843E+01	3.049E+02	3.212E+02	4.339E+01	3.645E+02
1.00E-02	4.800E+02	9.759E+01	5.775E+02	5.775E+02	2.719E+02	4.675E+01	3.187E+02	3.386E+02	4.199E+01	3.805E+02
1.50E-02	6.016E+02	7.828E+01	6.799E+02	6.799E+02	3.441E+02	4.001E+01	3.841E+02	4.146E+02	3.624E+01	4.509E+02
2.00E-02	7.199E+02	6.606E+01	7.860E+02	7.860E+02	4.118E+02	3.519E+01	4.470E+02	4.877E+02	3.205E+01	5.198E+02
3.00E-02	9.338E+02	5.117E+01	9.849E+02	9.849E+02	5.604E+02	2.869E+01	5.891E+02	6.131E+02	2.632E+01	6.394E+02
4.00E-02	1.120E+03	4.225E+01	1.163E+03	1.163E+03	7.021E+02	2.446E+01	7.265E+02	7.070E+02	2.254E+01	7.295E+02
5.00E-02	1.292E+03	3.624E+01	1.329E+03	1.329E+03	8.143E+02	2.145E+01	8.357E+02	7.936E+02	1.983E+01	8.135E+02
6.00E-02	1.450E+03	3.157E+01	1.482E+03	1.482E+03	9.048E+02	1.919E+01	9.240E+02	8.740E+02	1.778E+01	8.917E+02
7.00E-02	1.594E+03	2.828E+01	1.622E+03	1.622E+03	9.806E+02	1.741E+01	9.980E+02	9.485E+02	1.616E+01	9.646E+02
8.00E-02	1.725E+03	2.567E+01	1.750E+03	1.750E+03	1.046E+03	1.597E+01	1.062E+03	1.017E+03	1.485E+01	1.032E+03
9.00E-02	1.843E+03	2.354E+01	1.866E+03	1.866E+03	1.104E+03	1.478E+01	1.119E+03	1.081E+03	1.376E+01	1.095E+03

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-01	1.949E+03	2.176E+01	1.971E+03	1.156E+03	1.377E+01	1.170E+03	1.140E+03	1.283E+01	1.153E+03
1.50E-01	2.341E+03	1.600E+01	2.357E+03	1.352E+03	1.040E+01	1.363E+03	1.368E+03	9.733E+00	1.377E+03
2.00E-01	2.577E+03	1.280E+01	2.590E+03	1.479E+03	8.385E+00	1.487E+03	1.508E+03	7.862E+00	1.515E+03
3.00E-01	2.825E+03	9.277E+00	2.835E+03	1.616E+03	6.207E+00	1.622E+03	1.631E+03	5.838E+00	1.637E+03
4.00E-01	2.944E+03	7.354E+00	2.952E+03	1.679E+03	4.984E+00	1.684E+03	1.661E+03	4.696E+00	1.665E+03
5.00E-01	3.033E+03	6.130E+00	3.039E+03	1.721E+03	4.191E+00	1.726E+03	1.681E+03	3.954E+00	1.685E+03
6.00E-01	3.064E+03	5.276E+00	3.069E+03	1.733E+03	3.631E+00	1.738E+03	1.680E+03	3.429E+00	1.684E+03
7.00E-01	3.052E+03	4.644E+00	3.056E+03	1.723E+03	3.213E+00	1.728E+03	1.666E+03	3.037E+00	1.669E+03
8.00E-01	3.019E+03	4.156E+00	3.024E+03	1.703E+03	2.888E+00	1.706E+03	1.647E+03	2.731E+00	1.650E+03
9.00E-01	2.976E+03	3.766E+00	2.980E+03	1.679E+03	2.627E+00	1.681E+03	1.628E+03	2.485E+00	1.630E+03
1.00E+00	2.926E+03	3.448E+00	2.930E+03	1.652E+03	2.412E+00	1.654E+03	1.608E+03	2.283E+00	1.610E+03
1.50E+00	2.632E+03	2.448E+00	2.634E+03	1.500E+03	1.732E+00	1.502E+03	1.492E+03	1.642E+00	1.494E+03
2.00E+00	2.368E+03	1.915E+00	2.370E+03	1.367E+03	1.364E+00	1.368E+03	1.383E+03	1.295E+00	1.384E+03
3.00E+00	1.965E+03	1.351E+00	1.967E+03	1.162E+03	9.714E-01	1.163E+03	1.200E+03	9.228E-01	1.200E+03
4.00E+00	1.681E+03	1.053E+00	1.682E+03	1.015E+03	7.614E-01	1.015E+03	1.057E+03	7.239E-01	1.057E+03
5.00E+00	1.472E+03	8.672E-01	1.472E+03	9.044E+02	6.295E-01	9.050E+02	9.451E+02	5.988E-01	9.457E+02
6.00E+00	1.312E+03	7.395E-01	1.313E+03	8.190E+02	5.385E-01	8.196E+02	8.566E+02	5.124E-01	8.571E+02
7.00E+00	1.186E+03	6.460E-01	1.187E+03	7.509E+02	4.716E-01	7.514E+02	7.847E+02	4.490E-01	7.852E+02
8.00E+00	1.084E+03	5.745E-01	1.085E+03	6.951E+02	4.203E-01	6.955E+02	7.253E+02	4.002E-01	7.257E+02
9.00E+00	1.000E+03	5.179E-01	1.001E+03	6.484E+02	3.796E-01	6.488E+02	6.753E+02	3.613E-01	6.756E+02
1.00E+01	9.234E+02	4.719E-01	9.239E+02	6.088E+02	3.464E-01	6.091E+02	6.325E+02	3.300E-01	6.329E+02
1.50E+01	7.227E+02		7.227E+02	5.056E+02		5.056E+02	4.942E+02		4.942E+02
2.00E+01	5.820E+02		5.820E+02	4.145E+02		4.145E+02	4.054E+02		4.054E+02
3.00E+01	4.279E+02		4.279E+02	3.112E+02		3.112E+02	3.046E+02		3.046E+02
4.00E+01	3.440E+02		3.440E+02	2.533E+02		2.533E+02	2.481E+02		2.481E+02
5.00E+01	2.906E+02		2.906E+02	2.158E+02		2.158E+02	2.115E+02		2.115E+02
6.00E+01	2.535E+02		2.535E+02	1.894E+02		1.894E+02	1.857E+02		1.857E+02
7.00E+01	2.261E+02		2.261E+02	1.698E+02		1.698E+02	1.665E+02		1.665E+02
8.00E+01	2.050E+02		2.050E+02	1.545E+02		1.545E+02	1.516E+02		1.516E+02
9.00E+01	1.882E+02		1.882E+02	1.423E+02		1.423E+02	1.396E+02		1.396E+02
1.00E+02	1.746E+02		1.746E+02	1.323E+02		1.323E+02	1.299E+02		1.299E+02
1.50E+02	1.320E+02		1.320E+02	1.010E+02		1.010E+02	9.918E+01		9.918E+01
2.00E+02	1.098E+02		1.098E+02	8.444E+01		8.444E+01	8.296E+01		8.296E+01
3.00E+02	8.693E+01		8.693E+01	6.728E+01		6.728E+01	6.616E+01		6.616E+01
4.00E+02	7.539E+01		7.539E+01	5.858E+01		5.858E+01	5.763E+01		5.763E+01
5.00E+02	6.856E+01		6.856E+01	5.340E+01		5.340E+01	5.258E+01		5.258E+01
6.00E+02	6.414E+01		6.414E+01	5.004E+01		5.004E+01	4.930E+01		4.930E+01
7.00E+02	6.110E+01		6.110E+01	4.773E+01		4.773E+01	4.705E+01		4.705E+01
8.00E+02	5.893E+01		5.893E+01	4.607E+01		4.607E+01	4.545E+01		4.545E+01
9.00E+02	5.726E+01		5.726E+01	4.485E+01		4.485E+01	4.428E+01		4.428E+01
1.00E+03	5.598E+01		5.598E+01	4.394E+01		4.394E+01	4.341E+01		4.341E+01
1.50E+03	5.280E+01		5.280E+01	4.177E+01		4.177E+01	4.139E+01		4.139E+01
2.00E+03	5.188E+01		5.188E+01	4.129E+01		4.129E+01	4.103E+01		4.103E+01
3.00E+03	5.196E+01		5.196E+01	4.169E+01		4.169E+01	4.158E+01		4.158E+01
4.00E+03	5.270E+01		5.270E+01	4.253E+01		4.253E+01	4.251E+01		4.251E+01
5.00E+03	5.355E+01		5.355E+01	4.340E+01		4.340E+01	4.345E+01		4.345E+01
6.00E+03	5.437E+01		5.437E+01	4.422E+01		4.422E+01	4.432E+01		4.432E+01
7.00E+03	5.514E+01		5.514E+01	4.498E+01		4.498E+01	4.511E+01		4.511E+01
8.00E+03	5.584E+01		5.584E+01	4.566E+01		4.566E+01	4.583E+01		4.583E+01
9.00E+03	5.649E+01		5.649E+01	4.629E+01		4.629E+01	4.648E+01		4.648E+01
1.00E+04	5.708E+01		5.708E+01	4.686E+01		4.686E+01	4.707E+01		4.707E+01

 * Carbon-12 (4/5) *

target	Uranium			LiF(TLD-100)			7LiF(TLD-700)		
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))
1.00E-05	7.425E+00	9.140E+00	1.657E+01	4.464E+01	4.294E+02	4.740E+02	4.451E+01	4.278E+02	4.723E+02
1.50E-05	9.094E+00	1.121E+01	2.030E+01	5.467E+01	4.885E+02	5.432E+02	5.475E+01	4.894E+02	5.441E+02
2.00E-05	1.050E+01	1.288E+01	2.338E+01	6.313E+01	5.304E+02	5.935E+02	6.322E+01	5.313E+02	5.945E+02
3.00E-05	1.286E+01	1.552E+01	2.838E+01	7.732E+01	5.873E+02	6.647E+02	7.743E+01	5.883E+02	6.657E+02
4.00E-05	1.485E+01	1.760E+01	3.245E+01	8.928E+01	6.249E+02	7.141E+02	8.941E+01	6.258E+02	7.152E+02
5.00E-05	1.660E+01	1.933E+01	3.593E+01	9.982E+01	6.514E+02	7.513E+02	9.996E+01	6.524E+02	7.524E+02
6.00E-05	1.819E+01	2.081E+01	3.899E+01	1.093E+02	6.711E+02	7.804E+02	1.095E+02	6.721E+02	7.816E+02
7.00E-05	1.964E+01	2.210E+01	4.174E+01	1.181E+02	6.860E+02	8.041E+02	1.183E+02	6.870E+02	8.053E+02
8.00E-05	2.100E+01	2.324E+01	4.424E+01	1.263E+02	6.975E+02	8.237E+02	1.264E+02	6.985E+02	8.249E+02
9.00E-05	2.227E+01	2.428E+01	4.655E+01	1.339E+02	7.064E+02	8.403E+02	1.341E+02	7.074E+02	8.415E+02
1.00E-04	2.348E+01	2.521E+01	4.869E+01	1.412E+02	7.133E+02	8.545E+02	1.414E+02	7.143E+02	8.556E+02
1.50E-04	2.876E+01	2.891E+01	5.766E+01	1.729E+02	7.296E+02	9.025E+02	1.731E+02	7.305E+02	9.037E+02
2.00E-04	3.321E+01	3.157E+01	6.477E+01	1.996E+02	7.301E+02	9.298E+02	1.999E+02	7.305E+02	9.309E+02
3.00E-04	4.067E+01	3.774E+01	7.592E+01	2.445E+02	7.137E+02	9.582E+02	2.448E+02	7.145E+02	9.593E+02
4.00E-04	4.696E+01	3.955E+01	8.470E+01	2.823E+02	6.988E+02	9.722E+02	2.827E+02	6.905E+02	9.732E+02
5.00E-04	5.250E+01	3.955E+01	9.205E+01	3.157E+02	6.647E+02	9.803E+02	3.161E+02	6.652E+02	9.813E+02
6.00E-04	5.751E+01	4.092E+01	9.843E+01	3.458E+02	6.402E+02	9.860E+02	3.463E+02	6.407E+02	9.870E+02
7.00E-04	6.212E+01	4.199E+01	1.041E+02	3.735E+02	6.171E+02	9.906E+02	3.740E+02	6.176E+02	9.916E+02
8.00E-04	6.641E+01	4.283E+01	1.092E+02	3.993E+02	5.955E+02	9.948E+02	3.998E+02	5.959E+02	9.958E+02
9.00E-04	7.044E+01	4.351E+01	1.139E+02	4.233E+02	5.755E+02	9.990E+02	4.241E+02	5.758E+02	9.999E+02
1.00E-03	7.425E+01	4.406E+01	1.183E+02	4.464E+02	5.568E+02	1.003E+03	4.470E+02	5.572E+02	1.004E+03
1.50E-03	9.094E+01	4.558E+01	1.365E+02	5.467E+02	4.811E+02	1.028E+03	5.475E+02	4.813E+02	1.029E+03
2.00E-03	1.050E+02	4.600E+01	1.510E+02	6.313E+02	4.260E+02	1.057E+03	6.322E+02	4.261E+02	1.058E+03
3.00E-03	1.286E+02	4.552E+01	1.741E+02	7.732E+02	3.505E+02	1.124E+03	7.743E+02	3.506E+02	1.125E+03
4.00E-03	1.485E+02	4.438E+01	1.929E+02	8.928E+02	3.007E+02	1.193E+03	8.941E+02	3.007E+02	1.195E+03
5.00E-03	1.660E+02	4.304E+01	2.091E+02	9.982E+02	2.649E+02	1.263E+03	9.996E+02	2.649E+02	1.264E+03
6.00E-03	1.819E+02	4.168E+01	2.235E+02	1.093E+03	2.377E+02	1.331E+03	1.095E+03	2.377E+02	1.333E+03
7.00E-03	1.964E+02	4.034E+01	2.368E+02	1.181E+03	2.162E+02	1.397E+03	1.183E+03	2.163E+02	1.399E+03
8.00E-03	2.100E+02	3.907E+01	2.491E+02	1.263E+03	1.988E+02	1.461E+03	1.264E+03	1.988E+02	1.463E+03
9.00E-03	2.227E+02	3.787E+01	2.606E+02	1.339E+03	1.843E+02	1.524E+03	1.341E+03	1.843E+02	1.525E+03
1.00E-02	2.348E+02	3.673E+01	2.715E+02	1.412E+03	1.720E+02	1.584E+03	1.414E+03	1.721E+02	1.586E+03
1.50E-02	2.496E+02	3.202E+01	3.243E+02	1.723E+03	1.304E+02	1.859E+03	1.731E+03	1.304E+02	1.862E+03
2.00E-02	2.665E+02	2.850E+01	3.781E+02	2.003E+03	1.064E+02	2.109E+03	2.005E+03	1.064E+02	2.112E+03
3.00E-02	2.848E+02	2.360E+01	4.901E+02	2.461E+03	7.863E+01	2.540E+03	2.464E+03	7.863E+01	2.543E+03
4.00E-02	2.932E+02	2.032E+01	6.051E+02	2.832E+03	6.332E+01	2.895E+03	2.836E+03	6.332E+01	2.899E+03
5.00E-02	2.997E+02	1.794E+01	7.142E+02	3.173E+03	5.335E+01	3.271E+03	3.177E+03	5.335E+01	3.231E+03
6.00E-02	3.062E+02	1.613E+01	8.158E+02	3.483E+03	4.630E+01	3.534E+03	3.492E+03	4.629E+01	3.538E+03
7.00E-02	3.119E+02	1.470E+01	9.092E+02	3.773E+03	4.102E+01	3.819E+03	3.782E+03	4.101E+01	3.823E+03
8.00E-02	3.174E+02	1.353E+01	9.939E+02	4.044E+03	3.690E+01	4.081E+03	4.049E+03	3.689E+01	4.086E+03
9.00E-02	3.227E+02	1.255E+01	1.070E+03	4.288E+03	3.359E+01	4.322E+03	4.293E+03	3.359E+01	4.327E+03

target	Uranium				LiF(TLD-100)				7LiF(TLD-700)			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))
1.00E-01	1.126E+03	1.173E+01	1.138E+03	4.510E+03	3.087E+01	4.541E+03	4.515E+03	3.086E+01	4.546E+03			
1.50E-01	1.360E+03	8.933E+00	1.369E+03	5.339E+03	2.221E+01	5.361E+03	5.344E+03	2.221E+01	5.367E+03			
2.00E-01	1.473E+03	7.234E+00	1.480E+03	5.806E+03	1.753E+01	5.828E+03	5.811E+03	1.753E+01	5.828E+03			
3.00E-01	1.554E+03	5.392E+00	1.560E+03	6.129E+03	1.250E+01	6.142E+03	6.133E+03	1.250E+01	6.145E+03			
4.00E-01	1.579E+03	4.347E+00	1.584E+03	6.093E+03	9.812E+00	6.102E+03	6.096E+03	9.810E+00	6.105E+03			
5.00E-01	1.607E+03	3.666E+00	1.611E+03	6.024E+03	8.119E+00	6.032E+03	6.027E+03	8.118E+00	6.035E+03			
6.00E-01	1.616E+03	3.183E+00	1.619E+03	5.876E+03	6.950E+00	5.883E+03	5.878E+03	6.949E+00	5.885E+03			
7.00E-01	1.610E+03	2.821E+00	1.613E+03	5.687E+03	6.090E+00	5.694E+03	5.690E+03	6.089E+00	5.696E+03			
8.00E-01	1.597E+03	2.538E+00	1.599E+03	5.496E+03	5.430E+00	5.502E+03	5.499E+03	5.429E+00	5.504E+03			
9.00E-01	1.580E+03	2.311E+00	1.582E+03	5.315E+03	4.906E+00	5.320E+03	5.317E+03	4.905E+00	5.322E+03			
1.00E+00	1.560E+03	2.125E+00	1.562E+03	5.144E+03	4.479E+00	5.148E+03	5.146E+03	4.478E+00	5.150E+03			
1.50E+00	1.437E+03	1.530E+00	1.439E+03	4.402E+03	3.149E+00	4.405E+03	4.403E+03	3.149E+00	4.406E+03			
2.00E+00	1.320E+03	1.208E+00	1.322E+03	3.852E+03	2.449E+00	3.855E+03	3.853E+03	2.448E+00	3.856E+03			
3.00E+00	1.131E+03	8.625E-01	1.132E+03	3.092E+03	1.714E+00	3.094E+03	3.093E+03	1.714E+00	3.095E+03			
4.00E+00	9.901E+02	6.772E-01	9.908E+02	2.585E+03	1.329E+00	2.586E+03	2.586E+03	1.329E+00	2.587E+03			
5.00E+00	8.830E+02	5.605E-01	8.836E+02	2.223E+03	1.090E+00	2.224E+03	2.224E+03	1.090E+00	2.225E+03			
6.00E+00	7.994E+02	4.799E-01	7.998E+02	1.952E+03	9.270E-01	1.953E+03	1.953E+03	9.268E-01	1.954E+03			
7.00E+00	7.322E+02	4.206E-01	7.327E+02	1.742E+03	8.079E-01	1.743E+03	1.743E+03	8.077E-01	1.744E+03			
8.00E+00	6.771E+02	3.751E-01	6.775E+02	1.575E+03	7.170E-01	1.575E+03	1.575E+03	7.168E-01	1.576E+03			
9.00E+00	6.310E+02	3.389E-01	6.313E+02	1.437E+03	6.452E-01	1.438E+03	1.438E+03	6.451E-01	1.438E+03			
1.00E+01	5.917E+02	3.095E-01	5.920E+02	1.323E+03	5.871E-01	1.324E+03	1.324E+03	5.869E-01	1.324E+03			
1.50E+01	4.699E+02		4.699E+02	9.485E+02		9.485E+02	9.485E+02		9.485E+02			
2.00E+01	3.862E+02		3.862E+02	7.531E+02		7.531E+02	7.531E+02		7.531E+02			
3.00E+01	2.910E+02		2.910E+02	5.437E+02		5.437E+02	5.437E+02		5.437E+02			
4.00E+01	2.373E+02		2.373E+02	4.321E+02		4.321E+02	4.321E+02		4.321E+02			
5.00E+01	2.026E+02		2.026E+02	3.621E+02		3.621E+02	3.621E+02		3.621E+02			
6.00E+01	1.780E+02		1.780E+02	3.139E+02		3.139E+02	3.139E+02		3.139E+02			
7.00E+01	1.597E+02		1.597E+02	2.787E+02		2.787E+02	2.787E+02		2.787E+02			
8.00E+01	1.455E+02		1.455E+02	2.517E+02		2.517E+02	2.517E+02		2.517E+02			
9.00E+01	1.341E+02		1.341E+02	2.303E+02		2.303E+02	2.303E+02		2.303E+02			
1.00E+02	1.247E+02		1.247E+02	2.129E+02		2.129E+02	2.129E+02		2.129E+02			
1.50E+02	9.538E+01		9.538E+01	1.594E+02		1.594E+02	1.594E+02		1.594E+02			
2.00E+02	7.983E+01		7.983E+01	1.318E+02		1.318E+02	1.318E+02		1.318E+02			
3.00E+02	6.369E+01		6.369E+01	1.035E+02		1.035E+02	1.035E+02		1.035E+02			
4.00E+02	5.549E+01		5.549E+01	8.929E+01		8.929E+01	8.929E+01		8.929E+01			
5.00E+02	5.062E+01		5.062E+01	8.089E+01		8.089E+01	8.089E+01		8.089E+01			
6.00E+02	4.745E+01		4.745E+01	7.543E+01		7.543E+01	7.543E+01		7.543E+01			
7.00E+02	4.527E+01		4.527E+01	7.167E+01		7.167E+01	7.167E+01		7.167E+01			
8.00E+02	4.372E+01		4.372E+01	6.897E+01		6.897E+01	6.897E+01		6.897E+01			
9.00E+02	4.258E+01		4.258E+01	6.676E+01		6.676E+01	6.676E+01		6.676E+01			
1.00E+03	4.177E+01		4.177E+01	6.503E+01		6.503E+01	6.503E+01		6.503E+01			
1.50E+03	3.988E+01		3.988E+01	6.050E+01		6.050E+01	6.050E+01		6.050E+01			
2.00E+03	3.953E+01		3.953E+01	5.888E+01		5.888E+01	5.888E+01		5.888E+01			
3.00E+03	4.005E+01		4.005E+01	5.818E+01		5.818E+01	5.818E+01		5.818E+01			
4.00E+03	4.094E+01		4.094E+01	5.848E+01		5.848E+01	5.848E+01		5.848E+01			
5.00E+03	4.184E+01		4.184E+01	5.901E+01		5.901E+01	5.901E+01		5.901E+01			
6.00E+03	4.268E+01		4.268E+01	5.960E+01		5.960E+01	5.960E+01		5.960E+01			
7.00E+03	4.344E+01		4.344E+01	6.018E+01		6.018E+01	6.018E+01		6.018E+01			
8.00E+03	4.413E+01		4.413E+01	6.072E+01		6.072E+01	6.072E+01		6.072E+01			
9.00E+03	4.476E+01		4.476E+01	6.123E+01		6.123E+01	6.123E+01		6.123E+01			
1.00E+04	4.533E+01		4.533E+01	6.170E+01		6.170E+01	6.170E+01		6.170E+01			

 * Carbon-12 (5/5) *

target	Phantom			Water			SSNTD			
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-05	1.341E+02	6.258E+02	7.599E+02	7.599E+02	6.486E+01	6.171E+02	6.820E+02	1.221E+02	5.877E+02	7.098E+02
1.50E-05	1.581E+02	7.138E+02	8.719E+02	8.719E+02	7.943E+01	7.053E+02	7.847E+02	1.442E+02	6.708E+02	8.149E+02
2.00E-05	1.777E+02	7.765E+02	9.542E+02	9.542E+02	9.172E+01	7.684E+02	8.601E+02	1.622E+02	7.300E+02	8.922E+02
3.00E-05	2.097E+02	8.622E+02	1.072E+03	1.072E+03	1.123E+02	8.551E+02	9.675E+02	1.917E+02	8.112E+02	1.003E+03
4.00E-05	2.359E+02	9.191E+02	1.155E+03	1.155E+03	1.297E+02	9.131E+02	1.043E+03	2.159E+02	8.652E+02	1.081E+03
5.00E-05	2.584E+02	9.597E+02	1.218E+03	1.218E+03	1.450E+02	9.548E+02	1.100E+03	2.368E+02	9.038E+02	1.141E+03
6.00E-05	2.785E+02	9.899E+02	1.268E+03	1.268E+03	1.589E+02	9.861E+02	1.145E+03	2.553E+02	9.327E+02	1.188E+03
7.00E-05	2.968E+02	1.013E+03	1.310E+03	1.310E+03	1.716E+02	1.010E+03	1.182E+03	2.722E+02	9.548E+02	1.227E+03
8.00E-05	3.135E+02	1.031E+03	1.344E+03	1.344E+03	1.834E+02	1.029E+03	1.213E+03	2.877E+02	9.720E+02	1.260E+03
9.00E-05	3.291E+02	1.045E+03	1.374E+03	1.374E+03	1.946E+02	1.044E+03	1.239E+03	3.022E+02	9.856E+02	1.288E+03
1.00E-04	3.437E+02	1.056E+03	1.400E+03	1.400E+03	2.051E+02	1.056E+03	1.261E+03	3.157E+02	9.963E+02	1.312E+03
1.50E-04	4.064E+02	1.083E+03	1.490E+03	1.490E+03	2.512E+02	1.087E+03	1.338E+03	3.739E+02	1.023E+03	1.397E+03
2.00E-04	4.578E+02	1.086E+03	1.544E+03	1.544E+03	2.900E+02	1.093E+03	1.383E+03	4.217E+02	1.027E+03	1.449E+03
3.00E-04	5.418E+02	1.064E+03	1.641E+03	1.641E+03	3.552E+02	1.076E+03	1.431E+03	4.999E+02	1.008E+03	1.507E+03
4.00E-04	6.108E+02	1.030E+03	1.706E+03	1.706E+03	4.102E+02	1.044E+03	1.454E+03	5.643E+02	9.760E+02	1.540E+03
5.00E-04	6.704E+02	9.930E+02	1.663E+03	1.663E+03	4.586E+02	1.009E+03	1.468E+03	6.200E+02	9.417E+02	1.562E+03
6.00E-04	7.236E+02	9.567E+02	1.680E+03	1.680E+03	5.024E+02	9.746E+02	1.477E+03	6.696E+02	9.078E+02	1.577E+03
7.00E-04	7.718E+02	9.221E+02	1.694E+03	1.694E+03	5.426E+02	9.413E+02	1.484E+03	7.147E+02	8.756E+02	1.590E+03
8.00E-04	8.163E+02	8.898E+02	1.706E+03	1.706E+03	5.801E+02	9.098E+02	1.490E+03	7.563E+02	8.453E+02	1.602E+03
9.00E-04	8.576E+02	8.596E+02	1.717E+03	1.717E+03	6.153E+02	8.802E+02	1.496E+03	7.951E+02	8.170E+02	1.612E+03
1.00E-03	8.965E+02	8.316E+02	1.728E+03	1.728E+03	6.486E+02	8.526E+02	1.501E+03	8.314E+02	7.907E+02	1.622E+03
1.50E-03	1.063E+03	7.173E+02	1.781E+03	1.781E+03	7.943E+02	7.992E+02	1.534E+03	9.880E+02	6.831E+02	1.671E+03
2.00E-03	1.201E+03	6.342E+02	1.835E+03	1.835E+03	9.123E+02	6.557E+02	1.573E+03	1.117E+03	6.045E+02	1.723E+03
3.00E-03	1.426E+03	5.206E+02	1.946E+03	1.946E+03	1.123E+03	5.406E+02	1.664E+03	1.329E+03	4.969E+02	1.826E+03
4.00E-03	1.611E+03	4.457E+02	2.057E+03	2.057E+03	1.297E+03	4.641E+02	1.761E+03	1.504E+03	4.258E+02	1.929E+03
5.00E-03	1.772E+03	3.921E+02	2.164E+03	2.164E+03	1.450E+03	4.091E+02	1.859E+03	1.655E+03	3.748E+02	2.030E+03
6.00E-03	1.915E+03	3.515E+02	2.267E+03	2.267E+03	1.589E+03	3.673E+02	1.956E+03	1.791E+03	3.361E+02	2.127E+03
7.00E-03	2.046E+03	3.195E+02	2.365E+03	2.365E+03	1.716E+03	3.342E+02	2.050E+03	1.914E+03	3.056E+02	2.219E+03
8.00E-03	2.166E+03	2.935E+02	2.459E+03	2.459E+03	1.834E+03	3.073E+02	2.142E+03	2.028E+03	2.808E+02	2.308E+03
9.00E-03	2.278E+03	2.719E+02	2.550E+03	2.550E+03	1.946E+03	2.850E+02	2.231E+03	2.134E+03	2.602E+02	2.394E+03
1.00E-02	2.383E+03	2.537E+02	2.637E+03	2.637E+03	2.051E+03	2.660E+02	2.317E+03	2.233E+03	2.428E+02	2.476E+03
1.50E-02	2.821E+03	1.919E+02	3.012E+03	3.012E+03	2.487E+03	2.016E+02	2.689E+03	2.650E+03	1.839E+02	2.834E+03
2.00E-02	3.220E+03	1.558E+02	3.376E+03	3.376E+03	2.908E+03	1.646E+02	3.073E+03	3.038E+03	1.494E+02	3.187E+03
3.00E-02	3.946E+03	1.154E+02	4.062E+03	4.062E+03	3.653E+03	1.217E+02	3.775E+03	3.732E+03	1.106E+02	3.843E+03
4.00E-02	4.583E+03	9.281E+01	4.676E+03	4.676E+03	4.282E+03	9.802E+01	4.380E+03	4.329E+03	8.902E+01	4.418E+03
5.00E-02	5.152E+03	7.815E+01	5.230E+03	5.230E+03	4.848E+03	8.260E+01	4.931E+03	4.865E+03	7.497E+01	4.940E+03
6.00E-02	5.660E+03	6.777E+01	5.728E+03	5.728E+03	5.358E+03	7.169E+01	5.430E+03	5.344E+03	6.503E+01	5.409E+03
7.00E-02	6.111E+03	6.001E+01	6.171E+03	6.171E+03	5.814E+03	6.350E+01	5.878E+03	5.770E+03	5.759E+01	5.828E+03
8.00E-02	6.507E+03	5.397E+01	6.561E+03	6.561E+03	6.221E+03	5.713E+01	6.278E+03	6.147E+03	5.180E+01	6.199E+03
9.00E-02	6.854E+03	4.911E+01	6.903E+03	6.903E+03	6.581E+03	5.200E+01	6.633E+03	6.479E+03	4.714E+01	6.526E+03

target	Phantom			Water			SSNTD		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	7.155E+03	4.512E+01	7.200E+03	6.898E+03	4.779E+01	6.946E+03	6.768E+03	4.331E+01	6.811E+03
1.50E-01	8.112E+03	3.244E+01	8.144E+03	7.964E+03	3.439E+01	7.998E+03	7.706E+03	3.115E+01	7.737E+03
2.00E-01	8.465E+03	2.558E+01	8.491E+03	8.434E+03	2.714E+01	8.461E+03	8.076E+03	2.457E+01	8.101E+03
3.00E-01	8.417E+03	1.824E+01	8.435E+03	8.541E+03	1.936E+01	8.560E+03	8.080E+03	1.752E+01	8.097E+03
4.00E-01	8.098E+03	1.430E+01	8.112E+03	8.271E+03	1.519E+01	8.287E+03	7.799E+03	1.374E+01	7.812E+03
5.00E-01	7.856E+03	1.183E+01	7.868E+03	8.031E+03	1.257E+01	8.043E+03	7.579E+03	1.137E+01	7.590E+03
6.00E-01	7.585E+03	1.013E+01	7.595E+03	7.435E+03	1.076E+01	7.752E+03	7.325E+03	9.730E+00	7.335E+03
7.00E-01	7.300E+03	8.872E+00	7.309E+03	7.435E+03	9.431E+00	7.445E+03	7.055E+03	7.600E+00	7.063E+03
8.00E-01	7.032E+03	7.908E+00	7.040E+03	7.148E+03	8.409E+00	7.156E+03	6.799E+03	7.600E+00	6.807E+03
9.00E-01	6.782E+03	7.144E+00	6.792E+03	6.865E+03	7.597E+00	6.892E+03	6.563E+03	6.866E+00	6.570E+03
1.00E+00	6.555E+03	6.521E+00	6.562E+03	6.643E+03	6.936E+00	6.650E+03	6.343E+03	6.268E+00	6.349E+03
1.50E+00	5.577E+03	4.583E+00	5.582E+03	5.637E+03	4.877E+00	5.642E+03	5.405E+03	4.406E+00	5.410E+03
2.00E+00	4.859E+03	3.563E+00	4.863E+03	4.912E+03	3.793E+00	4.916E+03	4.716E+03	3.425E+00	4.719E+03
3.00E+00	3.876E+03	2.493E+00	3.878E+03	3.925E+03	2.655E+00	3.928E+03	3.767E+03	2.397E+00	3.770E+03
4.00E+00	3.227E+03	1.933E+00	3.229E+03	3.274E+03	2.059E+00	3.276E+03	3.140E+03	1.858E+00	3.142E+03
5.00E+00	2.768E+03	1.585E+00	2.769E+03	2.813E+03	1.689E+00	2.814E+03	2.695E+03	1.524E+00	2.697E+03
6.00E+00	2.426E+03	1.347E+00	2.427E+03	2.468E+03	1.436E+00	2.470E+03	2.363E+03	1.296E+00	2.365E+03
7.00E+00	2.161E+03	1.174E+00	2.163E+03	2.202E+03	1.251E+00	2.203E+03	2.107E+03	1.129E+00	2.108E+03
8.00E+00	1.951E+03	1.042E+00	1.952E+03	1.989E+03	1.110E+00	1.990E+03	1.902E+03	1.002E+00	1.903E+03
9.00E+00	1.779E+03	9.376E-01	1.780E+03	1.816E+03	9.993E-01	1.817E+03	1.735E+03	9.017E-01	1.736E+03
1.00E+01	1.636E+03	8.531E-01	1.637E+03	1.671E+03	9.093E-01	1.672E+03	1.596E+03	8.204E-01	1.597E+03
1.50E+01	1.161E+03	1.161E+03	1.161E+03	1.189E+03	1.189E+03	1.189E+03	1.136E+03	1.136E+03	1.136E+03
2.00E+01	9.200E+02	9.200E+02	9.200E+02	9.421E+02	9.421E+02	9.421E+02	9.002E+02	9.002E+02	9.002E+02
3.00E+01	6.255E+02	6.255E+02	6.255E+02	6.786E+02	6.786E+02	6.786E+02	6.485E+02	6.485E+02	6.485E+02
4.00E+01	5.255E+02	5.255E+02	5.255E+02	5.385E+02	5.385E+02	5.385E+02	5.146E+02	5.146E+02	5.146E+02
5.00E+01	4.399E+02	4.399E+02	4.399E+02	4.508E+02	4.508E+02	4.508E+02	4.308E+02	4.308E+02	4.308E+02
6.00E+01	3.810E+02	3.810E+02	3.810E+02	3.905E+02	3.905E+02	3.905E+02	3.732E+02	3.732E+02	3.732E+02
7.00E+01	3.379E+02	3.379E+02	3.379E+02	3.463E+02	3.463E+02	3.463E+02	3.311E+02	3.311E+02	3.311E+02
8.00E+01	3.049E+02	3.049E+02	3.049E+02	3.126E+02	3.126E+02	3.126E+02	2.988E+02	2.988E+02	2.988E+02
9.00E+01	2.789E+02	2.789E+02	2.789E+02	2.859E+02	2.859E+02	2.859E+02	2.733E+02	2.733E+02	2.733E+02
1.00E+02	2.578E+02	2.578E+02	2.578E+02	2.643E+02	2.643E+02	2.643E+02	2.526E+02	2.526E+02	2.526E+02
1.50E+02	1.927E+02	1.927E+02	1.927E+02	1.976E+02	1.976E+02	1.976E+02	1.889E+02	1.889E+02	1.889E+02
2.00E+02	1.591E+02	1.591E+02	1.591E+02	1.631E+02	1.631E+02	1.631E+02	1.560E+02	1.560E+02	1.560E+02
3.00E+02	1.248E+02	1.248E+02	1.248E+02	1.280E+02	1.280E+02	1.280E+02	1.224E+02	1.224E+02	1.224E+02
4.00E+02	1.075E+02	1.075E+02	1.075E+02	1.103E+02	1.103E+02	1.103E+02	1.055E+02	1.055E+02	1.055E+02
5.00E+02	9.735E+01	9.735E+01	9.735E+01	9.986E+01	9.986E+01	9.986E+01	9.551E+01	9.551E+01	9.551E+01
6.00E+02	9.073E+01	9.073E+01	9.073E+01	9.307E+01	9.307E+01	9.307E+01	8.902E+01	8.902E+01	8.902E+01
7.00E+02	8.616E+01	8.616E+01	8.616E+01	8.839E+01	8.839E+01	8.839E+01	8.455E+01	8.455E+01	8.455E+01
8.00E+02	8.288E+01	8.288E+01	8.288E+01	8.503E+01	8.503E+01	8.503E+01	8.133E+01	8.133E+01	8.133E+01
9.00E+02	7.976E+01	7.976E+01	7.976E+01	8.217E+01	8.217E+01	8.217E+01	7.811E+01	7.811E+01	7.811E+01
1.00E+03	7.725E+01	7.725E+01	7.725E+01	7.992E+01	7.992E+01	7.992E+01	7.549E+01	7.549E+01	7.549E+01
1.50E+03	7.036E+01	7.036E+01	7.036E+01	7.393E+01	7.393E+01	7.393E+01	6.825E+01	6.825E+01	6.825E+01
2.00E+03	6.757E+01	6.757E+01	6.757E+01	7.169E+01	7.169E+01	7.169E+01	6.523E+01	6.523E+01	6.523E+01
3.00E+03	6.570E+01	6.570E+01	6.570E+01	7.052E+01	7.052E+01	7.052E+01	6.305E+01	6.305E+01	6.305E+01
4.00E+03	6.540E+01	6.540E+01	6.540E+01	7.069E+01	7.069E+01	7.069E+01	6.255E+01	6.255E+01	6.255E+01
5.00E+03	6.559E+01	6.559E+01	6.559E+01	7.121E+01	7.121E+01	7.121E+01	6.259E+01	6.259E+01	6.259E+01
6.00E+03	6.596E+01	6.596E+01	6.596E+01	7.183E+01	7.183E+01	7.183E+01	6.284E+01	6.284E+01	6.284E+01
7.00E+03	6.638E+01	6.638E+01	6.638E+01	7.245E+01	7.245E+01	7.245E+01	6.317E+01	6.317E+01	6.317E+01
8.00E+03	6.682E+01	6.682E+01	6.682E+01	7.305E+01	7.305E+01	7.305E+01	6.354E+01	6.354E+01	6.354E+01
9.00E+03	6.725E+01	6.725E+01	6.725E+01	7.362E+01	7.362E+01	7.362E+01	6.391E+01	6.391E+01	6.391E+01
1.00E+04	6.767E+01	6.767E+01	6.767E+01	7.415E+01	7.415E+01	7.415E+01	6.428E+01	6.428E+01	6.428E+01

 * Oxygen-16 (1/5) *

target	Hydrogen			Helium			Beryllium		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-05	2.724E+02	2.759E+03	3.031E+03	8.994E+01	1.295E+03	1.385E+03	1.048E+02	8.098E+02	9.145E+02
1.50E-05	3.337E+02	3.168E+03	3.502E+03	1.102E+02	1.462E+03	1.573E+03	1.283E+02	9.205E+02	1.049E+03
2.00E-05	3.853E+02	3.464E+03	3.850E+03	1.272E+02	1.579E+03	1.706E+03	1.482E+02	9.987E+02	1.147E+03
3.00E-05	4.719E+02	3.877E+03	4.349E+03	1.558E+02	1.734E+03	1.899E+03	1.814E+02	1.105E+03	1.286E+03
4.00E-05	5.449E+02	4.157E+03	4.702E+03	1.799E+02	1.832E+03	2.012E+03	2.095E+02	1.174E+03	1.384E+03
5.00E-05	6.092E+02	4.361E+03	4.971E+03	2.011E+02	1.900E+03	2.101E+03	2.342E+02	1.223E+03	1.457E+03
6.00E-05	6.673E+02	4.517E+03	5.185E+03	2.203E+02	1.948E+03	2.168E+03	2.566E+02	1.259E+03	1.516E+03
7.00E-05	7.208E+02	4.639E+03	5.360E+03	2.380E+02	1.983E+03	2.221E+03	2.772E+02	1.286E+03	1.563E+03
8.00E-05	7.706E+02	4.737E+03	5.507E+03	2.544E+02	2.008E+03	2.263E+03	2.963E+02	1.307E+03	1.603E+03
9.00E-05	8.173E+02	4.815E+03	5.633E+03	2.698E+02	2.027E+03	2.296E+03	3.143E+02	1.323E+03	1.637E+03
1.00E-04	8.615E+02	4.860E+03	5.741E+03	2.844E+02	2.040E+03	2.324E+03	3.313E+02	1.335E+03	1.666E+03
1.50E-04	1.055E+03	5.062E+03	6.118E+03	3.483E+02	2.058E+03	2.406E+03	4.057E+02	1.362E+03	1.768E+03
2.00E-04	1.218E+03	5.120E+03	6.339E+03	4.022E+02	2.036E+03	2.439E+03	4.685E+02	1.359E+03	1.828E+03
3.00E-04	1.492E+03	5.085E+03	6.577E+03	4.926E+02	1.955E+03	2.448E+03	5.738E+02	1.323E+03	1.896E+03
4.00E-04	1.723E+03	4.971E+03	6.694E+03	5.688E+02	1.863E+03	2.432E+03	6.626E+02	1.273E+03	1.936E+03
5.00E-04	1.926E+03	4.832E+03	6.759E+03	6.360E+02	1.775E+03	2.411E+03	7.408E+02	1.222E+03	1.963E+03
6.00E-04	2.110E+03	4.687E+03	6.797E+03	6.967E+02	1.692E+03	2.389E+03	8.115E+02	1.173E+03	1.984E+03
7.00E-04	2.279E+03	4.544E+03	6.824E+03	7.525E+02	1.618E+03	2.370E+03	8.765E+02	1.127E+03	2.004E+03
8.00E-04	2.437E+03	4.407E+03	6.843E+03	8.045E+02	1.549E+03	2.354E+03	9.370E+02	1.085E+03	2.022E+03
9.00E-04	2.585E+03	4.276E+03	6.861E+03	8.533E+02	1.487E+03	2.341E+03	9.938E+02	1.046E+03	2.039E+03
1.00E-03	2.724E+03	4.153E+03	6.877E+03	8.994E+02	1.431E+03	2.330E+03	1.048E+03	1.009E+03	2.057E+03
2.00E-03	3.337E+03	3.634E+03	6.971E+03	1.102E+03	1.209E+03	2.310E+03	1.283E+03	8.639E+02	2.147E+03
3.00E-03	3.853E+03	3.244E+03	7.096E+03	1.272E+03	1.054E+03	2.326E+03	1.482E+03	7.599E+02	2.241E+03
4.00E-03	4.719E+03	2.695E+03	7.414E+03	1.558E+03	8.503E+02	2.408E+03	1.814E+03	6.196E+02	2.434E+03
5.00E-03	5.449E+03	2.325E+03	7.774E+03	1.799E+03	7.201E+02	2.519E+03	2.095E+03	5.283E+02	2.623E+03
6.00E-03	6.092E+03	2.057E+03	8.149E+03	2.011E+03	6.286E+02	2.640E+03	2.342E+03	4.634E+02	2.806E+03
7.00E-03	6.673E+03	1.851E+03	8.525E+03	2.203E+03	5.602E+02	2.763E+03	2.566E+03	4.144E+02	2.980E+03
8.00E-03	7.208E+03	1.688E+03	8.896E+03	2.380E+03	5.069E+02	2.886E+03	2.772E+03	3.760E+02	3.148E+03
9.00E-03	7.706E+03	1.555E+03	9.261E+03	2.544E+03	4.639E+02	3.008E+03	2.963E+03	3.449E+02	3.308E+03
1.00E-02	8.173E+03	1.444E+03	9.617E+03	2.698E+03	4.285E+02	3.127E+03	3.143E+03	3.192E+02	3.462E+03
2.00E-02	1.032E+04	1.030E+03	1.135E+04	3.483E+03	3.986E+02	3.243E+03	3.313E+03	2.975E+02	3.610E+03
3.00E-02	1.176E+04	8.430E+02	1.260E+04	4.022E+03	2.968E+02	3.780E+03	3.865E+03	2.247E+02	4.090E+03
4.00E-02	1.486E+04	6.233E+02	1.548E+04	4.925E+03	2.406E+02	4.263E+03	4.022E+03	1.812E+02	4.583E+03
5.00E-02	1.808E+04	5.030E+02	1.858E+04	5.747E+03	1.773E+02	5.102E+03	5.262E+03	1.341E+02	5.396E+03
6.00E-02	2.097E+04	4.244E+02	2.139E+04	6.519E+03	1.420E+02	5.899E+03	5.867E+03	1.077E+02	5.975E+03
7.00E-02	2.354E+04	3.687E+02	2.391E+04	7.243E+03	1.192E+02	6.638E+03	6.372E+03	9.056E+01	6.463E+03
8.00E-02	2.579E+04	3.269E+02	2.612E+04	7.920E+03	1.031E+02	7.347E+03	6.793E+03	7.847E+01	6.871E+03
9.00E-02	2.775E+04	2.942E+02	2.804E+04	8.548E+03	9.114E+01	8.011E+03	7.141E+03	6.943E+01	7.211E+03
1.00E-01	2.942E+04	2.680E+02	2.969E+04	9.127E+03	8.183E+01	8.630E+03	7.429E+03	6.240E+01	7.492E+03
2.00E-01					7.438E+01	9.202E+03	7.667E+03	5.676E+01	7.724E+03

target	Hydrogen			Helium			Beryllium		
	Electric	Nuclear	Total	Electric	Nuclear	Total	Electric	Nuclear	Total
	(MeV/cm2)	(MeV/(g/cm2))		(MeV/cm2)	(MeV/(g/cm2))		(MeV/cm2)	(MeV/(g/cm2))	
1.00E-01	3.084E+04	2.464E+02	3.108E+04	9.657E+03	6.826E+01	9.726E+03	7.863E+03	5.213E+01	7.915E+03
1.50E-01	3.493E+04	1.776E+02	3.511E+04	1.162E+04	4.889E+01	1.167E+04	8.448E+03	3.742E+01	8.485E+03
2.00E-01	3.598E+04	1.403E+02	3.612E+04	1.261E+04	3.847E+01	1.271E+04	8.711E+03	2.949E+01	8.740E+03
3.00E-01	3.488E+04	1.002E+02	3.498E+04	1.323E+04	2.734E+01	1.326E+04	8.938E+03	2.099E+01	8.959E+03
4.00E-01	3.295E+04	7.870E+01	3.303E+04	1.299E+04	2.140E+01	1.301E+04	9.004E+03	1.645E+01	9.021E+03
5.00E-01	3.155E+04	6.516E+01	3.162E+04	1.271E+04	1.768E+01	1.272E+04	9.087E+03	1.360E+01	9.101E+03
6.00E-01	3.034E+04	5.580E+01	3.040E+04	1.241E+04	1.511E+01	1.243E+04	9.094E+03	1.164E+01	9.106E+03
7.00E-01	2.917E+04	4.891E+01	2.922E+04	1.209E+04	1.323E+01	1.209E+04	9.014E+03	1.019E+01	9.024E+03
8.00E-01	2.799E+04	4.362E+01	2.803E+04	1.169E+04	1.179E+01	1.170E+04	8.858E+03	9.083E+00	8.867E+03
9.00E-01	2.692E+04	3.942E+01	2.696E+04	1.132E+04	1.064E+01	1.133E+04	8.682E+03	8.203E+00	8.690E+03
1.00E+00	2.594E+04	3.600E+01	2.598E+04	1.098E+04	9.708E+00	1.099E+04	8.495E+03	7.486E+00	8.502E+03
1.50E+00	2.192E+04	2.533E+01	2.194E+04	9.466E+03	6.810E+00	9.473E+03	7.517E+03	5.258E+00	7.523E+03
2.00E+00	1.903E+04	1.971E+01	1.905E+04	8.313E+03	5.288E+00	8.318E+03	6.682E+03	4.086E+00	6.686E+03
3.00E+00	1.518E+04	1.381E+01	1.519E+04	6.709E+03	3.694E+00	6.713E+03	5.458E+03	2.857E+00	5.461E+03
4.00E+00	1.267E+04	1.071E+01	1.268E+04	5.627E+03	2.861E+00	5.630E+03	4.612E+03	2.214E+00	4.615E+03
5.00E+00	1.089E+04	8.788E+00	1.090E+04	4.847E+03	2.344E+00	4.850E+03	3.995E+03	1.815E+00	3.997E+03
6.00E+00	9.562E+03	7.473E+00	9.569E+03	4.259E+03	1.992E+00	4.261E+03	3.526E+03	1.543E+00	3.528E+03
7.00E+00	8.531E+03	6.514E+00	8.538E+03	3.799E+03	1.735E+00	3.801E+03	3.158E+03	1.344E+00	3.159E+03
8.00E+00	7.707E+03	5.782E+00	7.713E+03	3.430E+03	1.539E+00	3.431E+03	2.861E+03	1.193E+00	2.862E+03
9.00E+00	7.032E+03	5.204E+00	7.038E+03	3.127E+03	1.384E+00	3.128E+03	2.616E+03	1.073E+00	2.617E+03
1.00E+01	6.470E+03	4.736E+00	6.475E+03	2.874E+03	1.259E+00	2.875E+03	2.411E+03	9.760E-01	2.412E+03
1.50E+01	4.549E+03		4.549E+03	2.056E+03		2.056E+03	1.705E+03		1.705E+03
2.00E+01	3.581E+03		3.581E+03	1.624E+03		1.624E+03	1.352E+03		1.352E+03
3.00E+01	2.557E+03		2.557E+03	1.165E+03		1.165E+03	9.740E+02		9.740E+02
4.00E+01	2.017E+03		2.017E+03	9.225E+02		9.225E+02	7.730E+02		7.730E+02
5.00E+01	1.682E+03		1.682E+03	7.709E+02		7.709E+02	6.471E+02		6.471E+02
6.00E+01	1.452E+03		1.452E+03	6.669E+02		6.669E+02	5.606E+02		5.606E+02
7.00E+01	1.285E+03		1.285E+03	5.909E+02		5.909E+02	4.973E+02		4.973E+02
8.00E+01	1.157E+03		1.157E+03	5.329E+02		5.329E+02	4.488E+02		4.488E+02
9.00E+01	1.056E+03		1.056E+03	4.870E+02		4.870E+02	4.105E+02		4.105E+02
1.00E+02	9.749E+02		9.749E+02	4.499E+02		4.499E+02	3.794E+02		3.794E+02
1.50E+02	7.247E+02		7.247E+02	3.356E+02		3.356E+02	2.837E+02		2.837E+02
2.00E+02	5.961E+02		5.961E+02	2.766E+02		2.766E+02	2.342E+02		2.342E+02
3.00E+02	4.653E+02		4.653E+02	2.166E+02		2.166E+02	1.837E+02		1.837E+02
4.00E+02	3.998E+02		3.998E+02	1.865E+02		1.865E+02	1.584E+02		1.584E+02
5.00E+02	3.610E+02		3.610E+02	1.686E+02		1.686E+02	1.434E+02		1.434E+02
6.00E+02	3.358E+02		3.358E+02	1.570E+02		1.570E+02	1.336E+02		1.336E+02
7.00E+02	3.183E+02		3.183E+02	1.490E+02		1.490E+02	1.269E+02		1.269E+02
8.00E+02	3.057E+02		3.057E+02	1.433E+02		1.433E+02	1.220E+02		1.220E+02
9.00E+02	2.964E+02		2.964E+02	1.390E+02		1.390E+02	1.182E+02		1.182E+02
1.00E+03	2.893E+02		2.893E+02	1.358E+02		1.358E+02	1.152E+02		1.152E+02
1.50E+03	2.713E+02		2.713E+02	1.277E+02		1.277E+02	1.074E+02		1.074E+02
2.00E+03	2.658E+02		2.658E+02	1.254E+02		1.254E+02	1.047E+02		1.047E+02
3.00E+03	2.654E+02		2.654E+02	1.256E+02		1.256E+02	1.036E+02		1.036E+02
4.00E+03	2.690E+02		2.690E+02	1.276E+02		1.276E+02	1.041E+02		1.041E+02
5.00E+03	2.734E+02		2.734E+02	1.299E+02		1.299E+02	1.051E+02		1.051E+02
6.00E+03	2.778E+02		2.778E+02	1.322E+02		1.322E+02	1.062E+02		1.062E+02
7.00E+03	2.819E+02		2.819E+02	1.343E+02		1.343E+02	1.072E+02		1.072E+02
8.00E+03	2.858E+02		2.858E+02	1.362E+02		1.362E+02	1.082E+02		1.082E+02
9.00E+03	2.893E+02		2.893E+02	1.381E+02		1.381E+02	1.091E+02		1.091E+02
1.00E+04	2.927E+02		2.927E+02	1.397E+02		1.397E+02	1.099E+02		1.099E+02

 * Oxygen-16 (2/5) *

target	Carbon			Aluminium			Iron		
	Electric	Nuclear	Total	Electric	Nuclear	Total	Electric	Nuclear	Total
Energy (MeV/amu)	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))	(MeV/(g/cm2))
1.00E-05	2.043E+02	7.078E+02	9.122E+02	5.292E+01	3.389E+02	3.918E+02	2.654E+01	1.296E+02	1.561E+02
1.50E-05	2.379E+02	8.128E+02	1.051E+03	6.482E+01	3.955E+02	4.604E+02	3.251E+01	1.539E+02	1.864E+02
2.00E-05	2.650E+02	8.885E+02	1.153E+03	7.485E+01	4.378E+02	5.126E+02	3.754E+01	1.726E+02	2.101E+02
3.00E-05	3.085E+02	9.939E+02	1.302E+03	9.167E+01	4.988E+02	5.905E+02	4.597E+01	2.005E+02	2.465E+02
4.00E-05	3.436E+02	1.065E+03	1.409E+03	1.058E+02	5.422E+02	6.481E+02	5.308E+01	2.212E+02	2.743E+02
5.00E-05	3.736E+02	1.118E+03	1.491E+03	1.183E+02	5.752E+02	6.935E+02	5.935E+01	2.375E+02	2.968E+02
6.00E-05	4.001E+02	1.157E+03	1.557E+03	1.296E+02	6.014E+02	7.310E+02	6.502E+01	2.508E+02	3.158E+02
7.00E-05	4.239E+02	1.188E+03	1.612E+03	1.400E+02	6.227E+02	7.627E+02	7.022E+01	2.619E+02	3.322E+02
8.00E-05	4.456E+02	1.213E+03	1.659E+03	1.497E+02	6.403E+02	7.903E+02	7.507E+01	2.715E+02	3.466E+02
9.00E-05	4.658E+02	1.233E+03	1.699E+03	1.588E+02	6.555E+02	8.143E+02	7.963E+01	2.798E+02	3.594E+02
1.00E-04	4.845E+02	1.249E+03	1.734E+03	1.674E+02	6.683E+02	8.357E+02	8.393E+01	2.871E+02	3.711E+02
1.50E-04	5.641E+02	1.296E+03	1.860E+03	2.050E+02	7.111E+02	9.161E+02	1.028E+02	3.136E+02	4.164E+02
2.00E-04	6.284E+02	1.310E+03	1.938E+03	2.367E+02	7.336E+02	9.703E+02	1.187E+02	3.301E+02	4.488E+02
3.00E-04	7.315E+02	1.300E+03	2.032E+03	2.899E+02	7.513E+02	1.041E+03	1.454E+02	3.488E+02	4.941E+02
4.00E-04	8.149E+02	1.270E+03	2.085E+03	3.347E+02	7.522E+02	1.087E+03	1.679E+02	3.578E+02	5.257E+02
5.00E-04	8.860E+02	1.234E+03	2.120E+03	3.742E+02	7.457E+02	1.120E+03	1.877E+02	3.620E+02	5.497E+02
6.00E-04	9.487E+02	1.197E+03	2.146E+03	4.100E+02	7.355E+02	1.145E+03	2.056E+02	3.634E+02	5.690E+02
7.00E-04	1.005E+03	1.160E+03	2.165E+03	4.428E+02	7.234E+02	1.166E+03	2.221E+02	3.630E+02	5.850E+02
8.00E-04	1.057E+03	1.125E+03	2.182E+03	4.734E+02	7.104E+02	1.184E+03	2.374E+02	3.614E+02	5.988E+02
9.00E-04	1.104E+03	1.091E+03	2.196E+03	5.021E+02	6.971E+02	1.199E+03	2.518E+02	3.591E+02	6.109E+02
1.00E-03	1.149E+03	1.059E+03	2.208E+03	5.292E+02	6.839E+02	1.213E+03	2.654E+02	3.563E+02	6.217E+02
1.50E-03	1.338E+03	9.266E+02	2.264E+03	6.482E+02	6.220E+02	1.270E+03	3.251E+02	3.389E+02	6.640E+02
2.00E-03	1.490E+03	8.266E+02	2.317E+03	7.485E+02	5.699E+02	1.318E+03	3.754E+02	3.207E+02	6.961E+02
3.00E-03	1.735E+03	6.864E+02	2.421E+03	9.167E+02	4.903E+02	1.407E+03	4.597E+02	2.884E+02	7.481E+02
4.00E-03	1.932E+03	5.920E+02	2.524E+03	1.058E+03	4.326E+02	1.491E+03	5.308E+02	2.622E+02	7.931E+02
5.00E-03	2.101E+03	5.235E+02	2.625E+03	1.183E+03	3.888E+02	1.572E+03	5.935E+02	2.409E+02	8.344E+02
6.00E-03	2.250E+03	4.711E+02	2.721E+03	1.296E+03	3.542E+02	1.651E+03	6.502E+02	2.232E+02	8.734E+02
7.00E-03	2.384E+03	4.295E+02	2.813E+03	1.400E+03	3.261E+02	1.726E+03	7.022E+02	2.083E+02	9.106E+02
8.00E-03	2.506E+03	3.955E+02	2.902E+03	1.497E+03	3.028E+02	1.800E+03	7.507E+02	1.956E+02	9.463E+02
9.00E-03	2.619E+03	3.672E+02	2.986E+03	1.588E+03	2.830E+02	1.871E+03	7.963E+02	1.846E+02	9.809E+02
1.00E-02	2.725E+03	3.432E+02	3.068E+03	1.674E+03	2.661E+02	1.940E+03	8.393E+02	1.749E+02	1.014E+03
1.50E-02	3.187E+03	2.619E+02	3.449E+03	2.050E+03	2.071E+02	2.257E+03	1.028E+03	1.401E+02	1.168E+03
2.00E-02	3.630E+03	2.143E+02	3.844E+03	2.455E+03	1.716E+02	2.626E+03	1.237E+03	1.182E+02	1.355E+03
3.00E-02	4.433E+03	1.584E+02	4.592E+03	3.157E+03	1.299E+02	3.287E+03	1.676E+03	9.143E+01	1.768E+03
4.00E-02	5.140E+03	1.278E+02	5.267E+03	3.670E+03	1.049E+02	3.775E+03	2.012E+03	7.546E+01	2.088E+03
5.00E-02	5.780E+03	1.078E+02	5.888E+03	4.094E+03	8.909E+01	4.183E+03	2.328E+03	6.469E+01	2.391E+03
6.00E-02	6.360E+03	9.366E+01	6.454E+03	4.442E+03	7.778E+01	4.520E+03	2.628E+03	5.634E+01	2.684E+03
7.00E-02	6.882E+03	8.303E+01	6.965E+03	4.728E+03	6.923E+01	4.797E+03	2.903E+03	5.045E+01	2.954E+03
8.00E-02	7.348E+03	7.474E+01	7.423E+03	4.965E+03	6.252E+01	5.027E+03	3.146E+03	4.578E+01	3.192E+03
9.00E-02	7.763E+03	6.807E+01	7.831E+03	5.162E+03	5.710E+01	5.219E+03	3.359E+03	4.197E+01	3.401E+03

target	Carbon			Aluminium			Iron		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	8.129E+03	6.258E+01	8.191E+03	5.328E+03	5.261E+01	5.381E+03	3.543E+03	3.881E+01	3.582E+03
1.50E-01	9.359E+03	4.510E+01	9.405E+03	5.888E+03	3.822E+01	5.927E+03	4.175E+03	2.852E+01	4.204E+03
2.00E-01	9.940E+03	3.563E+01	9.940E+03	6.230E+03	3.034E+01	6.260E+03	4.527E+03	2.279E+01	4.550E+03
3.00E-01	1.009E+04	2.544E+01	1.012E+04	6.635E+03	2.180E+01	6.657E+03	4.871E+03	1.652E+01	4.887E+03
4.00E-01	9.916E+03	1.998E+01	9.936E+03	6.828E+03	1.719E+01	6.845E+03	5.000E+03	1.309E+01	5.014E+03
5.00E-01	9.801E+03	1.654E+01	9.817E+03	6.977E+03	1.427E+01	6.991E+03	5.093E+03	1.091E+01	5.104E+03
6.00E-01	9.674E+03	1.417E+01	9.688E+03	7.043E+03	1.224E+01	7.055E+03	5.130E+03	9.390E+00	5.139E+03
7.00E-01	9.504E+03	1.242E+01	9.516E+03	7.024E+03	1.075E+01	7.035E+03	5.111E+03	8.264E+00	5.119E+03
8.00E-01	9.287E+03	1.107E+01	9.298E+03	6.933E+03	9.602E+00	6.943E+03	5.044E+03	7.394E+00	5.052E+03
9.00E-01	9.072E+03	1.001E+01	9.082E+03	6.820E+03	8.687E+00	6.829E+03	4.965E+03	6.701E+00	4.971E+03
1.00E+00	8.859E+03	9.139E+00	8.869E+03	6.694E+03	7.941E+00	6.702E+03	4.878E+03	6.134E+00	4.884E+03
1.50E+00	7.834E+03	6.431E+00	7.840E+03	5.993E+03	5.609E+00	5.999E+03	4.405E+03	4.354E+00	4.410E+03
2.00E+00	6.984E+03	5.003E+00	6.989E+03	5.374E+03	4.374E+00	5.379E+03	3.990E+03	3.406E+00	3.993E+03
3.00E+00	5.740E+03	3.504E+00	5.743E+03	4.453E+03	3.073E+00	4.458E+03	3.368E+03	2.403E+00	3.370E+03
4.00E+00	4.871E+03	2.718E+00	4.874E+03	3.803E+03	2.678E+00	3.811E+03	2.923E+03	1.873E+00	2.924E+03
5.00E+00	4.233E+03	2.230E+00	4.235E+03	3.332E+03	1.963E+00	3.334E+03	2.589E+03	1.542E+00	2.590E+03
6.00E+00	3.745E+03	1.897E+00	3.747E+03	2.965E+03	1.671E+00	2.968E+03	2.329E+03	1.315E+00	2.330E+03
7.00E+00	3.361E+03	1.653E+00	3.362E+03	2.676E+03	1.458E+00	2.678E+03	2.121E+03	1.148E+00	2.122E+03
8.00E+00	3.049E+03	1.468E+00	3.051E+03	2.441E+03	1.295E+00	2.442E+03	1.950E+03	1.021E+00	1.951E+03
9.00E+00	2.792E+03	1.321E+00	2.794E+03	2.246E+03	1.166E+00	2.247E+03	1.807E+03	9.204E-01	1.808E+03
1.00E+01	2.576E+03	1.202E+00	2.577E+03	2.081E+03	1.062E+00	2.083E+03	1.686E+03	8.387E-01	1.687E+03
1.50E+01	1.855E+03	1.155E+03	1.855E+03	1.561E+03	1.248E+03	1.561E+03	1.348E+03	1.085E+03	1.348E+03
2.00E+01	1.474E+03	1.064E+03	1.474E+03	1.248E+03	9.093E+02	1.248E+03	1.085E+03	7.966E+02	1.085E+03
3.00E+01	1.064E+03	8.456E+02	1.064E+03	9.093E+02	7.264E+02	9.093E+02	7.966E+02	6.398E+02	7.966E+02
4.00E+01	8.456E+02	7.086E+02	8.456E+02	6.111E+02	6.111E+02	6.111E+02	5.403E+02	5.403E+02	5.403E+02
5.00E+01	7.086E+02	6.143E+02	7.086E+02	5.313E+02	5.313E+02	5.313E+02	4.710E+02	4.710E+02	4.710E+02
6.00E+01	6.143E+02	5.452E+02	6.143E+02	4.726E+02	4.726E+02	4.726E+02	4.200E+02	4.200E+02	4.200E+02
7.00E+01	5.452E+02	4.923E+02	5.452E+02	4.276E+02	4.276E+02	4.276E+02	3.807E+02	3.807E+02	3.807E+02
8.00E+01	4.923E+02	4.504E+02	4.923E+02	3.918E+02	3.918E+02	3.918E+02	3.494E+02	3.494E+02	3.494E+02
9.00E+01	4.504E+02	4.165E+02	4.504E+02	3.628E+02	3.628E+02	3.628E+02	3.239E+02	3.239E+02	3.239E+02
1.00E+02	3.117E+02	3.117E+02	3.117E+02	2.729E+02	2.729E+02	2.729E+02	2.448E+02	2.448E+02	2.448E+02
1.50E+02	2.575E+02	2.575E+02	2.575E+02	2.262E+02	2.262E+02	2.262E+02	2.034E+02	2.034E+02	2.034E+02
2.00E+02	2.022E+02	2.022E+02	2.022E+02	1.783E+02	1.783E+02	1.783E+02	1.610E+02	1.610E+02	1.610E+02
3.00E+02	1.744E+02	1.744E+02	1.744E+02	1.542E+02	1.542E+02	1.542E+02	1.395E+02	1.395E+02	1.395E+02
4.00E+02	1.580E+02	1.580E+02	1.580E+02	1.399E+02	1.399E+02	1.399E+02	1.268E+02	1.268E+02	1.268E+02
5.00E+02	1.473E+02	1.473E+02	1.473E+02	1.307E+02	1.307E+02	1.307E+02	1.186E+02	1.186E+02	1.186E+02
6.00E+02	1.399E+02	1.399E+02	1.399E+02	1.243E+02	1.243E+02	1.243E+02	1.130E+02	1.130E+02	1.130E+02
7.00E+02	1.346E+02	1.346E+02	1.346E+02	1.198E+02	1.198E+02	1.198E+02	1.089E+02	1.089E+02	1.089E+02
8.00E+02	1.305E+02	1.305E+02	1.305E+02	1.162E+02	1.162E+02	1.162E+02	1.058E+02	1.058E+02	1.058E+02
9.00E+02	1.273E+02	1.273E+02	1.273E+02	1.135E+02	1.135E+02	1.135E+02	1.034E+02	1.034E+02	1.034E+02
1.00E+03	1.191E+02	1.191E+02	1.191E+02	1.065E+02	1.065E+02	1.065E+02	9.732E+01	9.732E+01	9.732E+01
1.50E+03	1.163E+02	1.163E+02	1.163E+02	1.044E+02	1.044E+02	1.044E+02	9.552E+01	9.552E+01	9.552E+01
2.00E+03	1.154E+02	1.154E+02	1.154E+02	1.041E+02	1.041E+02	1.041E+02	9.550E+01	9.550E+01	9.550E+01
3.00E+03	1.162E+02	1.162E+02	1.162E+02	1.053E+02	1.053E+02	1.053E+02	9.676E+01	9.676E+01	9.676E+01
4.00E+03	1.174E+02	1.174E+02	1.174E+02	1.068E+02	1.068E+02	1.068E+02	9.825E+01	9.825E+01	9.825E+01
5.00E+03	1.187E+02	1.187E+02	1.187E+02	1.082E+02	1.082E+02	1.082E+02	9.970E+01	9.970E+01	9.970E+01
6.00E+03	1.199E+02	1.199E+02	1.199E+02	1.096E+02	1.096E+02	1.096E+02	1.011E+02	1.011E+02	1.011E+02
7.00E+03	1.210E+02	1.210E+02	1.210E+02	1.109E+02	1.109E+02	1.109E+02	1.023E+02	1.023E+02	1.023E+02
8.00E+03	1.221E+02	1.221E+02	1.221E+02	1.121E+02	1.121E+02	1.121E+02	1.035E+02	1.035E+02	1.035E+02
9.00E+03	1.230E+02	1.230E+02	1.230E+02	1.131E+02	1.131E+02	1.131E+02	1.045E+02	1.045E+02	1.045E+02
1.00E+04									

 * Oxygen-16 (3/5) *

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	1.833E+01	1.123E+02	1.306E+02	9.991E+00	2.352E+01	3.351E+01	1.291E+01	1.931E+01	3.222E+01
1.50E-05	2.245E+01	1.337E+02	1.562E+02	1.224E+01	2.871E+01	4.095E+01	1.581E+01	2.363E+01	3.944E+01
2.00E-05	2.592E+01	1.503E+02	1.762E+02	1.413E+01	3.287E+01	4.700E+01	1.823E+01	2.712E+01	4.537E+01
3.00E-05	3.175E+01	1.753E+02	2.070E+02	1.730E+01	3.942E+01	5.673E+01	2.235E+01	3.261E+01	5.497E+01
4.00E-05	3.666E+01	1.938E+02	2.305E+02	1.998E+01	4.453E+01	6.452E+01	2.581E+01	3.693E+01	6.274E+01
5.00E-05	4.099E+01	2.085E+02	2.493E+02	2.234E+01	4.874E+01	7.108E+01	2.886E+01	4.049E+01	6.935E+01
6.00E-05	4.490E+01	2.205E+02	2.654E+02	2.447E+01	5.232E+01	7.680E+01	3.161E+01	4.353E+01	7.514E+01
7.00E-05	4.850E+01	2.307E+02	2.792E+02	2.643E+01	5.544E+01	8.187E+01	3.415E+01	4.618E+01	8.033E+01
8.00E-05	5.185E+01	2.395E+02	2.913E+02	2.828E+01	5.819E+01	8.645E+01	3.650E+01	4.854E+01	8.504E+01
9.00E-05	5.499E+01	2.471E+02	3.021E+02	2.997E+01	6.066E+01	9.049E+01	3.872E+01	5.065E+01	8.937E+01
1.00E-04	5.797E+01	2.538E+02	3.118E+02	3.159E+01	6.289E+01	9.449E+01	4.081E+01	5.257E+01	9.338E+01
1.50E-04	7.100E+01	2.784E+02	3.494E+02	3.863E+01	7.161E+01	1.103E+02	4.998E+01	6.009E+01	1.101E+02
2.00E-04	8.198E+01	2.941E+02	3.761E+02	4.468E+01	7.779E+01	1.225E+02	5.772E+01	6.547E+01	1.232E+02
3.00E-04	1.004E+02	3.124E+02	4.128E+02	5.472E+01	8.620E+01	1.409E+02	7.069E+01	7.287E+01	1.436E+02
4.00E-04	1.159E+02	3.218E+02	4.377E+02	6.313E+01	9.174E+01	1.549E+02	8.162E+01	7.782E+01	1.594E+02
5.00E-04	1.296E+02	3.266E+02	4.563E+02	7.063E+01	9.568E+01	1.663E+02	9.126E+01	8.138E+01	1.726E+02
6.00E-04	1.420E+02	3.288E+02	4.703E+02	7.739E+01	9.858E+01	1.760E+02	9.997E+01	8.405E+01	1.840E+02
7.00E-04	1.534E+02	3.293E+02	4.827E+02	8.359E+01	1.008E+02	1.844E+02	1.080E+02	8.772E+01	1.941E+02
8.00E-04	1.640E+02	3.287E+02	4.926E+02	8.936E+01	1.025E+02	1.918E+02	1.154E+02	8.772E+01	2.032E+02
9.00E-04	1.739E+02	3.273E+02	5.012E+02	9.478E+01	1.038E+02	1.986E+02	1.224E+02	8.900E+01	2.114E+02
1.00E-03	1.833E+02	3.253E+02	5.086E+02	9.991E+01	1.048E+02	2.047E+02	1.291E+02	9.002E+01	2.191E+02
1.50E-03	2.245E+02	3.119E+02	5.364E+02	1.224E+02	1.072E+02	2.296E+02	1.581E+02	9.267E+01	2.507E+02
2.00E-03	2.592E+02	2.969E+02	5.562E+02	1.413E+02	1.072E+02	2.485E+02	1.825E+02	9.317E+01	2.757E+02
3.00E-03	3.175E+02	2.692E+02	5.867E+02	1.730E+02	1.047E+02	2.777E+02	2.235E+02	9.166E+01	3.152E+02
4.00E-03	3.666E+02	2.462E+02	6.128E+02	1.998E+02	1.010E+02	3.008E+02	2.581E+02	8.897E+01	3.471E+02
5.00E-03	4.099E+02	2.271E+02	6.370E+02	2.275E+02	9.712E+01	3.246E+02	2.886E+02	8.597E+01	3.746E+02
6.00E-03	4.490E+02	2.112E+02	6.602E+02	2.502E+02	9.338E+01	3.436E+02	3.161E+02	8.299E+01	3.991E+02
7.00E-03	4.850E+02	1.976E+02	6.826E+02	2.717E+02	8.985E+01	3.615E+02	3.415E+02	8.013E+01	4.216E+02
8.00E-03	5.185E+02	1.860E+02	7.045E+02	2.922E+02	8.657E+01	3.788E+02	3.650E+02	7.742E+01	4.425E+02
9.00E-03	5.499E+02	1.759E+02	7.258E+02	3.120E+02	8.352E+01	3.956E+02	3.872E+02	7.489E+01	4.621E+02
1.00E-02	5.797E+02	1.669E+02	7.466E+02	3.313E+02	8.070E+01	4.120E+02	4.081E+02	7.252E+01	4.806E+02
1.50E-02	7.318E+02	1.345E+02	8.663E+02	4.223E+02	6.930E+01	4.916E+02	4.998E+02	6.281E+01	5.627E+02
2.00E-02	8.239E+02	1.138E+02	9.967E+02	5.083E+02	6.108E+01	5.699E+02	5.916E+02	5.566E+01	6.473E+02
3.00E-02	1.161E+03	8.849E+01	1.250E+03	7.008E+02	4.995E+01	7.508E+02	7.569E+02	4.584E+01	8.027E+02
4.00E-02	1.410E+03	7.323E+01	1.483E+03	8.863E+02	4.266E+01	9.296E+02	8.847E+02	3.933E+01	9.240E+02
5.00E-02	1.642E+03	6.290E+01	1.703E+03	1.033E+03	3.746E+01	1.075E+03	1.004E+03	3.464E+01	1.039E+03
6.00E-02	1.858E+03	5.538E+01	1.913E+03	1.162E+03	3.353E+01	1.196E+03	1.116E+03	3.108E+01	1.147E+03
7.00E-02	2.057E+03	4.918E+01	2.105E+03	1.268E+03	3.045E+01	1.299E+03	1.221E+03	2.828E+01	1.249E+03
8.00E-02	2.240E+03	4.467E+01	2.285E+03	1.362E+03	2.795E+01	1.390E+03	1.318E+03	2.599E+01	1.344E+03
9.00E-02	2.408E+03	4.099E+01	2.449E+03	1.445E+03	2.587E+01	1.471E+03	1.410E+03	2.410E+01	1.434E+03

target	Copper			Tungsten			Lead		
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))
1.00E-01	2.561E+03	3.792E+01	2.599E+03	1.521E+03	2.412E+01	1.543E+03	1.495E+03	2.249E+01	1.517E+03
1.50E-01	3.144E+03	2.794E+01	3.172E+03	1.818E+03	1.825E+01	1.836E+03	1.834E+03	1.708E+01	1.851E+03
2.00E-01	3.518E+03	2.236E+01	3.540E+03	2.021E+03	1.472E+01	2.035E+03	2.056E+03	1.381E+01	2.070E+03
3.00E-01	3.956E+03	1.624E+01	3.972E+03	2.284E+03	1.091E+01	2.275E+03	2.282E+03	1.027E+01	2.292E+03
4.00E-01	4.194E+03	1.288E+01	4.207E+03	2.391E+03	8.770E+00	2.400E+03	2.366E+03	8.266E+00	2.374E+03
5.00E-01	4.380E+03	1.074E+01	4.391E+03	2.487E+03	7.378E+00	2.495E+03	2.425E+03	6.963E+00	2.432E+03
6.00E-01	4.497E+03	9.252E+00	4.506E+03	2.544E+03	6.395E+00	2.551E+03	2.463E+03	6.041E+00	2.469E+03
7.00E-01	4.549E+03	8.146E+00	4.553E+03	2.577E+03	5.661E+00	2.573E+03	2.480E+03	5.351E+00	2.485E+03
8.00E-01	4.546E+03	7.292E+00	4.533E+03	2.563E+03	5.089E+00	2.568E+03	2.477E+03	4.813E+00	2.482E+03
9.00E-01	4.519E+03	6.610E+00	4.526E+03	2.548E+03	4.629E+00	2.553E+03	2.469E+03	4.381E+00	2.473E+03
1.00E+00	4.478E+03	6.052E+00	4.484E+03	2.526E+03	4.252E+00	2.530E+03	2.456E+03	4.026E+00	2.460E+03
1.50E+00	4.147E+03	4.300E+00	4.152E+03	2.361E+03	3.054E+00	2.364E+03	2.347E+03	2.896E+00	2.350E+03
2.00E+00	3.802E+03	3.365E+00	3.805E+03	2.191E+03	2.407E+00	2.194E+03	2.216E+03	2.285E+00	2.218E+03
3.00E+00	3.240E+03	2.377E+00	3.243E+03	1.913E+03	1.715E+00	1.915E+03	1.974E+03	1.630E+00	1.976E+03
4.00E+00	2.821E+03	1.853E+00	2.823E+03	1.701E+03	1.344E+00	1.703E+03	1.771E+03	1.279E+00	1.773E+03
5.00E+00	2.501E+03	1.526E+00	2.503E+03	1.536E+03	1.112E+00	1.537E+03	1.605E+03	1.058E+00	1.606E+03
6.00E+00	2.251E+03	1.302E+00	2.252E+03	1.404E+03	9.512E-01	1.405E+03	1.469E+03	9.053E-01	1.469E+03
7.00E+00	2.049E+03	1.137E+00	2.050E+03	1.297E+03	8.332E-01	1.297E+03	1.355E+03	7.934E-01	1.356E+03
8.00E+00	1.883E+03	1.012E+00	1.884E+03	1.207E+03	7.426E-01	1.207E+03	1.259E+03	7.073E-01	1.260E+03
9.00E+00	1.744E+03	9.121E-01	1.745E+03	1.130E+03	6.707E-01	1.131E+03	1.177E+03	6.390E-01	1.178E+03
1.00E+01	1.626E+03	8.312E-01	1.626E+03	1.065E+03	6.122E-01	1.065E+03	1.106E+03	5.834E-01	1.107E+03
1.50E+01	1.280E+03	1.280E+03	1.280E+03	9.162E+02	8.713E+02	9.162E+02	8.713E+02	8.713E+02	8.713E+02
2.00E+01	1.032E+03	1.032E+03	1.032E+03	7.506E+02	7.506E+02	7.506E+02	7.154E+02	7.154E+02	7.154E+02
3.00E+01	7.599E+02	7.599E+02	7.599E+02	5.629E+02	5.629E+02	5.629E+02	5.379E+02	5.379E+02	5.379E+02
4.00E+01	6.112E+02	6.112E+02	6.112E+02	4.577E+02	4.577E+02	4.577E+02	4.382E+02	4.382E+02	4.382E+02
5.00E+01	5.166E+02	5.166E+02	5.166E+02	3.898E+02	3.898E+02	3.898E+02	3.736E+02	3.736E+02	3.736E+02
6.00E+01	4.508E+02	4.508E+02	4.508E+02	3.420E+02	3.420E+02	3.420E+02	3.281E+02	3.281E+02	3.281E+02
7.00E+01	4.022E+02	4.022E+02	4.022E+02	3.064E+02	3.064E+02	3.064E+02	2.942E+02	2.942E+02	2.942E+02
8.00E+01	3.647E+02	3.647E+02	3.647E+02	2.788E+02	2.788E+02	2.788E+02	2.679E+02	2.679E+02	2.679E+02
9.00E+01	3.349E+02	3.349E+02	3.349E+02	2.568E+02	2.568E+02	2.568E+02	2.468E+02	2.468E+02	2.468E+02
1.00E+02	3.106E+02	3.106E+02	3.106E+02	2.387E+02	2.387E+02	2.387E+02	2.296E+02	2.296E+02	2.296E+02
1.50E+02	2.350E+02	2.350E+02	2.350E+02	1.822E+02	1.822E+02	1.822E+02	1.755E+02	1.755E+02	1.755E+02
2.00E+02	1.955E+02	1.955E+02	1.955E+02	1.523E+02	1.523E+02	1.523E+02	1.469E+02	1.469E+02	1.469E+02
3.00E+02	1.548E+02	1.548E+02	1.548E+02	1.215E+02	1.215E+02	1.215E+02	1.172E+02	1.172E+02	1.172E+02
4.00E+02	1.343E+02	1.343E+02	1.343E+02	1.058E+02	1.058E+02	1.058E+02	1.022E+02	1.022E+02	1.022E+02
5.00E+02	1.222E+02	1.222E+02	1.222E+02	9.655E+01	9.655E+01	9.655E+01	9.332E+01	9.332E+01	9.332E+01
6.00E+02	1.143E+02	1.143E+02	1.143E+02	9.056E+01	9.056E+01	9.056E+01	8.757E+01	8.757E+01	8.757E+01
7.00E+02	1.089E+02	1.089E+02	1.089E+02	8.646E+01	8.646E+01	8.646E+01	8.364E+01	8.364E+01	8.364E+01
8.00E+02	1.050E+02	1.050E+02	1.050E+02	8.355E+01	8.355E+01	8.355E+01	8.085E+01	8.085E+01	8.085E+01
9.00E+02	1.020E+02	1.020E+02	1.020E+02	8.144E+01	8.144E+01	8.144E+01	7.883E+01	7.883E+01	7.883E+01
1.00E+03	9.976E+01	9.976E+01	9.976E+01	7.988E+01	7.988E+01	7.988E+01	7.733E+01	7.733E+01	7.733E+01
1.50E+03	9.409E+01	9.409E+01	9.409E+01	7.626E+01	7.626E+01	7.626E+01	7.400E+01	7.400E+01	7.400E+01
2.00E+03	9.246E+01	9.246E+01	9.246E+01	7.553E+01	7.553E+01	7.553E+01	7.356E+01	7.356E+01	7.356E+01
3.00E+03	9.259E+01	9.259E+01	9.259E+01	7.641E+01	7.641E+01	7.641E+01	7.489E+01	7.489E+01	7.489E+01
4.00E+03	9.391E+01	9.391E+01	9.391E+01	7.800E+01	7.800E+01	7.800E+01	7.676E+01	7.676E+01	7.676E+01
5.00E+03	9.542E+01	9.542E+01	9.542E+01	7.962E+01	7.962E+01	7.962E+01	7.857E+01	7.857E+01	7.857E+01
6.00E+03	9.689E+01	9.689E+01	9.689E+01	8.112E+01	8.112E+01	8.112E+01	8.022E+01	8.022E+01	8.022E+01
7.00E+03	9.825E+01	9.825E+01	9.825E+01	8.249E+01	8.249E+01	8.249E+01	8.170E+01	8.170E+01	8.170E+01
8.00E+03	9.950E+01	9.950E+01	9.950E+01	8.372E+01	8.372E+01	8.372E+01	8.302E+01	8.302E+01	8.302E+01
9.00E+03	1.006E+02	1.006E+02	1.006E+02	8.484E+01	8.484E+01	8.484E+01	8.422E+01	8.422E+01	8.422E+01
1.00E+04	1.017E+02	1.017E+02	1.017E+02	8.586E+01	8.586E+01	8.586E+01	8.531E+01	8.531E+01	8.531E+01

 * Oxygen-16 (4/5) *

target	Uranium			LiF(TLD-100)			LiF(TLD-700)		
	Energy (MeV/amu)	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))
1.00E-05	8.966E+00	1.530E+01	2.427E+01	5.366E+01	5.935E+02	6.491E+02	5.351E+01	5.936E+02	6.471E+02
1.50E-05	1.098E+01	1.878E+01	2.976E+01	6.573E+01	6.825E+02	7.482E+02	6.582E+01	6.836E+02	7.494E+02
2.00E-05	1.268E+01	2.159E+01	3.427E+01	7.590E+01	7.451E+02	8.210E+02	7.601E+01	7.462E+02	8.222E+02
3.00E-05	1.538E+01	2.605E+01	4.158E+01	9.299E+01	8.318E+02	9.299E+01	8.318E+02	9.309E+02	9.261E+02
4.00E-05	1.793E+01	2.957E+01	4.750E+01	1.073E+02	8.905E+02	9.978E+02	1.075E+02	8.917E+02	9.992E+02
5.00E-05	2.005E+01	3.249E+01	5.254E+01	1.200E+02	9.330E+02	1.053E+03	1.202E+02	9.343E+02	1.054E+03
6.00E-05	2.196E+01	3.499E+01	5.695E+01	1.315E+02	9.653E+02	1.097E+03	1.316E+02	9.666E+02	1.098E+03
7.00E-05	2.372E+01	3.718E+01	6.090E+01	1.420E+02	9.905E+02	1.132E+03	1.422E+02	9.917E+02	1.134E+03
8.00E-05	2.536E+01	3.913E+01	6.449E+01	1.518E+02	1.010E+03	1.162E+03	1.520E+02	1.012E+03	1.164E+03
9.00E-05	2.690E+01	4.088E+01	6.778E+01	1.610E+02	1.026E+03	1.187E+03	1.612E+02	1.028E+03	1.189E+03
1.00E-04	2.835E+01	4.247E+01	7.083E+01	1.697E+02	1.039E+03	1.209E+03	1.700E+02	1.041E+03	1.211E+03
1.50E-04	3.472E+01	4.877E+01	8.349E+01	2.079E+02	1.076E+03	1.282E+03	2.082E+02	1.077E+03	1.283E+03
2.00E-04	4.010E+01	5.331E+01	9.340E+01	2.400E+02	1.086E+03	1.326E+03	2.404E+02	1.087E+03	1.328E+03
3.00E-04	4.911E+01	5.963E+01	1.087E+02	2.940E+02	1.076E+03	1.370E+03	2.944E+02	1.077E+03	1.372E+03
4.00E-04	5.671E+01	6.391E+01	1.206E+02	3.394E+02	1.051E+03	1.400E+03	3.399E+02	1.052E+03	1.392E+03
5.00E-04	6.340E+01	6.704E+01	1.304E+02	3.795E+02	1.021E+03	1.400E+03	3.800E+02	1.021E+03	1.401E+03
6.00E-04	6.945E+01	6.942E+01	1.389E+02	4.157E+02	9.896E+02	1.405E+03	4.163E+02	9.903E+02	1.407E+03
7.00E-04	7.501E+01	7.128E+01	1.463E+02	4.490E+02	9.593E+02	1.408E+03	4.497E+02	9.599E+02	1.410E+03
8.00E-04	8.019E+01	7.277E+01	1.530E+02	4.800E+02	9.302E+02	1.410E+03	4.807E+02	9.308E+02	1.412E+03
9.00E-04	8.506E+01	7.397E+01	1.590E+02	5.092E+02	9.027E+02	1.412E+03	5.099E+02	9.033E+02	1.413E+03
1.00E-03	8.966E+01	7.494E+01	1.645E+02	5.367E+02	8.768E+02	1.413E+03	5.374E+02	8.773E+02	1.415E+03
1.50E-03	1.098E+02	7.770E+01	1.875E+02	6.573E+02	7.682E+02	1.425E+03	6.582E+02	7.685E+02	1.427E+03
2.00E-03	1.268E+02	7.855E+01	2.054E+02	7.590E+02	6.864E+02	1.445E+03	7.601E+02	6.867E+02	1.447E+03
3.00E-03	1.553E+02	7.796E+01	2.332E+02	9.296E+02	5.715E+02	1.501E+03	9.309E+02	5.717E+02	1.503E+03
4.00E-03	1.793E+02	7.617E+01	2.555E+02	1.073E+03	4.939E+02	1.567E+03	1.075E+03	4.940E+02	1.569E+03
5.00E-03	2.005E+02	7.400E+01	2.745E+02	1.200E+03	4.374E+02	1.638E+03	1.202E+03	4.375E+02	1.639E+03
6.00E-03	2.196E+02	7.175E+01	2.914E+02	1.315E+03	3.941E+02	1.709E+03	1.316E+03	3.942E+02	1.711E+03
7.00E-03	2.372E+02	6.954E+01	3.068E+02	1.420E+03	3.597E+02	1.780E+03	1.422E+03	3.597E+02	1.782E+03
8.00E-03	2.536E+02	6.742E+01	3.210E+02	1.518E+03	3.315E+02	1.850E+03	1.520E+03	3.316E+02	1.852E+03
9.00E-03	2.690E+02	6.540E+01	3.344E+02	1.610E+03	3.080E+02	1.918E+03	1.612E+03	3.080E+02	1.920E+03
1.00E-02	2.835E+02	6.350E+01	3.470E+02	1.697E+03	2.881E+02	1.985E+03	1.700E+03	2.881E+02	1.988E+03
1.50E-02	3.547E+02	5.553E+01	4.102E+02	2.079E+03	2.197E+02	2.298E+03	2.082E+03	2.197E+02	2.301E+03
2.00E-02	4.279E+02	4.953E+01	4.774E+02	2.411E+03	1.801E+02	2.591E+03	2.414E+03	1.801E+02	2.594E+03
3.00E-02	5.794E+02	4.113E+01	6.203E+02	3.021E+03	1.337E+02	3.154E+03	3.025E+03	1.337E+02	3.158E+03
4.00E-02	7.350E+02	3.547E+01	7.703E+02	3.529E+03	1.080E+02	3.637E+03	3.534E+03	1.080E+02	3.642E+03
5.00E-02	8.838E+02	3.136E+01	9.152E+02	4.002E+03	9.118E+01	4.093E+03	4.007E+03	9.117E+01	4.098E+03
6.00E-02	1.024E+03	2.822E+01	1.052E+03	4.442E+03	7.925E+01	4.521E+03	4.448E+03	7.924E+01	4.527E+03
7.00E-02	1.154E+03	2.573E+01	1.179E+03	4.852E+03	7.029E+01	4.922E+03	4.858E+03	7.028E+01	4.928E+03
8.00E-02	1.273E+03	2.369E+01	1.297E+03	5.232E+03	6.330E+01	5.295E+03	5.238E+03	6.329E+01	5.302E+03
9.00E-02	1.381E+03	2.200E+01	1.403E+03	5.584E+03	5.767E+01	5.641E+03	5.590E+03	5.767E+01	5.648E+03

target	Uranium			LiF(TLD-100)			7LiF(TLD-700)			
	Energy (MeV/amu)	Electric (MeV/(g/cm2))	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total	Electric	Nuclear (MeV/(g/cm2))	Total
1.00E-01	1.478E+03	2.056E+01	1.499E+03	5.907E+03	5.304E+01	5.960E+03	5.914E+03	5.914E+03	5.303E+01	5.967E+03
1.50E-01	1.823E+03	1.568E+01	1.841E+03	7.155E+03	3.826E+01	7.193E+03	7.162E+03	7.162E+03	3.826E+01	7.200E+03
2.00E-01	2.011E+03	1.283E+01	2.024E+03	7.915E+03	3.024E+01	7.945E+03	7.921E+03	7.921E+03	3.024E+01	7.951E+03
3.00E-01	2.176E+03	9.487E+00	2.185E+03	8.571E+03	2.161E+01	8.592E+03	8.576E+03	8.576E+03	2.161E+01	8.597E+03
4.00E-01	2.249E+03	7.654E+00	2.257E+03	8.681E+03	1.698E+01	8.698E+03	8.685E+03	8.685E+03	1.698E+01	8.702E+03
5.00E-01	2.320E+03	6.457E+00	2.326E+03	8.686E+03	1.407E+01	8.700E+03	8.690E+03	8.690E+03	1.406E+01	8.704E+03
6.00E-01	2.371E+03	5.608E+00	2.376E+03	8.615E+03	1.205E+01	8.627E+03	8.618E+03	8.618E+03	1.205E+01	8.630E+03
7.00E-01	2.397E+03	4.972E+00	2.402E+03	8.473E+03	1.056E+01	8.483E+03	8.476E+03	8.476E+03	1.056E+01	8.487E+03
8.00E-01	2.401E+03	4.476E+00	2.406E+03	8.272E+03	9.423E+00	8.281E+03	8.275E+03	8.275E+03	9.421E+00	8.285E+03
9.00E-01	2.396E+03	4.076E+00	2.400E+03	8.070E+03	8.517E+00	8.078E+03	8.073E+03	8.073E+03	8.515E+00	8.081E+03
1.00E+00	2.384E+03	3.748E+00	2.387E+03	7.872E+03	7.778E+00	7.879E+03	7.874E+03	7.874E+03	7.777E+00	7.882E+03
1.50E+00	2.260E+03	2.701E+00	2.263E+03	6.940E+03	5.476E+00	6.945E+03	6.942E+03	6.942E+03	5.475E+00	6.947E+03
2.00E+00	2.115E+03	2.133E+00	2.117E+03	6.189E+03	4.262E+00	6.193E+03	6.191E+03	6.191E+03	4.261E+00	6.195E+03
3.00E+00	1.861E+03	1.523E+00	1.863E+03	5.101E+03	2.986E+00	5.104E+03	5.102E+03	5.102E+03	2.986E+00	5.105E+03
4.00E+00	1.660E+03	1.196E+00	1.661E+03	4.341E+03	2.317E+00	4.343E+03	4.342E+03	4.342E+03	2.317E+00	4.344E+03
5.00E+00	1.499E+03	9.905E-01	1.500E+03	3.780E+03	1.902E+00	3.782E+03	3.781E+03	3.781E+03	1.901E+00	3.783E+03
6.00E+00	1.370E+03	8.482E-01	1.371E+03	3.350E+03	1.617E+00	3.352E+03	3.351E+03	3.351E+03	1.617E+00	3.352E+03
7.00E+00	1.264E+03	7.435E-01	1.265E+03	3.010E+03	1.410E+00	3.011E+03	3.011E+03	3.011E+03	1.410E+00	3.012E+03
8.00E+00	1.175E+03	6.631E-01	1.176E+03	2.734E+03	1.252E+00	2.736E+03	2.735E+03	2.735E+03	1.251E+00	2.736E+03
9.00E+00	1.100E+03	5.992E-01	1.100E+03	2.506E+03	1.127E+00	2.507E+03	2.507E+03	2.507E+03	1.126E+00	2.508E+03
1.00E+01	1.035E+03	5.472E-01	1.035E+03	2.314E+03	1.025E+00	2.315E+03	2.315E+03	2.315E+03	1.025E+00	2.316E+03
1.50E+01	8.276E+02	8.276E+02	8.276E+02	1.677E+03	1.677E+03	1.677E+03	1.677E+03	1.677E+03	1.677E+03	1.677E+03
2.00E+01	6.805E+02	6.805E+02	6.805E+02	1.334E+03	1.334E+03	1.334E+03	1.334E+03	1.334E+03	1.334E+03	1.334E+03
3.00E+01	5.129E+02	5.129E+02	5.129E+02	9.645E+02	9.645E+02	9.645E+02	9.645E+02	9.645E+02	9.645E+02	9.645E+02
4.00E+01	4.185E+02	4.185E+02	4.185E+02	7.671E+02	7.671E+02	7.671E+02	7.671E+02	7.671E+02	7.671E+02	7.671E+02
5.00E+01	3.572E+02	3.572E+02	3.572E+02	6.432E+02	6.432E+02	6.432E+02	6.432E+02	6.432E+02	6.432E+02	6.432E+02
6.00E+01	3.139E+02	3.139E+02	3.139E+02	5.579E+02	5.579E+02	5.579E+02	5.579E+02	5.579E+02	5.579E+02	5.579E+02
7.00E+01	2.817E+02	2.817E+02	2.817E+02	4.953E+02	4.953E+02	4.953E+02	4.953E+02	4.953E+02	4.953E+02	4.953E+02
8.00E+01	2.566E+02	2.566E+02	2.566E+02	4.474E+02	4.474E+02	4.474E+02	4.474E+02	4.474E+02	4.474E+02	4.474E+02
9.00E+01	2.366E+02	2.366E+02	2.366E+02	4.095E+02	4.095E+02	4.095E+02	4.095E+02	4.095E+02	4.095E+02	4.095E+02
1.00E+02	2.201E+02	2.201E+02	2.201E+02	3.787E+02	3.787E+02	3.787E+02	3.787E+02	3.787E+02	3.787E+02	3.787E+02
1.50E+02	1.685E+02	1.685E+02	1.685E+02	2.837E+02	2.837E+02	2.837E+02	2.837E+02	2.837E+02	2.837E+02	2.837E+02
2.00E+02	1.411E+02	1.411E+02	1.411E+02	2.345E+02	2.345E+02	2.345E+02	2.345E+02	2.345E+02	2.345E+02	2.345E+02
3.00E+02	1.128E+02	1.128E+02	1.128E+02	1.843E+02	1.843E+02	1.843E+02	1.843E+02	1.843E+02	1.843E+02	1.843E+02
4.00E+02	9.838E+01	9.838E+01	9.838E+01	1.590E+02	1.590E+02	1.590E+02	1.590E+02	1.590E+02	1.590E+02	1.590E+02
5.00E+02	8.986E+01	8.986E+01	8.986E+01	1.441E+02	1.441E+02	1.441E+02	1.441E+02	1.441E+02	1.441E+02	1.441E+02
6.00E+02	8.435E+01	8.435E+01	8.435E+01	1.343E+02	1.343E+02	1.343E+02	1.343E+02	1.343E+02	1.343E+02	1.343E+02
7.00E+02	8.059E+01	8.059E+01	8.059E+01	1.277E+02	1.277E+02	1.277E+02	1.277E+02	1.277E+02	1.277E+02	1.277E+02
8.00E+02	7.792E+01	7.792E+01	7.792E+01	1.229E+02	1.229E+02	1.229E+02	1.229E+02	1.229E+02	1.229E+02	1.229E+02
9.00E+02	7.599E+01	7.599E+01	7.599E+01	1.189E+02	1.189E+02	1.189E+02	1.189E+02	1.189E+02	1.189E+02	1.189E+02
1.00E+03	7.457E+01	7.457E+01	7.457E+01	1.159E+02	1.159E+02	1.159E+02	1.159E+02	1.159E+02	1.159E+02	1.159E+02
1.50E+03	7.141E+01	7.141E+01	7.141E+01	1.078E+02	1.078E+02	1.078E+02	1.078E+02	1.078E+02	1.078E+02	1.078E+02
2.00E+03	7.100E+01	7.100E+01	7.100E+01	1.049E+02	1.049E+02	1.049E+02	1.049E+02	1.049E+02	1.049E+02	1.049E+02
3.00E+03	7.217E+01	7.217E+01	7.217E+01	1.037E+02	1.037E+02	1.037E+02	1.037E+02	1.037E+02	1.037E+02	1.037E+02
4.00E+03	7.389E+01	7.389E+01	7.389E+01	1.042E+02	1.042E+02	1.042E+02	1.042E+02	1.042E+02	1.042E+02	1.042E+02
5.00E+03	7.557E+01	7.557E+01	7.557E+01	1.051E+02	1.051E+02	1.051E+02	1.051E+02	1.051E+02	1.051E+02	1.051E+02
6.00E+03	7.712E+01	7.712E+01	7.712E+01	1.062E+02	1.062E+02	1.062E+02	1.062E+02	1.062E+02	1.062E+02	1.062E+02
7.00E+03	7.851E+01	7.851E+01	7.851E+01	1.072E+02	1.072E+02	1.072E+02	1.072E+02	1.072E+02	1.072E+02	1.072E+02
8.00E+03	7.976E+01	7.976E+01	7.976E+01	1.082E+02	1.082E+02	1.082E+02	1.082E+02	1.082E+02	1.082E+02	1.082E+02
9.00E+03	8.089E+01	8.089E+01	8.089E+01	1.091E+02	1.091E+02	1.091E+02	1.091E+02	1.091E+02	1.091E+02	1.091E+02
1.00E+04	8.192E+01	8.192E+01	8.192E+01	1.099E+02	1.099E+02	1.099E+02	1.099E+02	1.099E+02	1.099E+02	1.099E+02

 * Oxygen-16 (5/5) *

target	Phantom			Water			SSNTD			
	Energy (MeV/amu)	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total
1.00E-05	1.619E+02	8.289E+02	9.908E+02	7.829E+01	8.104E+02	8.887E+02	8.887E+02	1.474E+02	7.849E+02	9.323E+02
1.50E-05	1.908E+02	9.531E+02	1.144E+03	9.588E+01	9.340E+02	1.030E+03	1.030E+03	1.740E+02	9.028E+02	1.077E+03
2.00E-05	2.146E+02	1.043E+03	1.257E+03	1.107E+02	1.024E+03	1.135E+03	1.135E+03	1.959E+02	9.883E+02	1.184E+03
3.00E-05	2.531E+02	1.168E+03	1.422E+03	1.356E+02	1.150E+03	1.286E+03	1.286E+03	2.314E+02	1.108E+03	1.339E+03
4.00E-05	2.848E+02	1.254E+03	1.539E+03	1.566E+02	1.237E+03	1.393E+03	1.393E+03	2.606E+02	1.189E+03	1.450E+03
5.00E-05	3.120E+02	1.317E+03	1.629E+03	1.751E+02	1.301E+03	1.476E+03	1.476E+03	2.858E+02	1.249E+03	1.535E+03
6.00E-05	3.363E+02	1.365E+03	1.701E+03	1.918E+02	1.350E+03	1.542E+03	1.542E+03	3.083E+02	1.295E+03	1.603E+03
7.00E-05	3.583E+02	1.402E+03	1.760E+03	2.071E+02	1.389E+03	1.596E+03	1.596E+03	3.286E+02	1.331E+03	1.659E+03
8.00E-05	3.785E+02	1.432E+03	1.811E+03	2.214E+02	1.420E+03	1.642E+03	1.642E+03	3.474E+02	1.360E+03	1.707E+03
9.00E-05	3.973E+02	1.457E+03	1.854E+03	2.349E+02	1.446E+03	1.681E+03	1.681E+03	3.648E+02	1.383E+03	1.748E+03
1.00E-04	4.150E+02	1.477E+03	1.892E+03	2.476E+02	1.467E+03	1.715E+03	1.715E+03	3.812E+02	1.402E+03	1.784E+03
1.50E-04	4.906E+02	1.535E+03	2.025E+03	3.032E+02	1.531E+03	1.834E+03	1.834E+03	4.514E+02	1.459E+03	1.910E+03
2.00E-04	5.527E+02	1.555E+03	2.107E+03	3.501E+02	1.555E+03	1.905E+03	1.905E+03	5.091E+02	1.478E+03	1.987E+03
3.00E-04	6.541E+02	1.547E+03	2.201E+03	4.288E+02	1.555E+03	1.984E+03	1.984E+03	6.036E+02	1.472E+03	2.076E+03
4.00E-04	7.374E+02	1.515E+03	2.252E+03	4.951E+02	1.528E+03	2.023E+03	2.023E+03	6.812E+02	1.443E+03	2.124E+03
5.00E-04	8.094E+02	1.475E+03	2.284E+03	5.536E+02	1.492E+03	2.045E+03	2.045E+03	7.485E+02	1.405E+03	2.153E+03
6.00E-04	8.736E+02	1.432E+03	2.306E+03	6.064E+02	1.452E+03	2.059E+03	2.059E+03	8.084E+02	1.365E+03	2.173E+03
7.00E-04	9.318E+02	1.390E+03	2.322E+03	6.550E+02	1.412E+03	2.067E+03	2.067E+03	8.629E+02	1.325E+03	2.188E+03
8.00E-04	9.855E+02	1.349E+03	2.334E+03	7.002E+02	1.373E+03	2.073E+03	2.073E+03	9.131E+02	1.287E+03	2.200E+03
9.00E-04	1.035E+03	1.310E+03	2.345E+03	7.427E+02	1.336E+03	2.078E+03	2.078E+03	9.599E+02	1.250E+03	2.210E+03
1.00E-03	1.082E+03	1.273E+03	2.358E+03	7.829E+02	1.300E+03	2.083E+03	2.083E+03	1.004E+03	1.215E+03	2.219E+03
1.50E-03	1.284E+03	1.117E+03	2.401E+03	9.588E+02	1.147E+03	2.106E+03	2.106E+03	1.193E+03	1.067E+03	2.260E+03
2.00E-03	1.450E+03	9.988E+02	2.449E+03	1.107E+03	1.029E+03	2.137E+03	2.137E+03	1.349E+03	9.550E+02	2.304E+03
3.00E-03	1.721E+03	8.319E+02	2.553E+03	1.356E+03	8.616E+02	2.218E+03	2.218E+03	1.604E+03	7.962E+02	2.400E+03
4.00E-03	1.945E+03	7.189E+02	2.664E+03	1.566E+03	7.468E+02	2.313E+03	2.313E+03	1.815E+03	6.884E+02	2.504E+03
5.00E-03	2.139E+03	6.365E+02	2.776E+03	1.751E+03	6.627E+02	2.413E+03	2.413E+03	1.998E+03	6.098E+02	2.608E+03
6.00E-03	2.312E+03	5.734E+02	2.886E+03	1.918E+03	5.980E+02	2.516E+03	2.516E+03	2.162E+03	5.495E+02	2.711E+03
7.00E-03	2.470E+03	5.232E+02	2.993E+03	2.071E+03	5.464E+02	2.618E+03	2.618E+03	2.310E+03	5.015E+02	2.812E+03
8.00E-03	2.615E+03	4.822E+02	3.097E+03	2.214E+03	5.041E+02	2.718E+03	2.718E+03	2.448E+03	4.623E+02	2.910E+03
9.00E-03	2.750E+03	4.479E+02	3.198E+03	2.349E+03	4.687E+02	2.817E+03	2.817E+03	2.576E+03	4.295E+02	3.005E+03
1.00E-02	2.877E+03	4.188E+02	3.296E+03	2.476E+03	4.386E+02	2.914E+03	2.914E+03	2.696E+03	4.017E+02	3.098E+03
1.50E-02	3.416E+03	3.201E+02	3.737E+03	3.008E+03	3.361E+02	3.345E+03	3.345E+03	3.209E+03	3.072E+02	3.516E+03
2.00E-02	3.936E+03	2.622E+02	4.198E+03	3.550E+03	2.758E+02	3.826E+03	3.826E+03	3.712E+03	2.517E+02	3.964E+03
3.00E-02	4.896E+03	1.941E+02	5.091E+03	4.529E+03	2.045E+02	4.734E+03	4.734E+03	4.629E+03	1.864E+02	4.816E+03
4.00E-02	5.756E+03	1.567E+02	5.912E+03	5.375E+03	1.654E+02	5.540E+03	5.540E+03	5.436E+03	1.505E+02	5.587E+03
5.00E-02	6.537E+03	1.323E+02	6.669E+03	6.148E+03	1.397E+02	6.288E+03	6.288E+03	6.171E+03	1.271E+02	6.298E+03
6.00E-02	7.243E+03	1.150E+02	7.358E+03	6.854E+03	1.215E+02	6.975E+03	6.975E+03	6.838E+03	1.105E+02	6.948E+03
7.00E-02	7.878E+03	1.020E+02	7.958E+03	7.494E+03	1.078E+02	7.602E+03	7.602E+03	7.439E+03	9.797E+01	7.537E+03
8.00E-02	8.446E+03	9.181E+01	8.538E+03	8.072E+03	9.712E+01	8.169E+03	8.169E+03	7.976E+03	8.822E+01	8.066E+03
9.00E-02	8.950E+03	8.364E+01	9.033E+03	8.591E+03	8.850E+01	8.680E+03	8.680E+03	8.459E+03	8.038E+01	8.539E+03

target	Phantom			Water			SSNTD		
	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric (MeV/(g/cm ²))	Nuclear (MeV/(g/cm ²))	Total	Electric	Nuclear (MeV/(g/cm ²))	Total
1.00E-01	9.394E+03	7.691E+01	9.471E+03	9.055E+03	8.141E+01	9.136E+03	8.885E+03	7.391E+01	8.959E+03
1.50E-01	1.089E+04	5.546E+01	1.094E+04	1.069E+04	5.877E+01	1.075E+04	1.034E+04	5.332E+01	1.040E+04
2.00E-01	1.155E+04	4.383E+01	1.160E+04	1.151E+04	4.648E+01	1.156E+04	1.102E+04	4.214E+01	1.106E+04
3.00E-01	1.178E+04	3.132E+01	1.181E+04	1.195E+04	3.323E+01	1.199E+04	1.131E+04	3.011E+01	1.134E+04
4.00E-01	1.154E+04	2.460E+01	1.158E+04	1.178E+04	2.612E+01	1.181E+04	1.111E+04	2.366E+01	1.113E+04
5.00E-01	1.134E+04	2.037E+01	1.136E+04	1.159E+04	2.164E+01	1.161E+04	1.094E+04	1.959E+01	1.096E+04
6.00E-01	1.113E+04	1.745E+01	1.115E+04	1.136E+04	1.854E+01	1.138E+04	1.075E+04	1.678E+01	1.077E+04
7.00E-01	1.088E+04	1.530E+01	1.090E+04	1.108E+04	1.623E+01	1.110E+04	1.052E+04	1.471E+01	1.053E+04
8.00E-01	1.059E+04	1.365E+01	1.060E+04	1.076E+04	1.450E+01	1.078E+04	1.024E+04	1.313E+01	1.025E+04
9.00E-01	1.031E+04	1.233E+01	1.032E+04	1.046E+04	1.311E+01	1.047E+04	9.969E+03	1.186E+01	9.971E+03
1.00E+00	1.004E+04	1.126E+01	1.005E+04	1.017E+04	1.198E+01	1.018E+04	9.711E+03	1.083E+01	9.721E+03
1.50E+00	8.794E+03	7.928E+00	8.802E+03	8.889E+03	8.434E+00	8.897E+03	8.524E+03	7.627E+00	8.531E+03
2.00E+00	7.808E+03	6.169E+00	7.814E+03	7.893E+03	6.563E+00	7.899E+03	7.577E+03	5.935E+00	7.583E+03
3.00E+00	6.394E+03	4.322E+00	6.399E+03	6.476E+03	4.602E+00	6.480E+03	6.216E+03	4.159E+00	6.220E+03
4.00E+00	5.419E+03	3.353E+00	5.423E+03	5.499E+03	3.571E+00	5.502E+03	5.273E+03	3.227E+00	5.276E+03
5.00E+00	4.706E+03	2.752E+00	4.709E+03	4.783E+03	2.931E+00	4.786E+03	4.583E+03	2.648E+00	4.585E+03
6.00E+00	4.162E+03	2.340E+00	4.165E+03	4.236E+03	2.493E+00	4.238E+03	4.053E+03	2.252E+00	4.058E+03
7.00E+00	3.734E+03	2.040E+00	3.736E+03	3.804E+03	2.174E+00	3.806E+03	3.640E+03	1.963E+00	3.642E+03
8.00E+00	3.388E+03	1.811E+00	3.390E+03	3.454E+03	1.930E+00	3.456E+03	3.303E+03	1.743E+00	3.305E+03
9.00E+00	3.102E+03	1.630E+00	3.104E+03	3.166E+03	1.737E+00	3.167E+03	3.026E+03	1.569E+00	3.027E+03
1.00E+01	2.862E+03	1.483E+00	2.864E+03	2.923E+03	1.581E+00	2.925E+03	2.792E+03	1.428E+00	2.794E+03
1.50E+01	2.053E+03		2.053E+03	2.102E+03		2.102E+03	2.008E+03		2.008E+03
2.00E+01	1.629E+03		1.629E+03	1.668E+03		1.668E+03	1.594E+03		1.594E+03
3.00E+01	1.175E+03		1.175E+03	1.204E+03		1.204E+03	1.150E+03		1.150E+03
4.00E+01	9.329E+02		9.329E+02	9.559E+02		9.559E+02	9.135E+02		9.135E+02
5.00E+01	7.813E+02		7.813E+02	8.006E+02		8.006E+02	7.652E+02		7.652E+02
6.00E+01	6.769E+02		6.769E+02	6.938E+02		6.938E+02	6.632E+02		6.632E+02
7.00E+01	6.006E+02		6.006E+02	6.156E+02		6.156E+02	5.884E+02		5.884E+02
8.00E+01	5.421E+02		5.421E+02	5.557E+02		5.557E+02	5.312E+02		5.312E+02
9.00E+01	4.959E+02		4.959E+02	5.084E+02		5.084E+02	4.860E+02		4.860E+02
1.00E+02	4.584E+02		4.584E+02	4.700E+02		4.700E+02	4.493E+02		4.493E+02
1.50E+02	3.428E+02		3.428E+02	3.515E+02		3.515E+02	3.361E+02		3.361E+02
2.00E+02	2.831E+02		2.831E+02	2.903E+02		2.903E+02	2.776E+02		2.776E+02
3.00E+02	2.221E+02		2.221E+02	2.278E+02		2.278E+02	2.178E+02		2.178E+02
4.00E+02	1.915E+02		1.915E+02	1.964E+02		1.964E+02	1.878E+02		1.878E+02
5.00E+02	1.734E+02		1.734E+02	1.778E+02		1.778E+02	1.701E+02		1.701E+02
6.00E+02	1.616E+02		1.616E+02	1.658E+02		1.658E+02	1.585E+02		1.585E+02
7.00E+02	1.535E+02		1.535E+02	1.574E+02		1.574E+02	1.506E+02		1.506E+02
8.00E+02	1.476E+02		1.476E+02	1.515E+02		1.515E+02	1.449E+02		1.449E+02
9.00E+02	1.421E+02		1.421E+02	1.464E+02		1.464E+02	1.391E+02		1.391E+02
1.00E+03	1.376E+02		1.376E+02	1.424E+02		1.424E+02	1.345E+02		1.345E+02
1.50E+03	1.254E+02		1.254E+02	1.317E+02		1.317E+02	1.216E+02		1.216E+02
2.00E+03	1.204E+02		1.204E+02	1.277E+02		1.277E+02	1.162E+02		1.162E+02
3.00E+03	1.171E+02		1.171E+02	1.256E+02		1.256E+02	1.123E+02		1.123E+02
4.00E+03	1.165E+02		1.165E+02	1.259E+02		1.259E+02	1.115E+02		1.115E+02
5.00E+03	1.169E+02		1.169E+02	1.269E+02		1.269E+02	1.115E+02		1.115E+02
6.00E+03	1.175E+02		1.175E+02	1.280E+02		1.280E+02	1.120E+02		1.120E+02
7.00E+03	1.183E+02		1.183E+02	1.291E+02		1.291E+02	1.126E+02		1.126E+02
8.00E+03	1.190E+02		1.190E+02	1.301E+02		1.301E+02	1.132E+02		1.132E+02
9.00E+03	1.198E+02		1.198E+02	1.311E+02		1.311E+02	1.139E+02		1.139E+02
1.00E+04	1.206E+02		1.206E+02	1.321E+02		1.321E+02	1.145E+02		1.145E+02

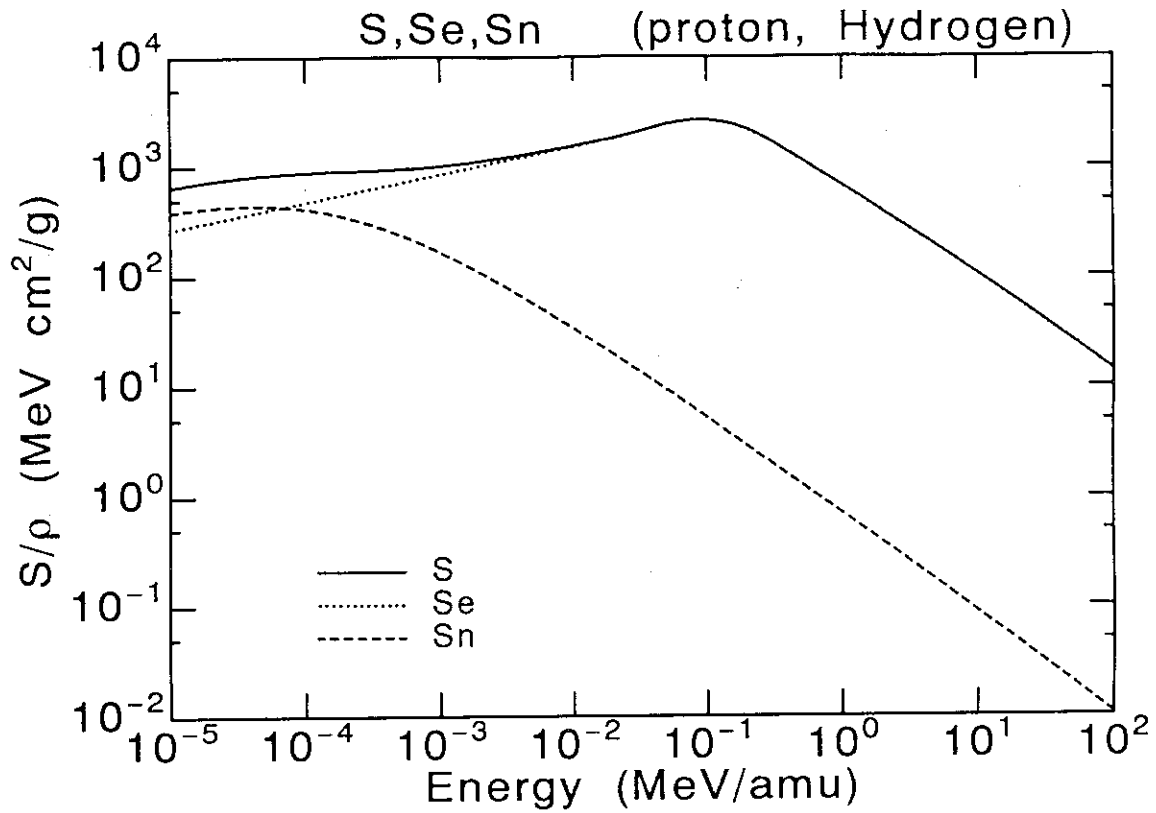


Fig. 1 Energy dependence of S, S_e and S_n((proton, Hydrogen)

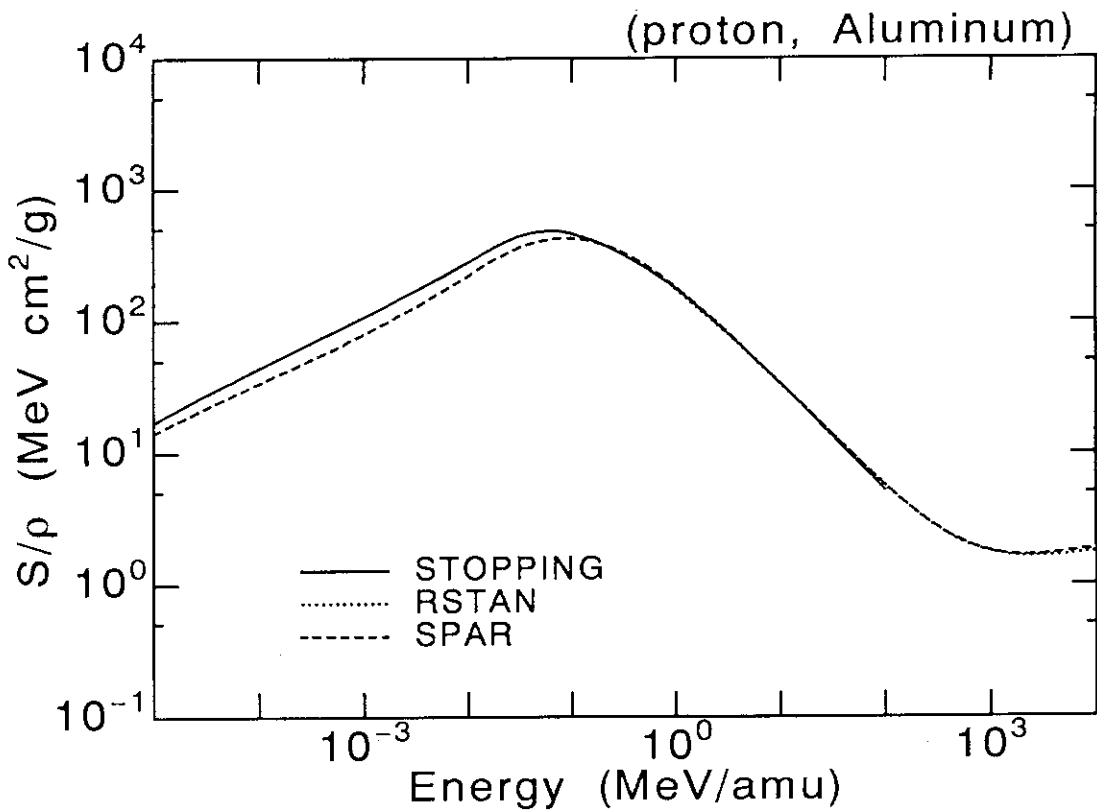


Fig. 2 Comparison of calculation between STOPPING and SPAR (proton, Aluminum)

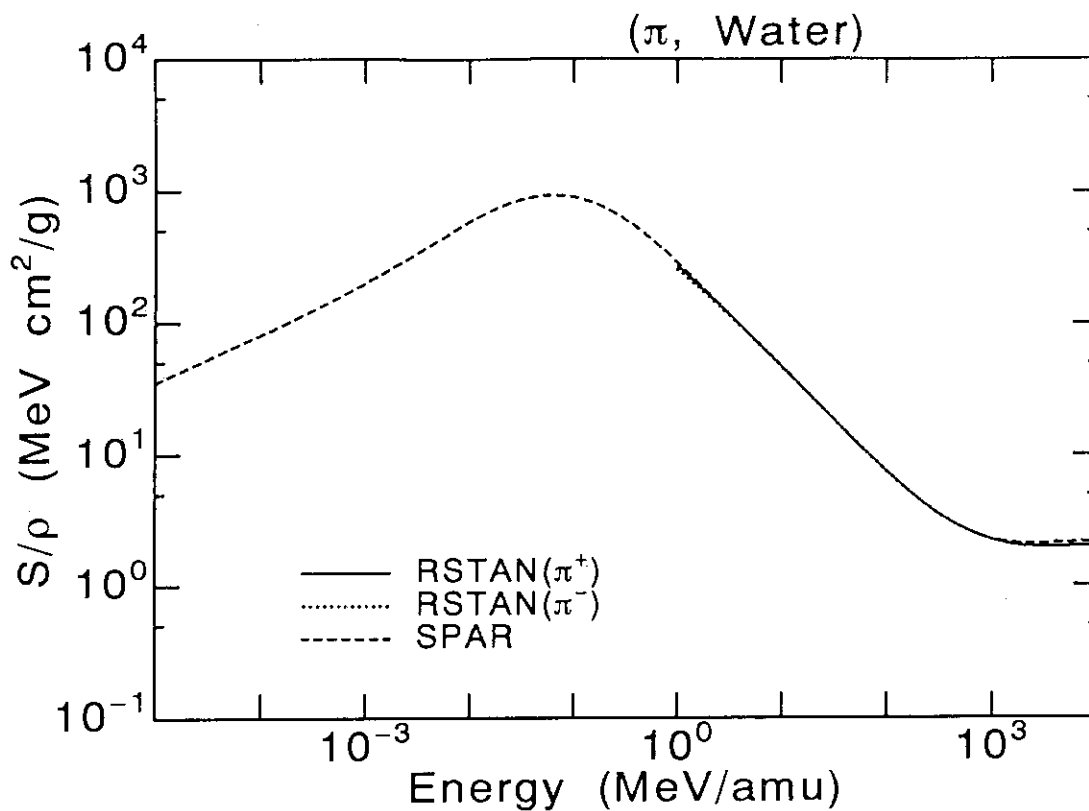


Fig. 3 Comparison of calculation between RSTAN and SPAR (π , Water)

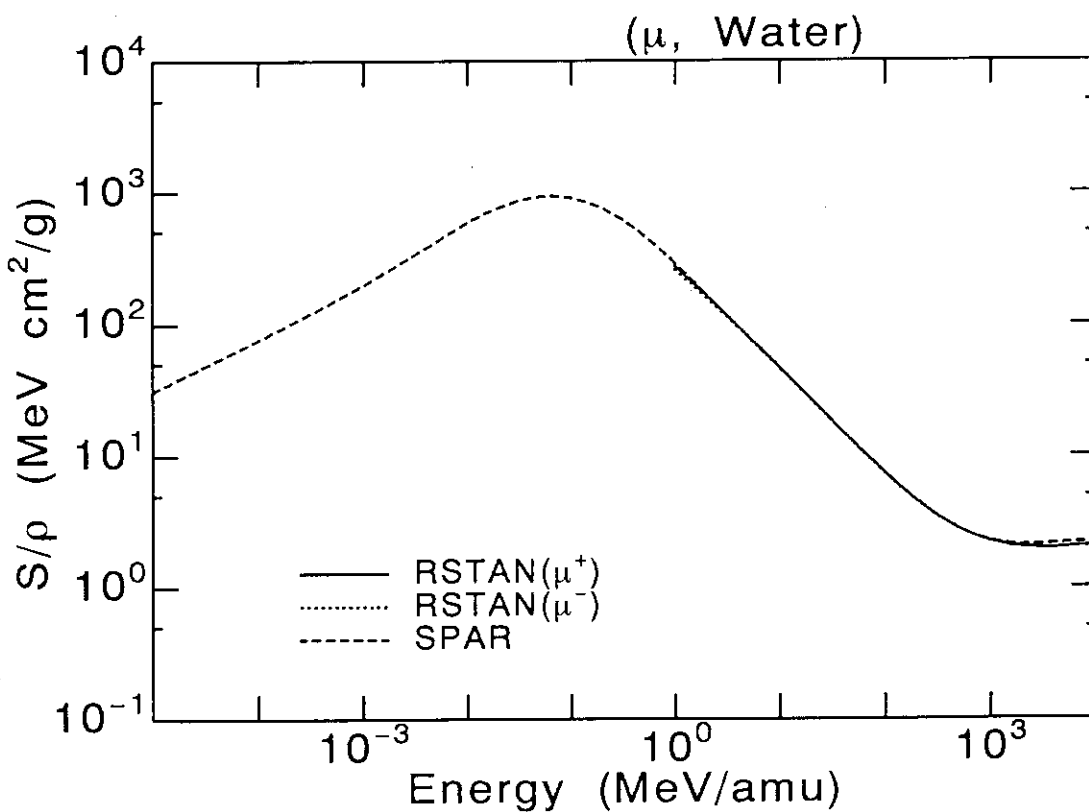


Fig. 4 Comparison of calculation between RSTAN and SPAR (μ , Water)

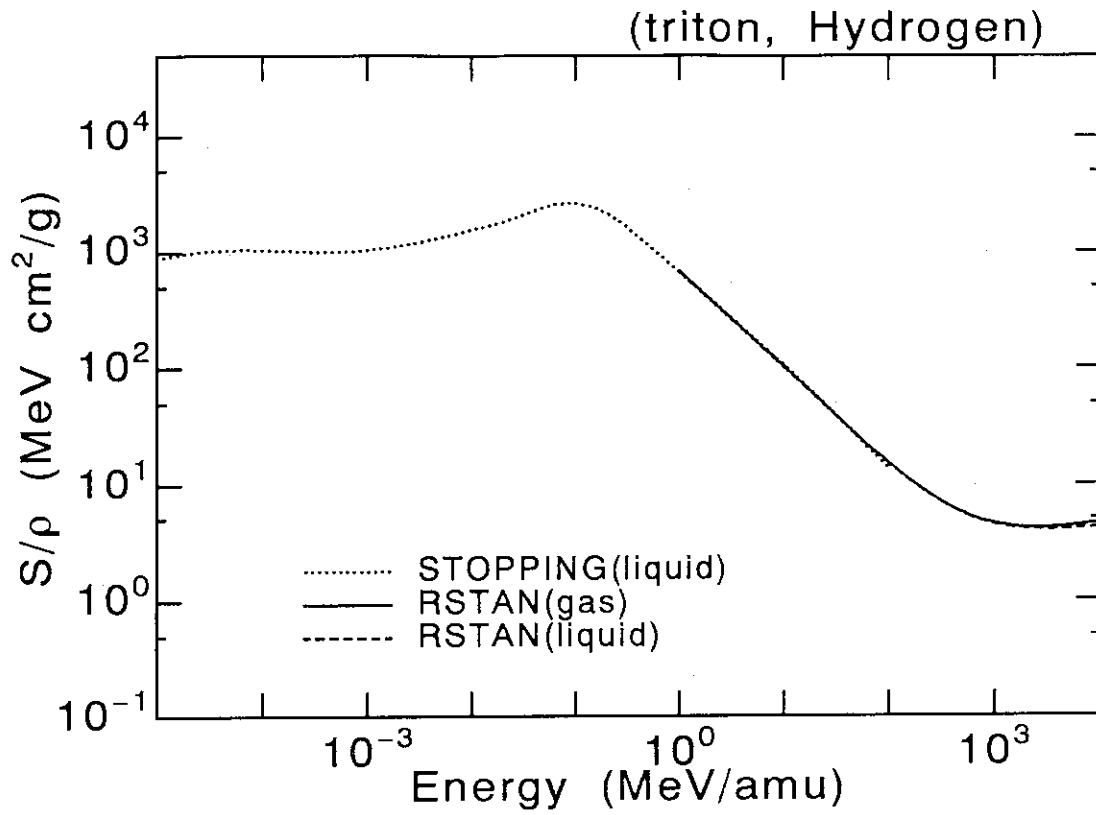
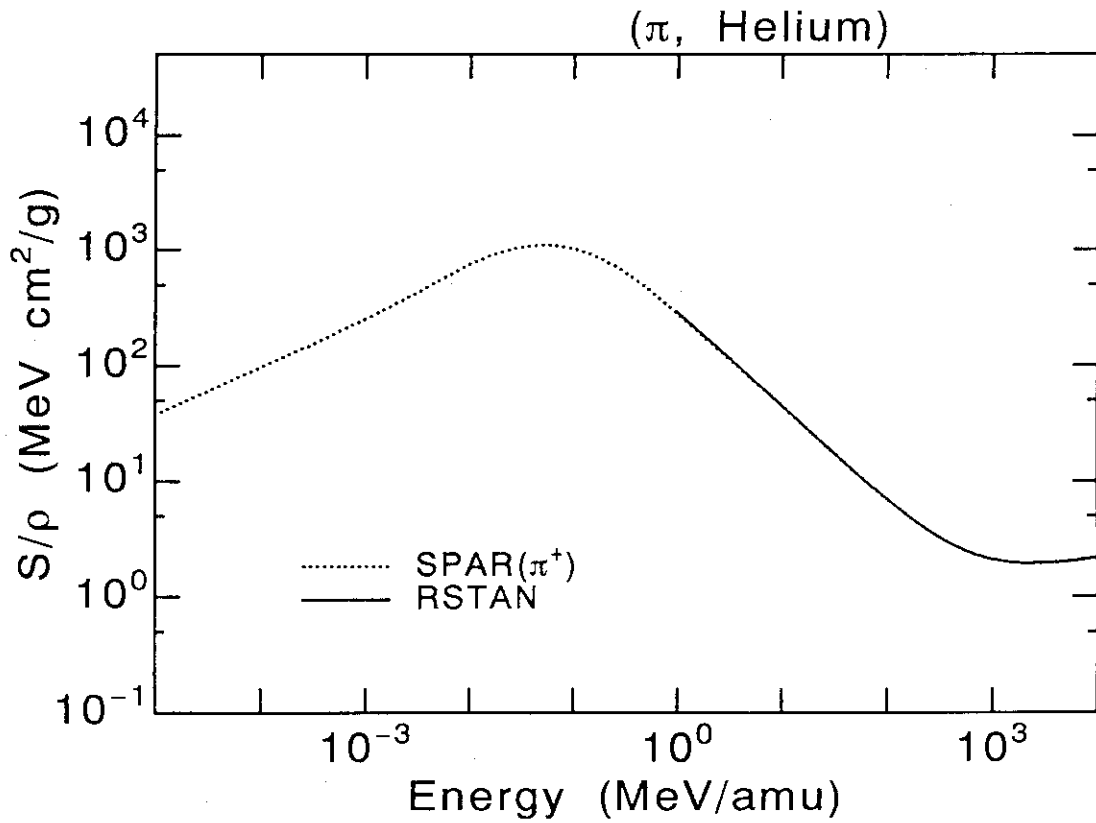
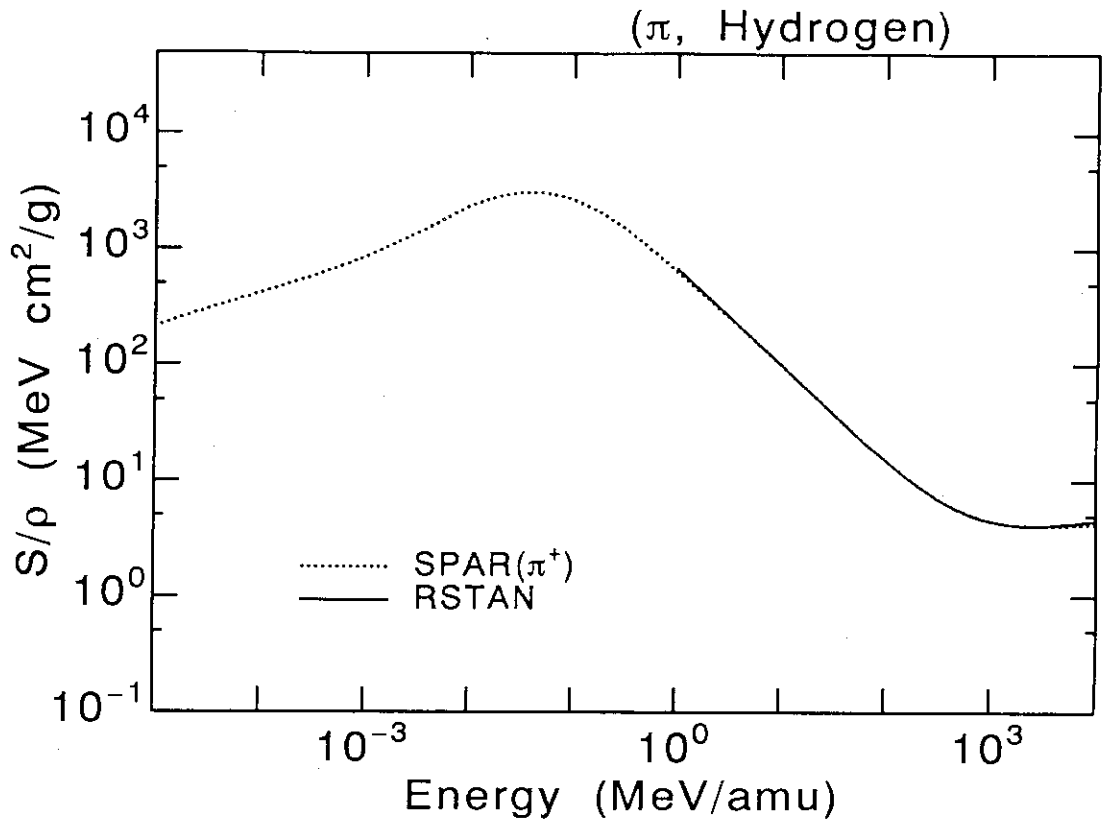
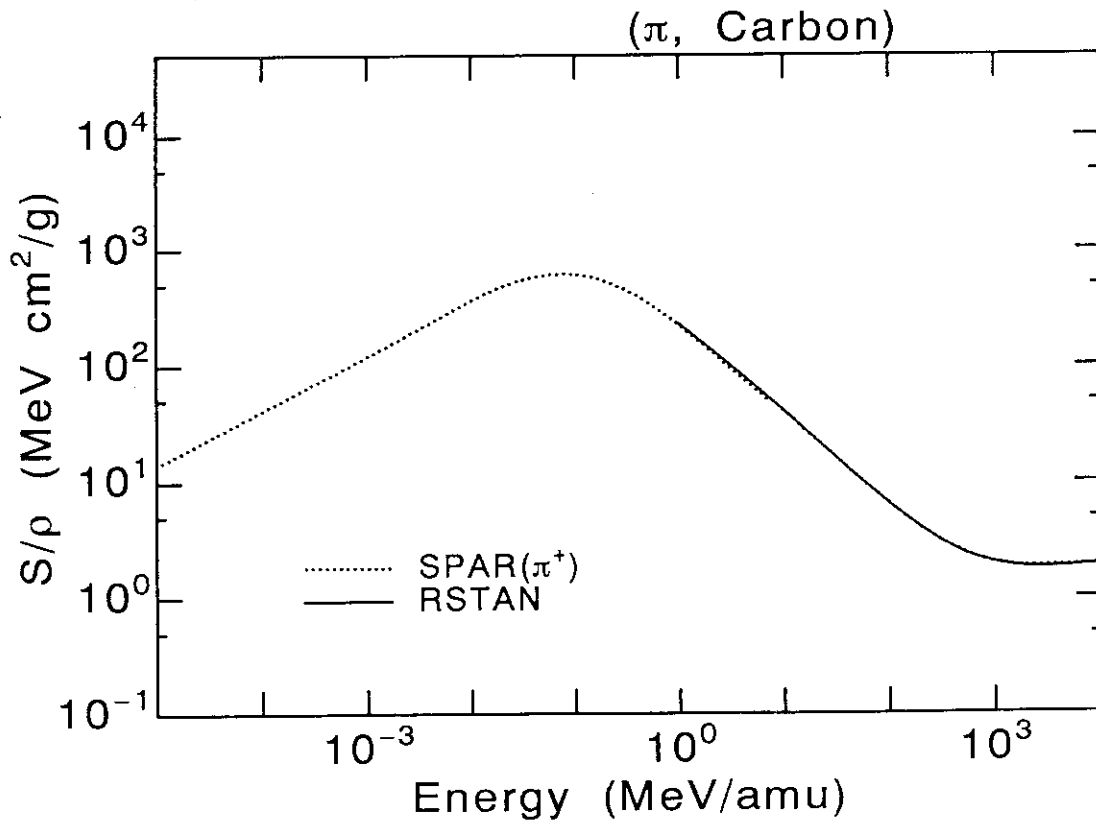
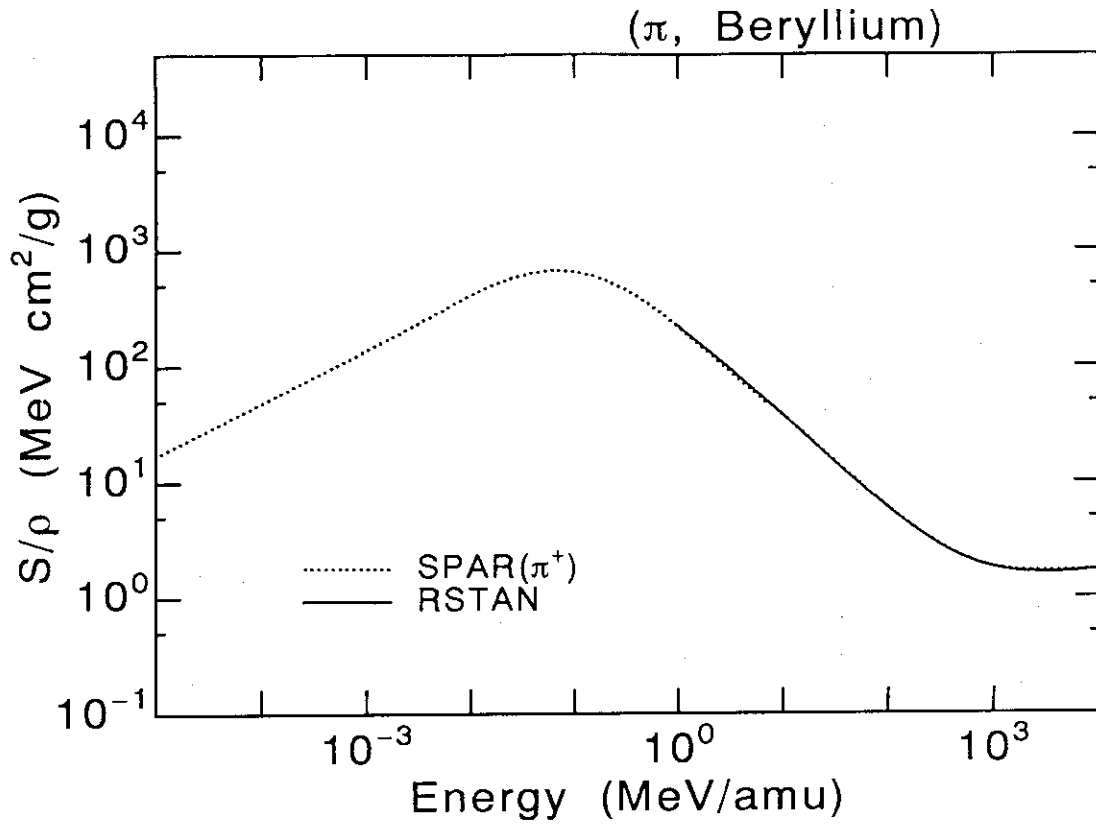
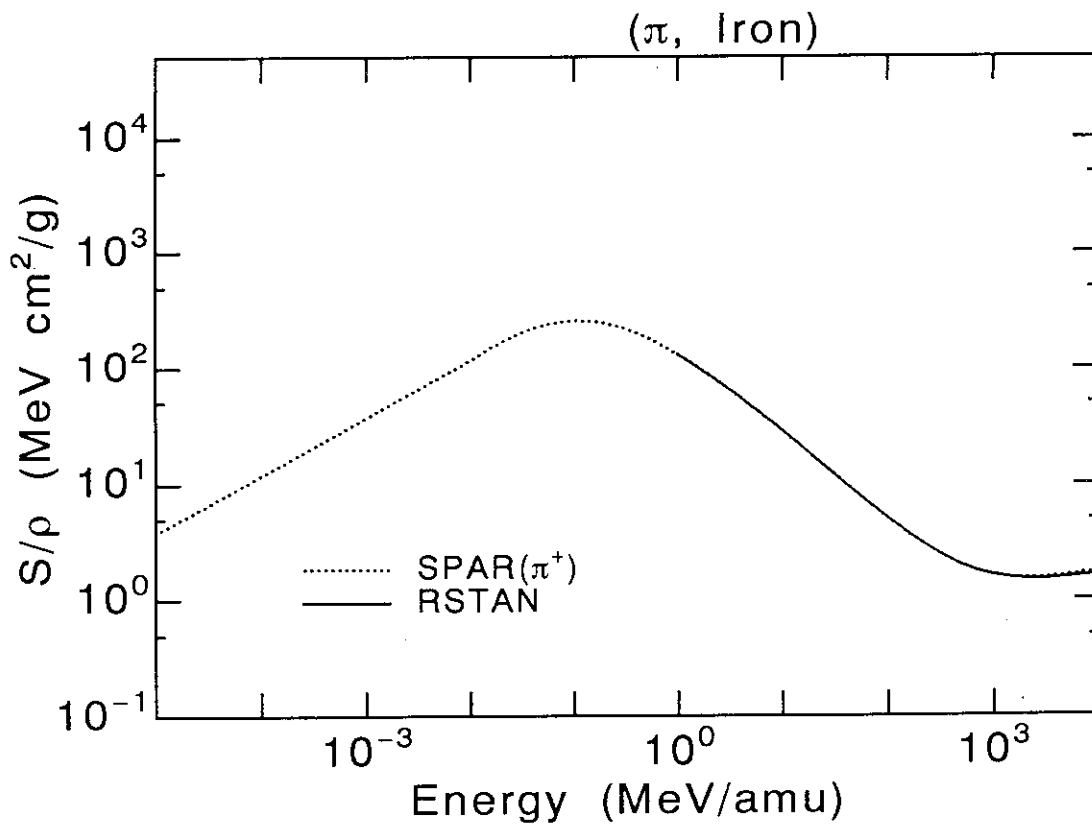
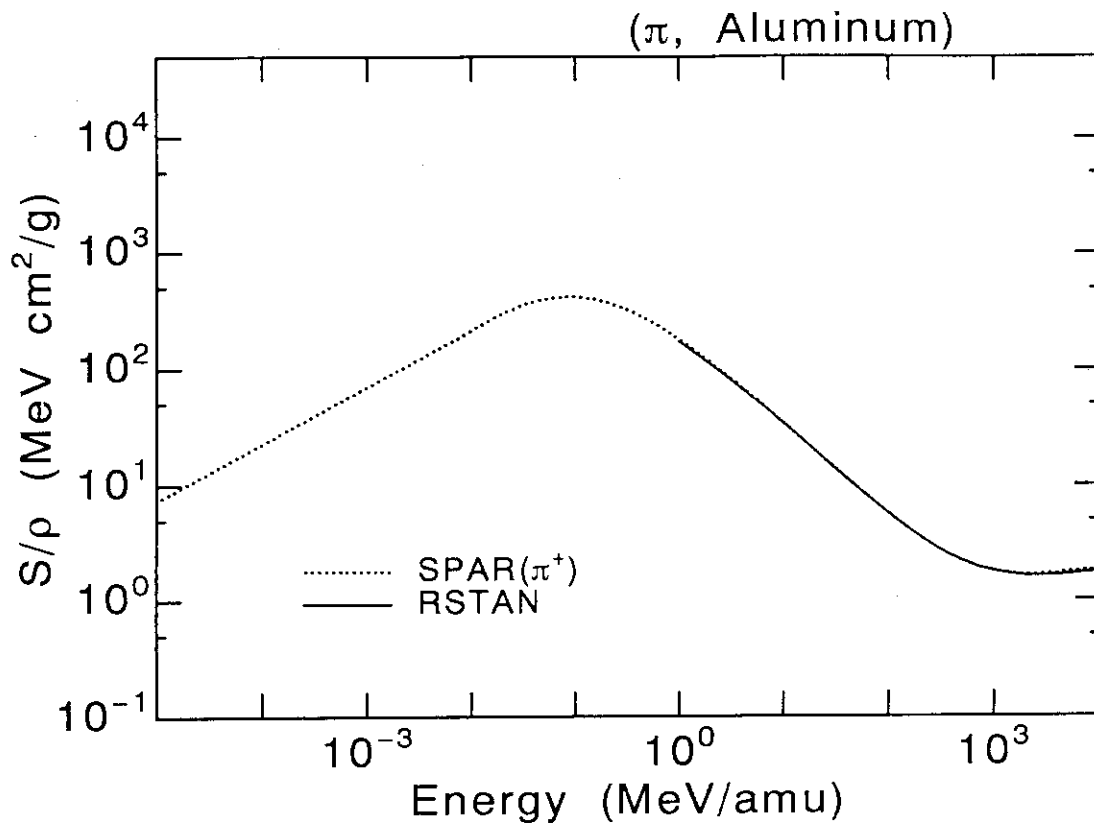


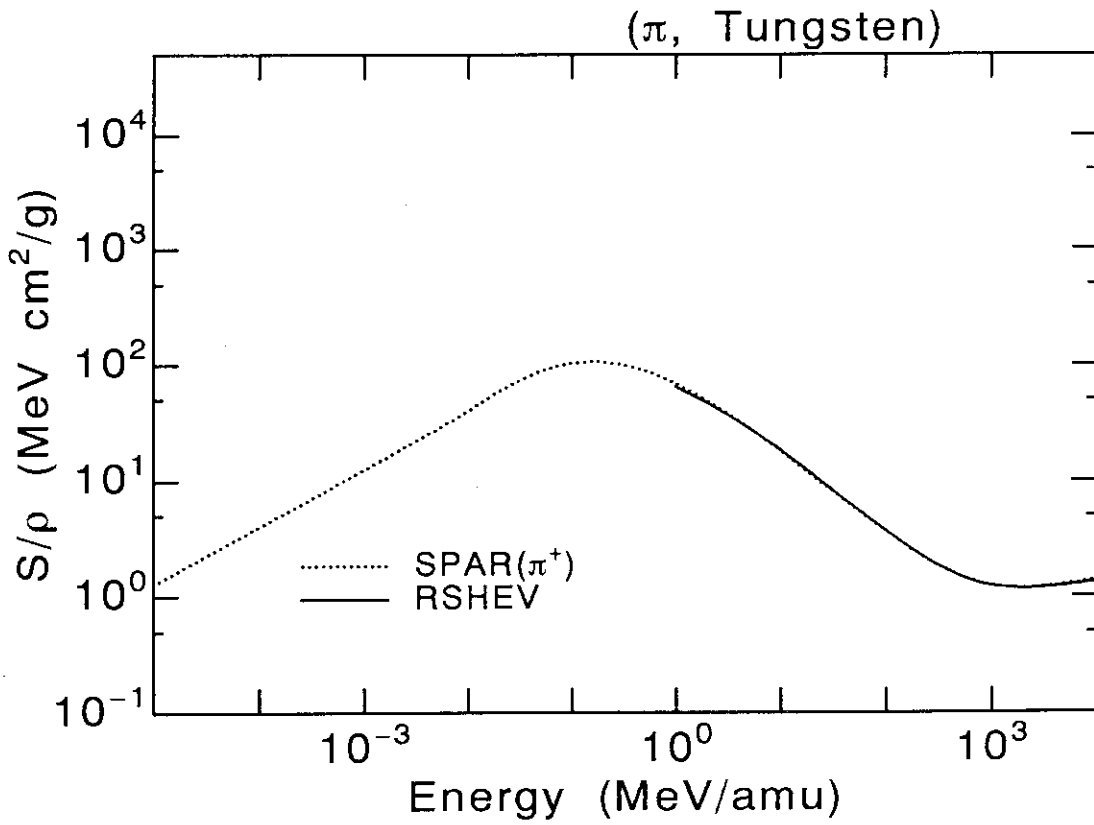
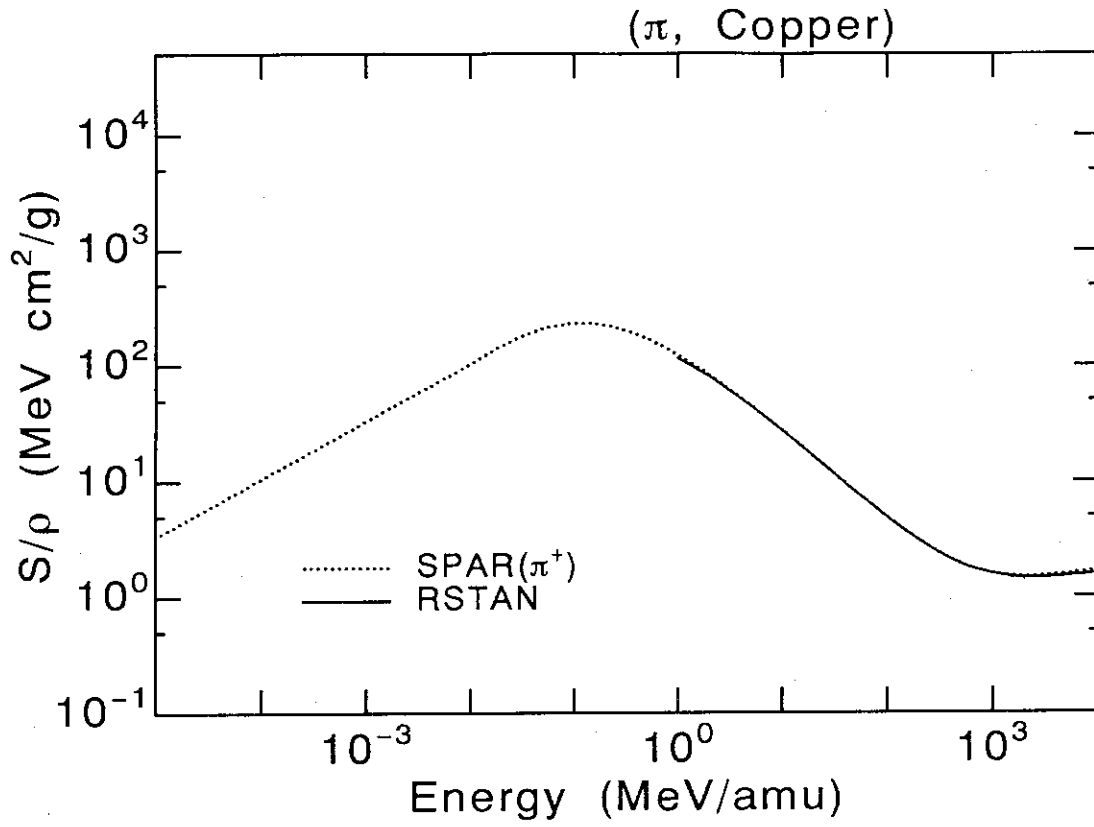
Fig. 5 Comparison of calculation between liquid matter and gaseous matter (triton, Hydrogen)

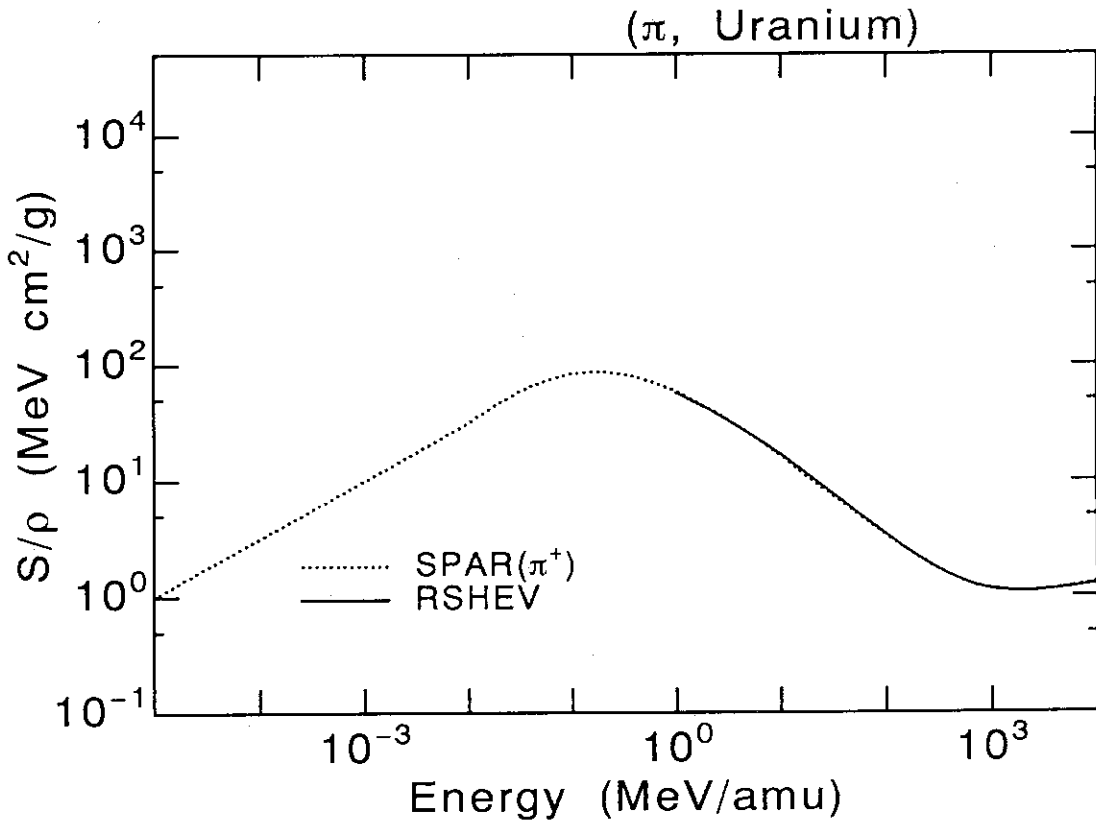
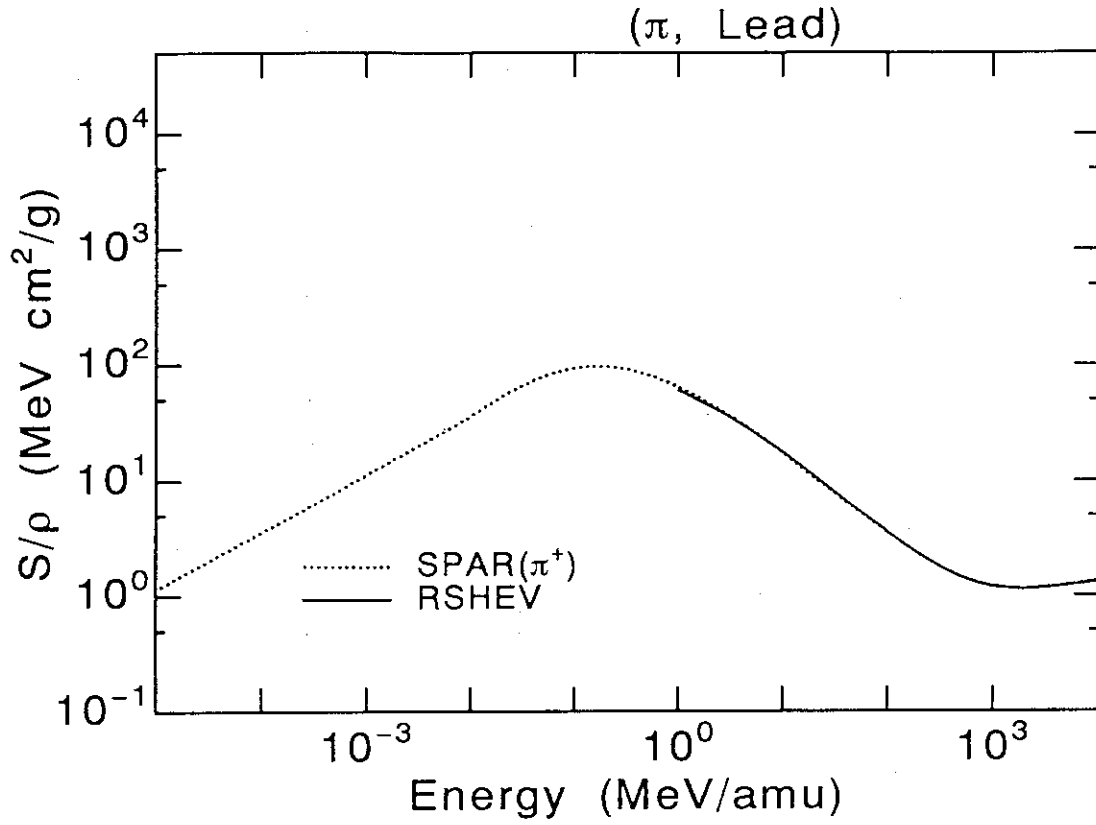
Fig. 6 Figures of total stopping power S/ρ

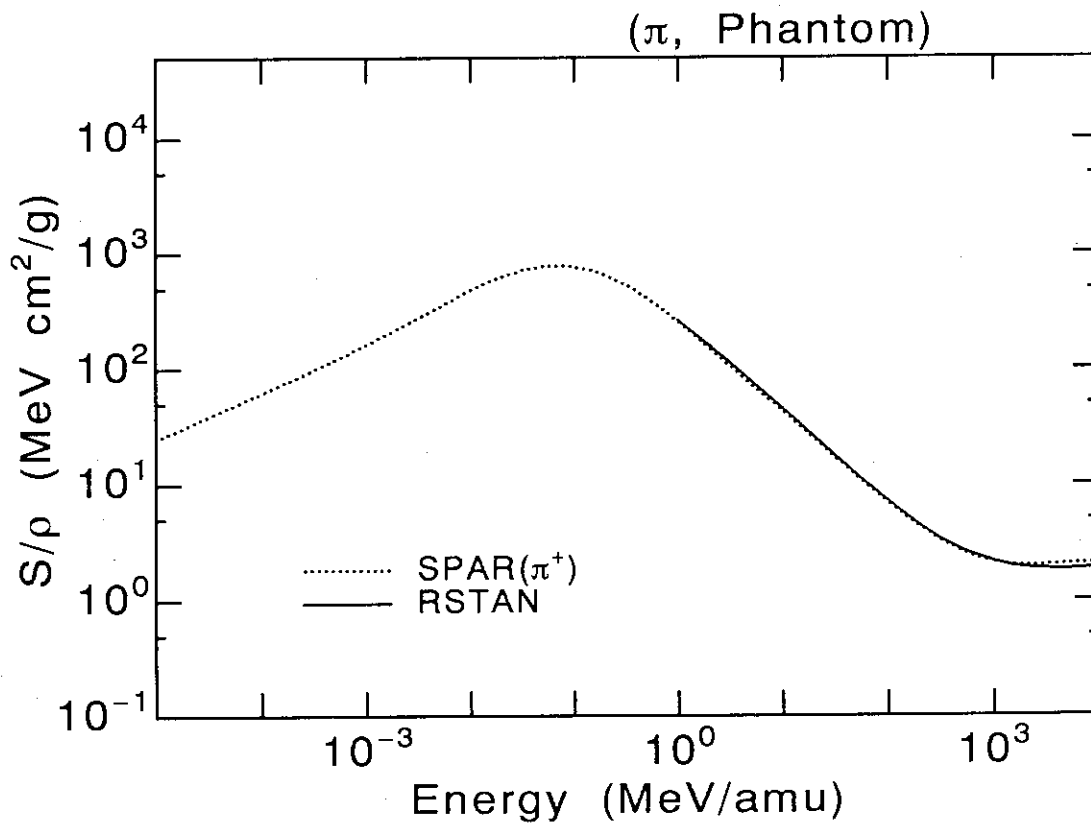
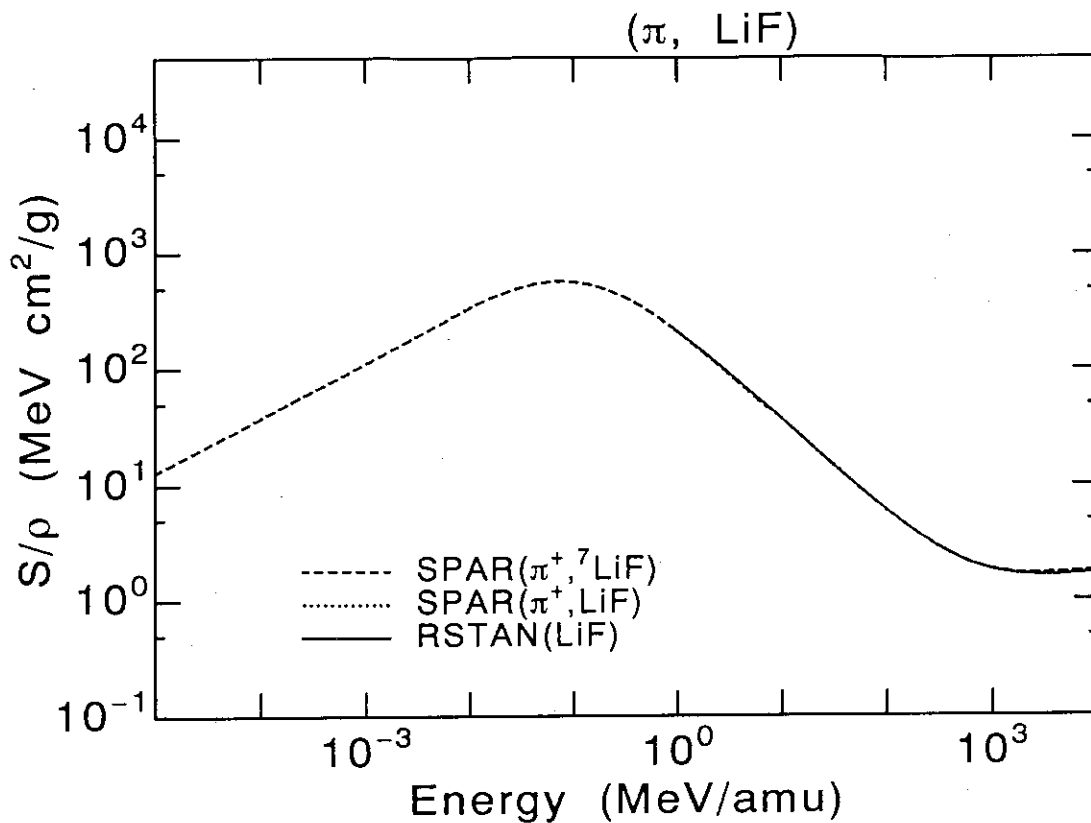


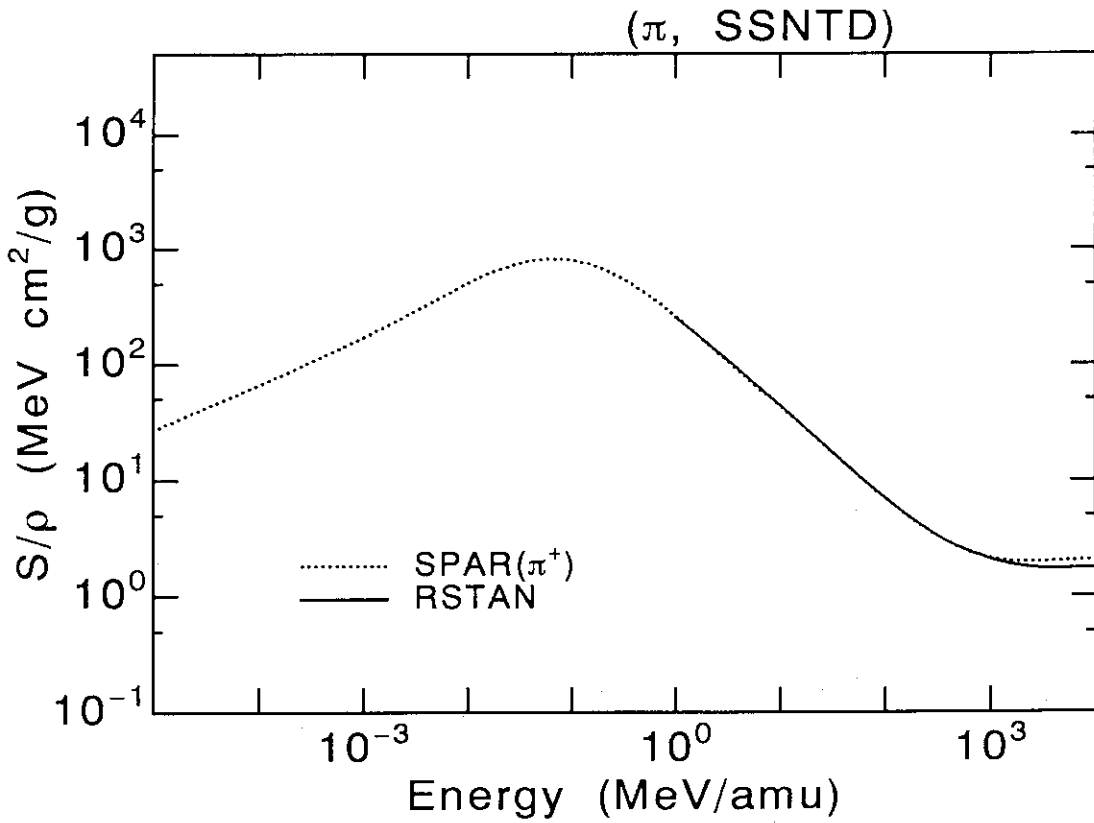
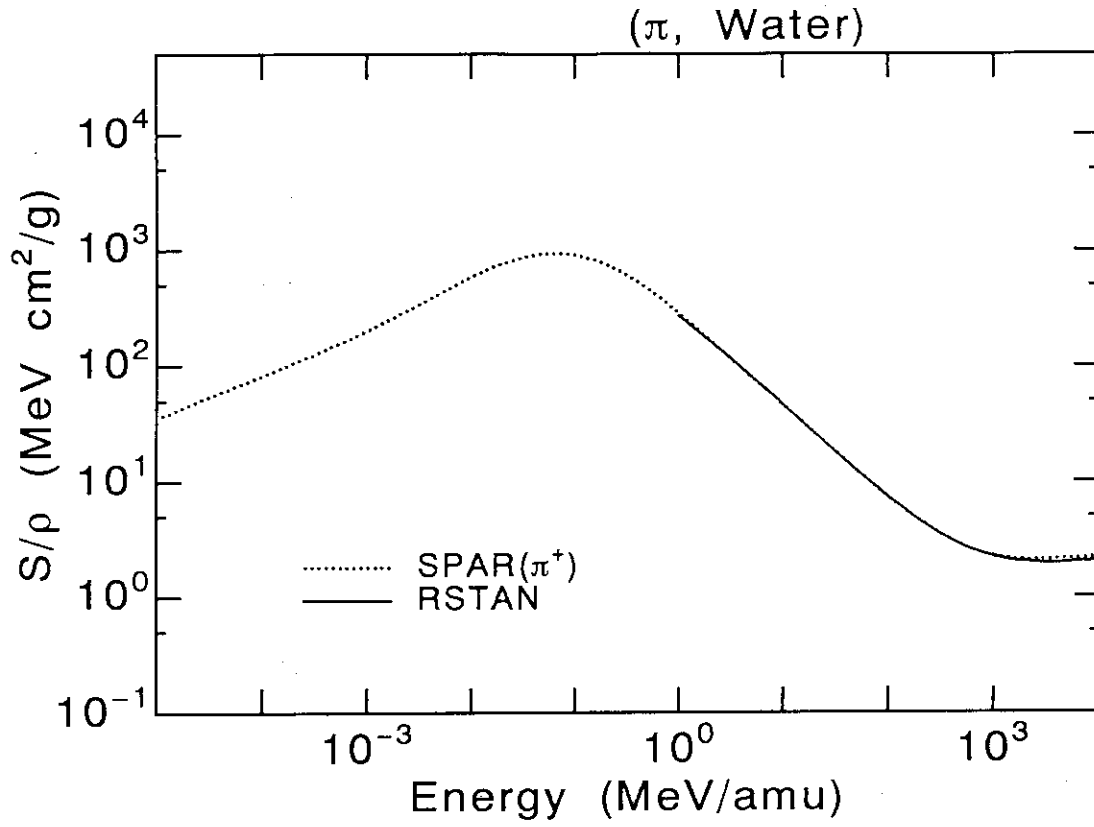


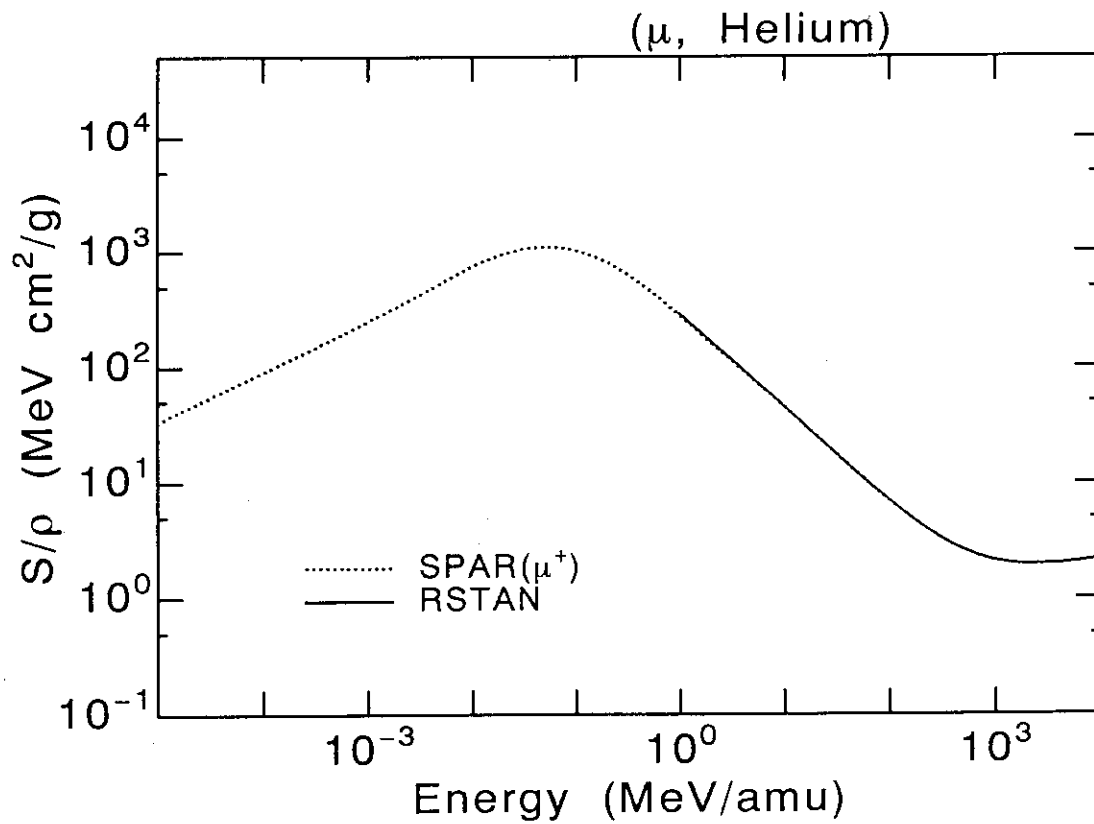
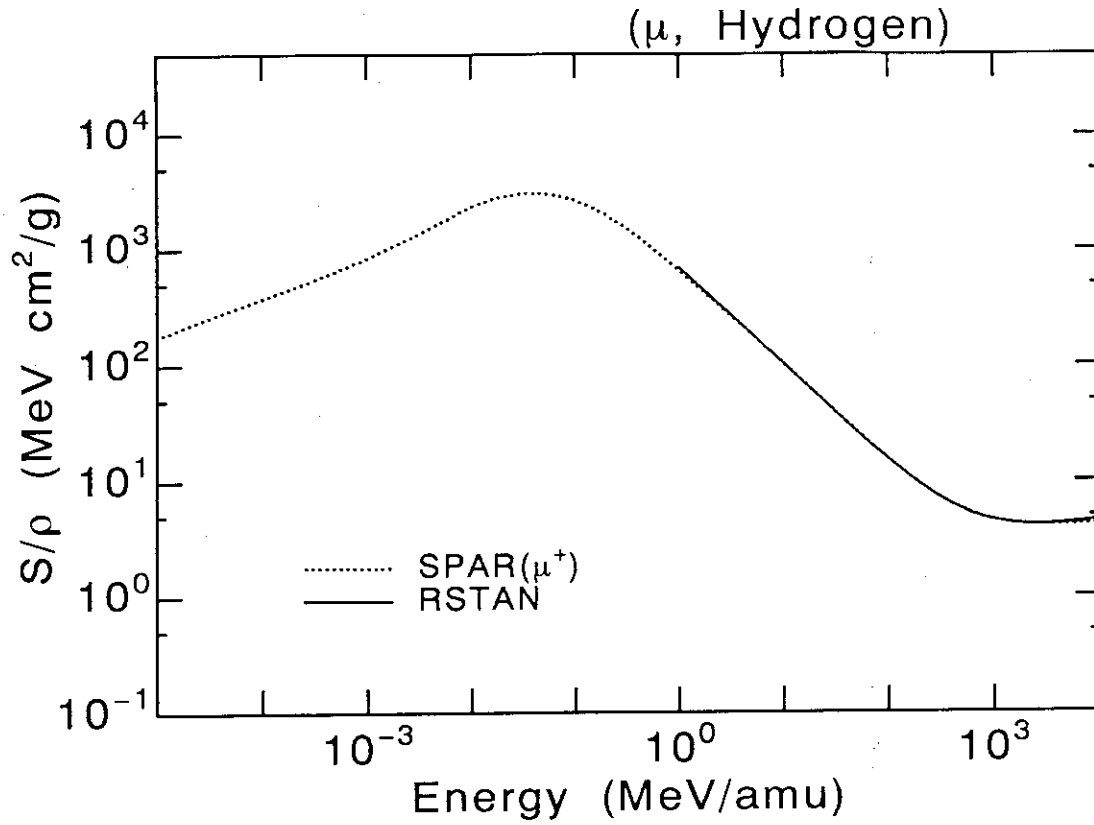


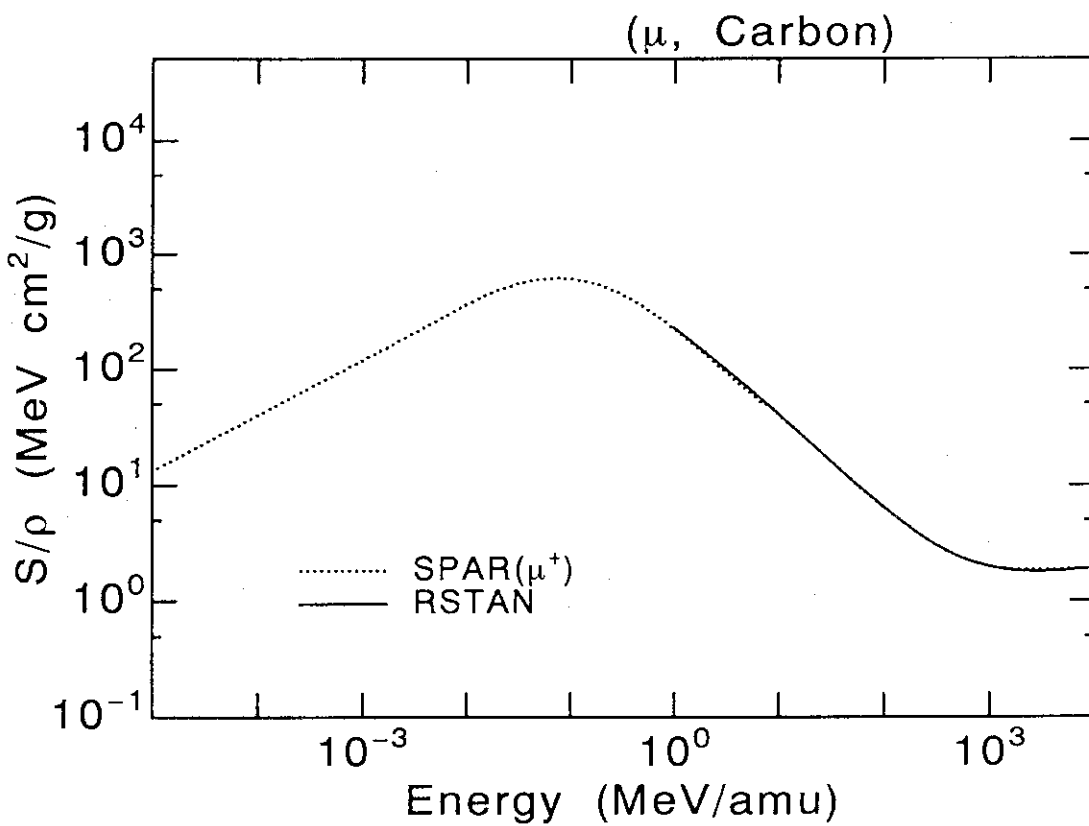
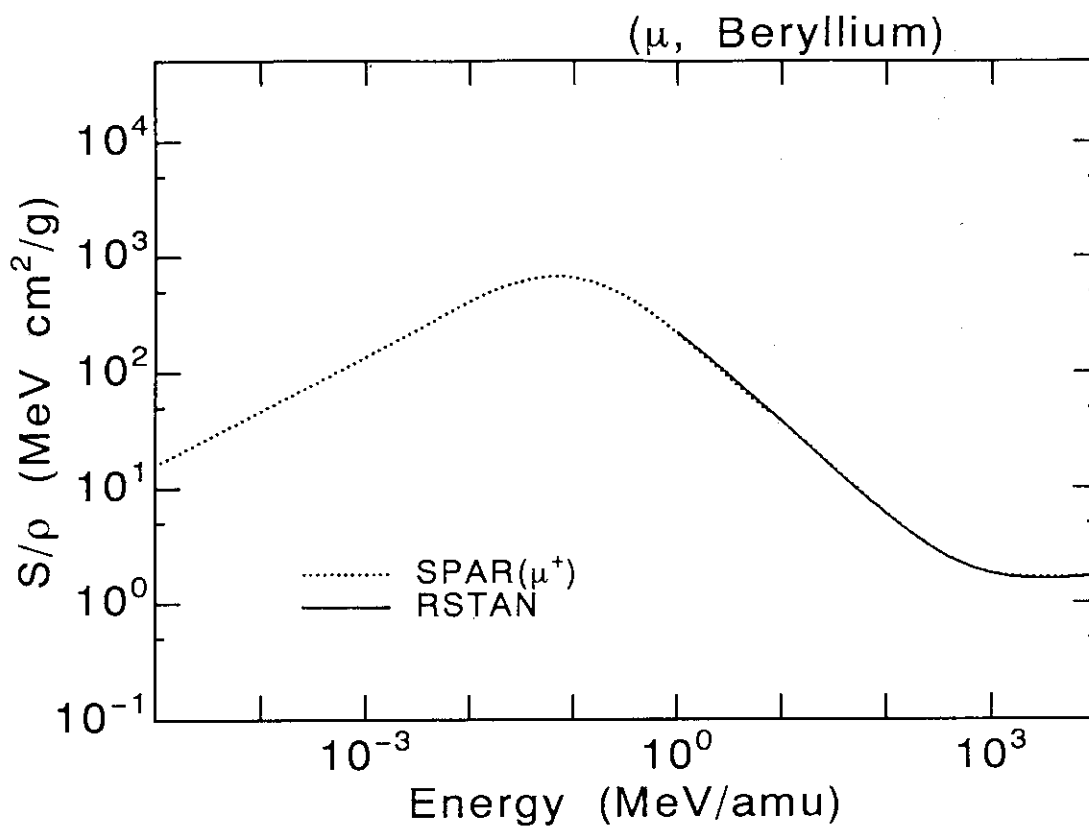


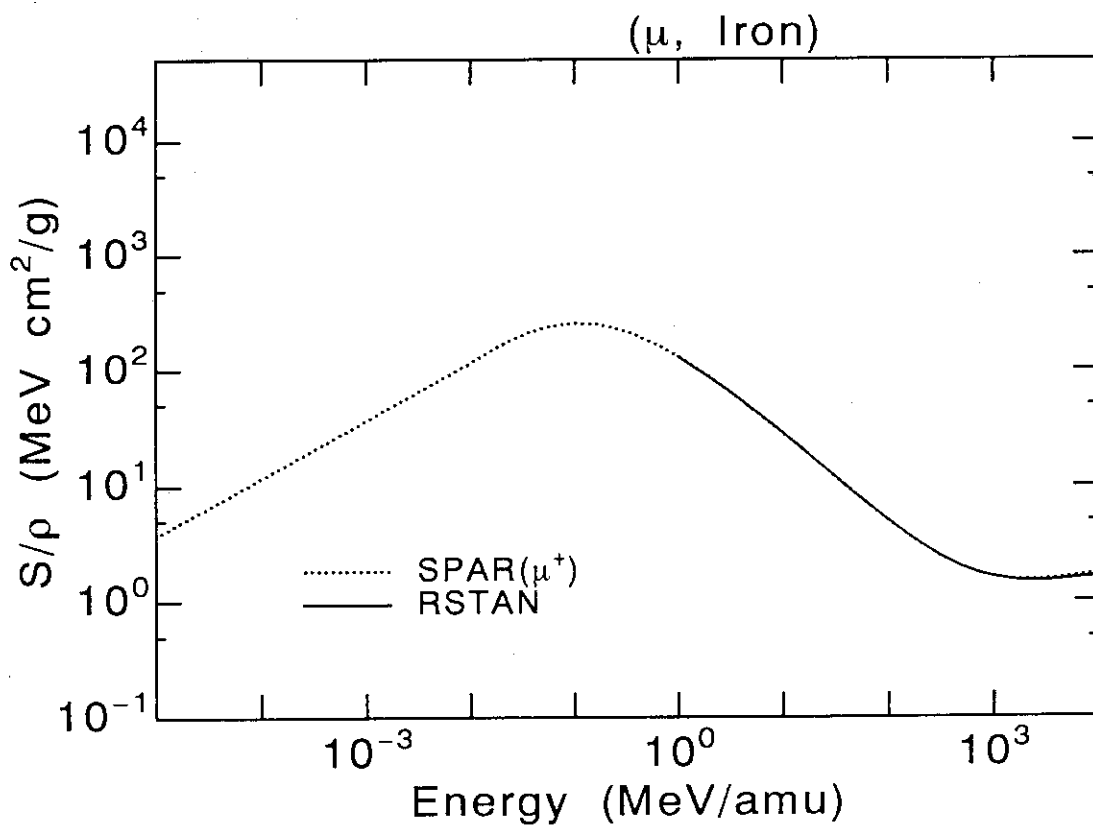
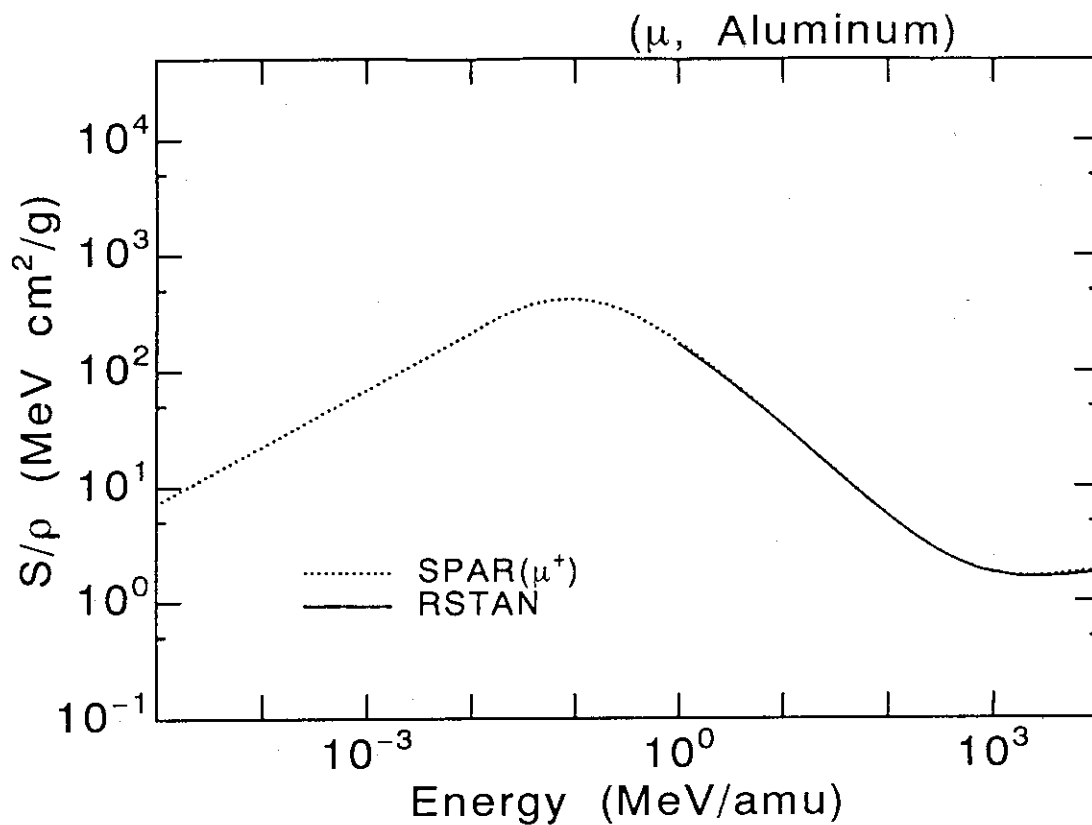


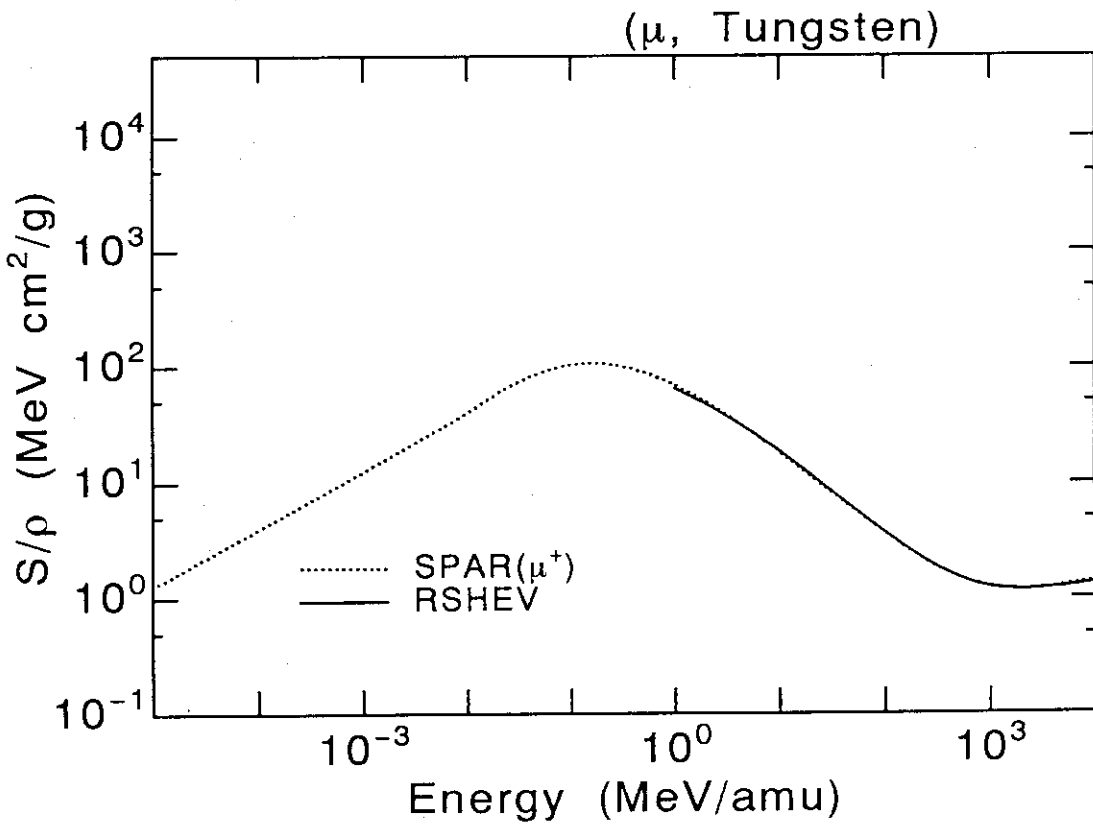
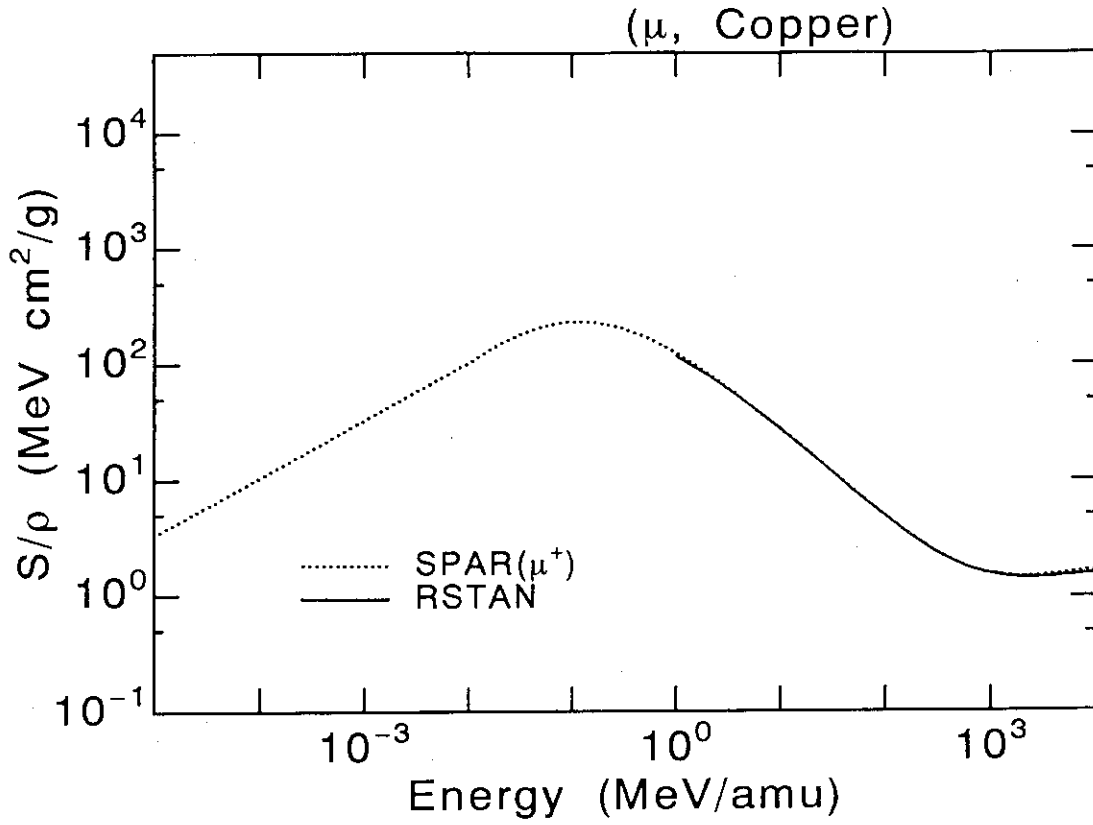


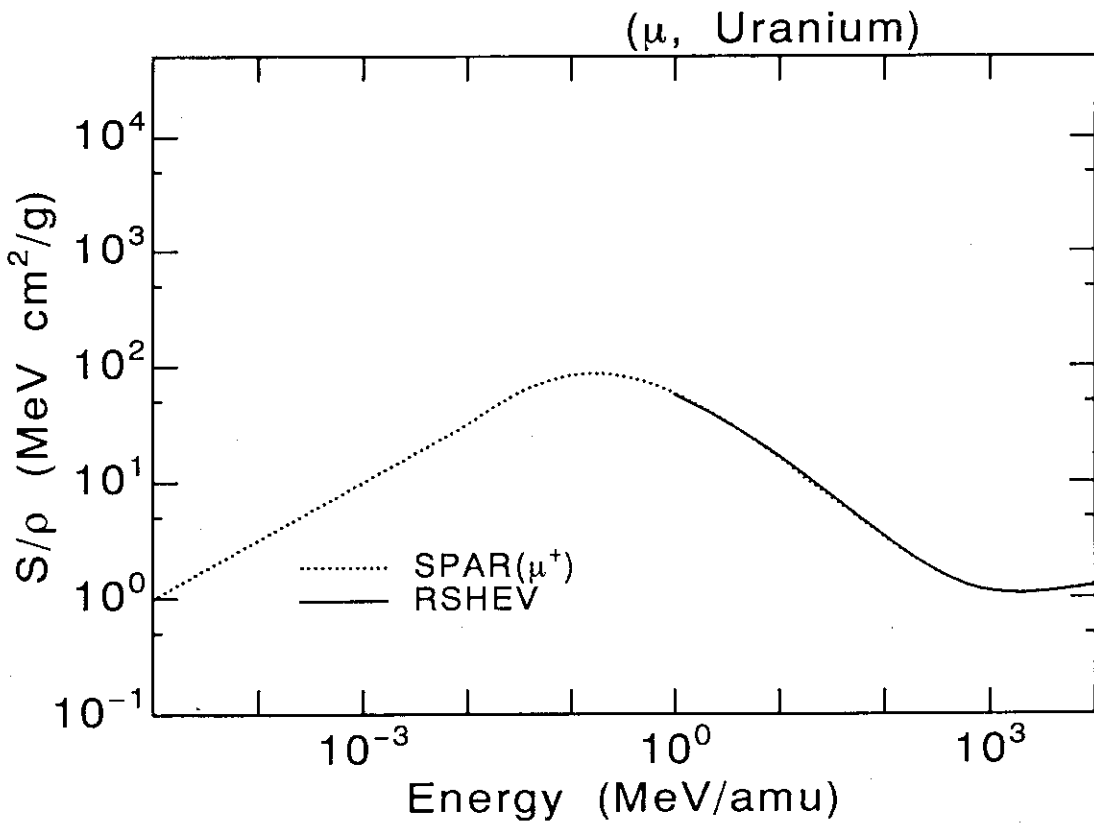
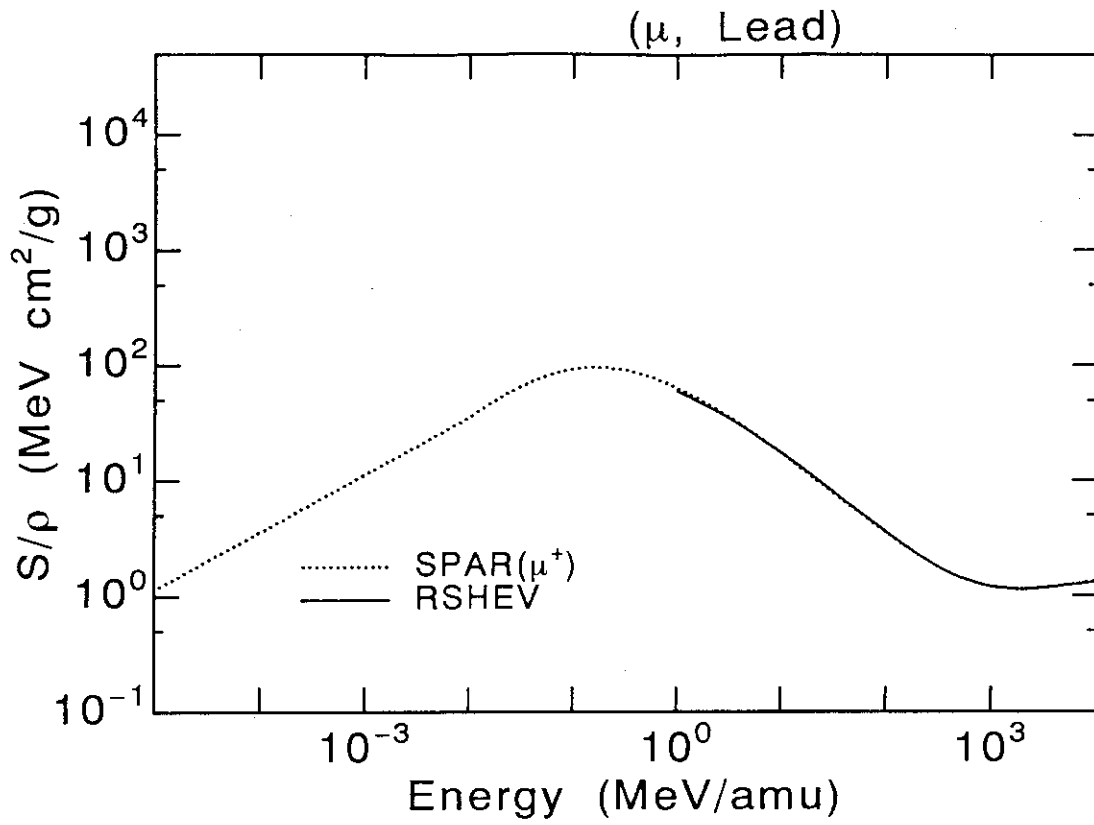


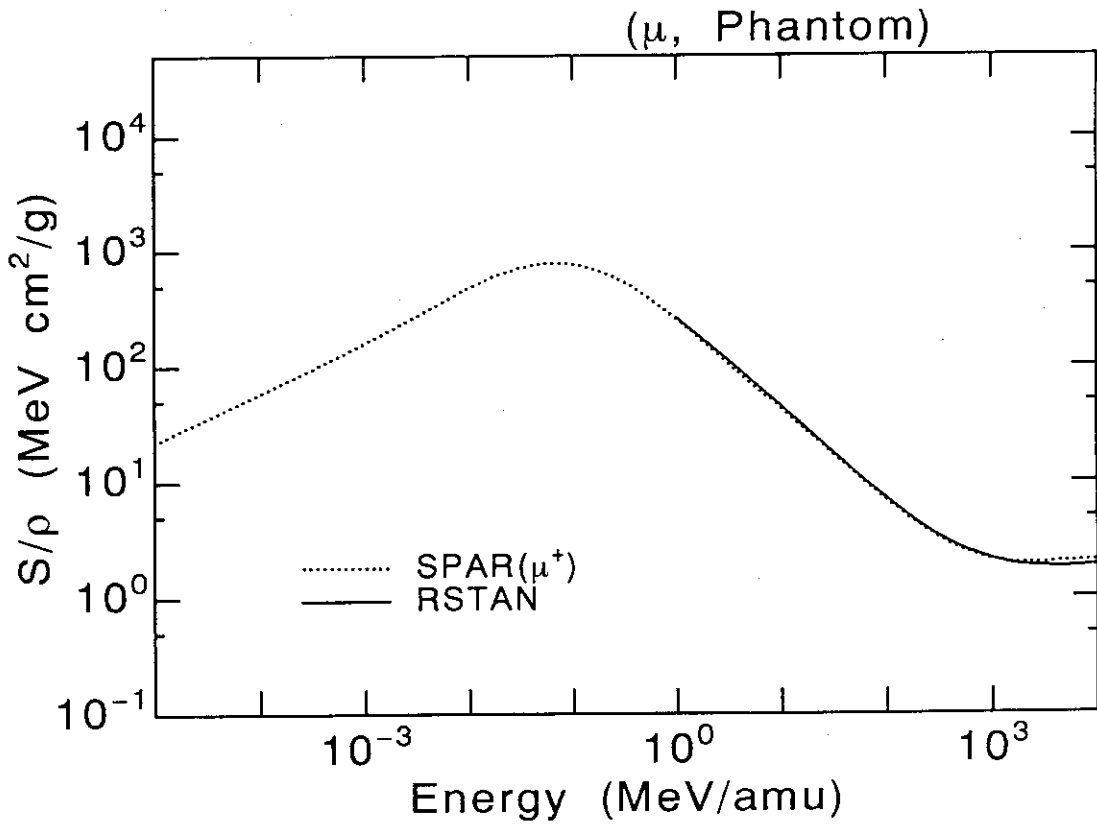
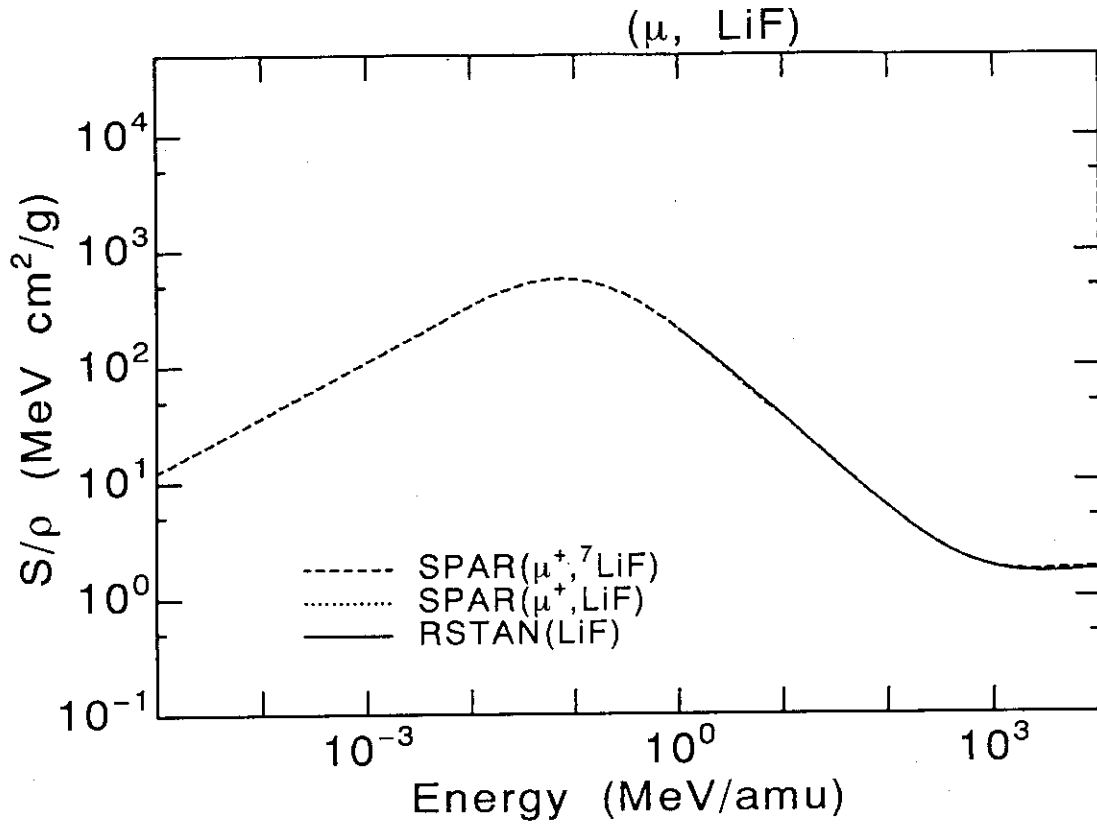


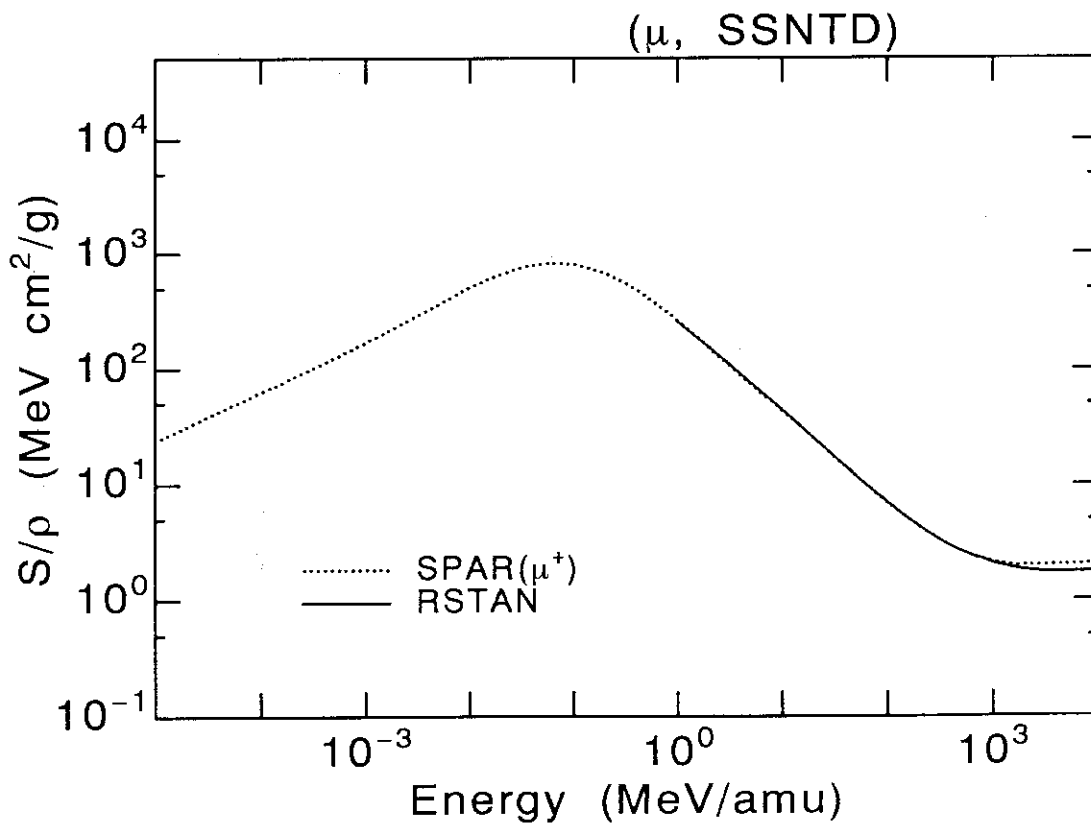
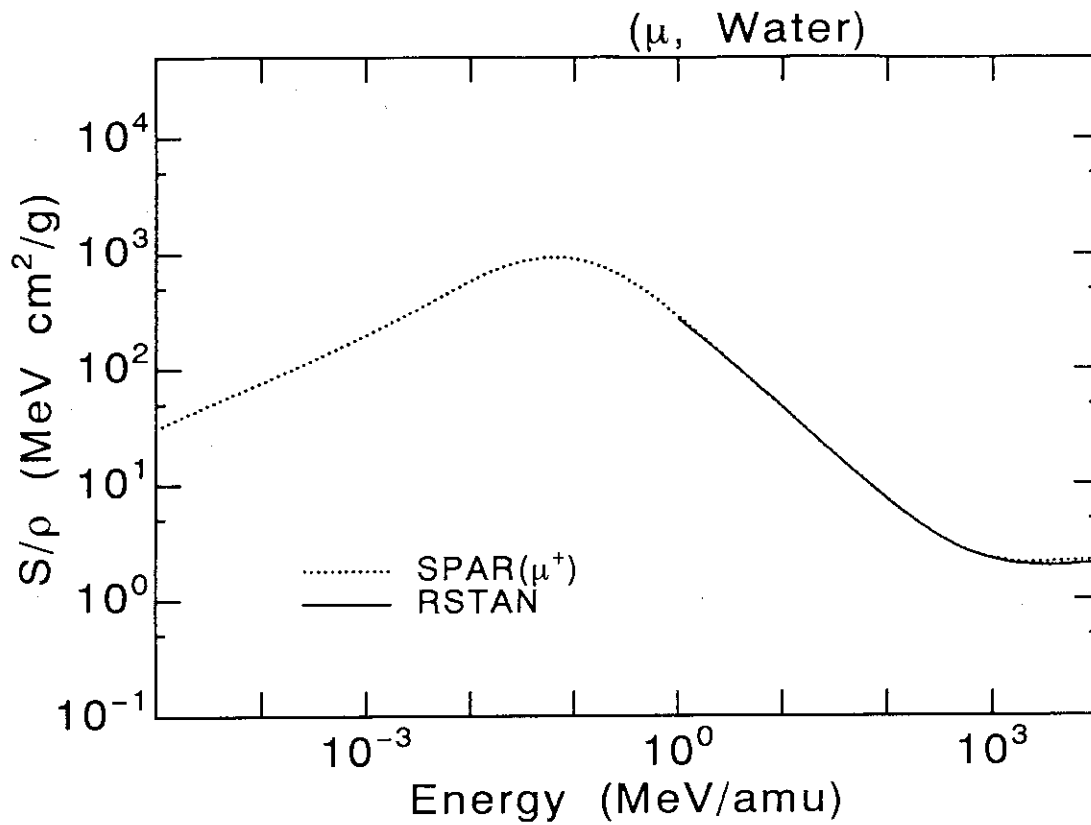


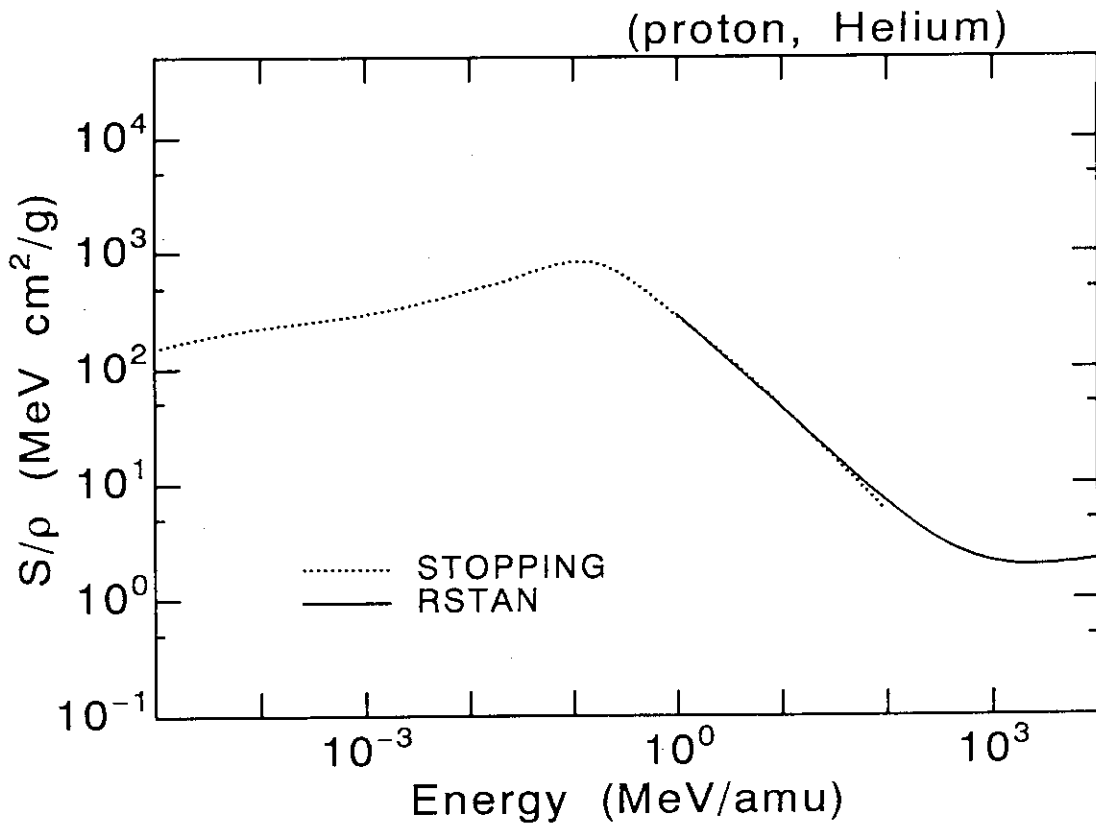
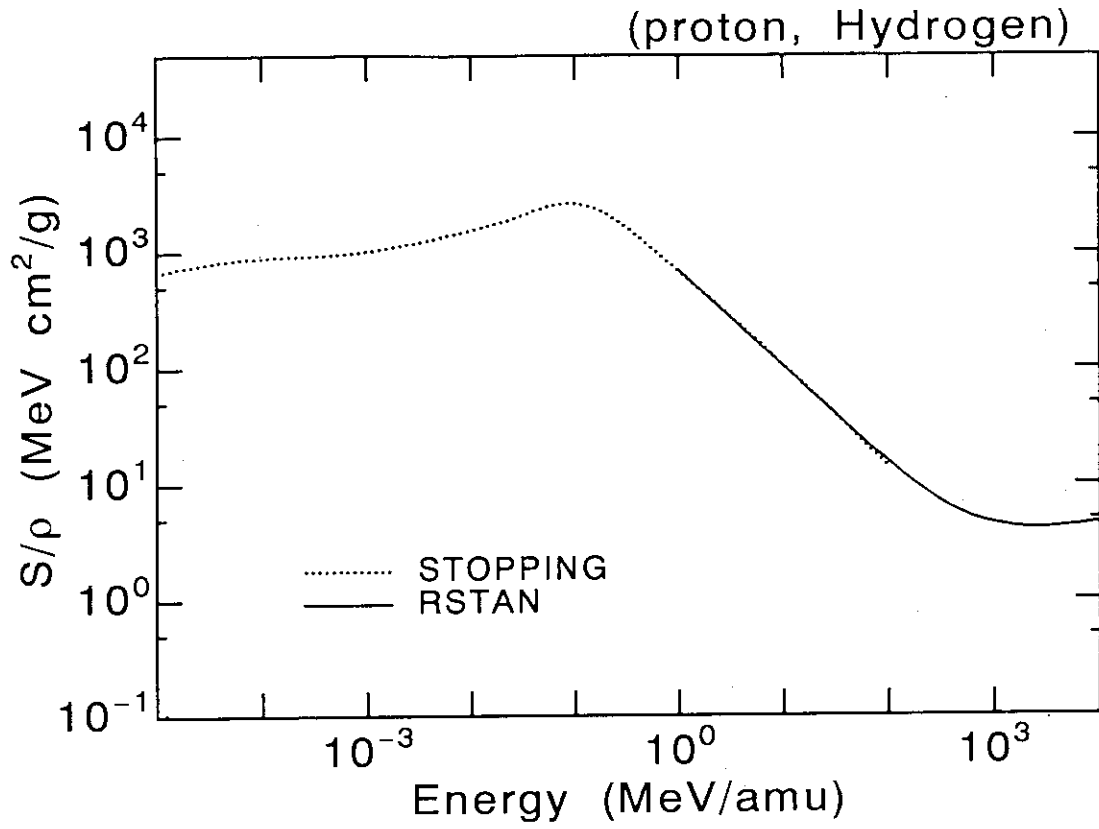




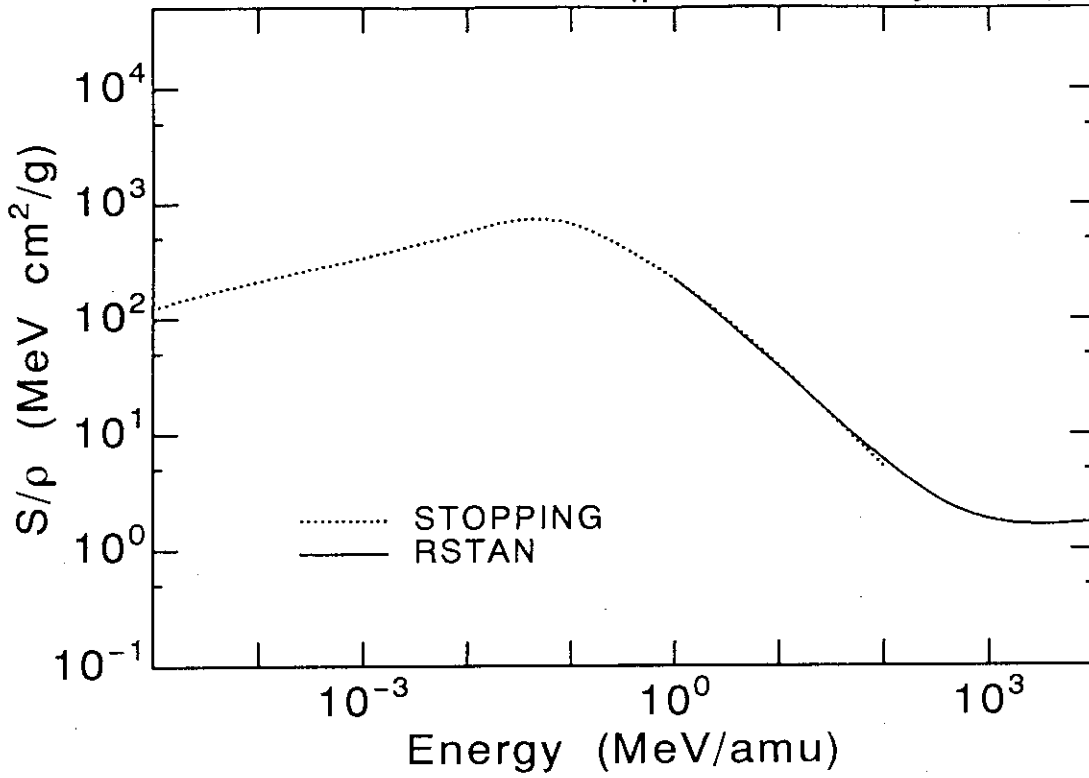




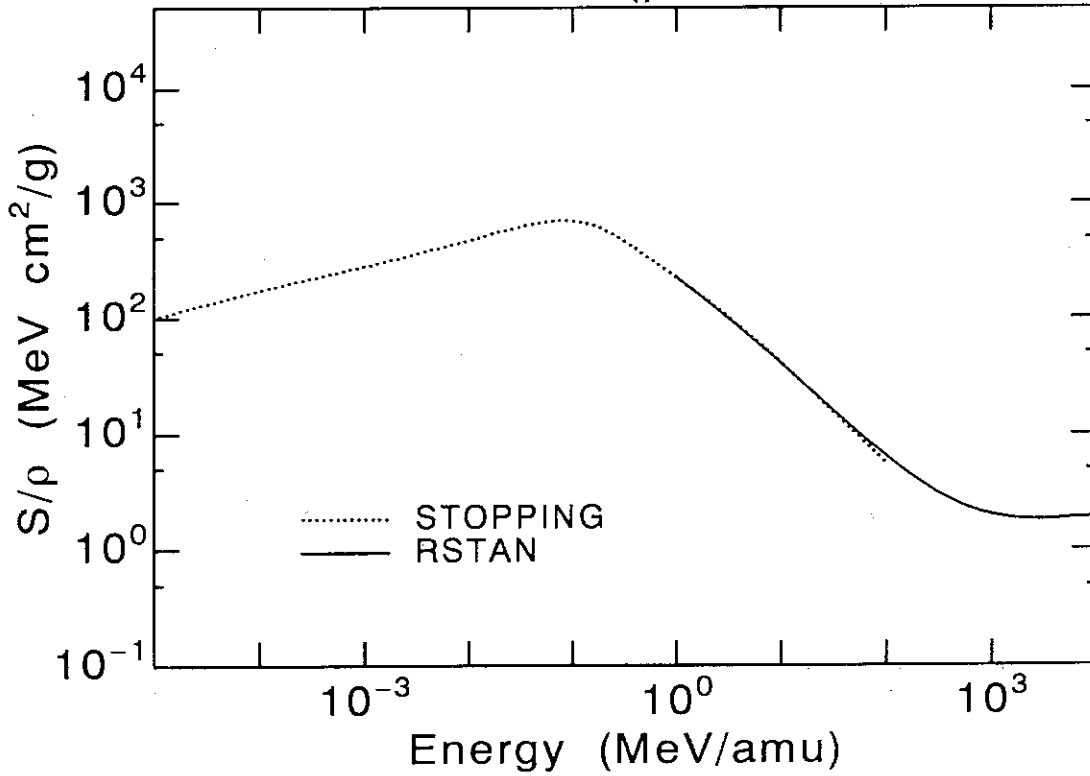




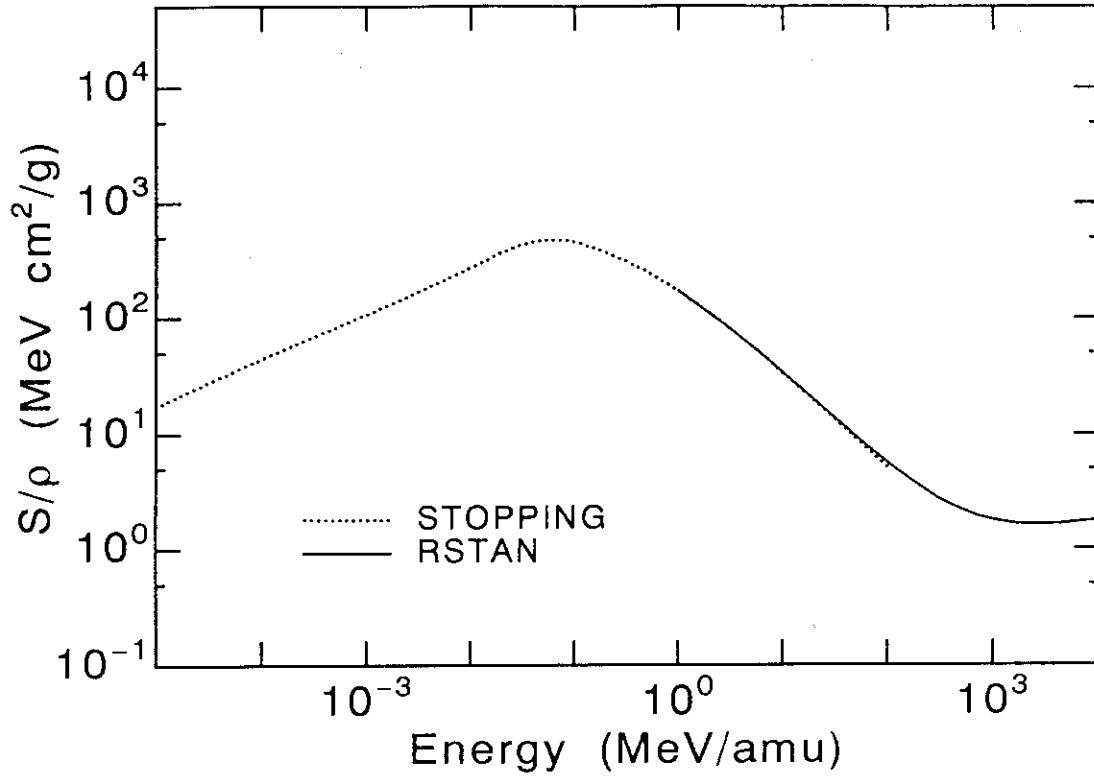
(proton, Beryllium)



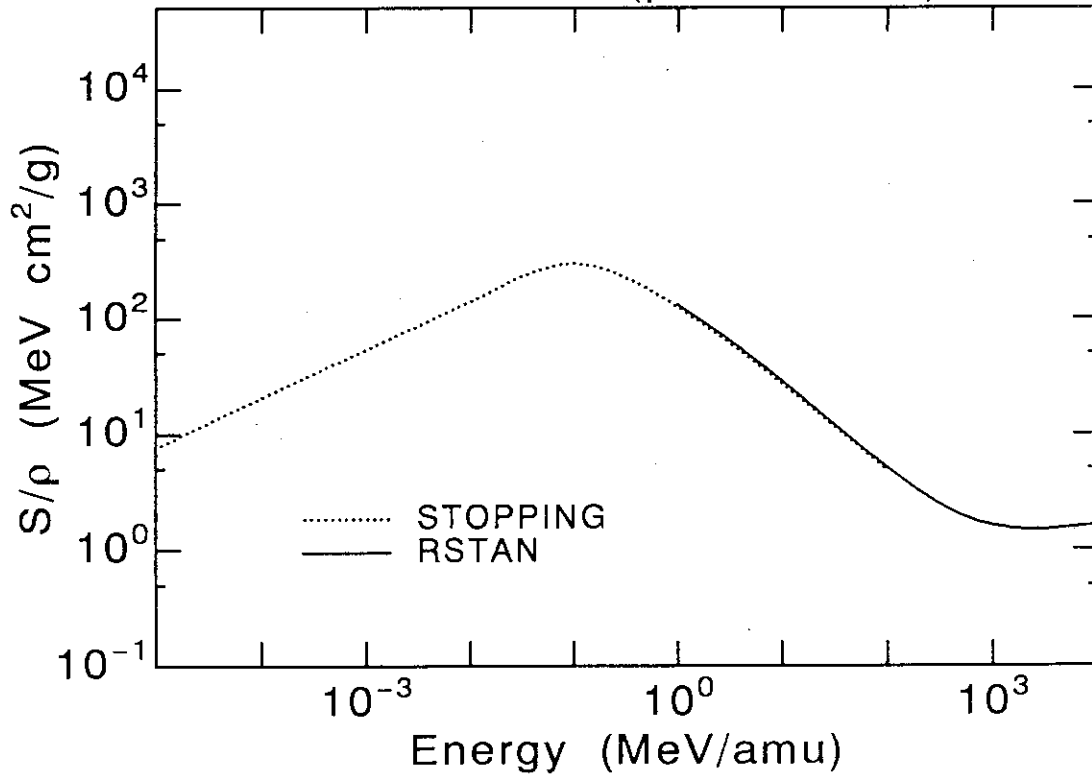
(proton, Carbon)

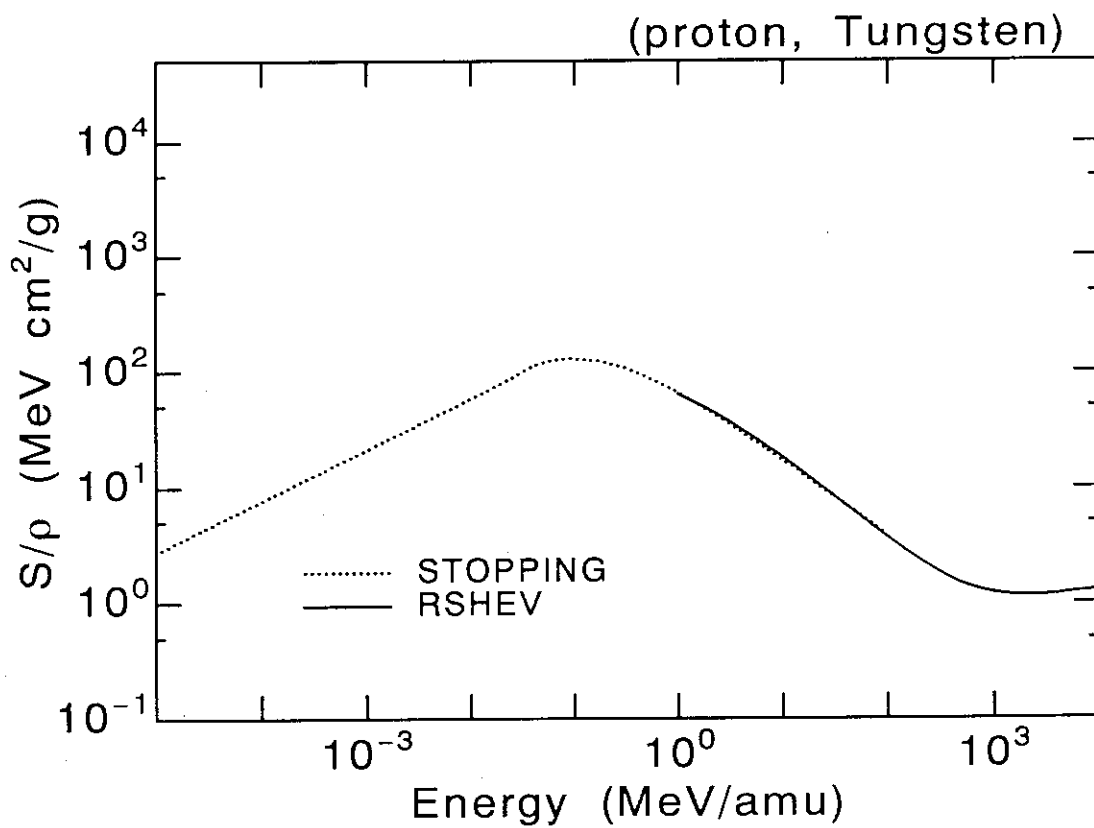
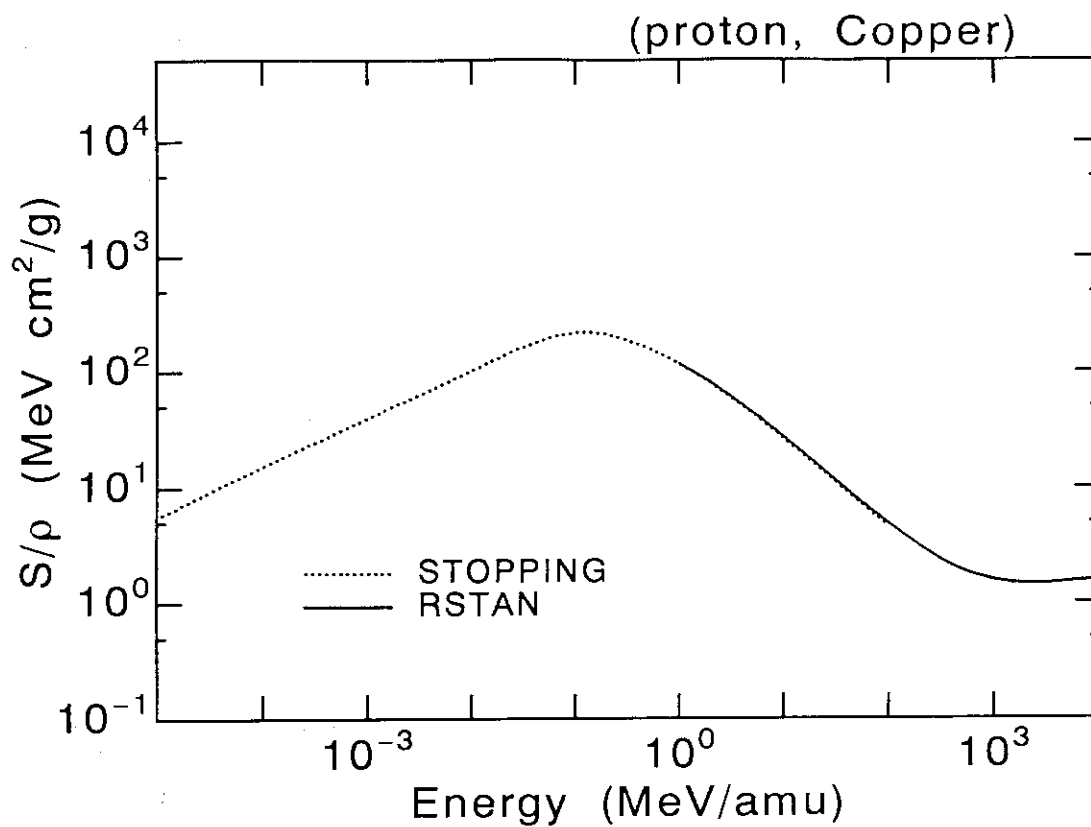


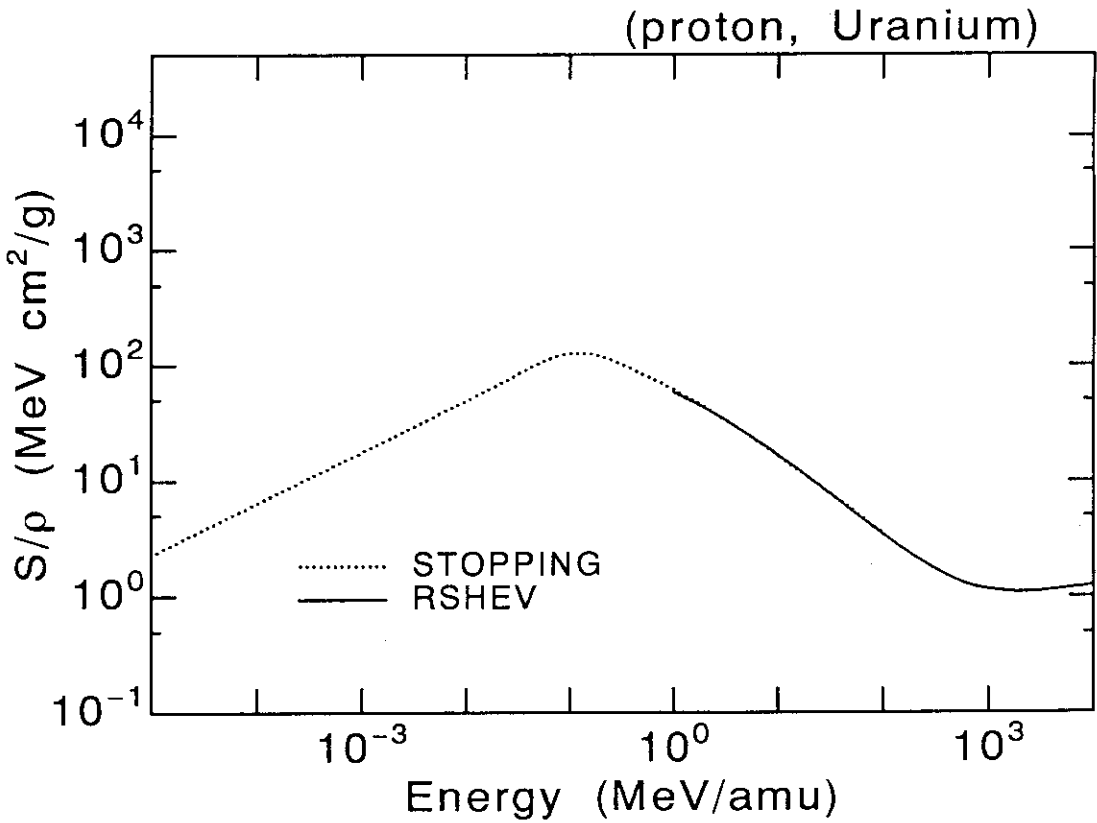
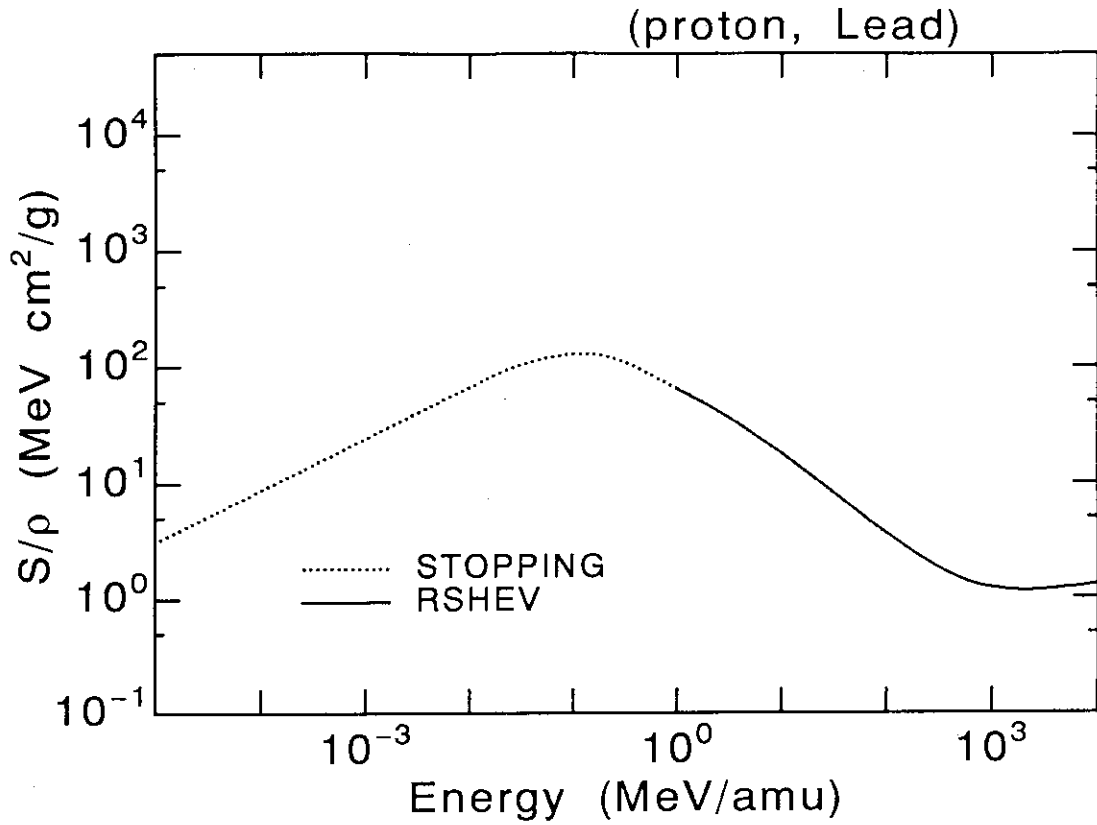
(proton, Aluminum)

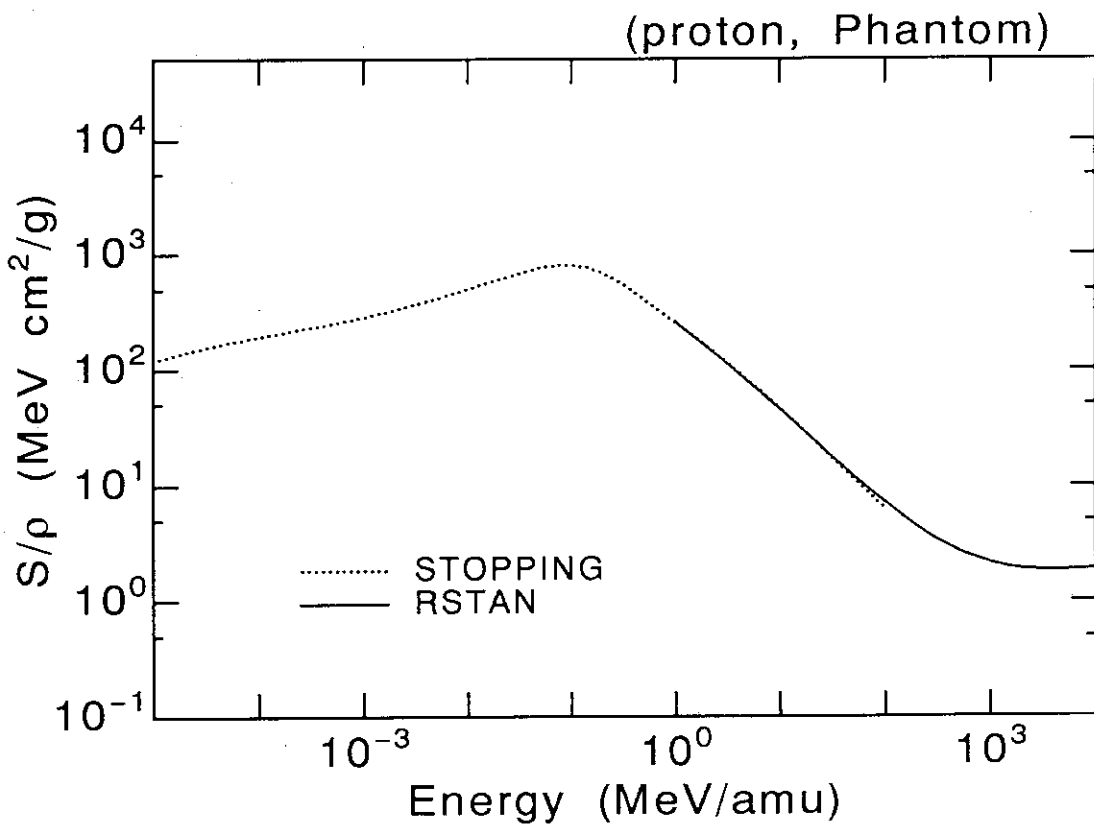
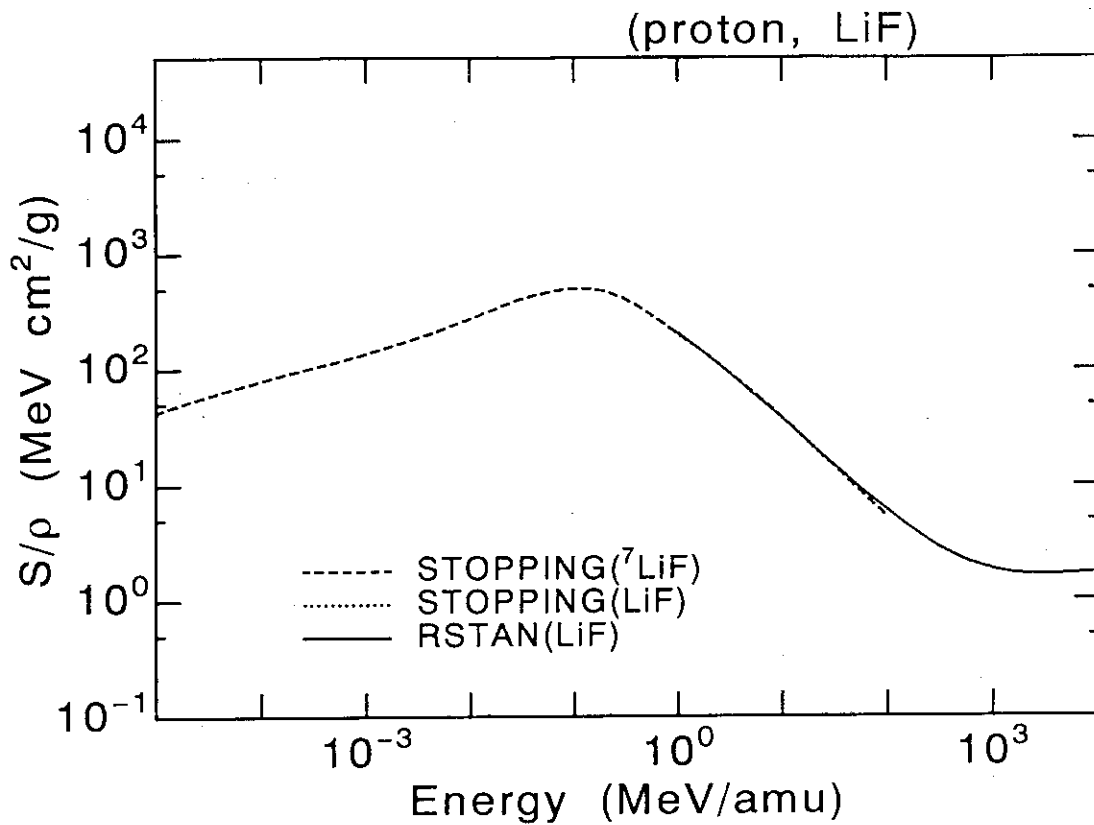


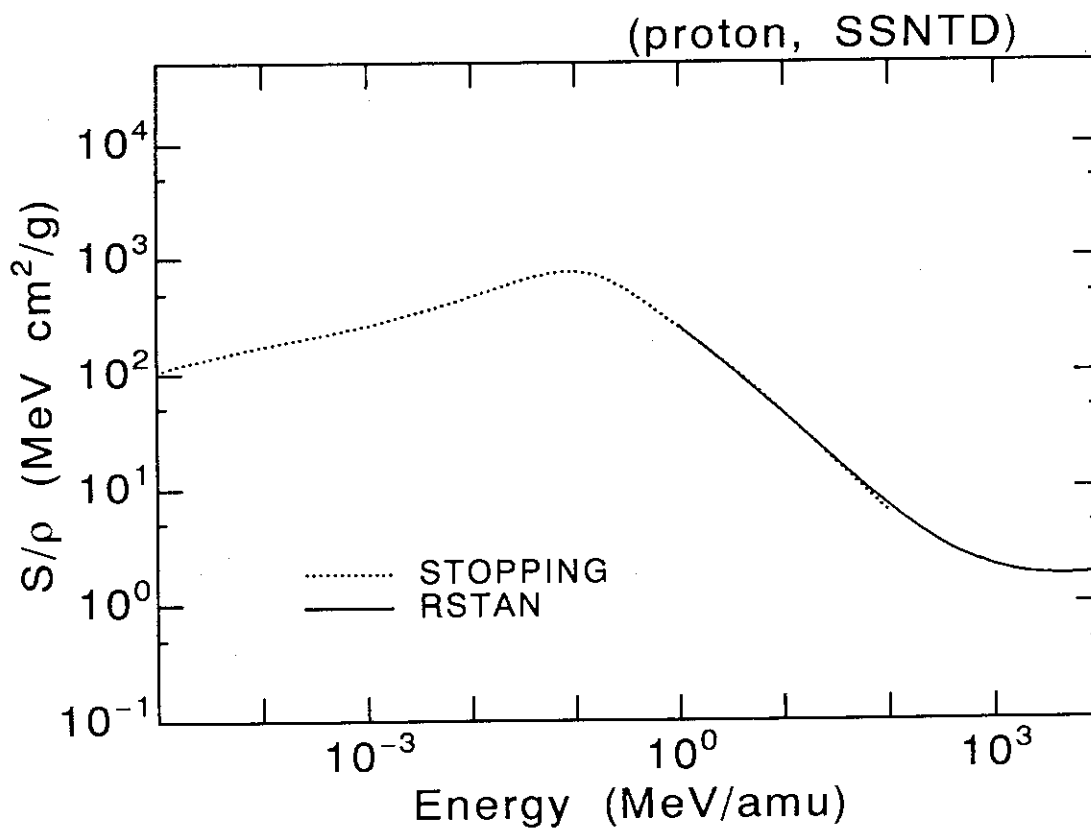
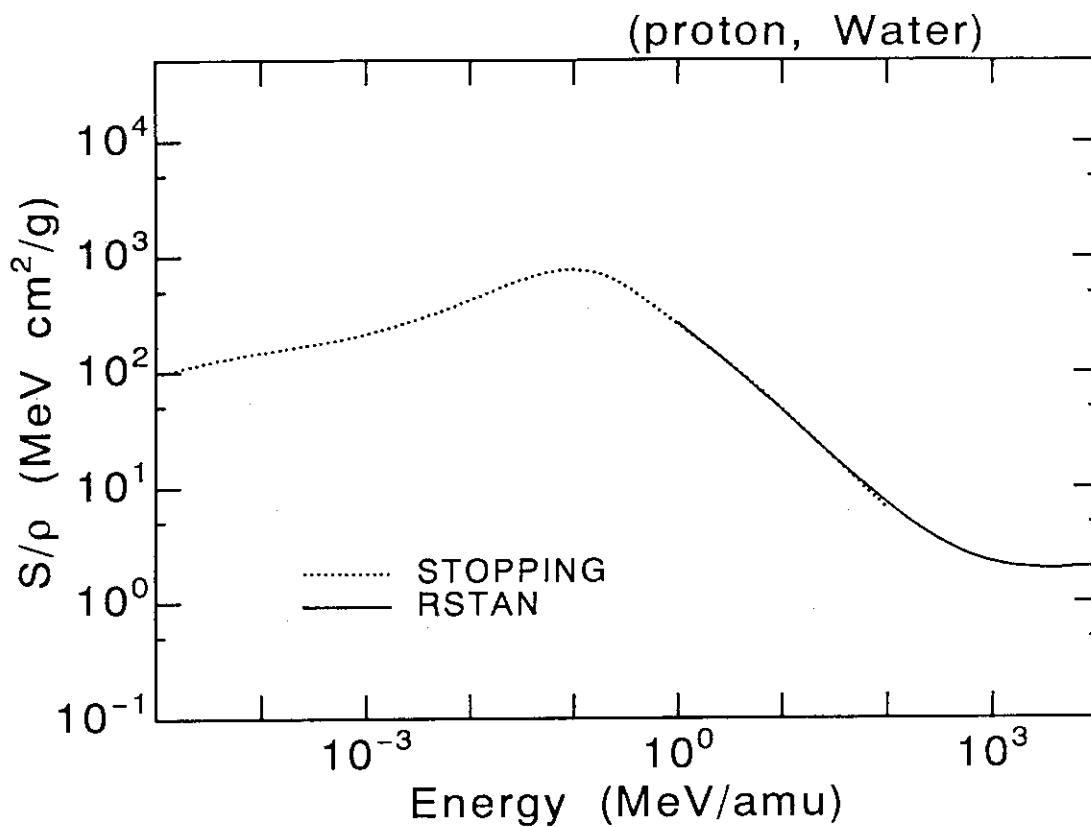
(proton, Iron)

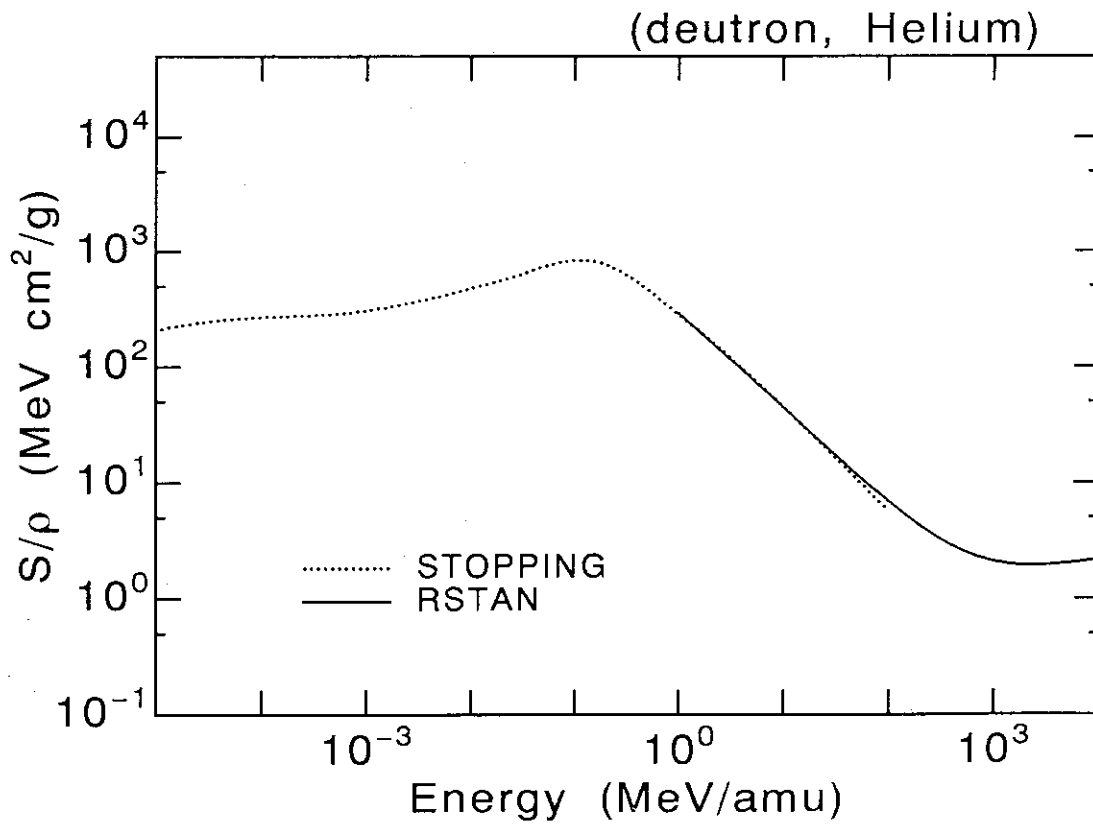
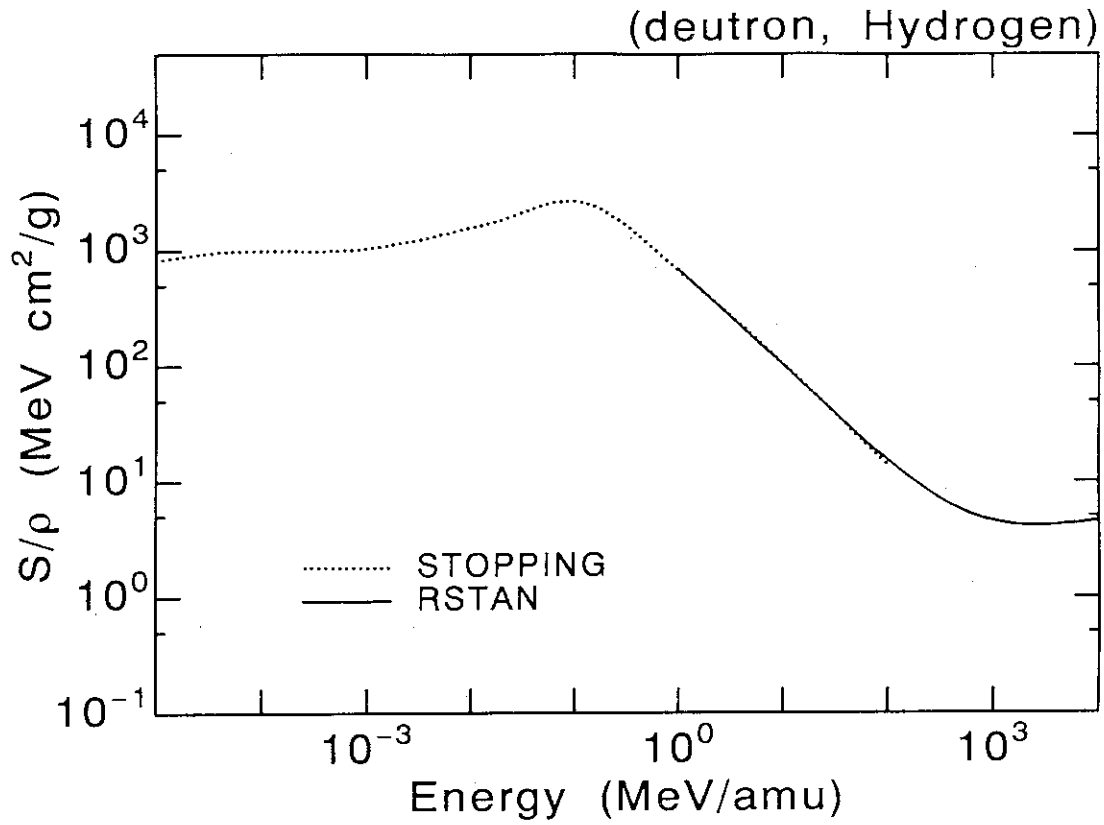




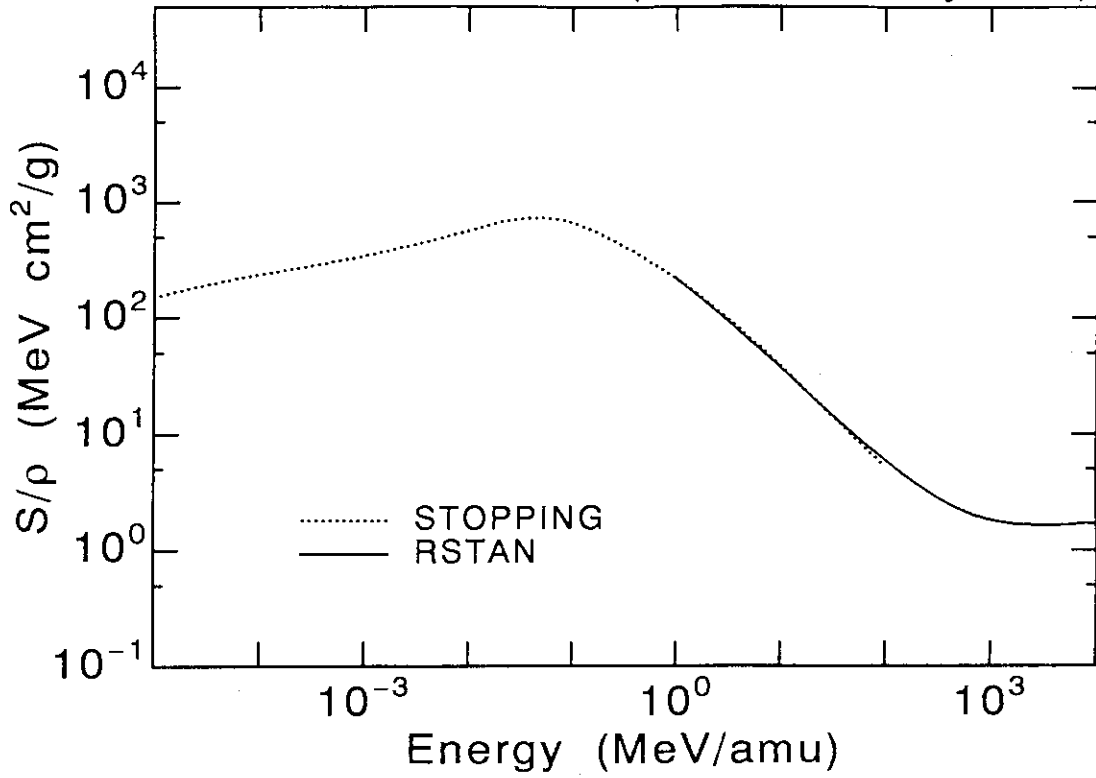




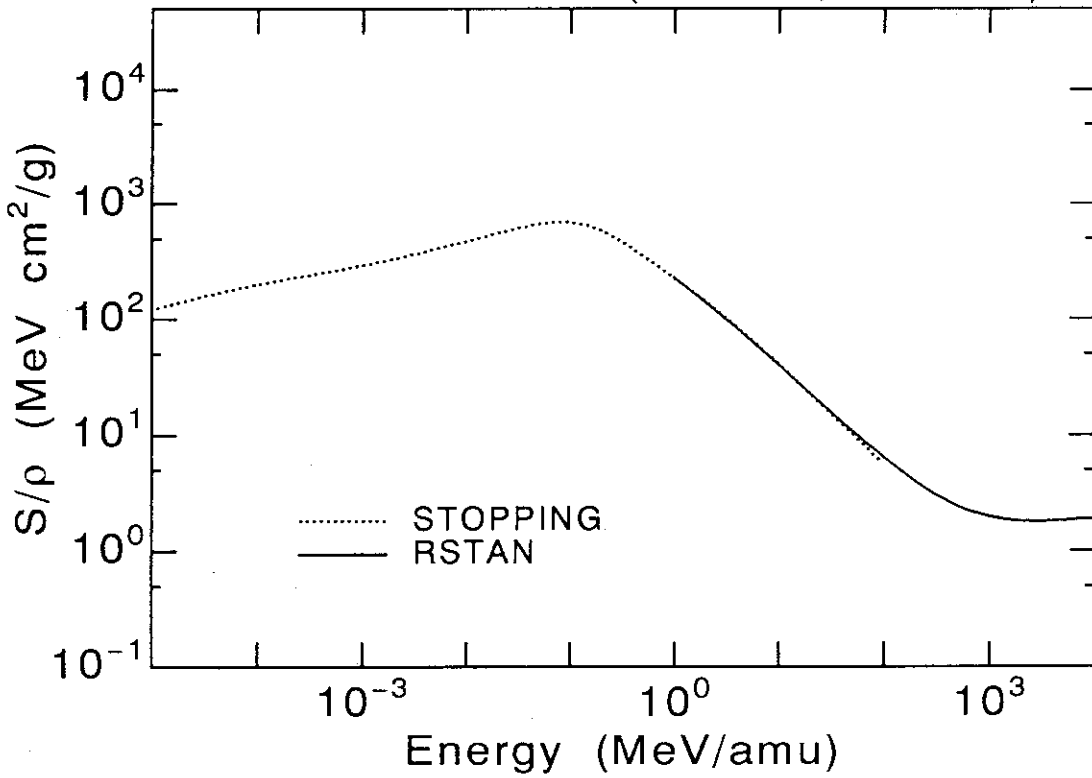


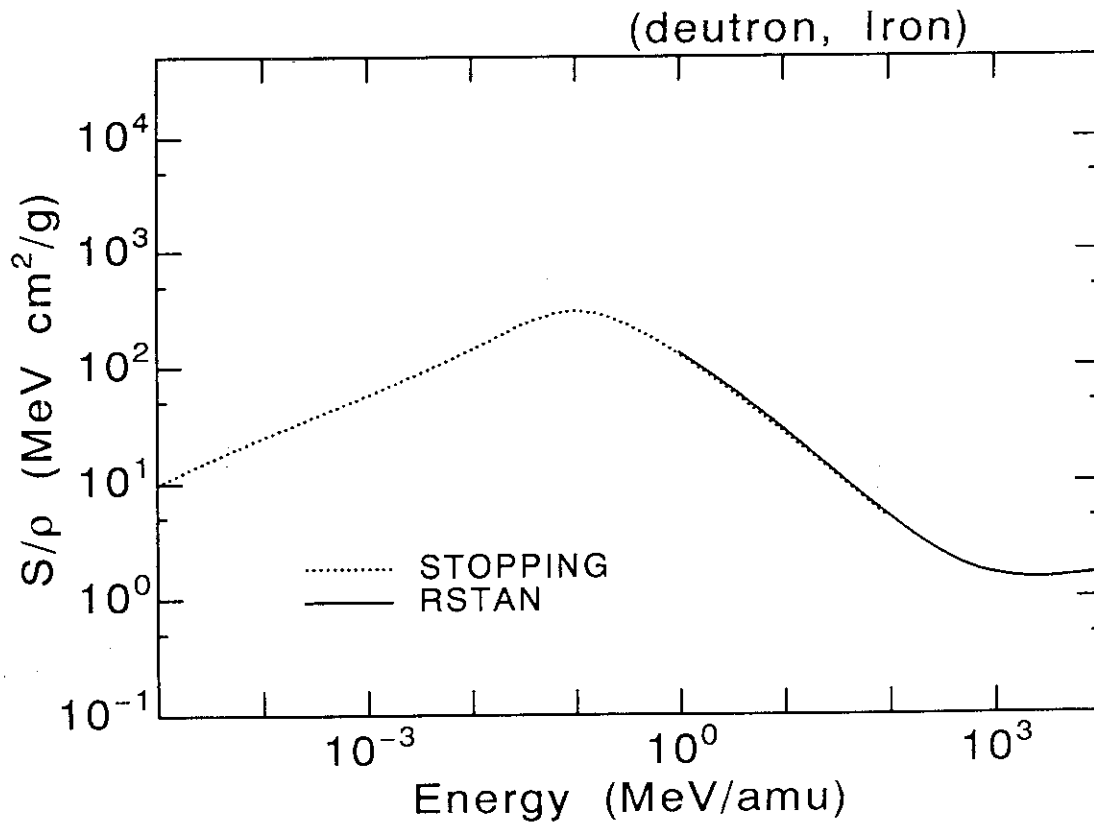
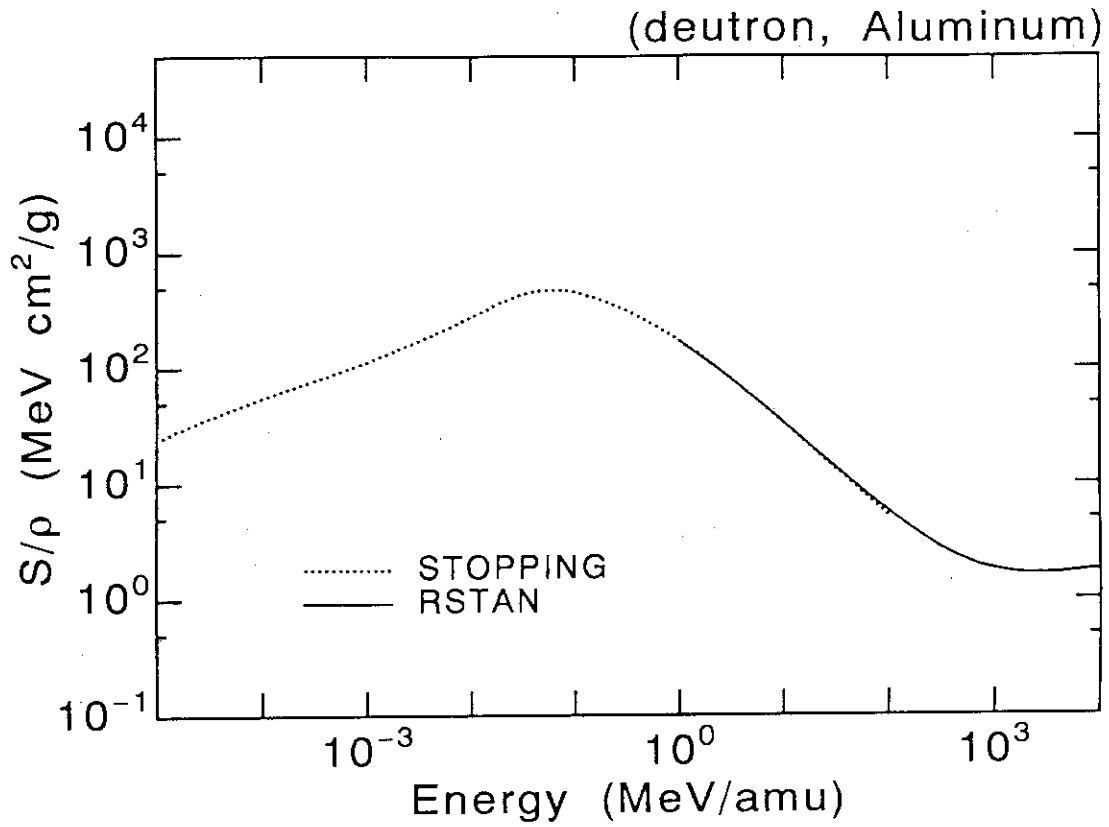


(deuteron, Beryllium)

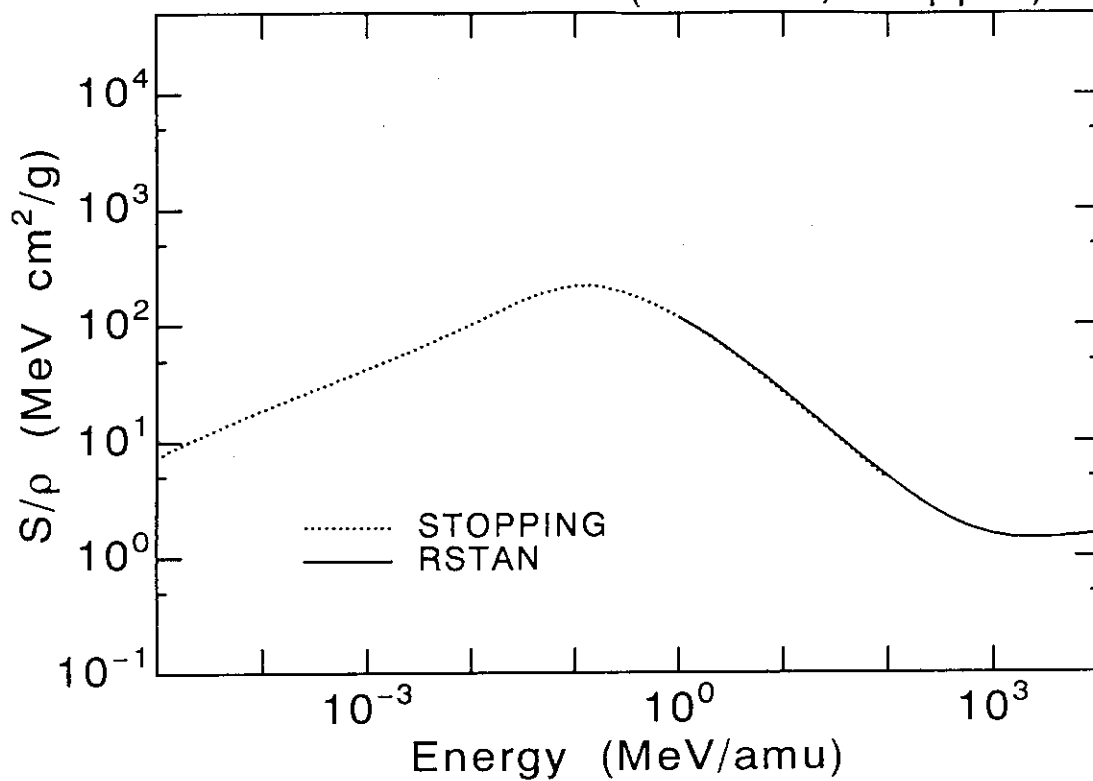


(deuteron, Carbon)

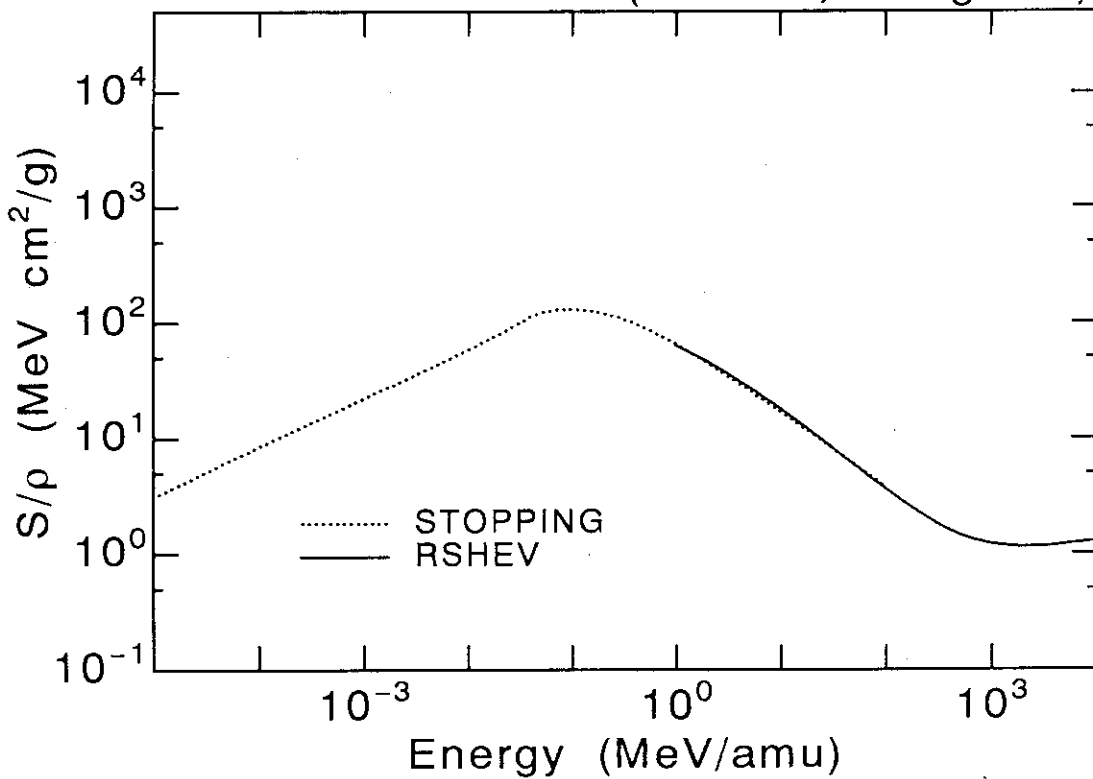




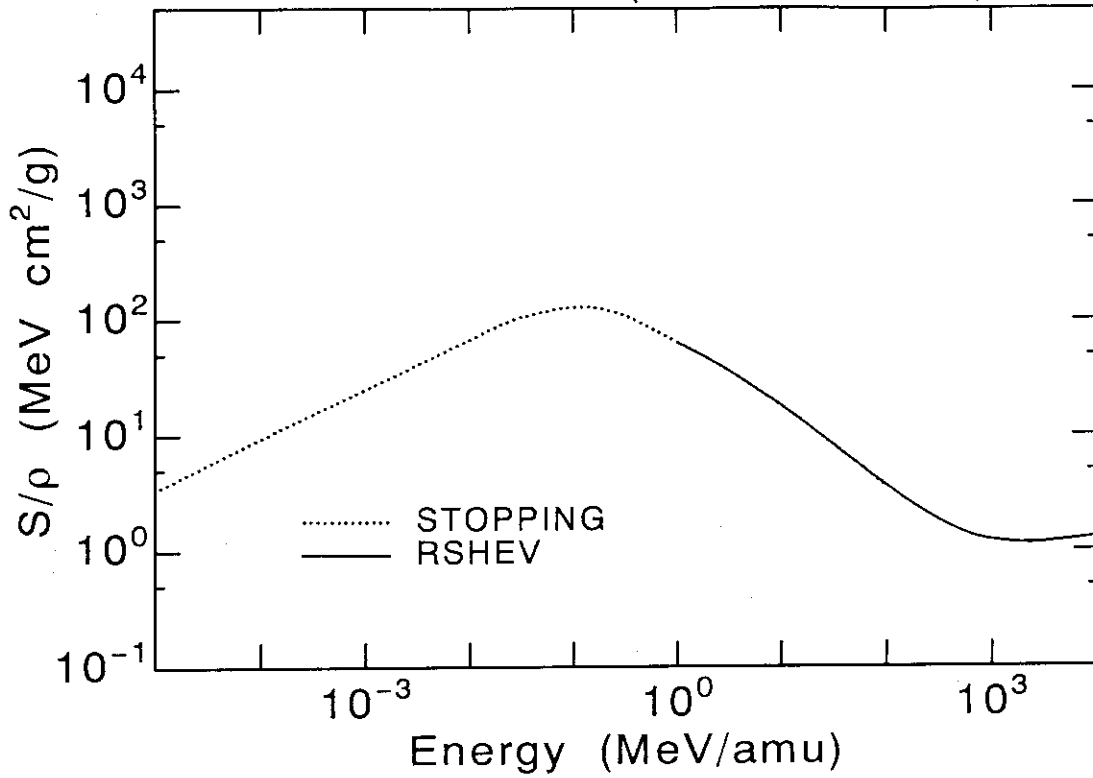
(deuteron, Copper)



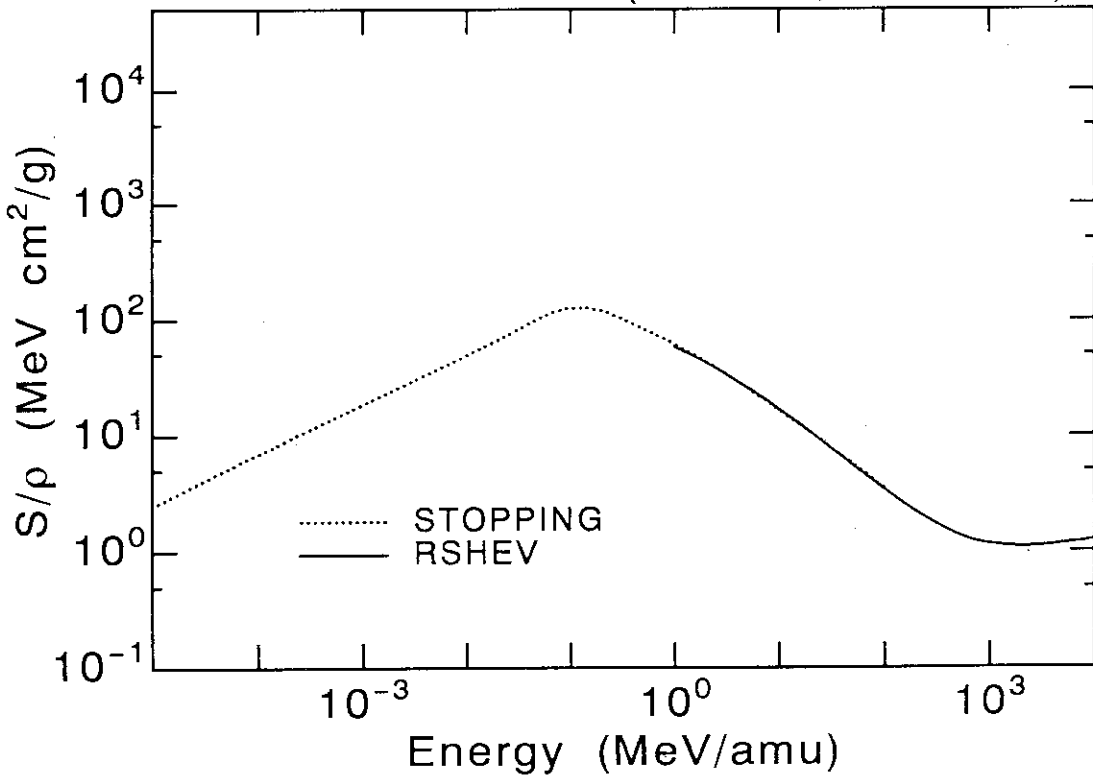
(deuteron, Tungsten)

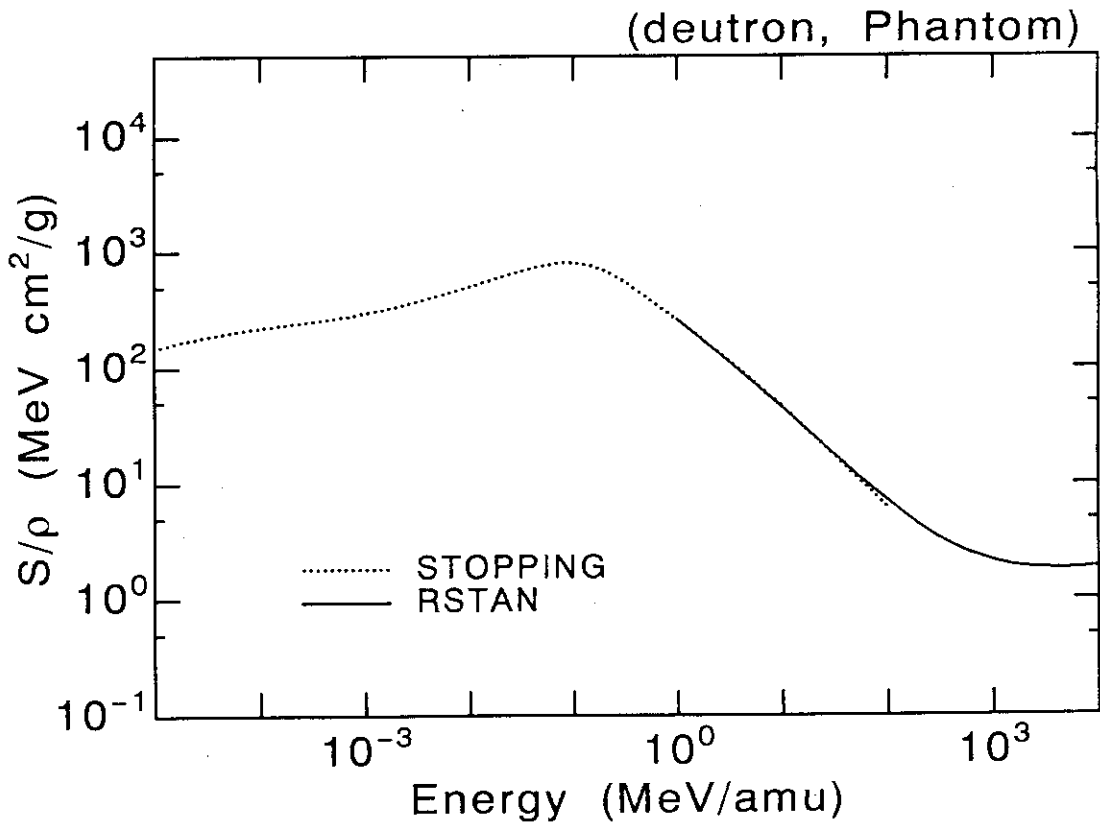
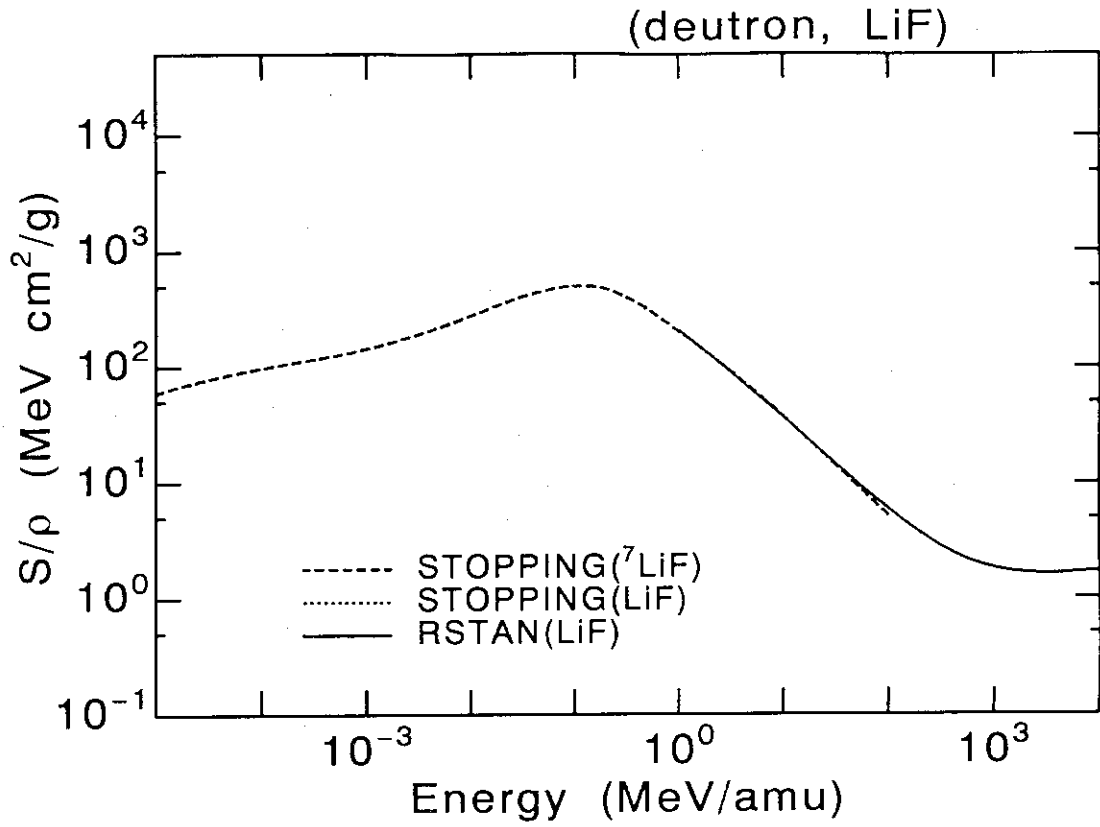


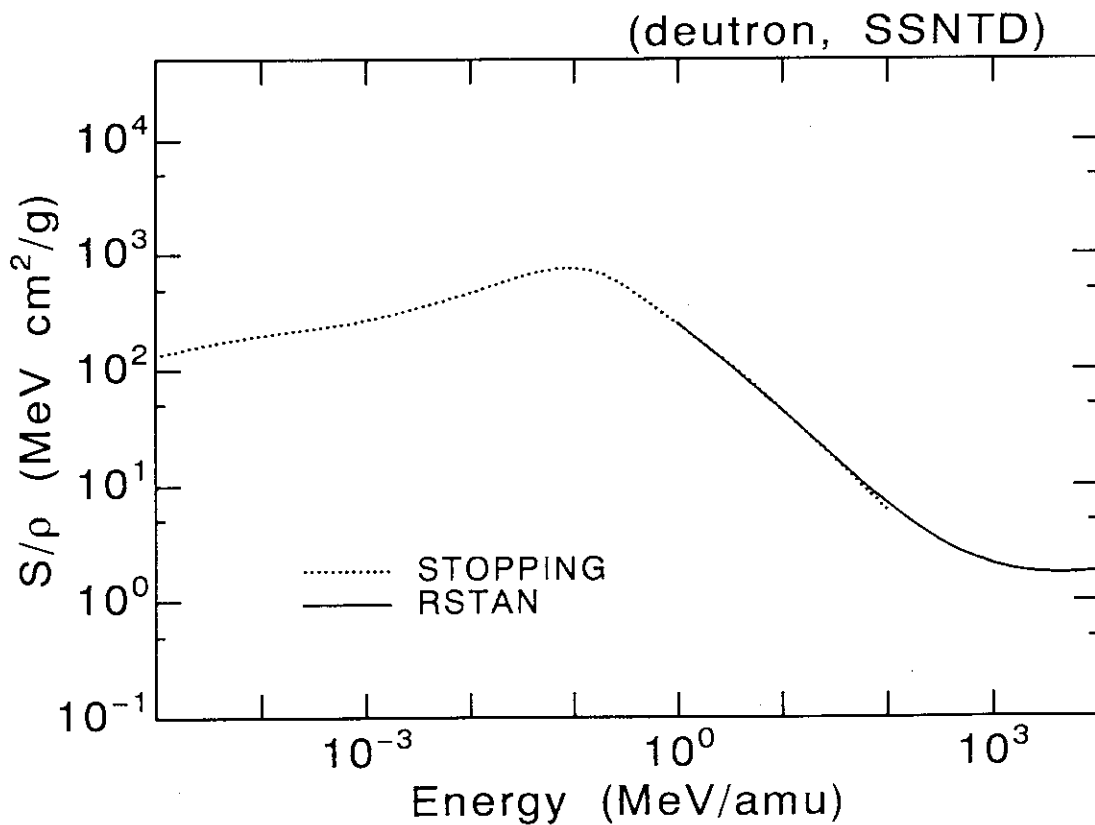
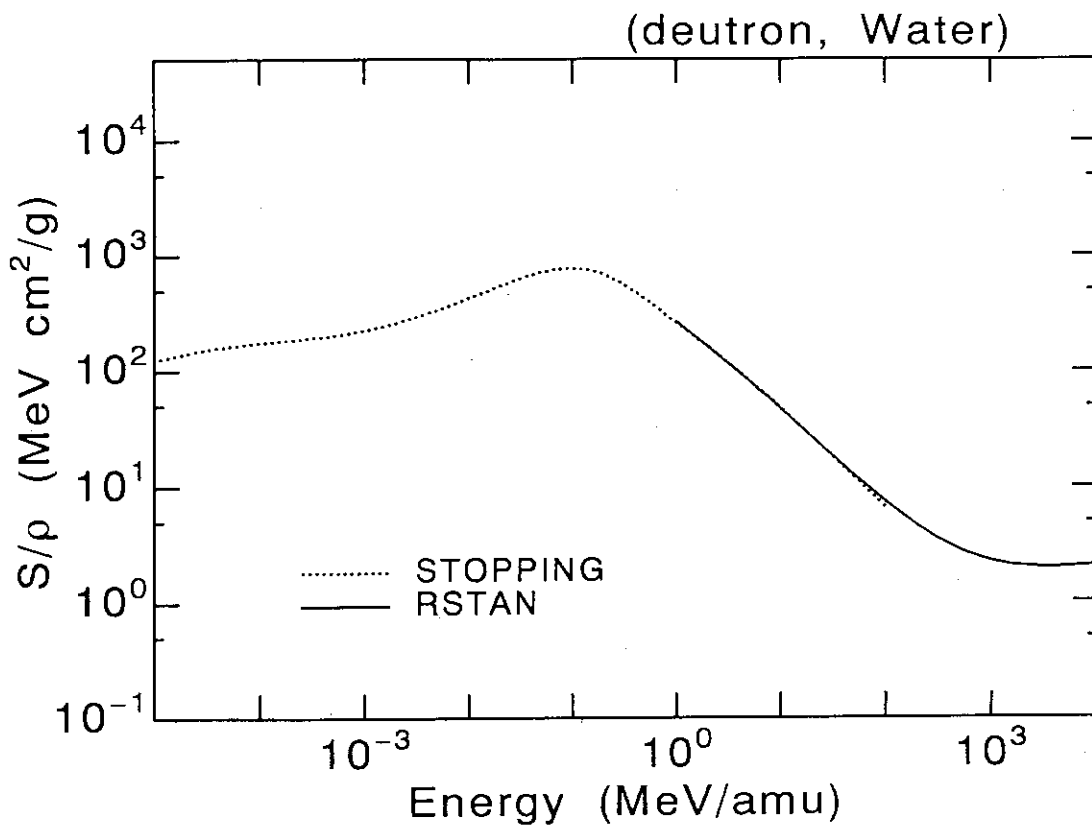
(deuteron, Lead)



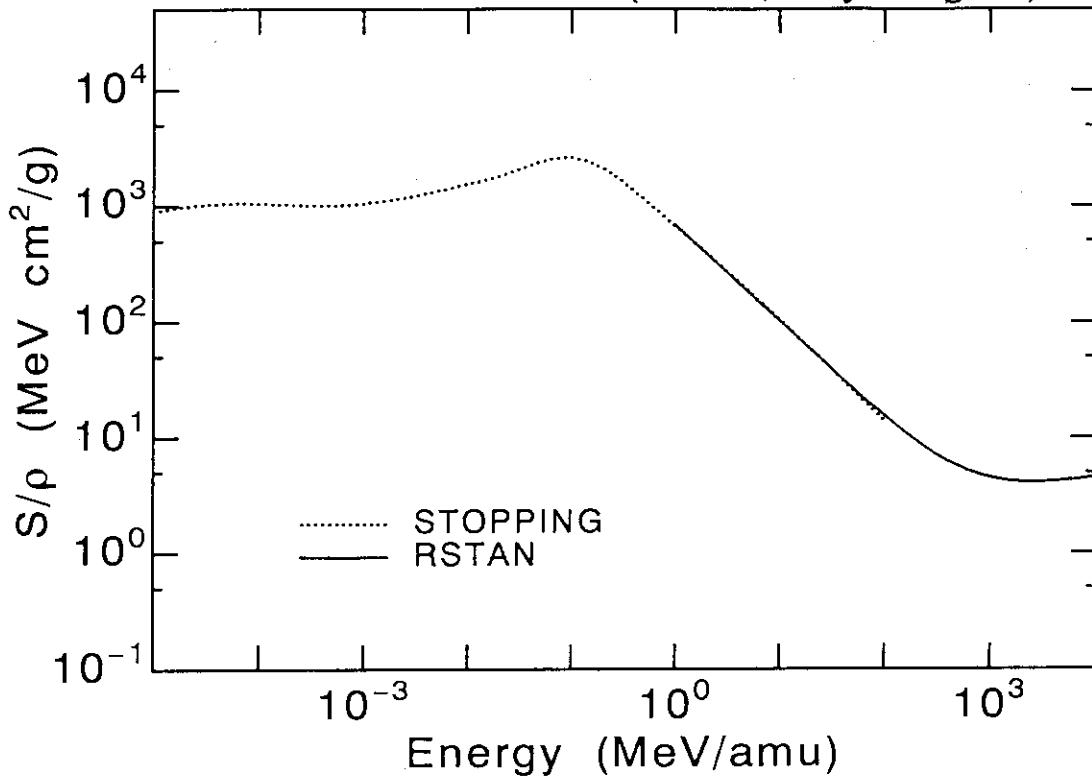
(deuteron, Uranium)



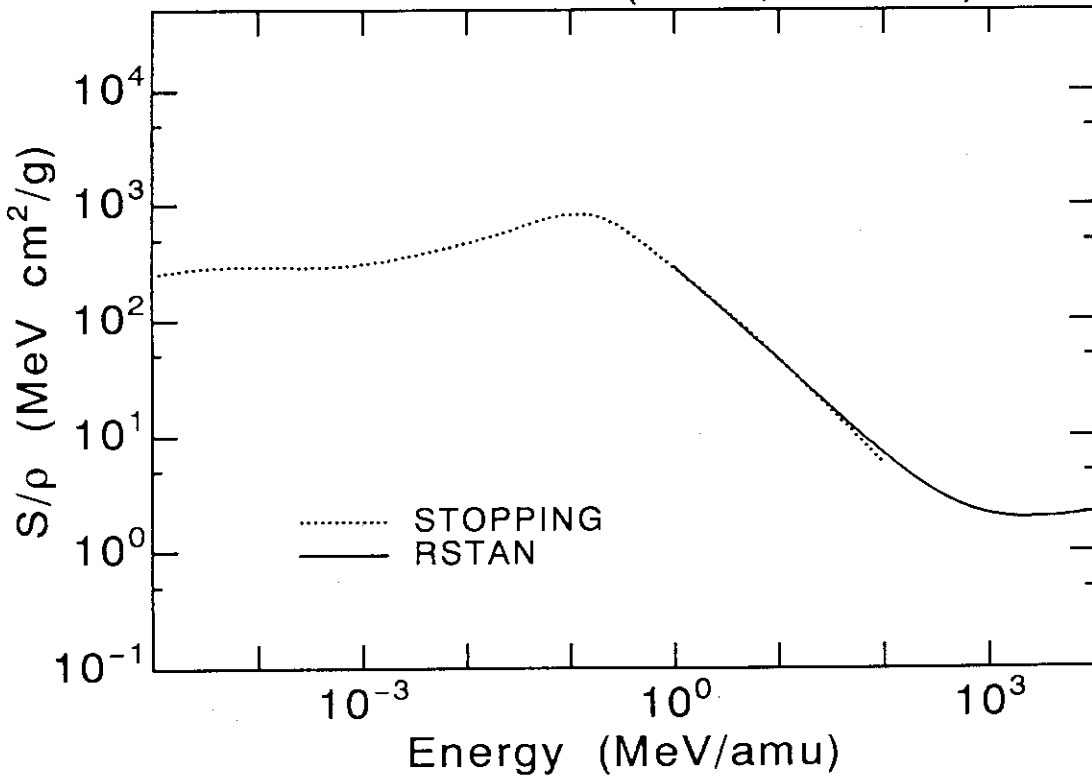


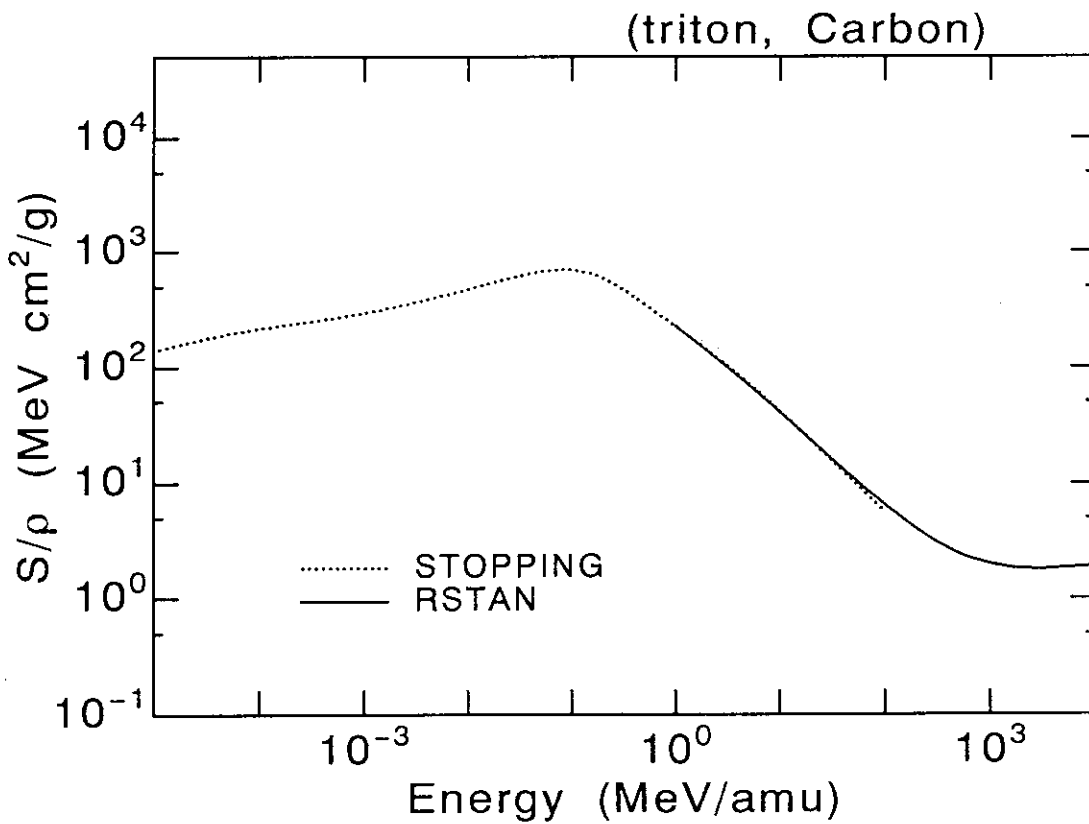
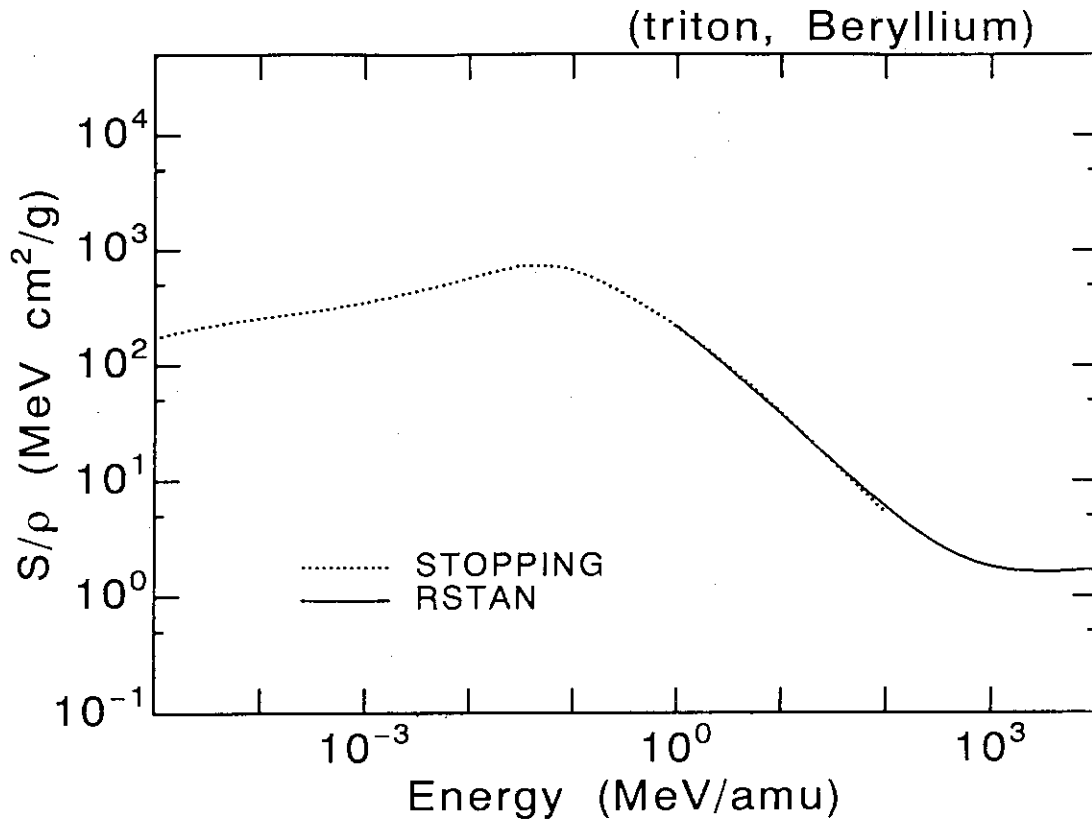


(triton, Hydrogen)

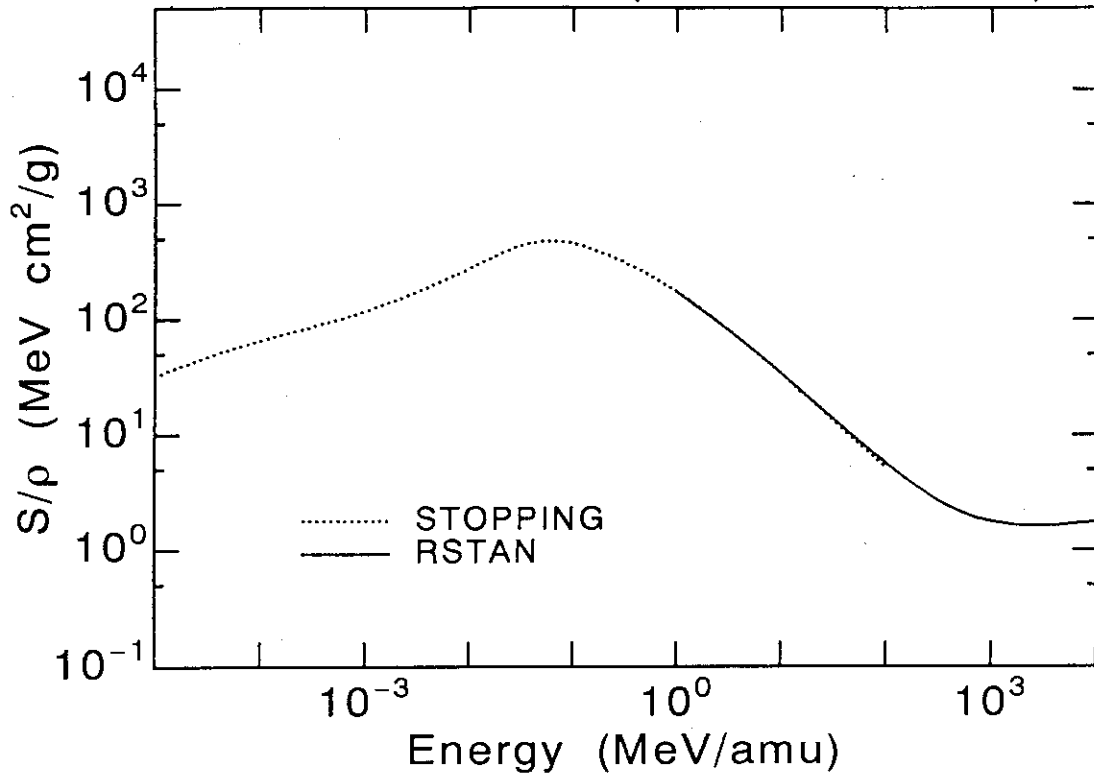


(triton, Helium)

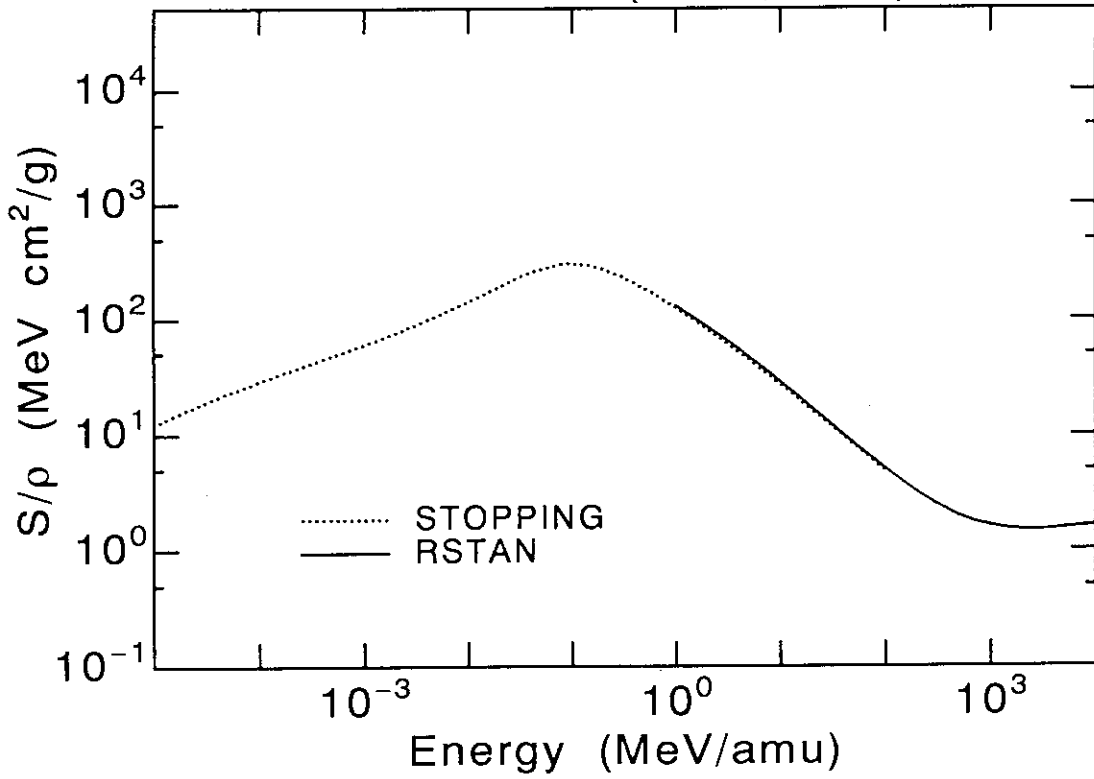


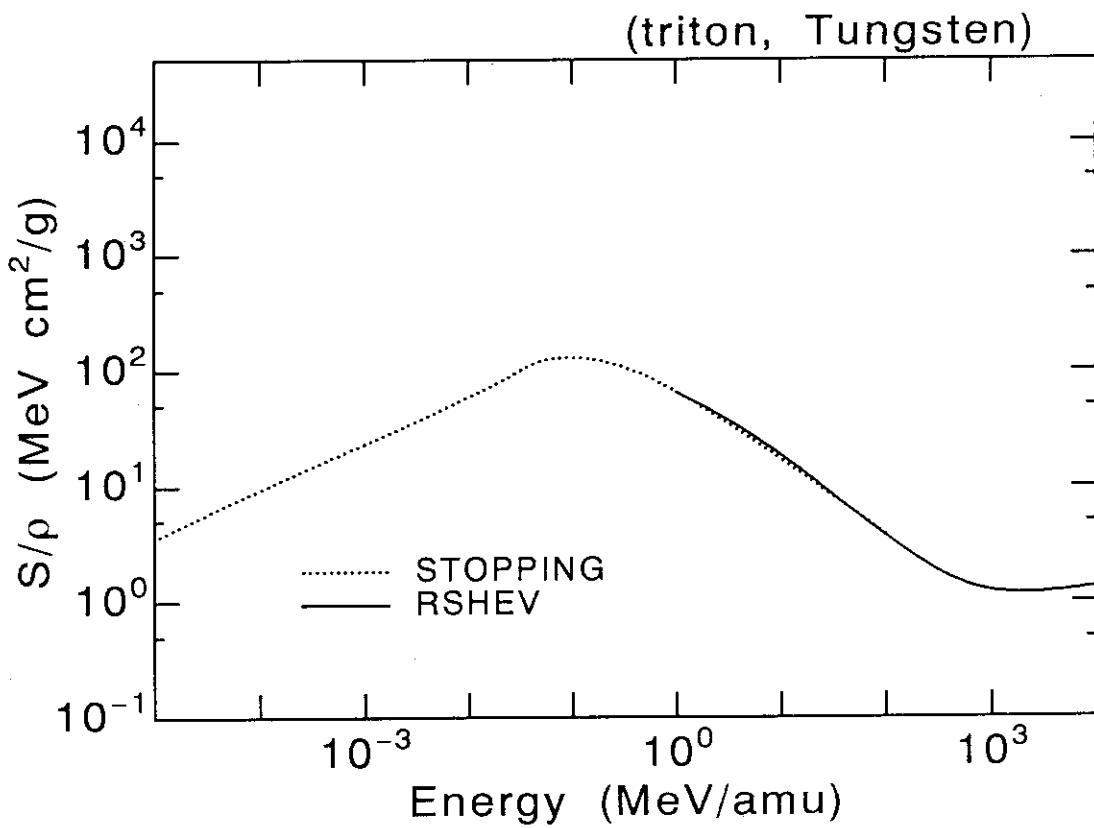
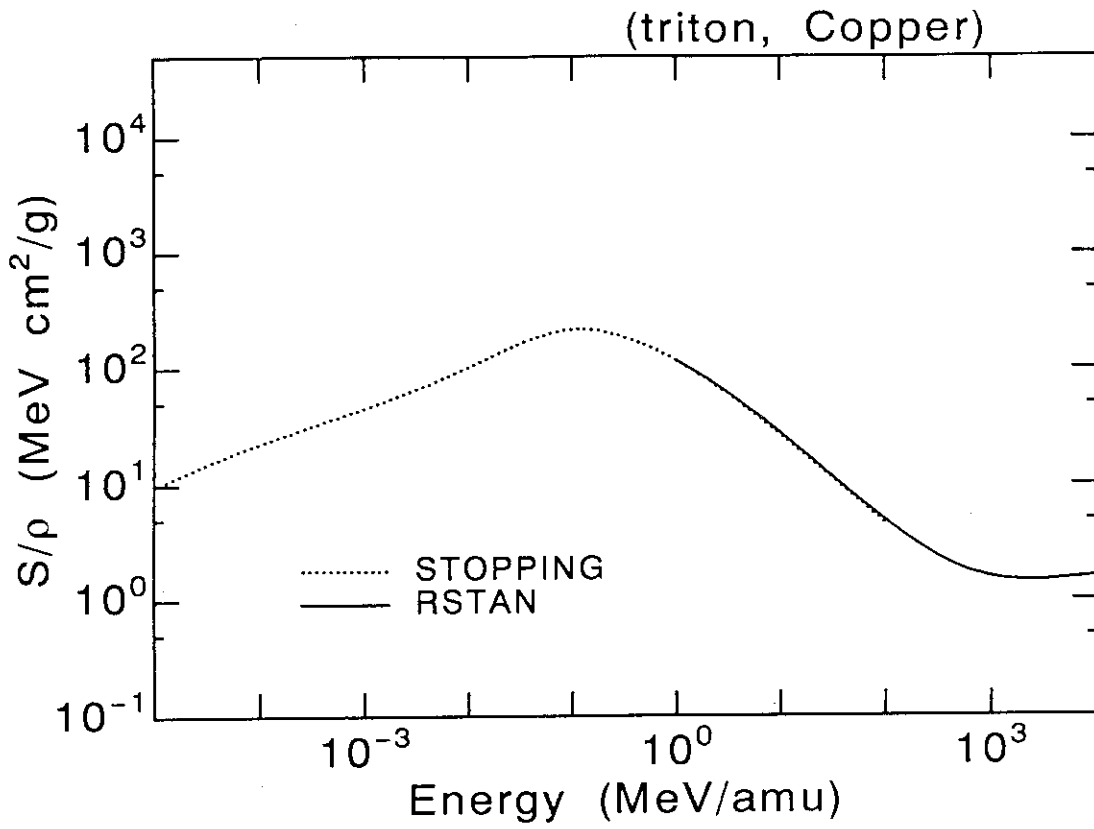


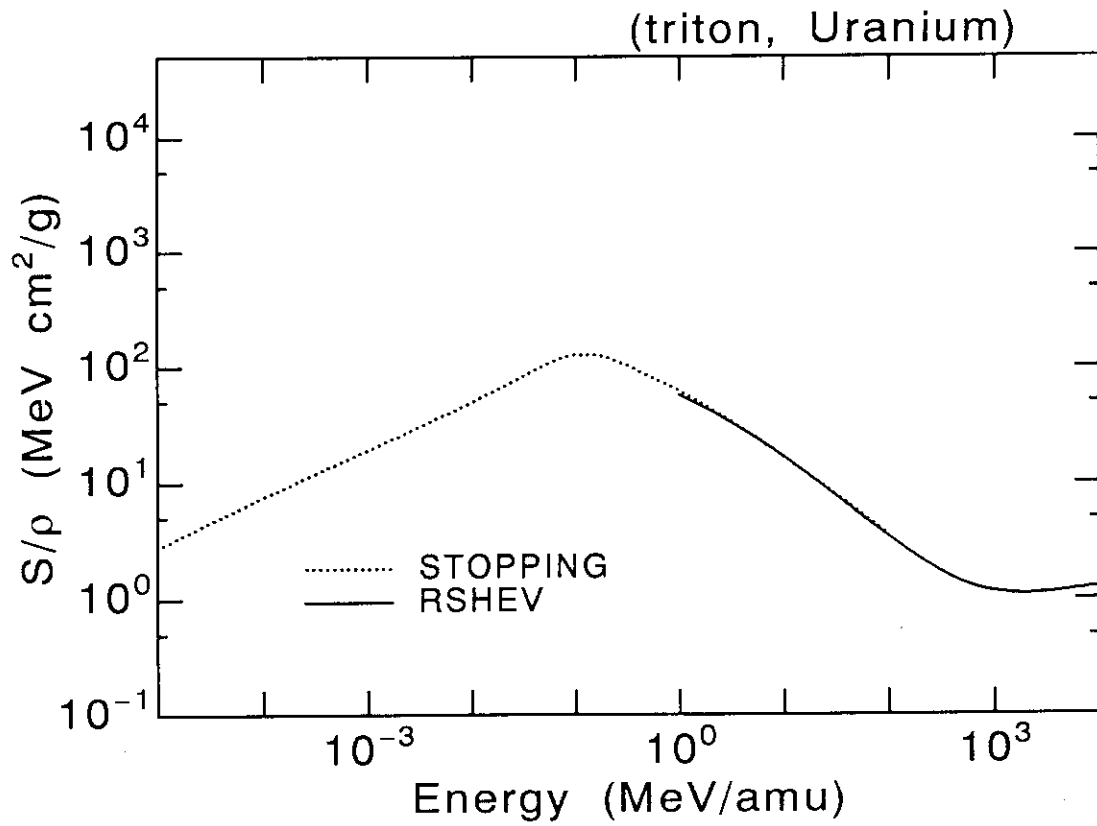
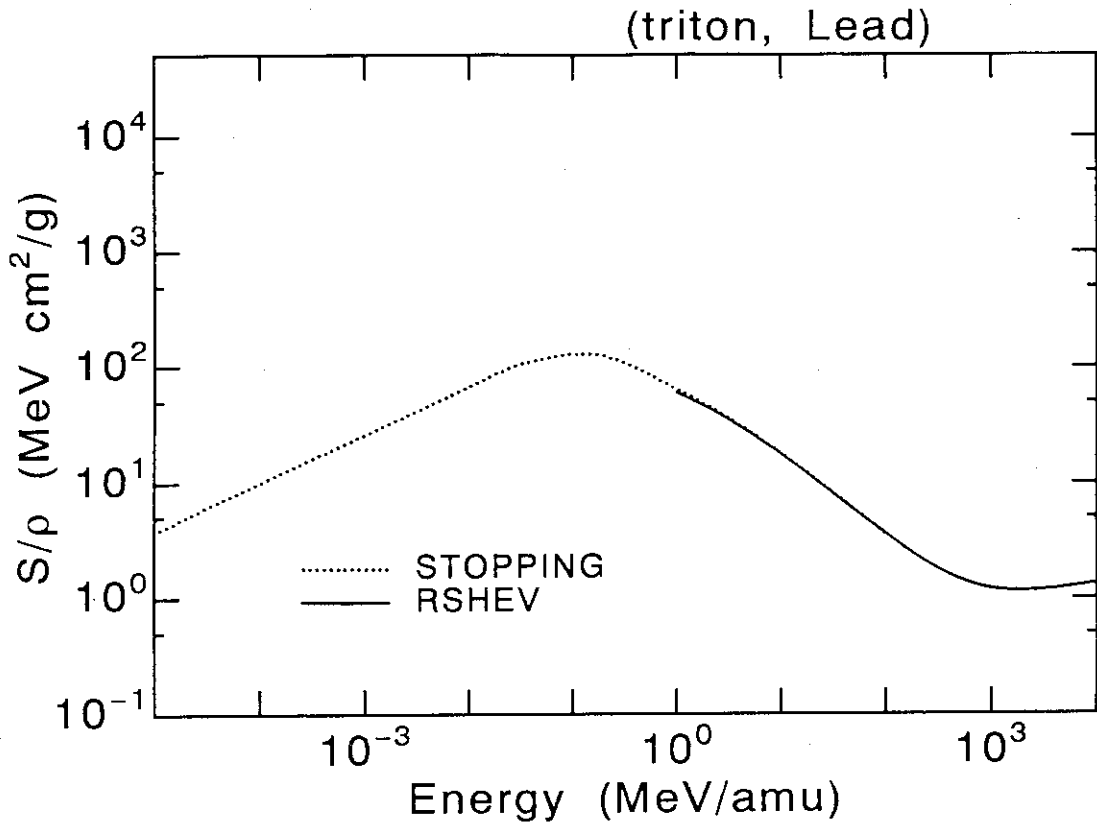
(triton, Aluminum)

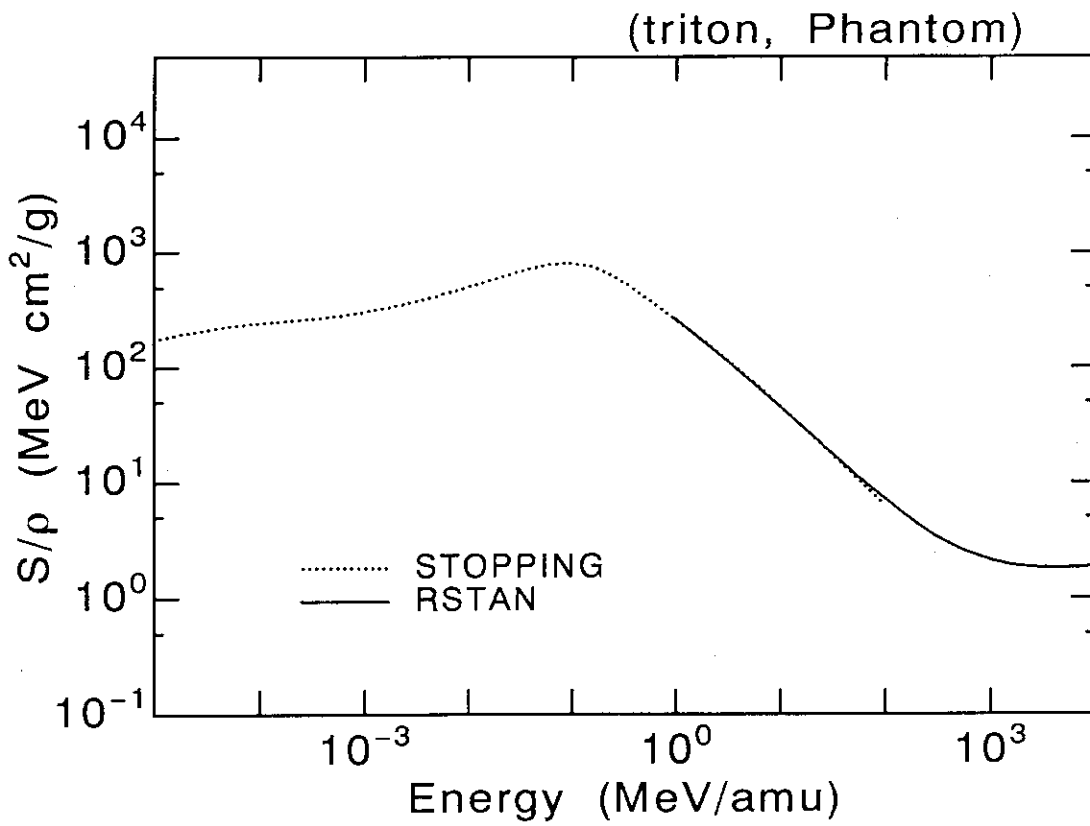
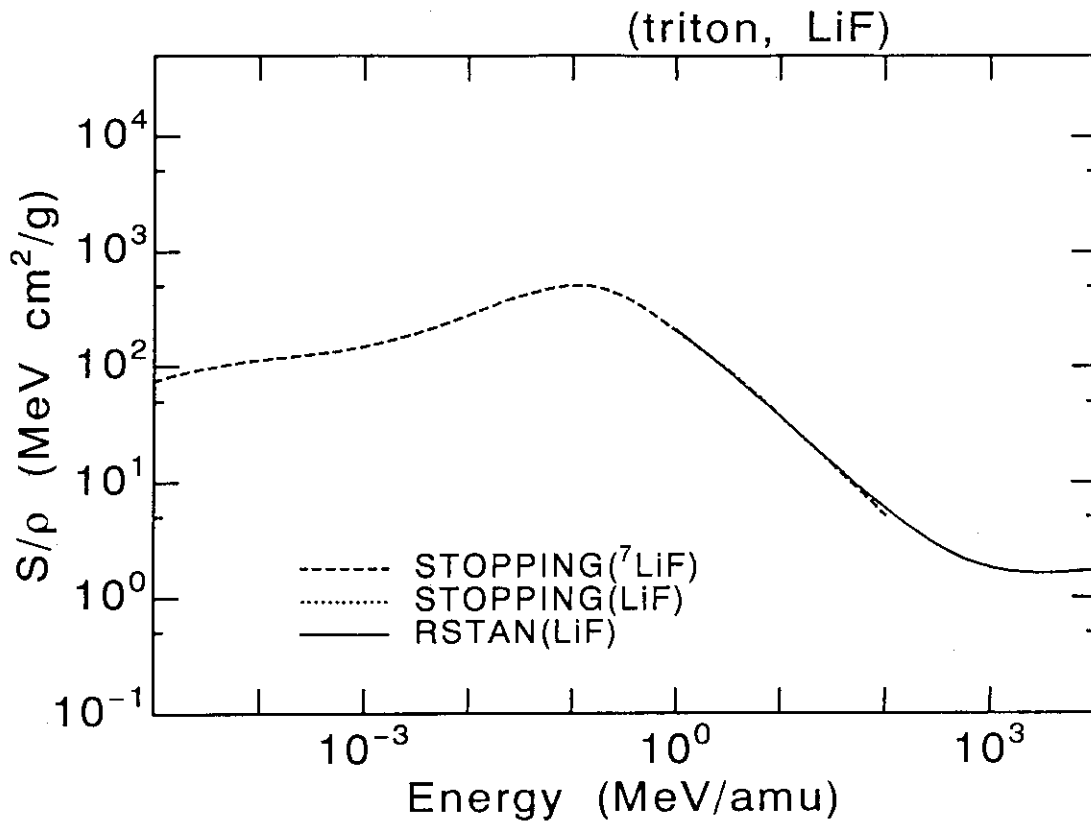


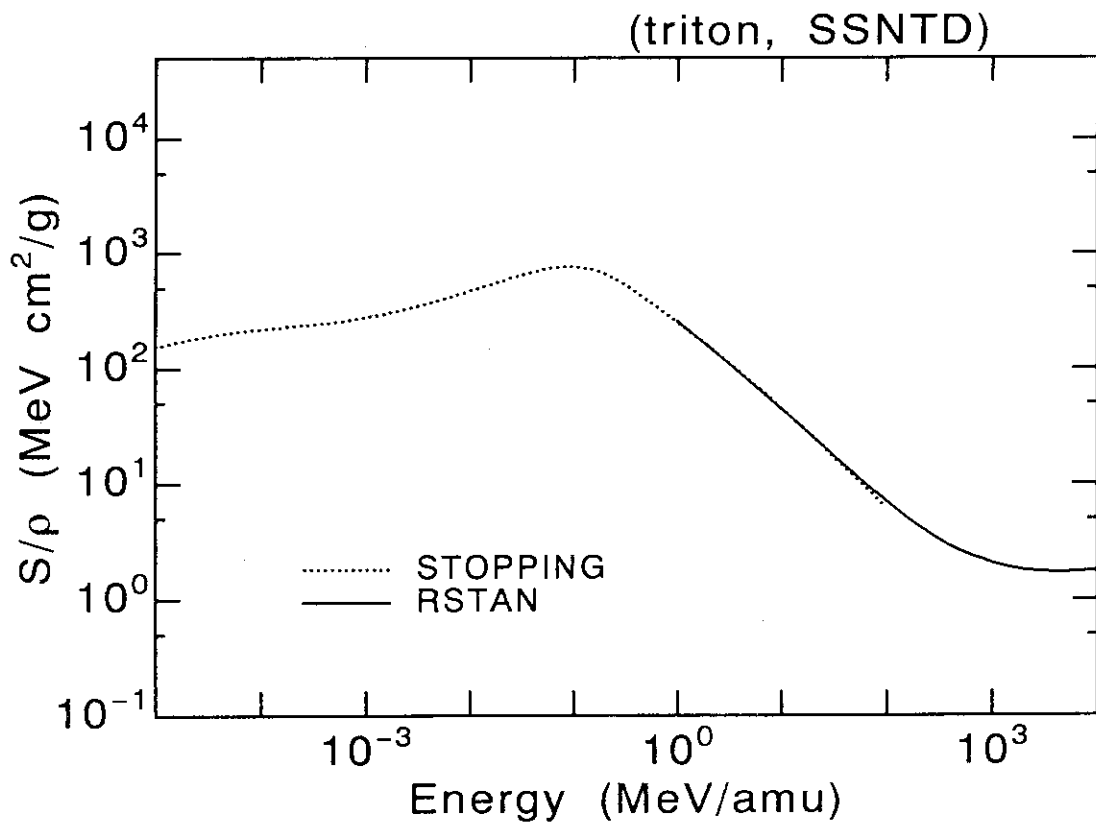
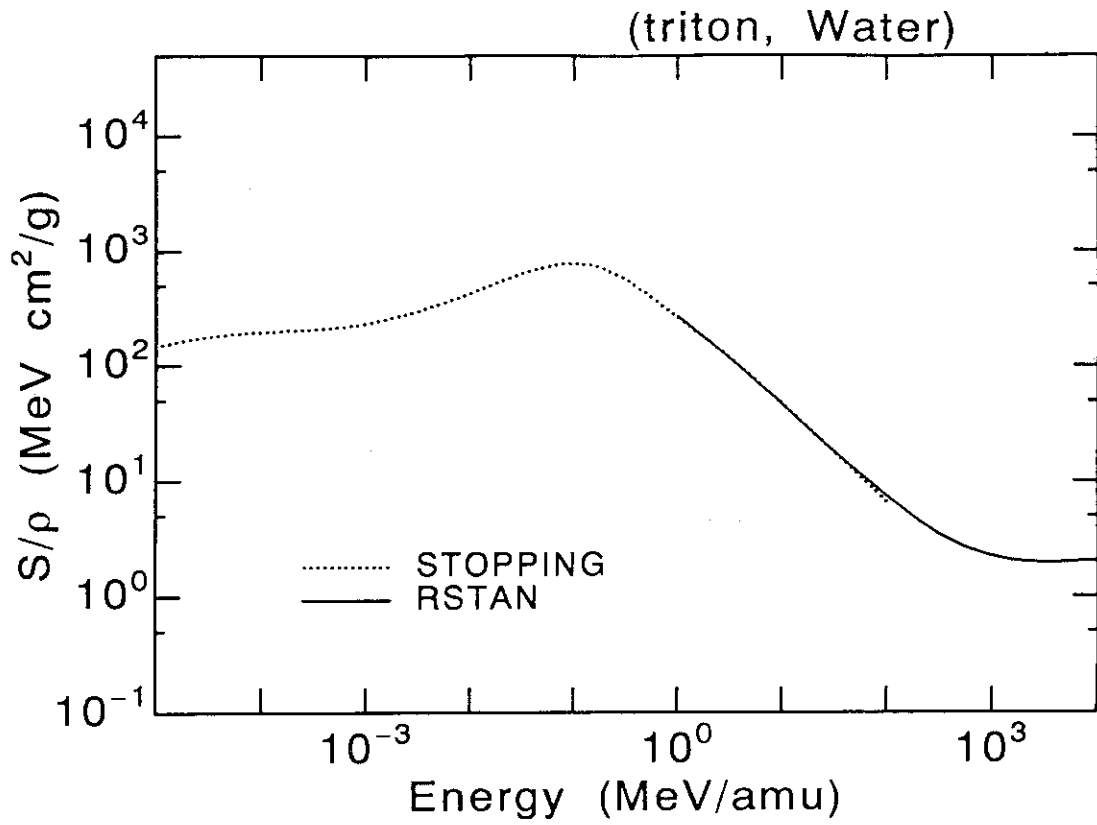
(triton, Iron)

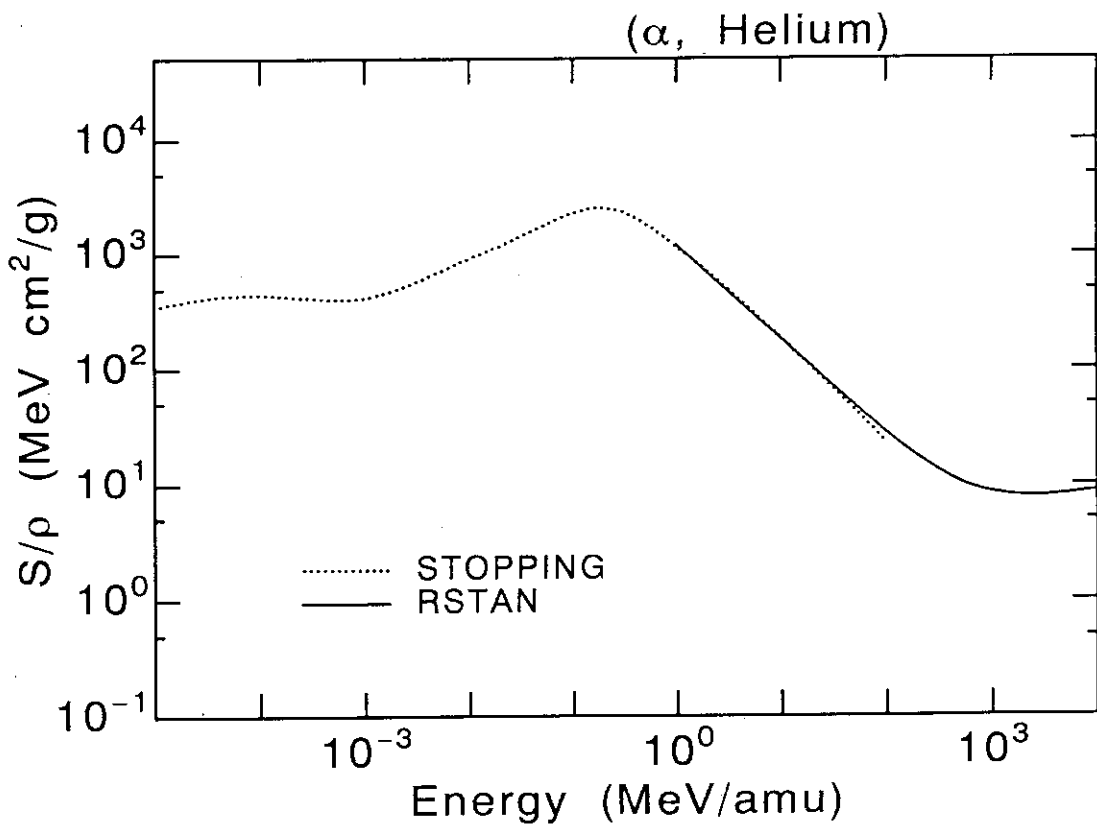
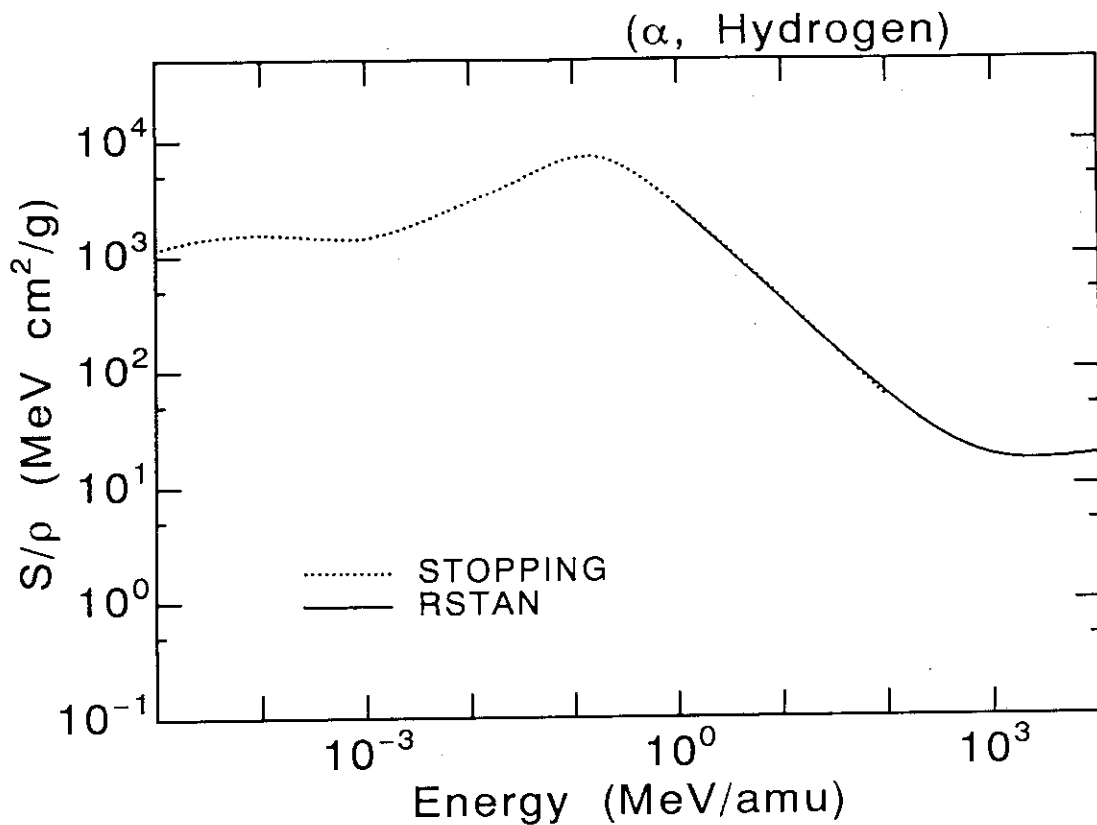




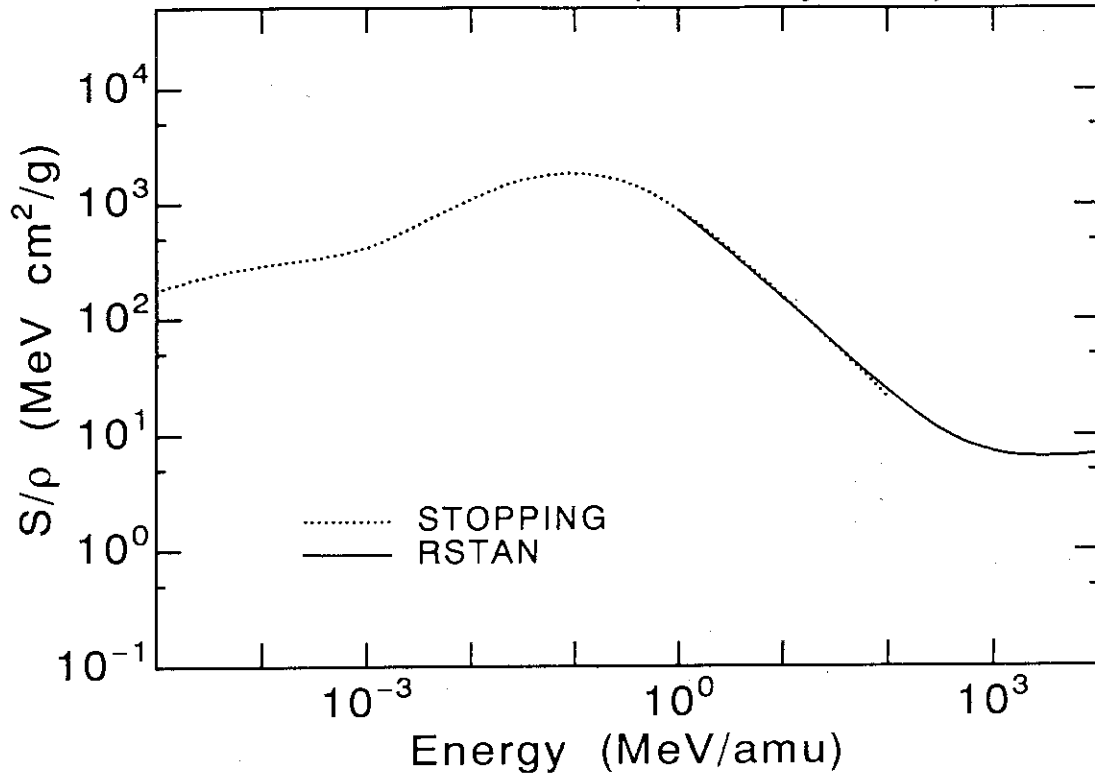




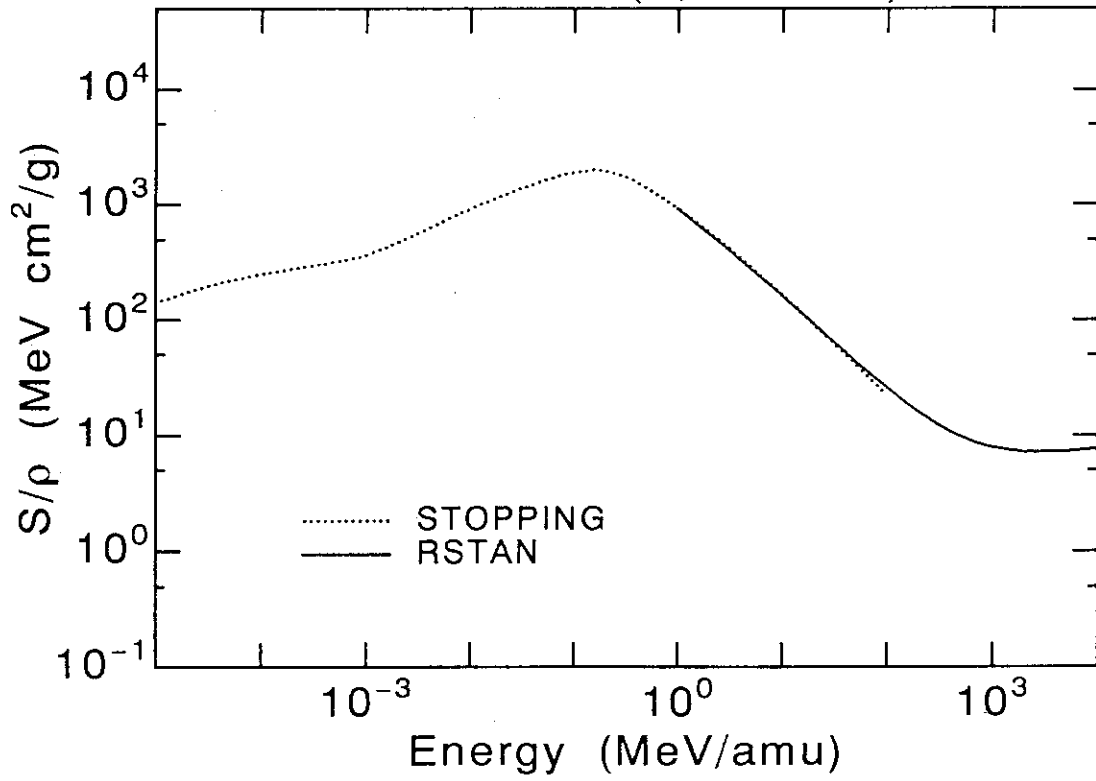


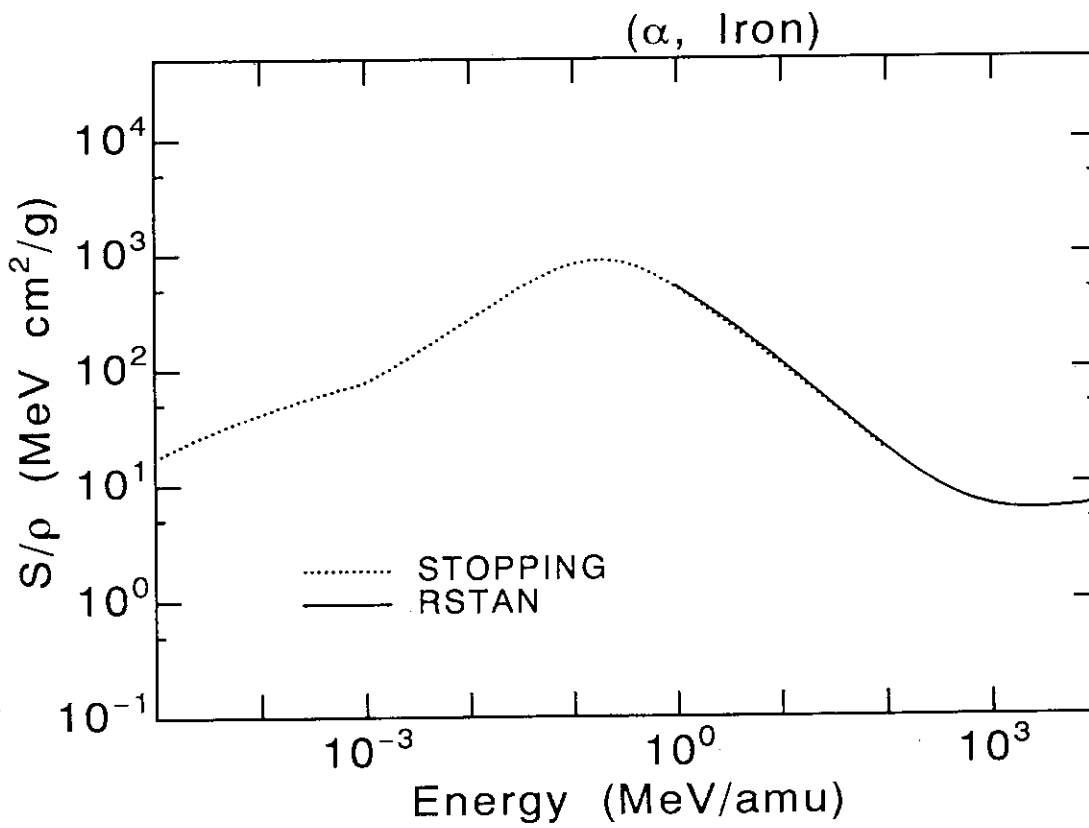
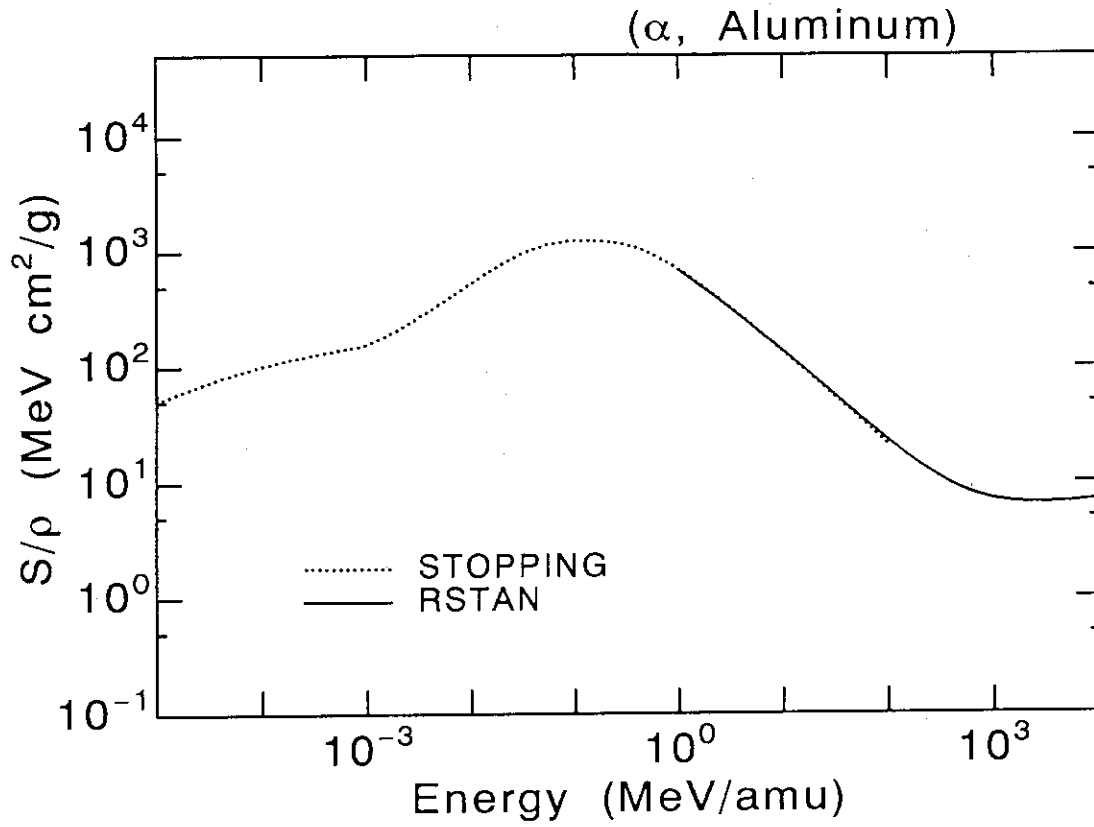


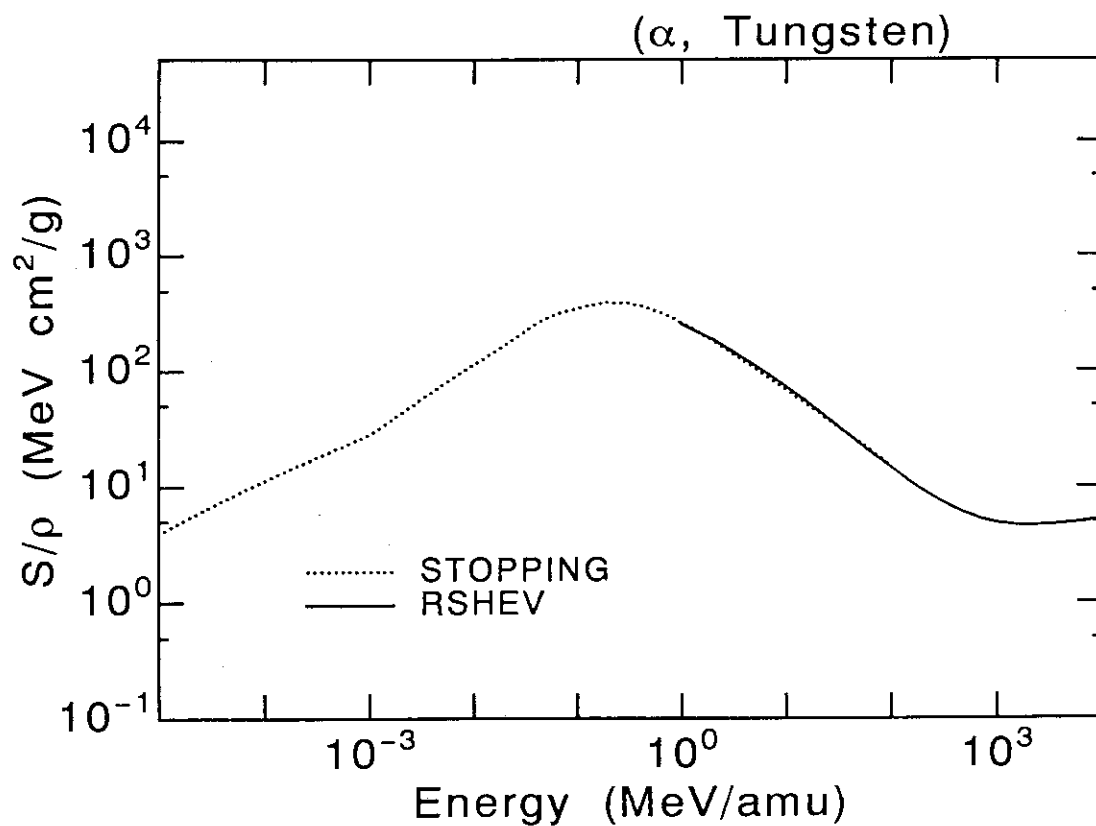
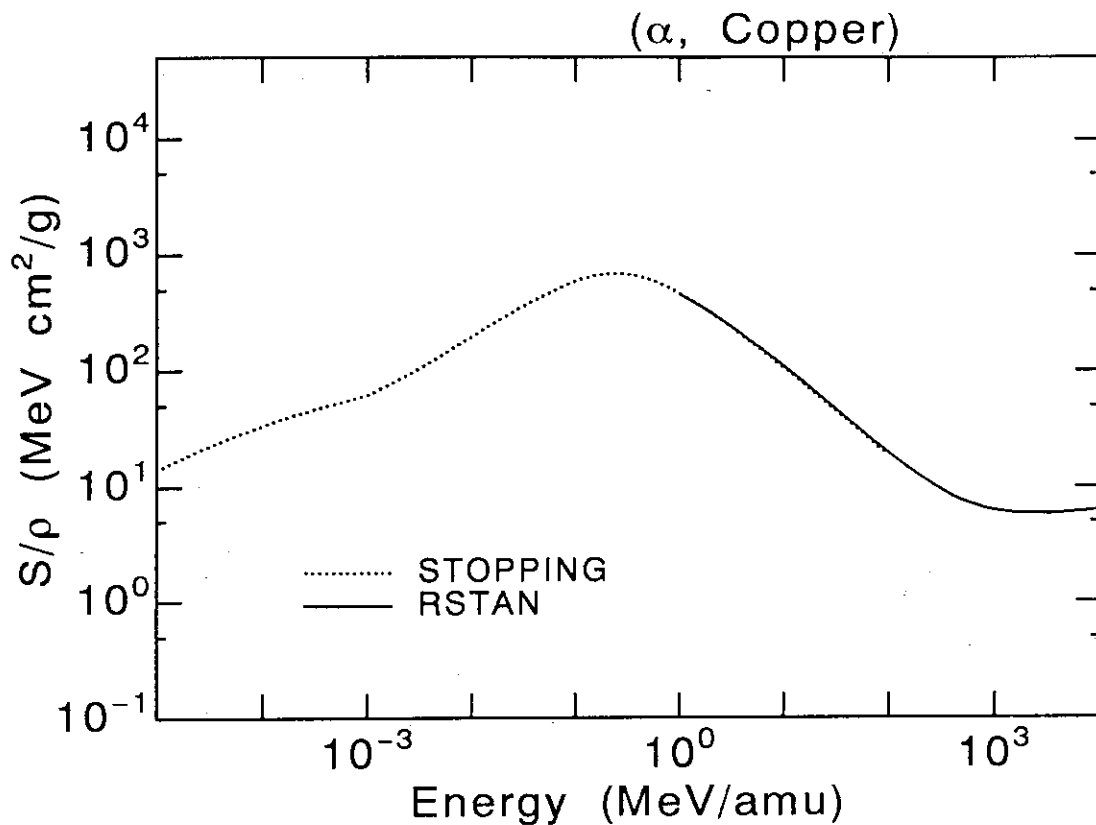
(α , Beryllium)

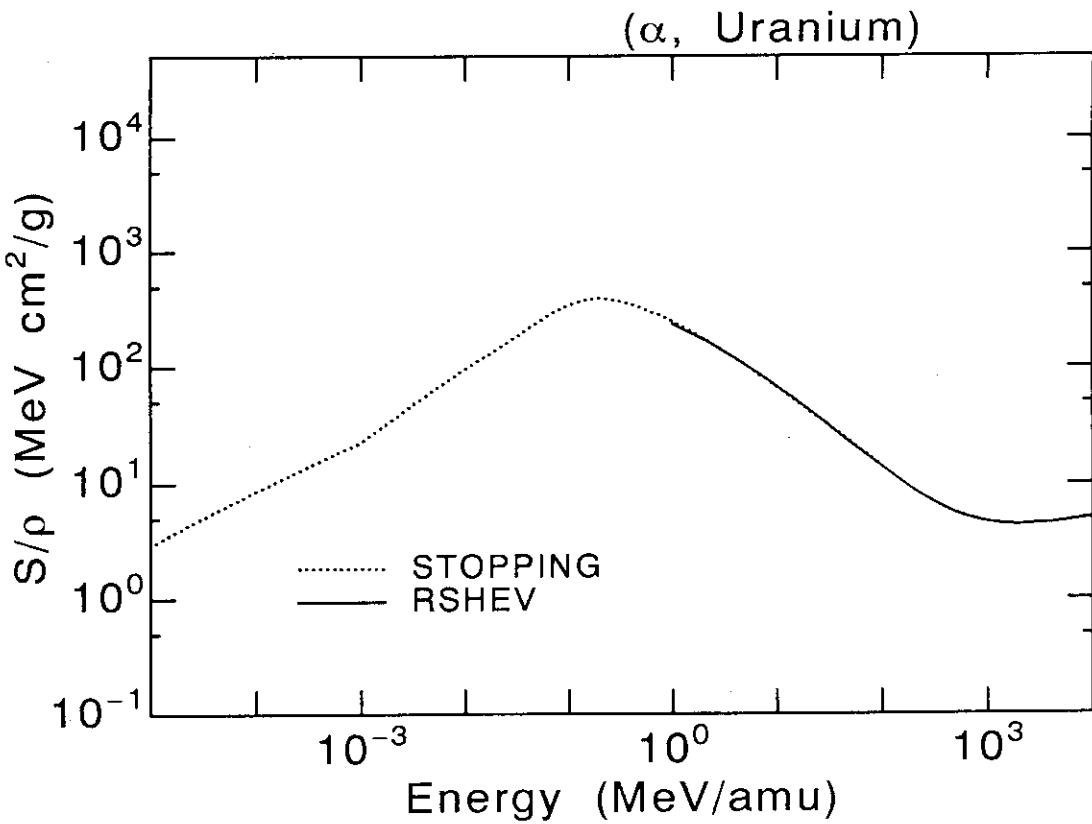
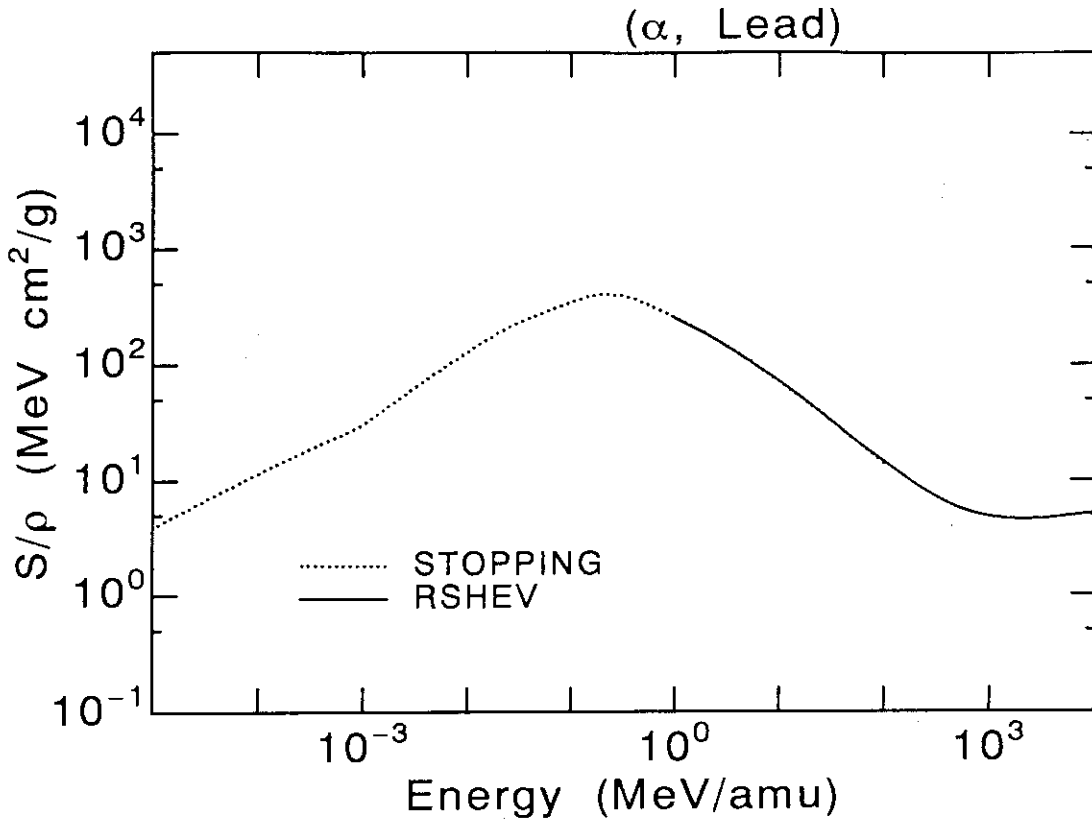


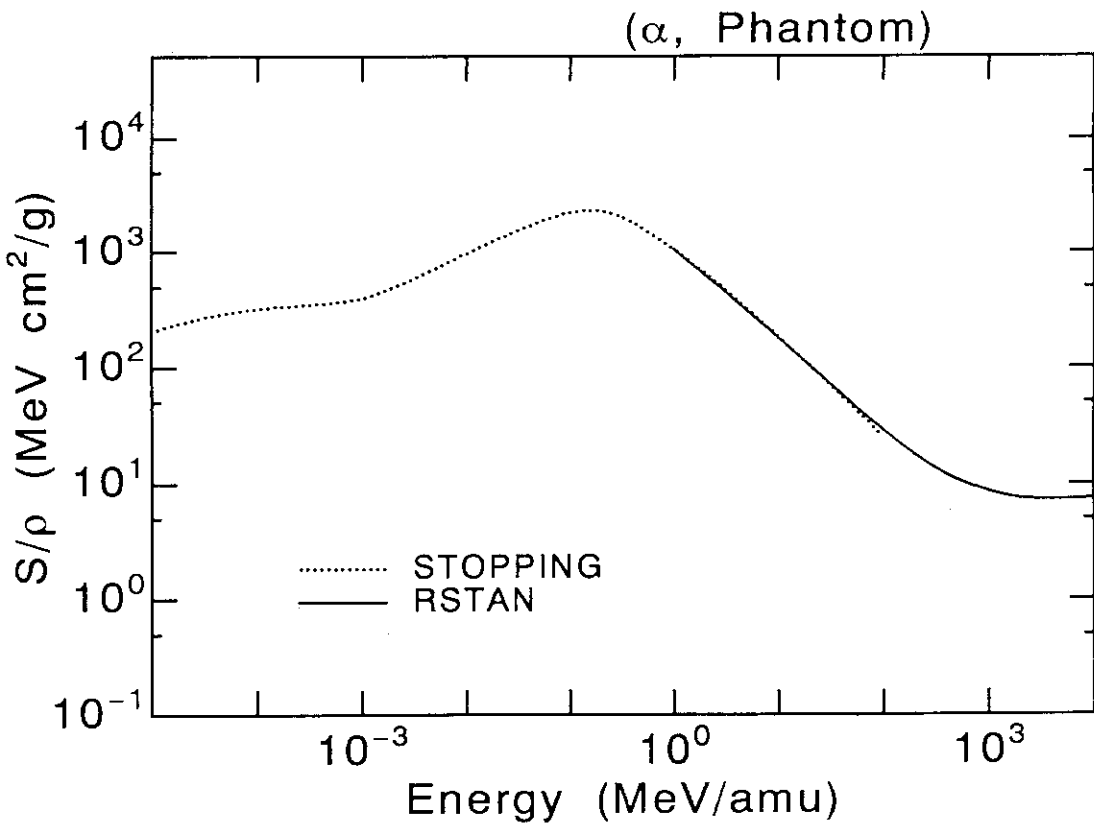
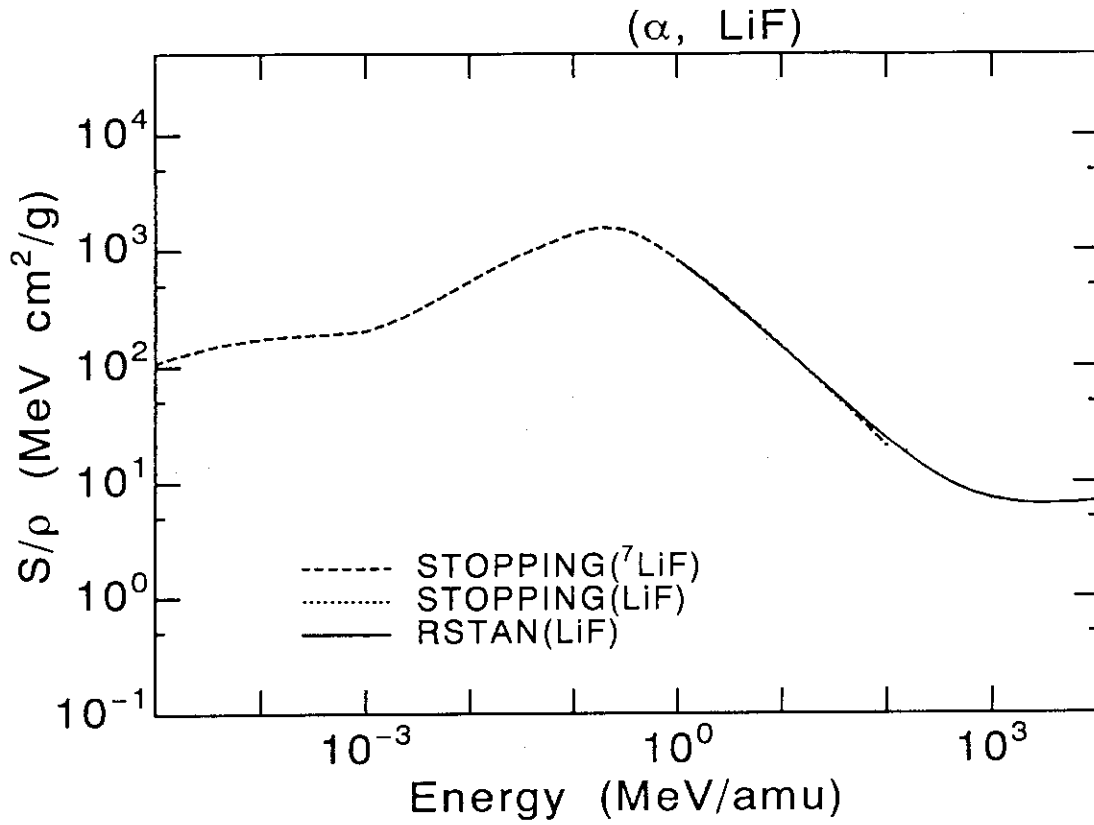
(α , Carbon)

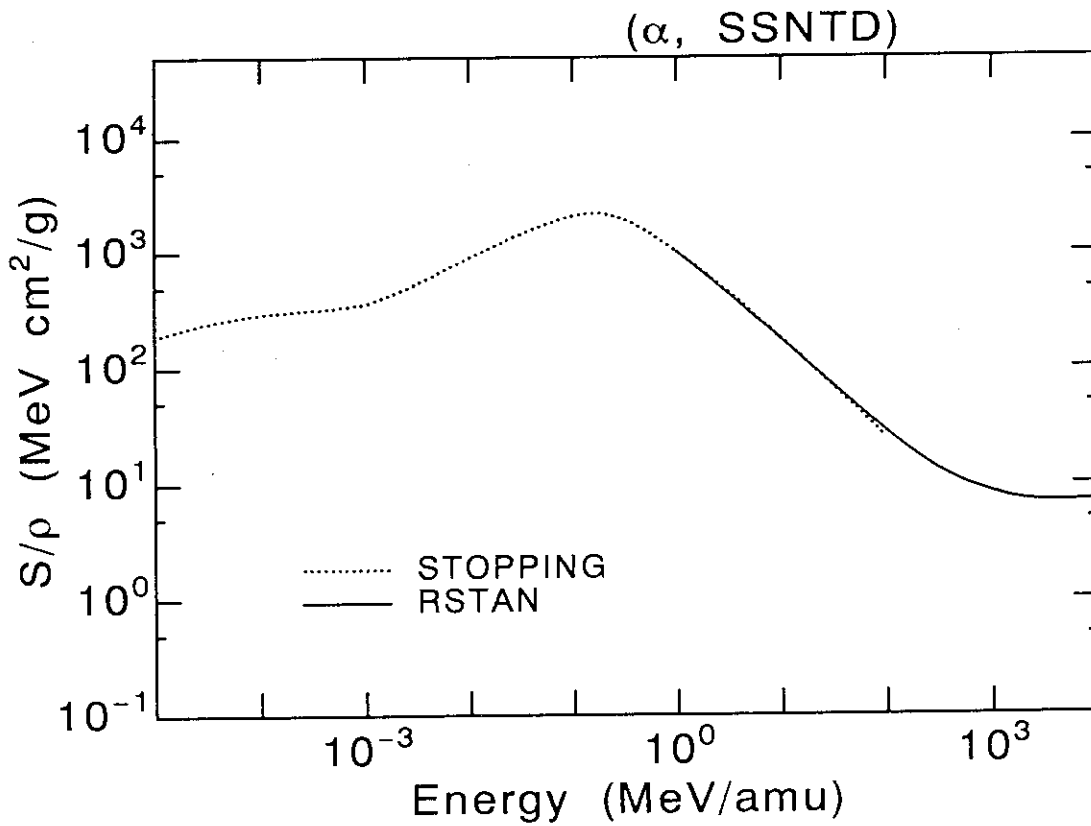
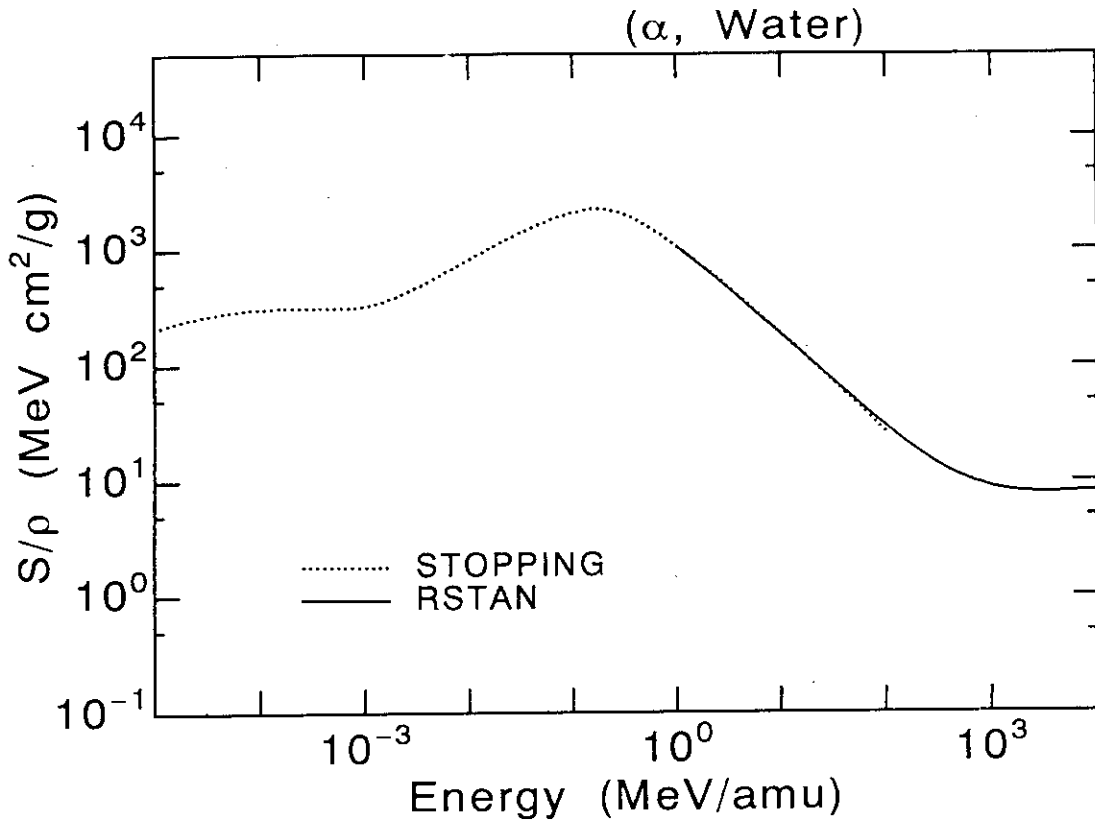


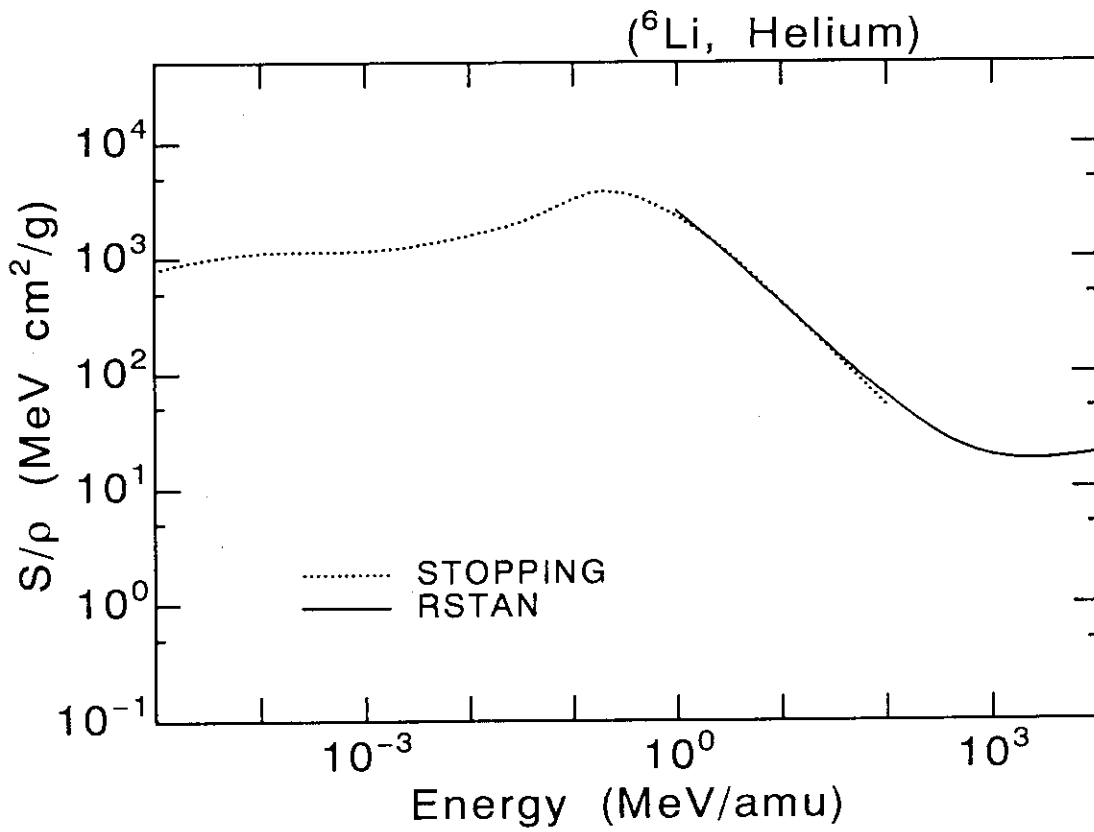
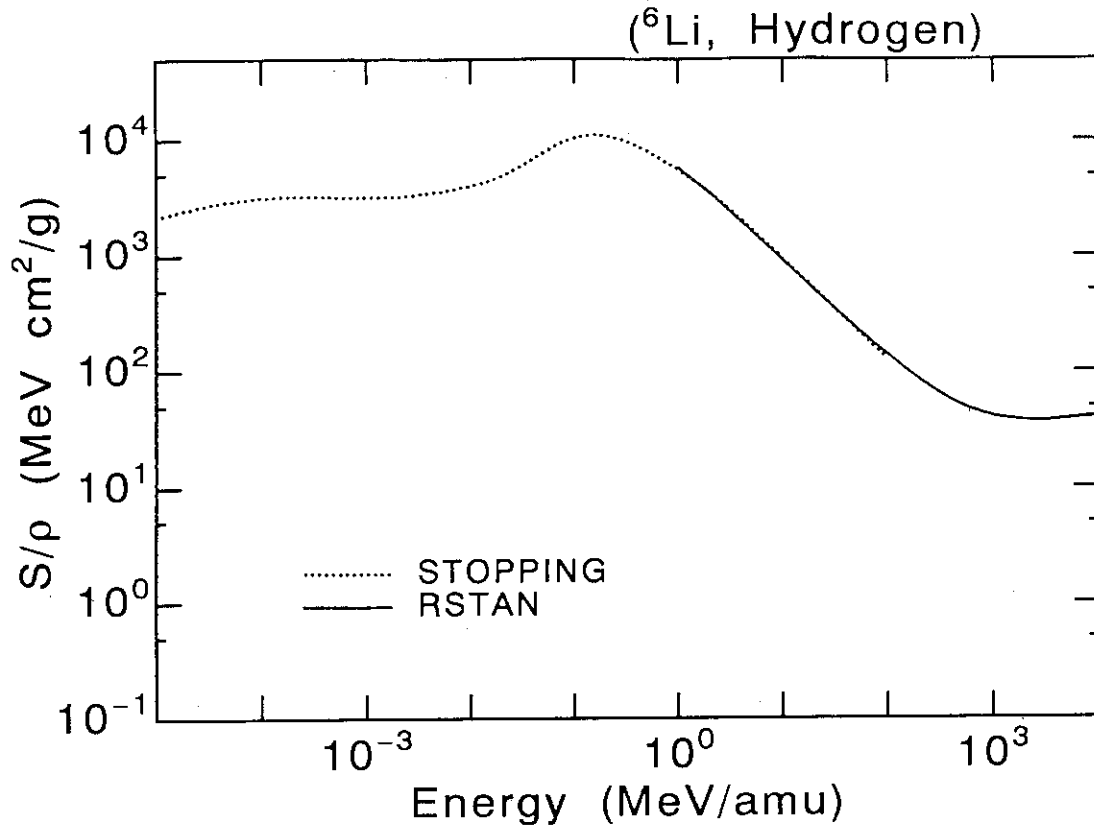




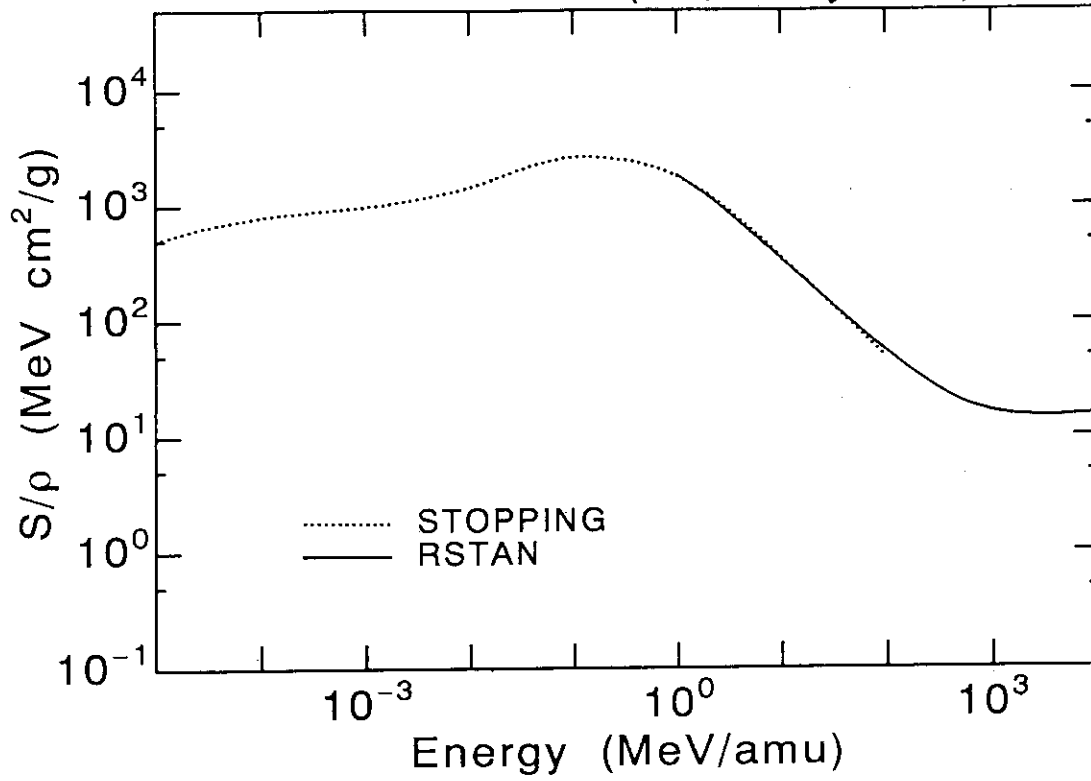




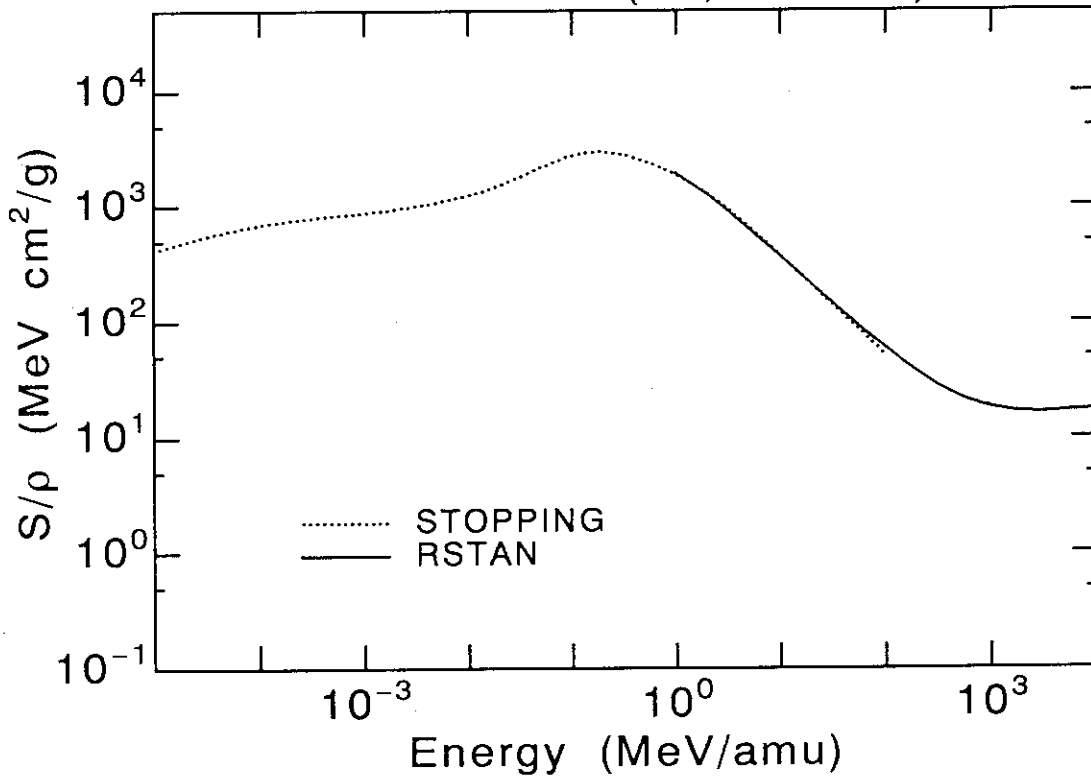


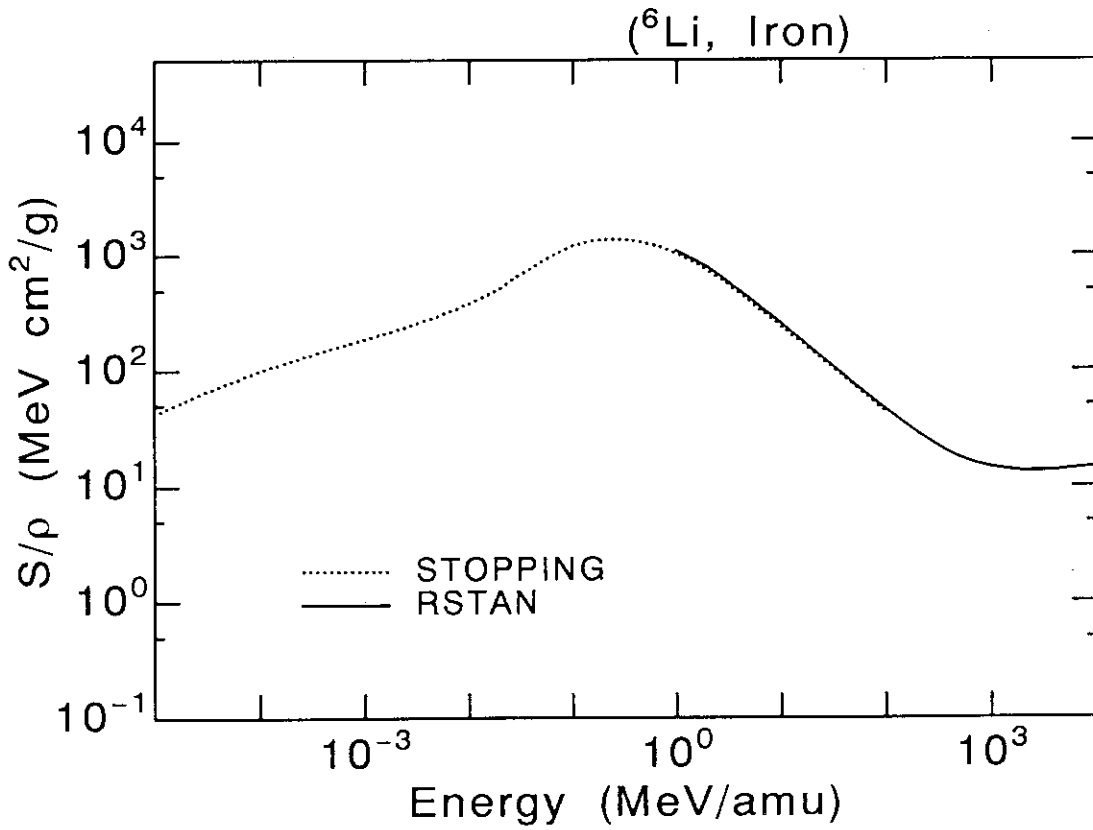
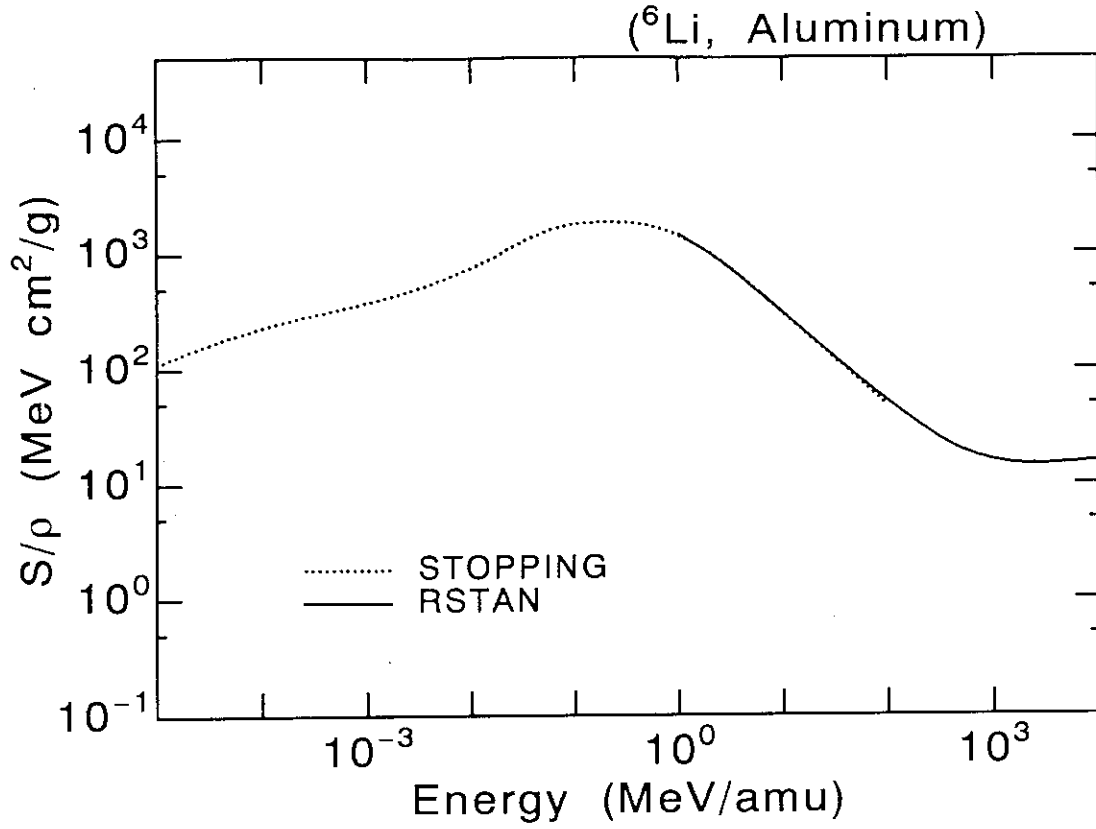


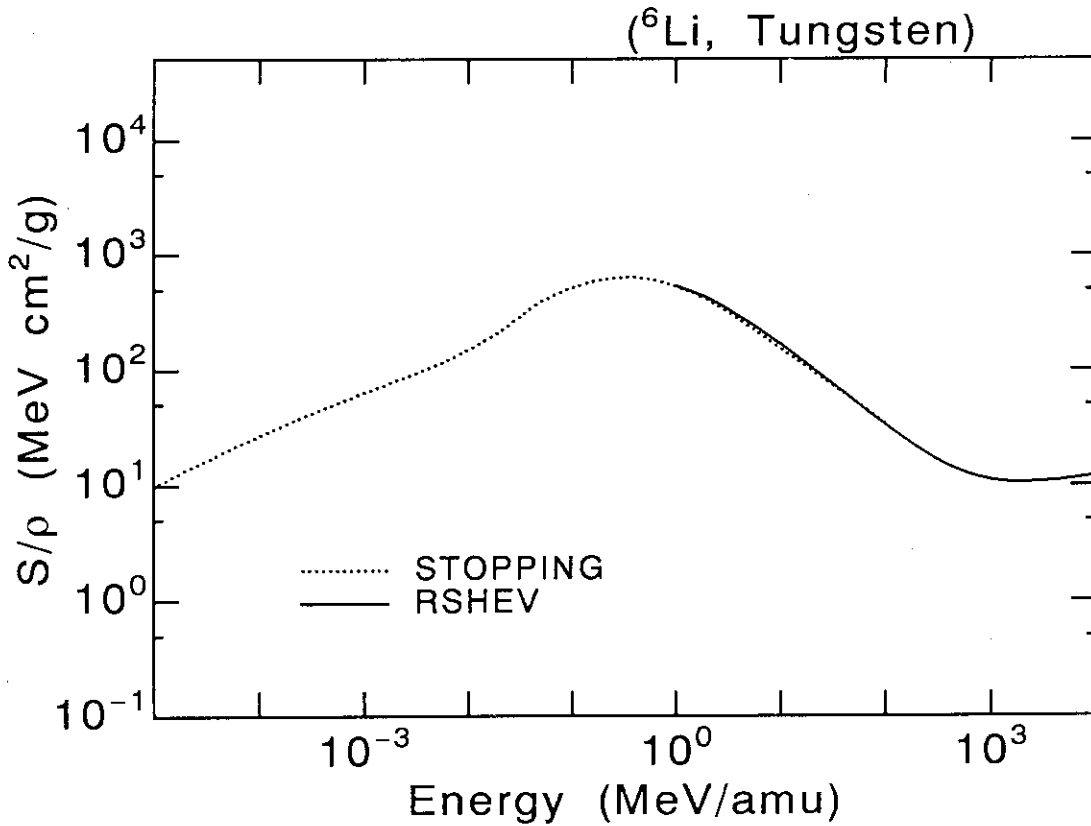
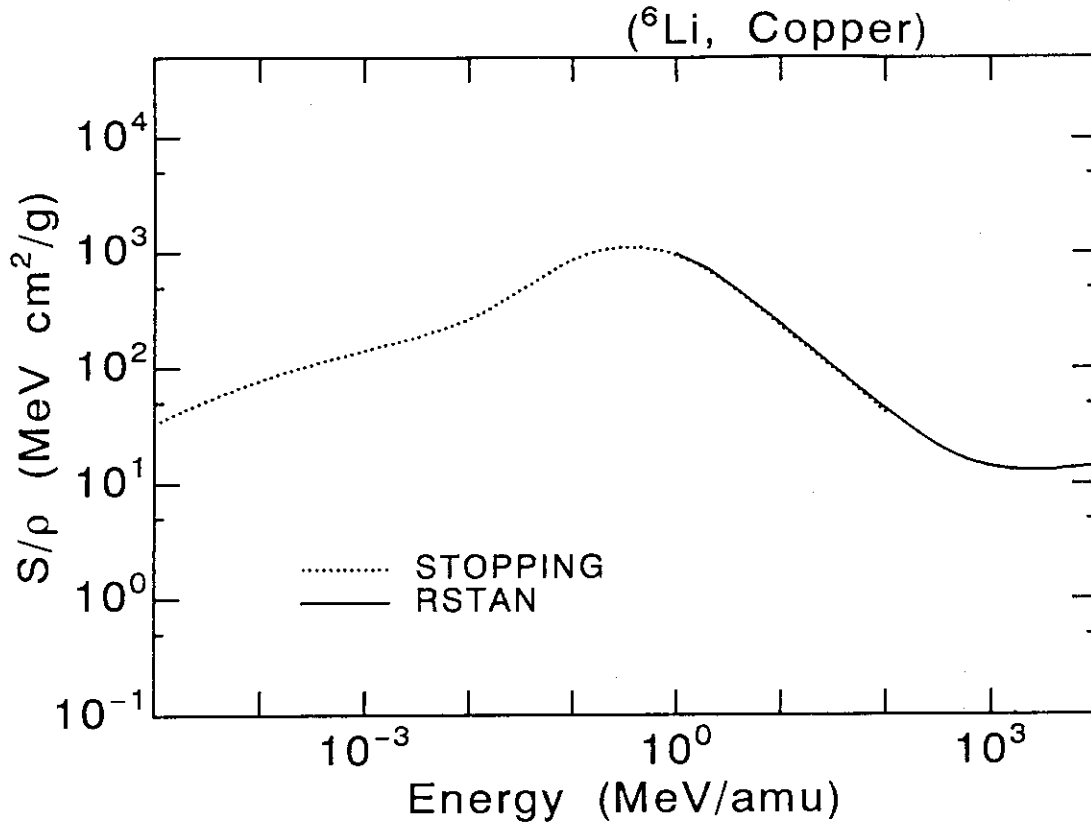
(⁶Li, Beryllium)

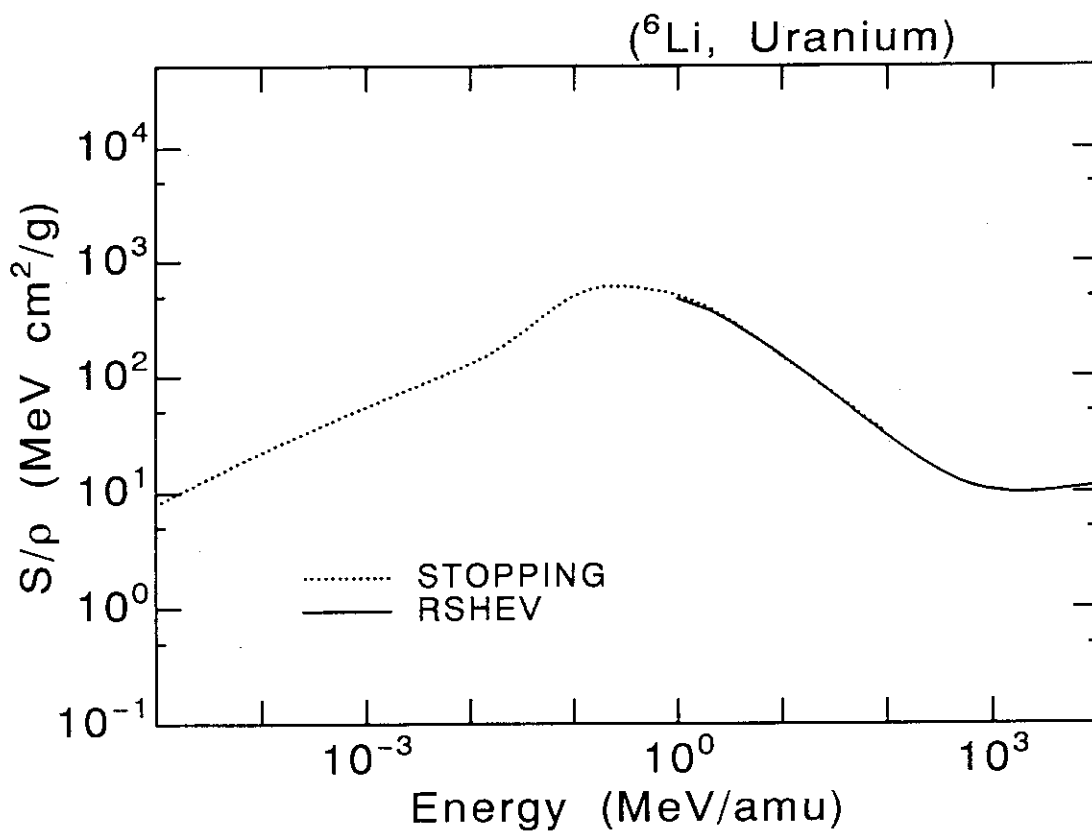
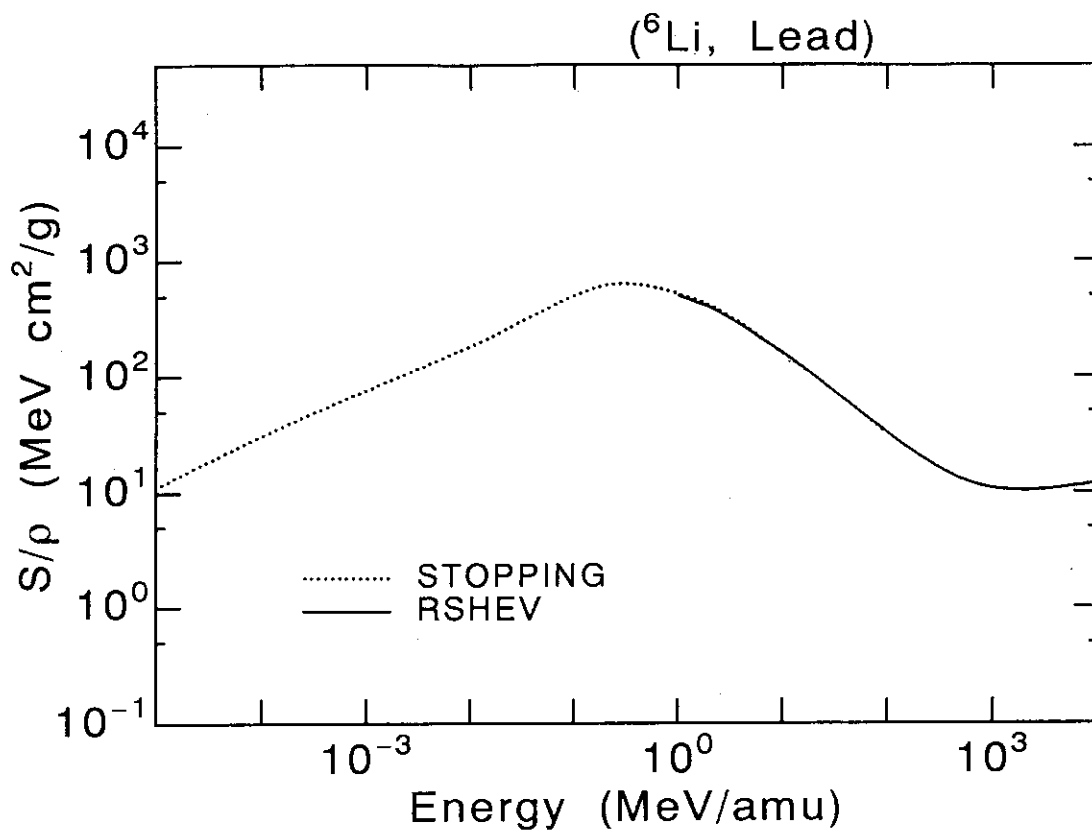


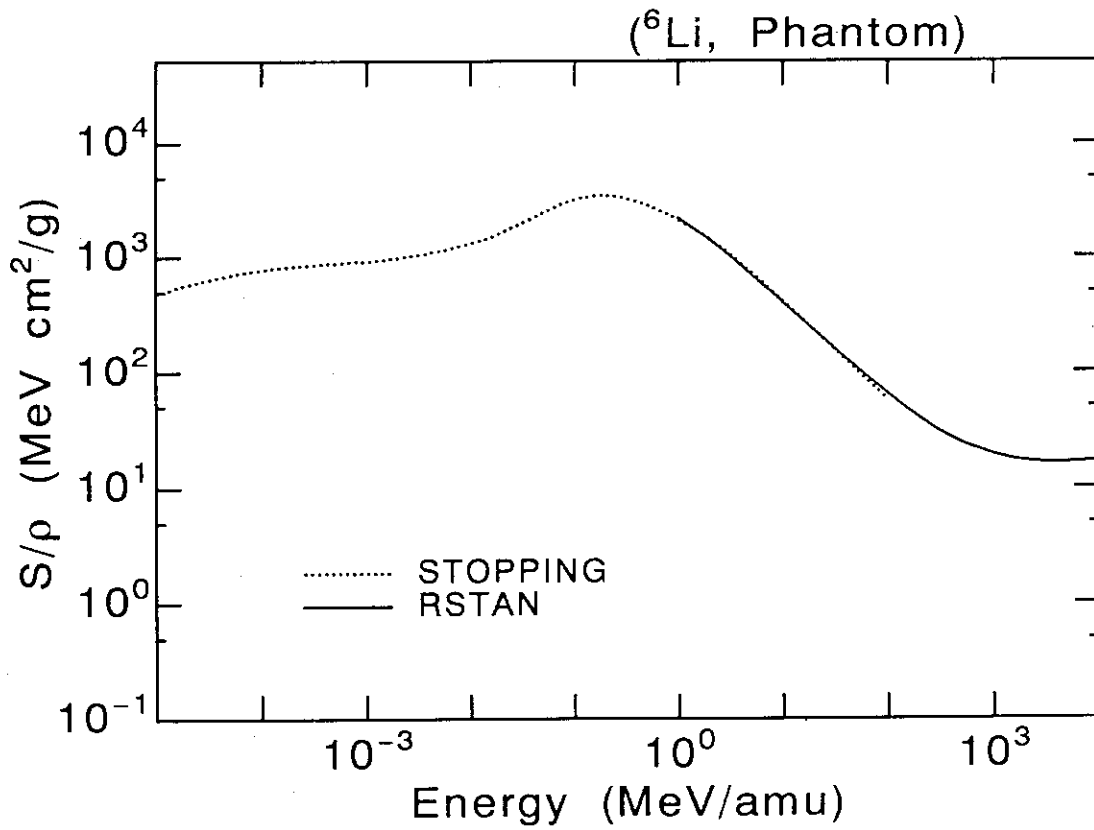
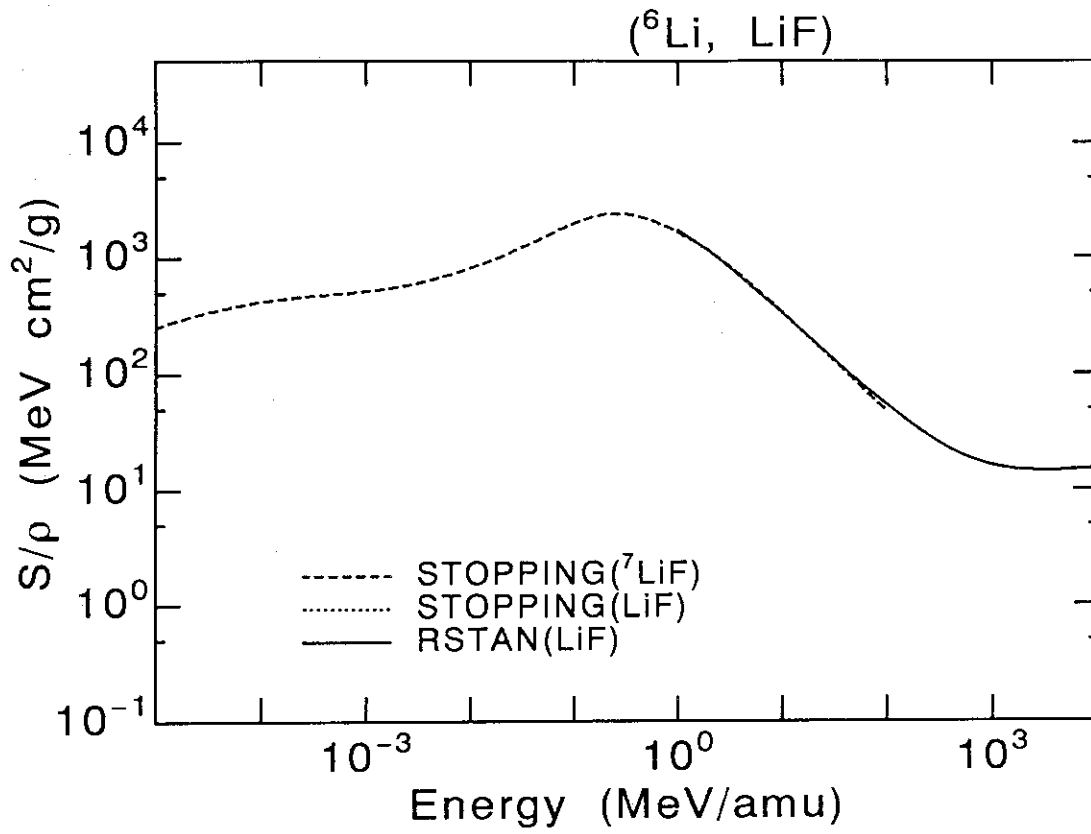
(⁶Li, Carbon)

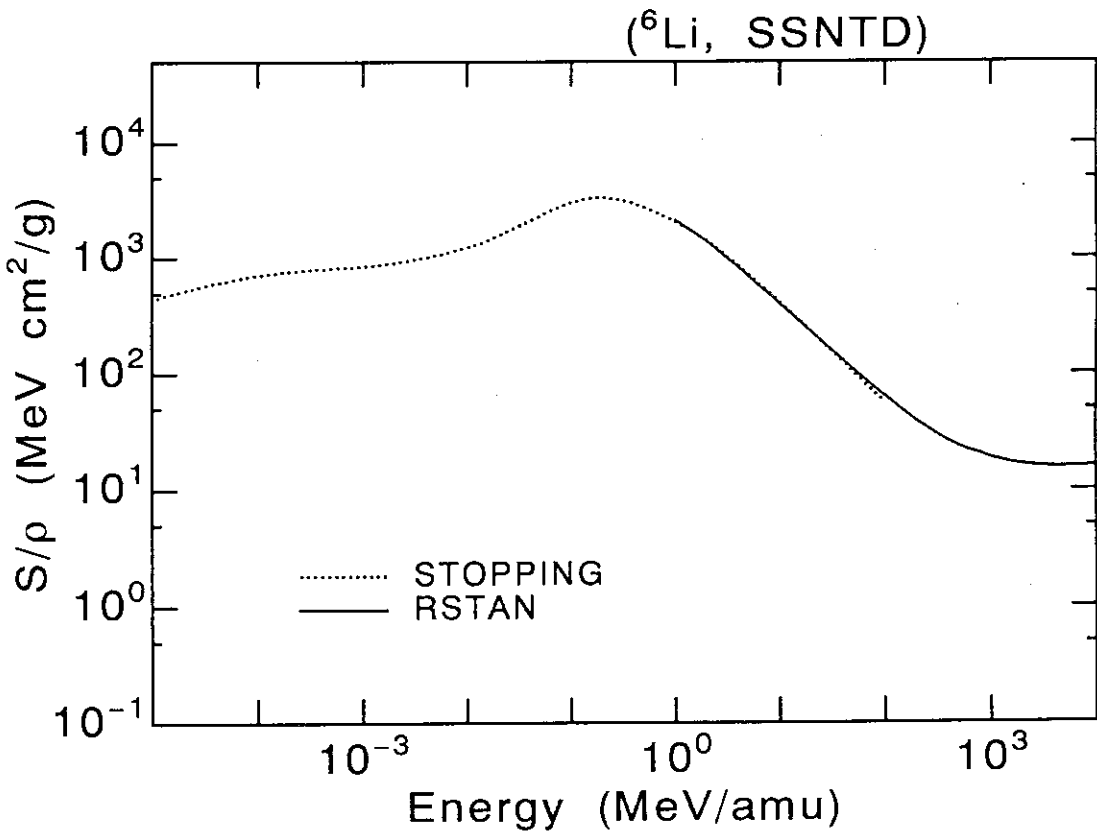
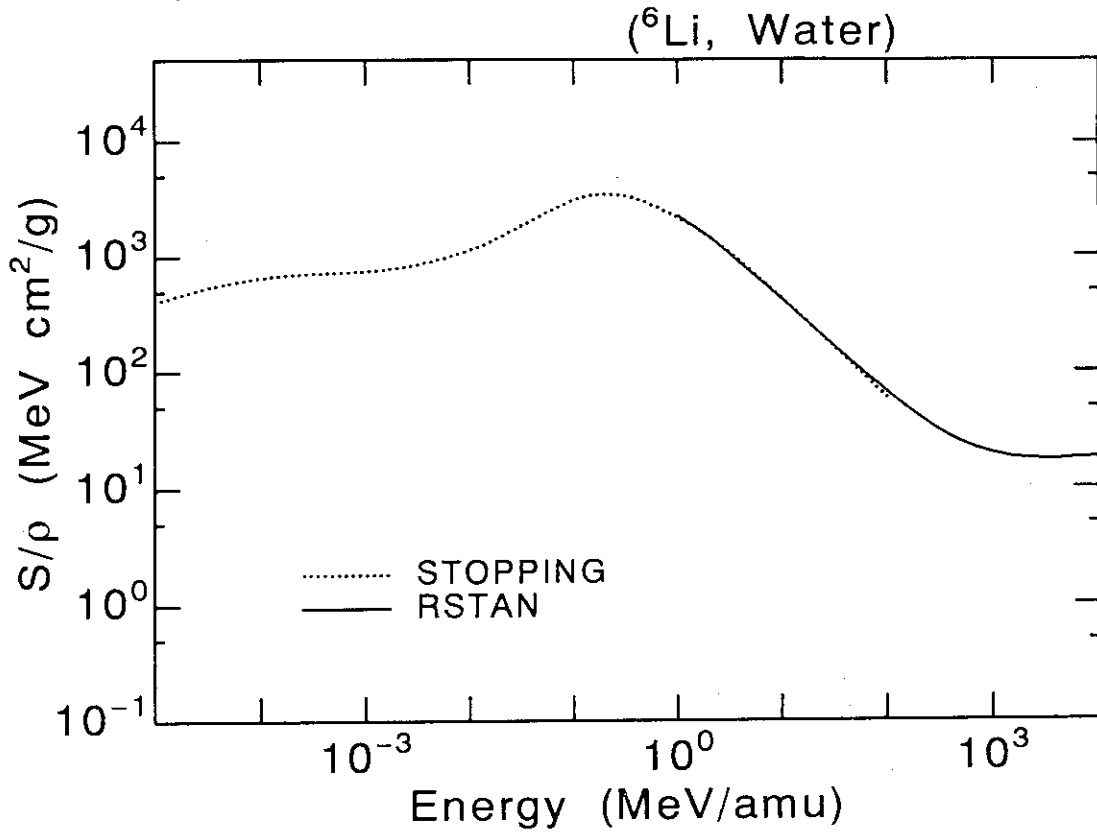


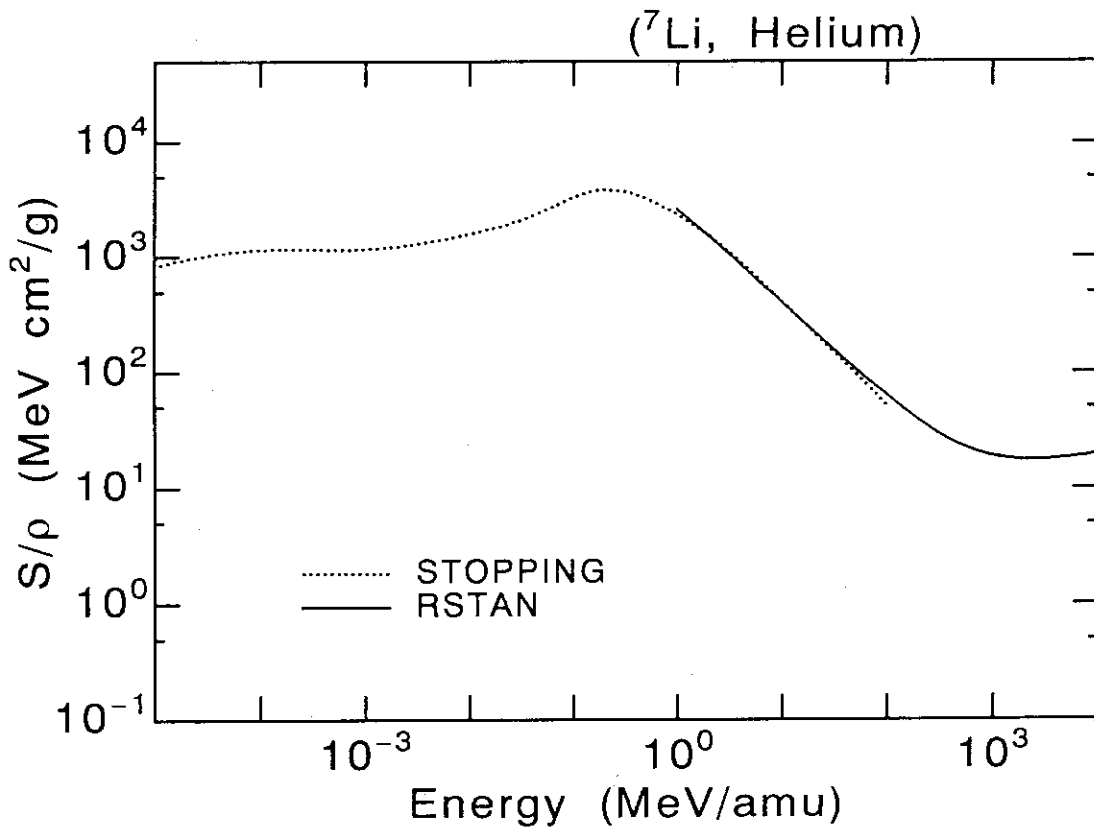
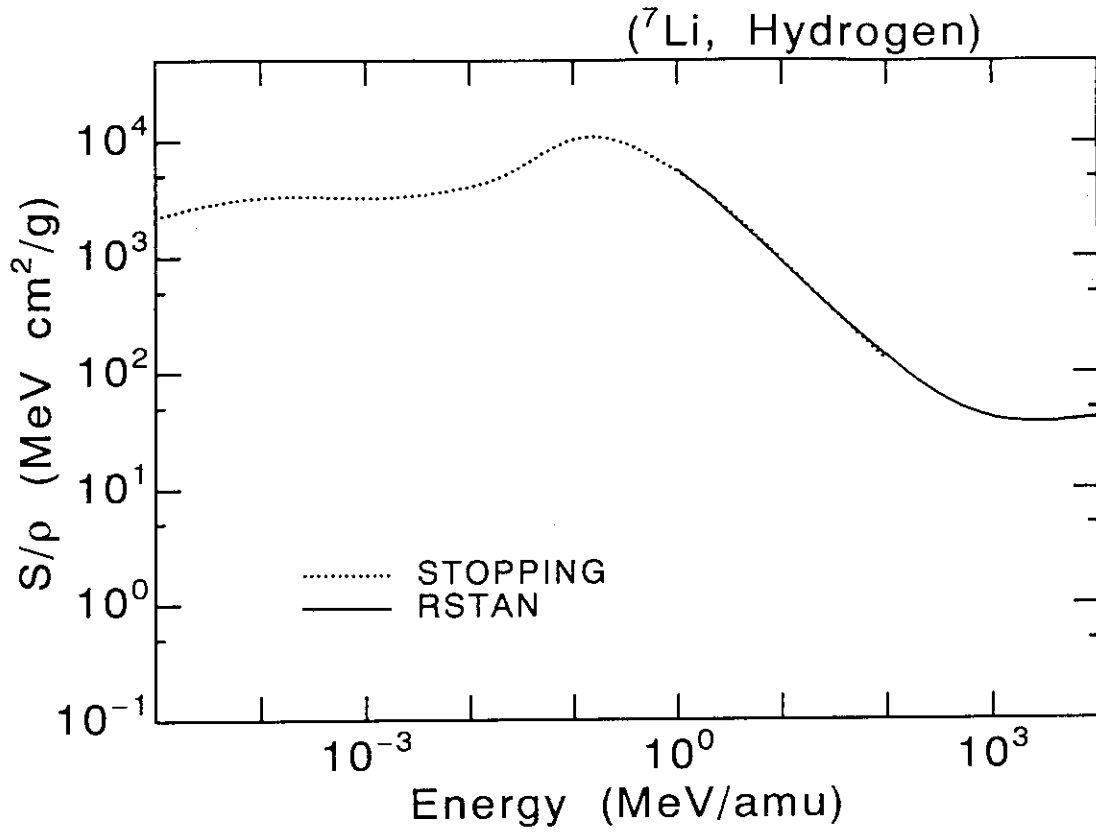




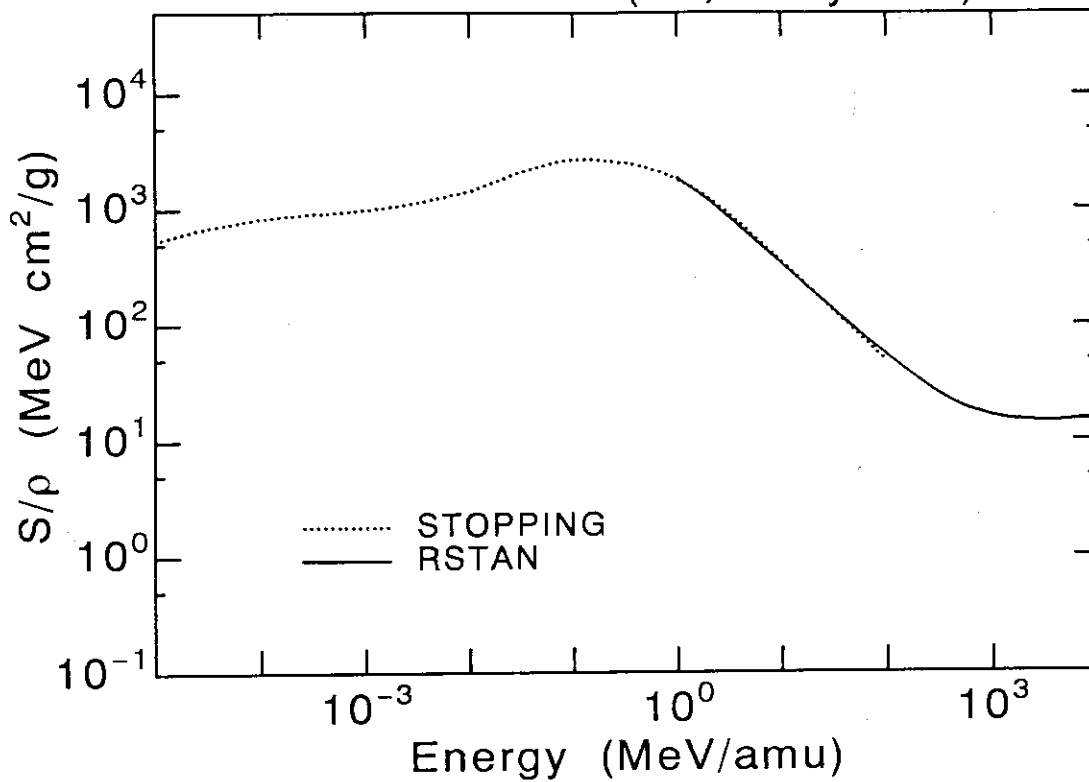




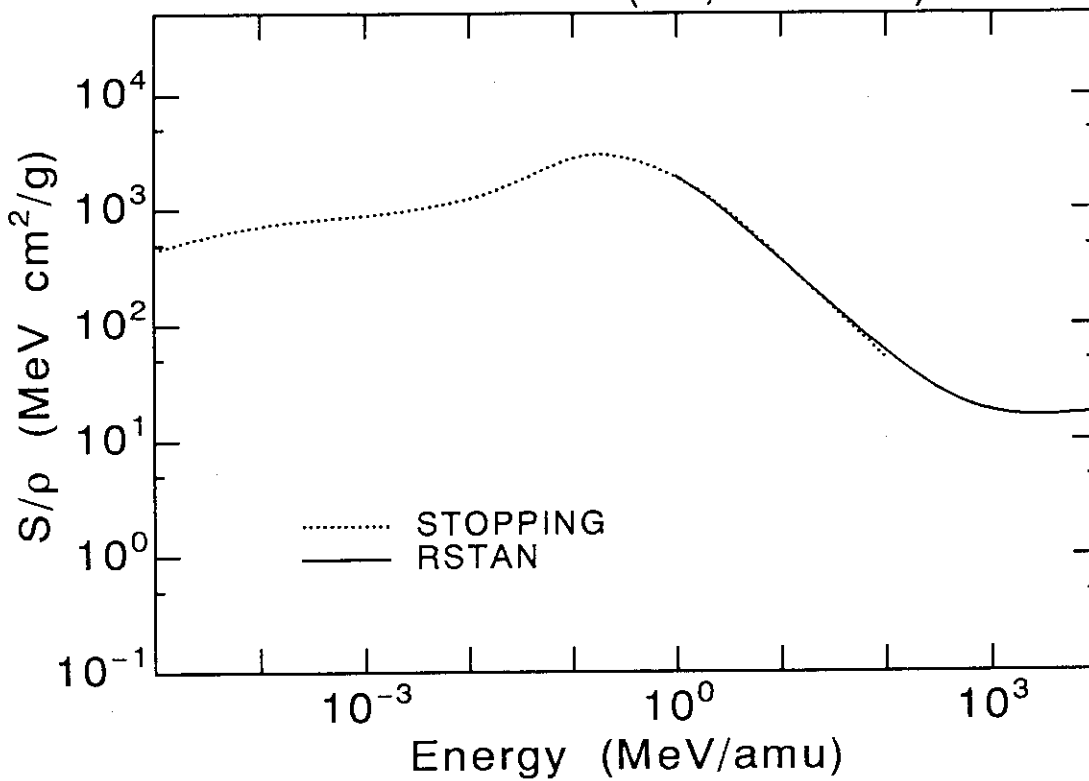




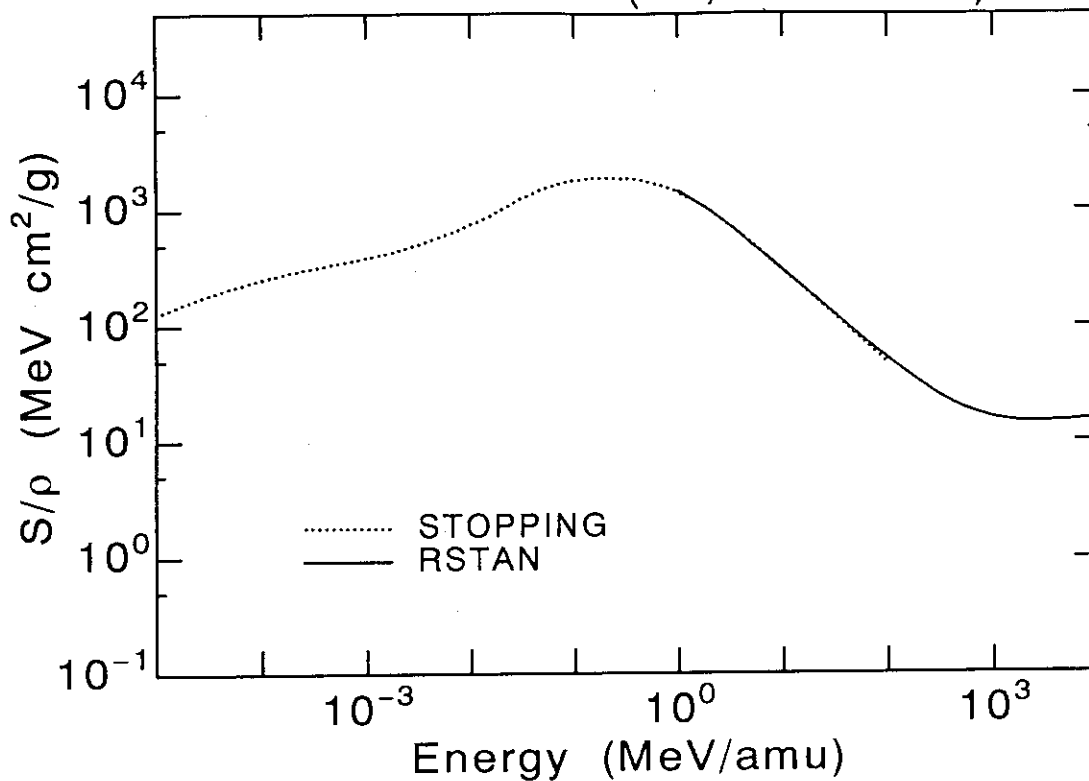
(⁷Li, Beryllium)



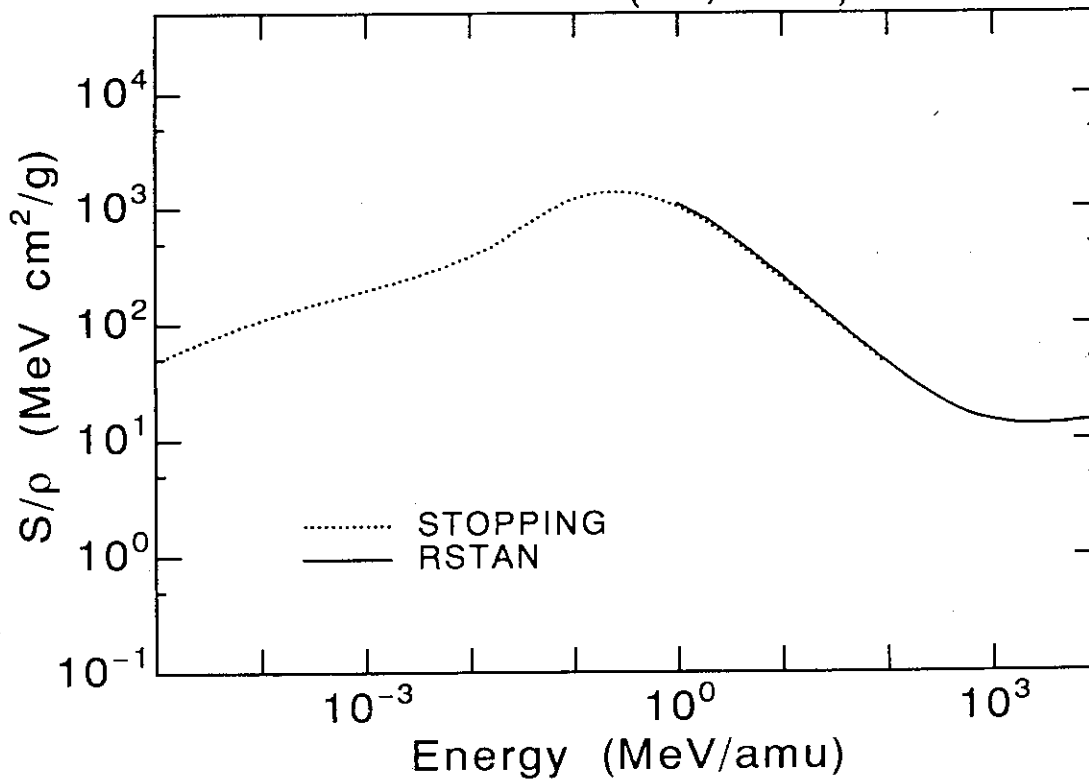
(⁷Li, Carbon)



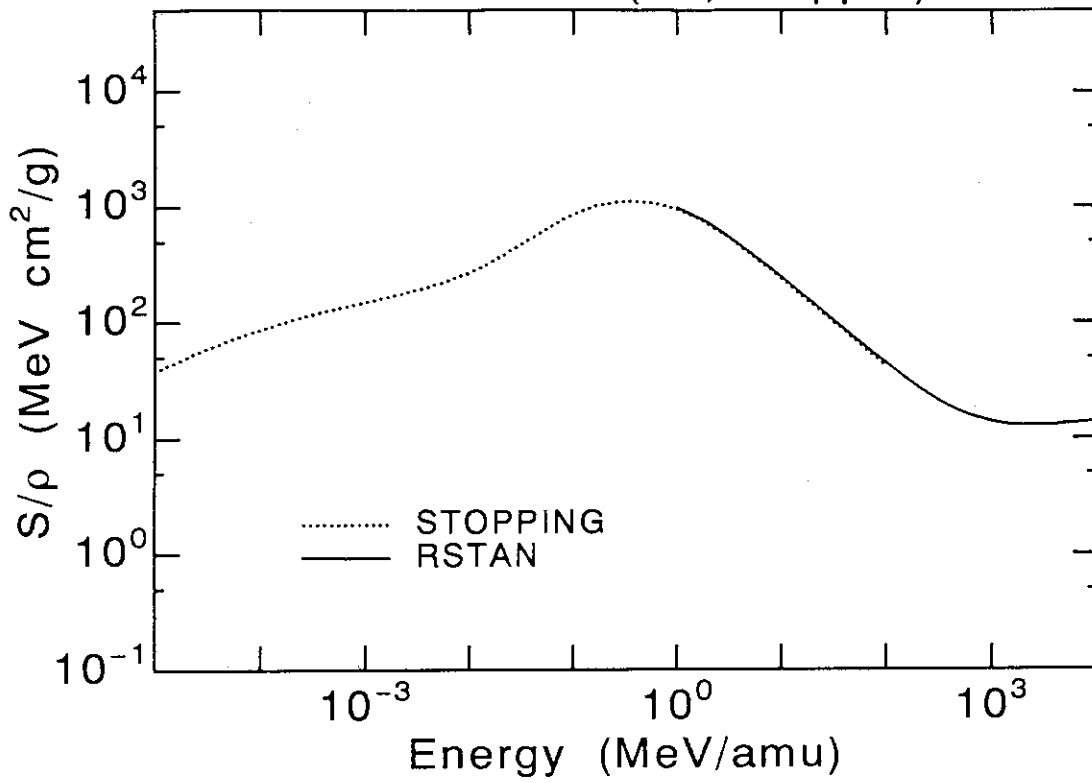
(⁷Li, Aluminum)



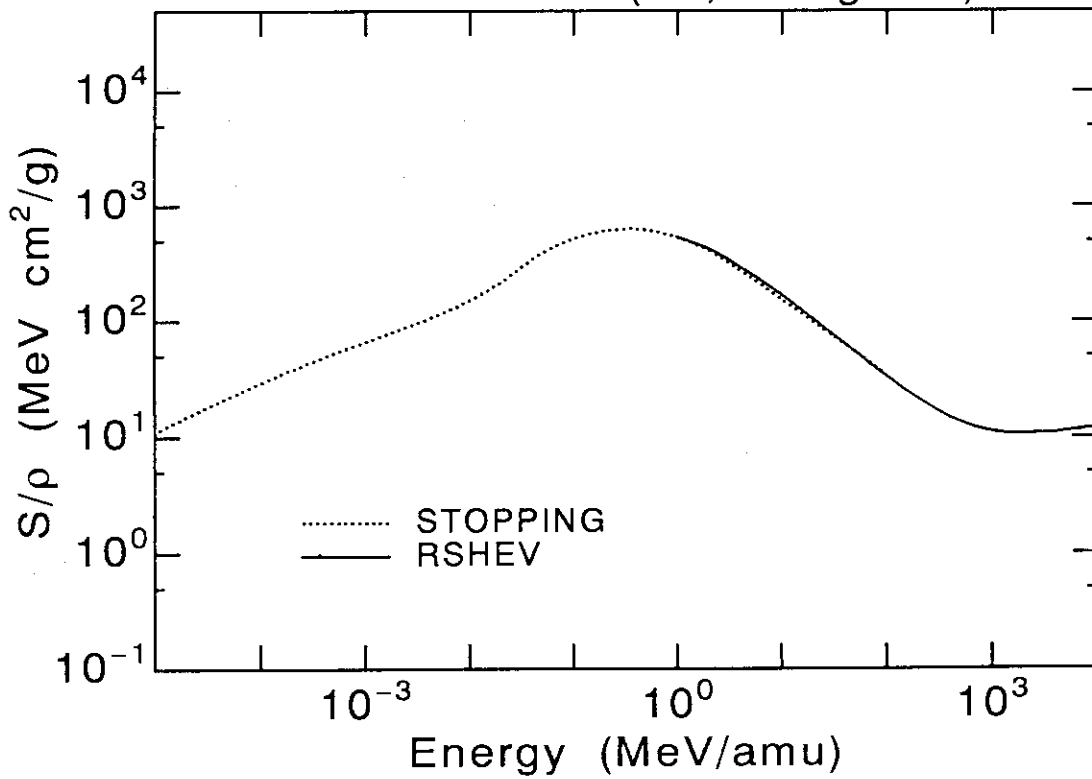
(⁷Li, Iron)

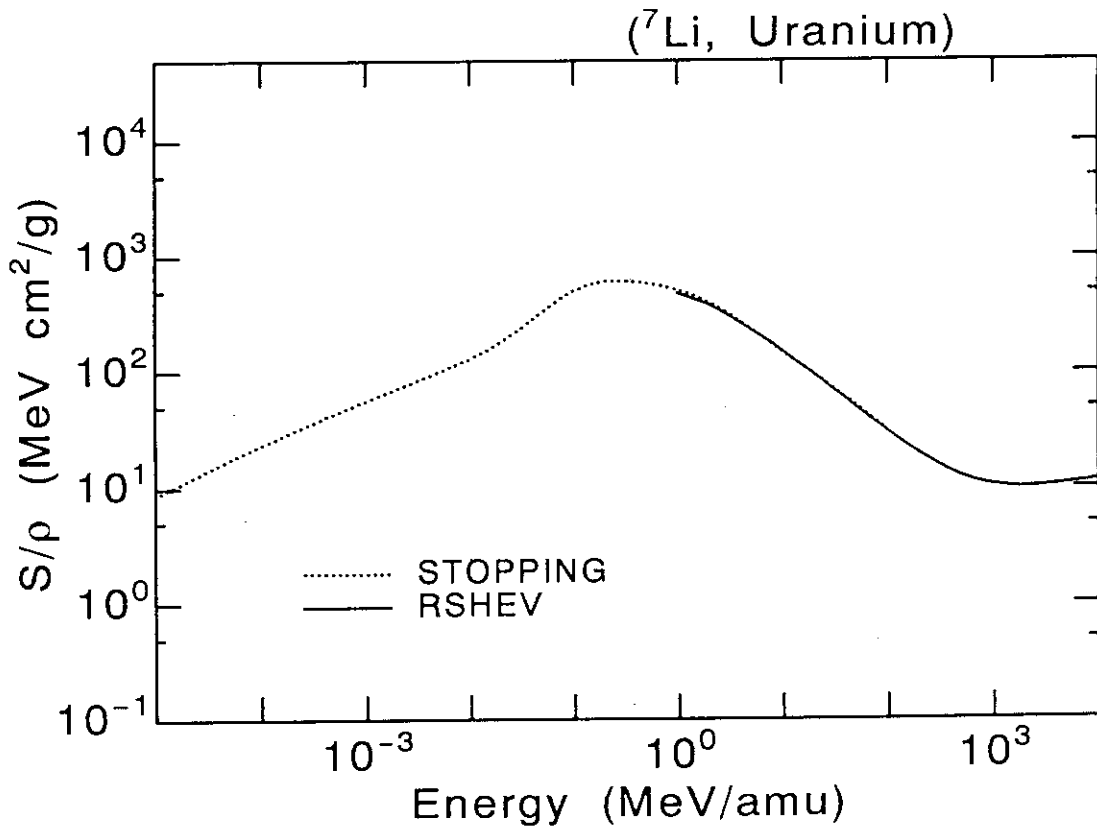
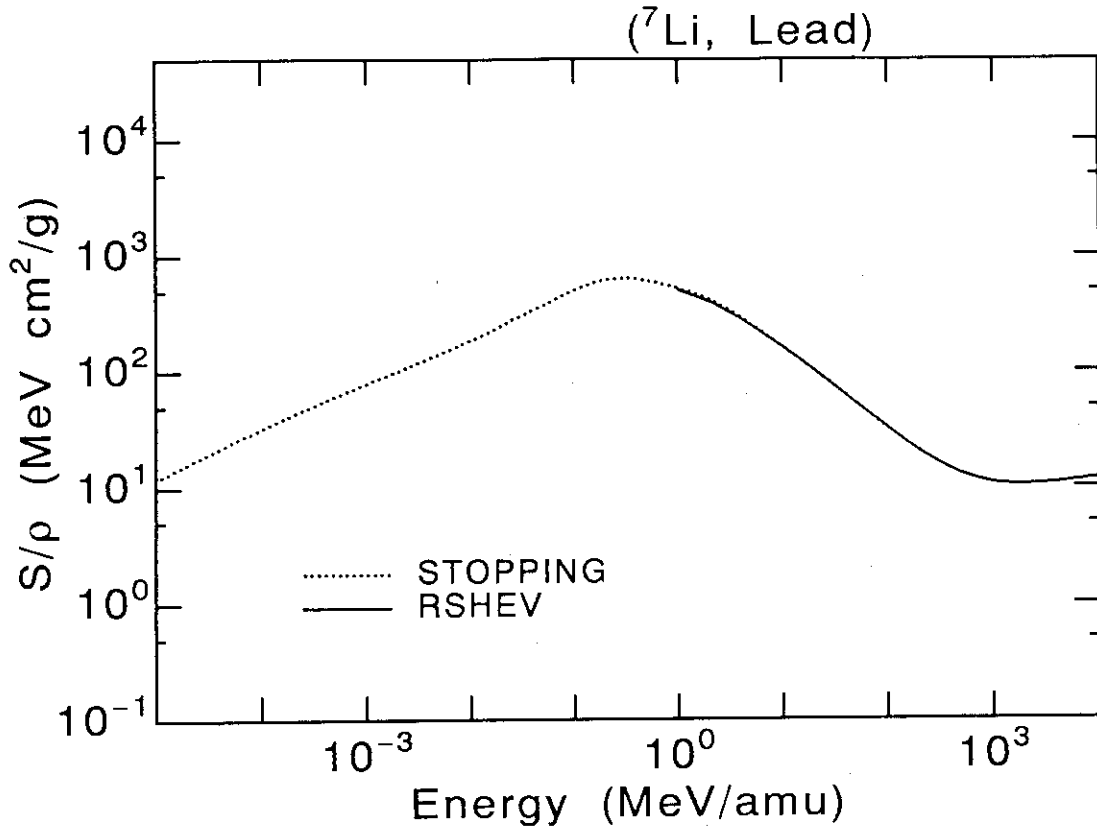


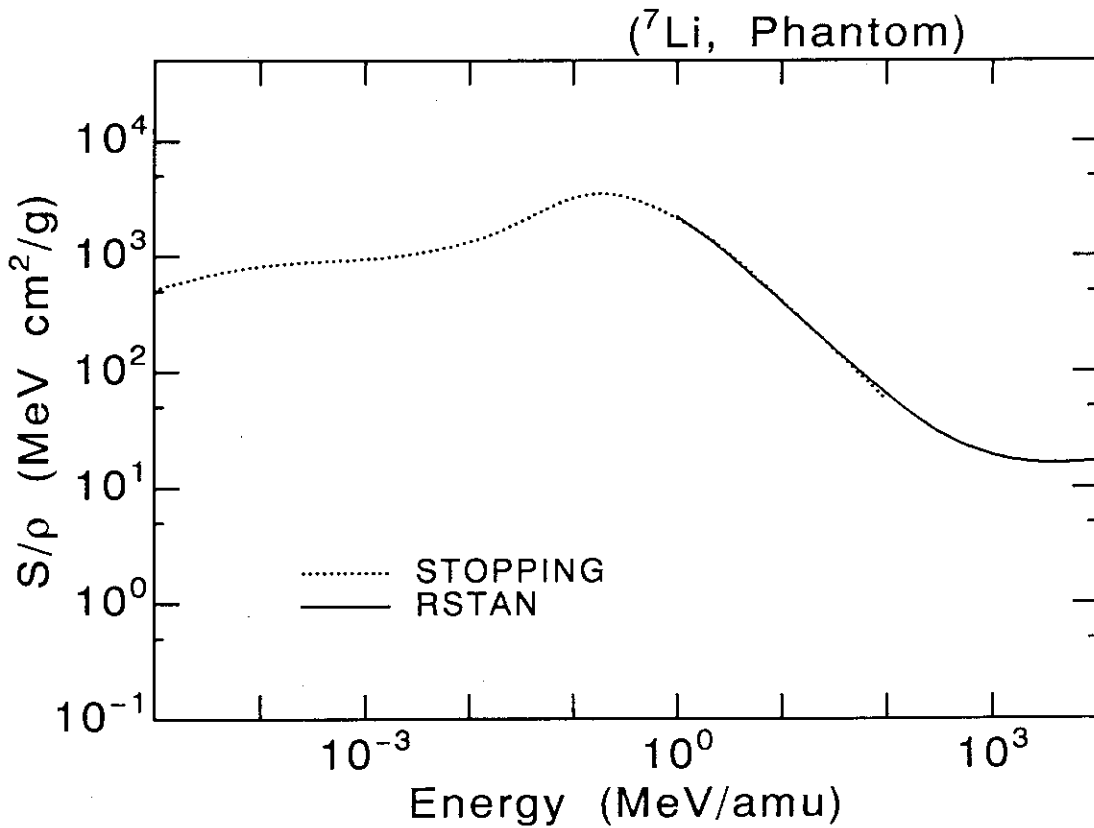
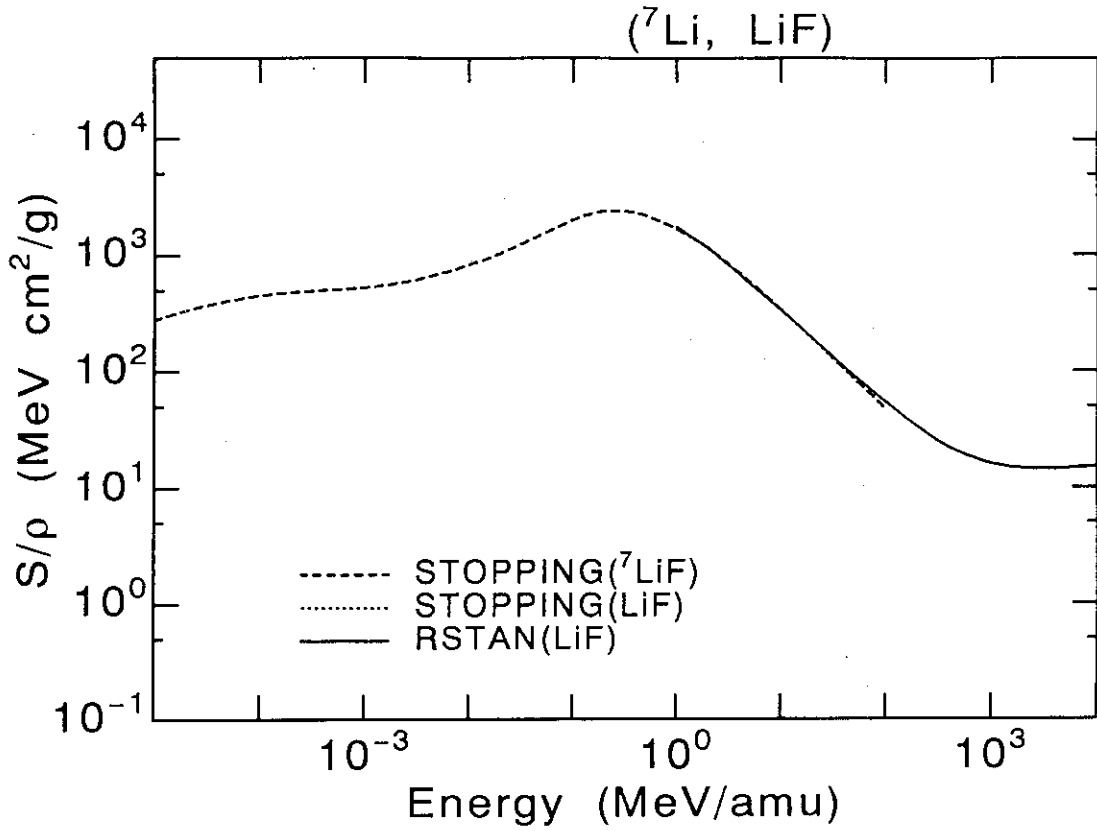
(⁷Li, Copper)

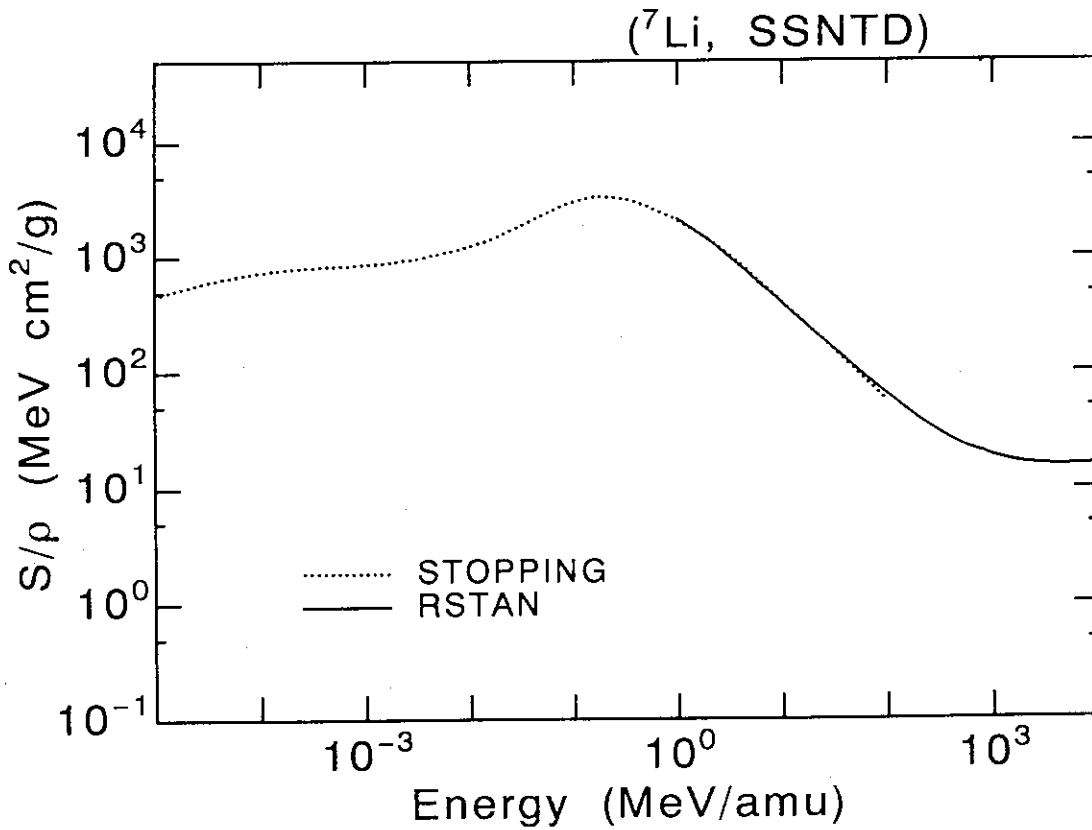
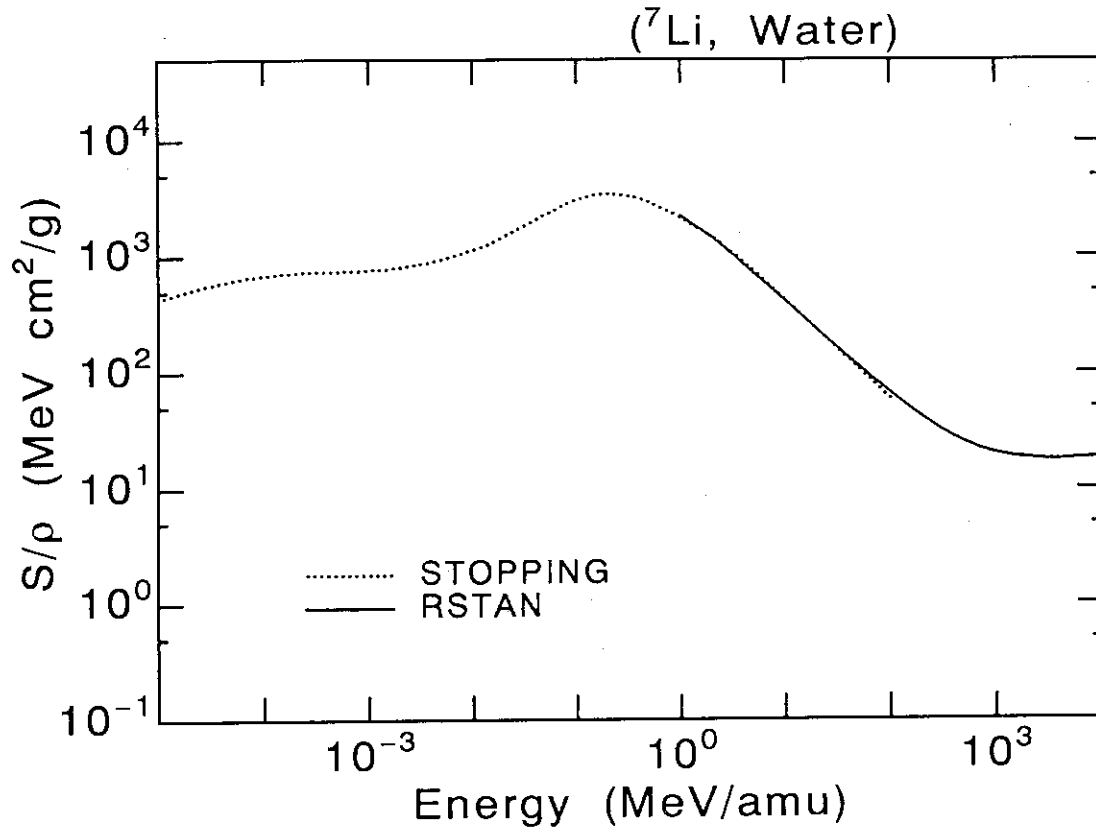


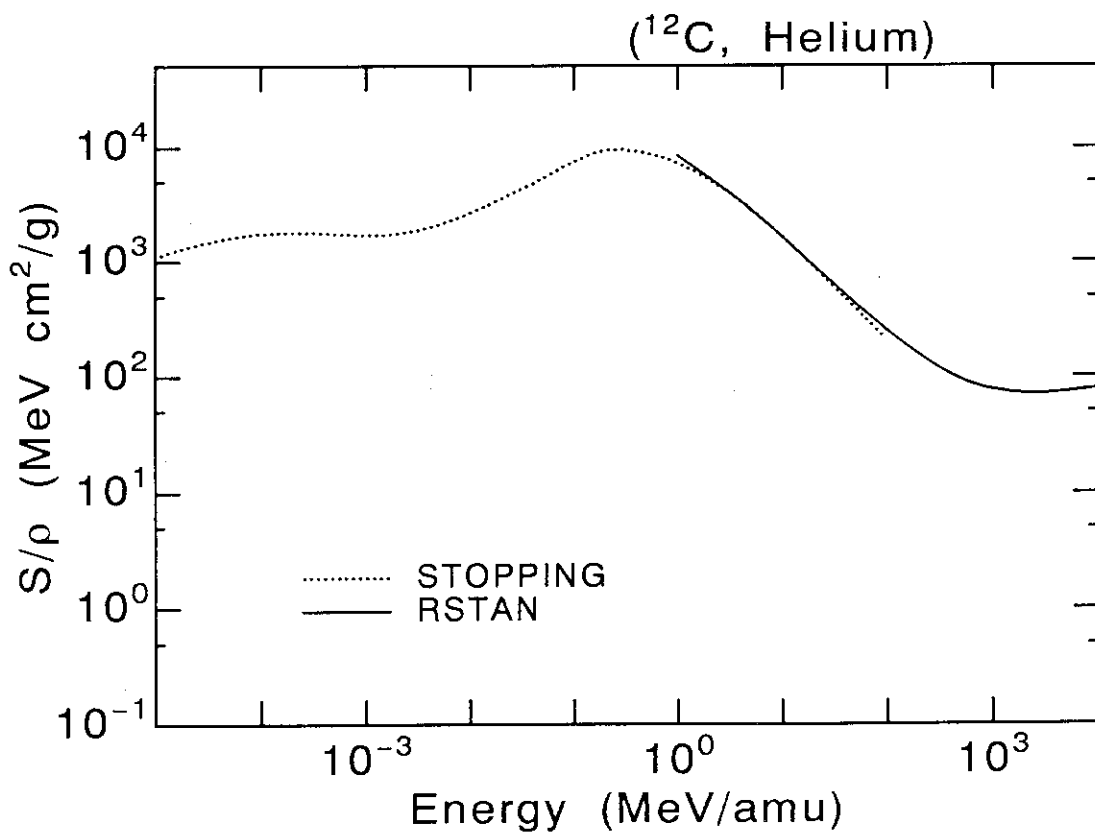
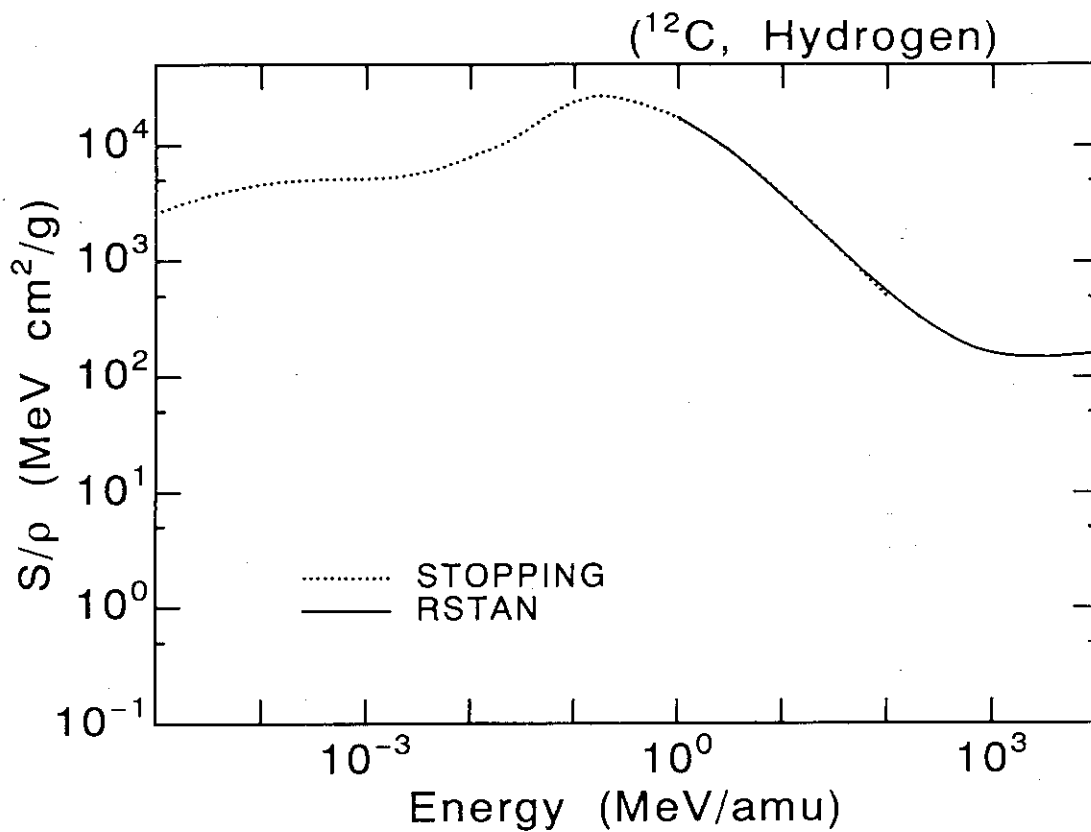
(⁷Li, Tungsten)

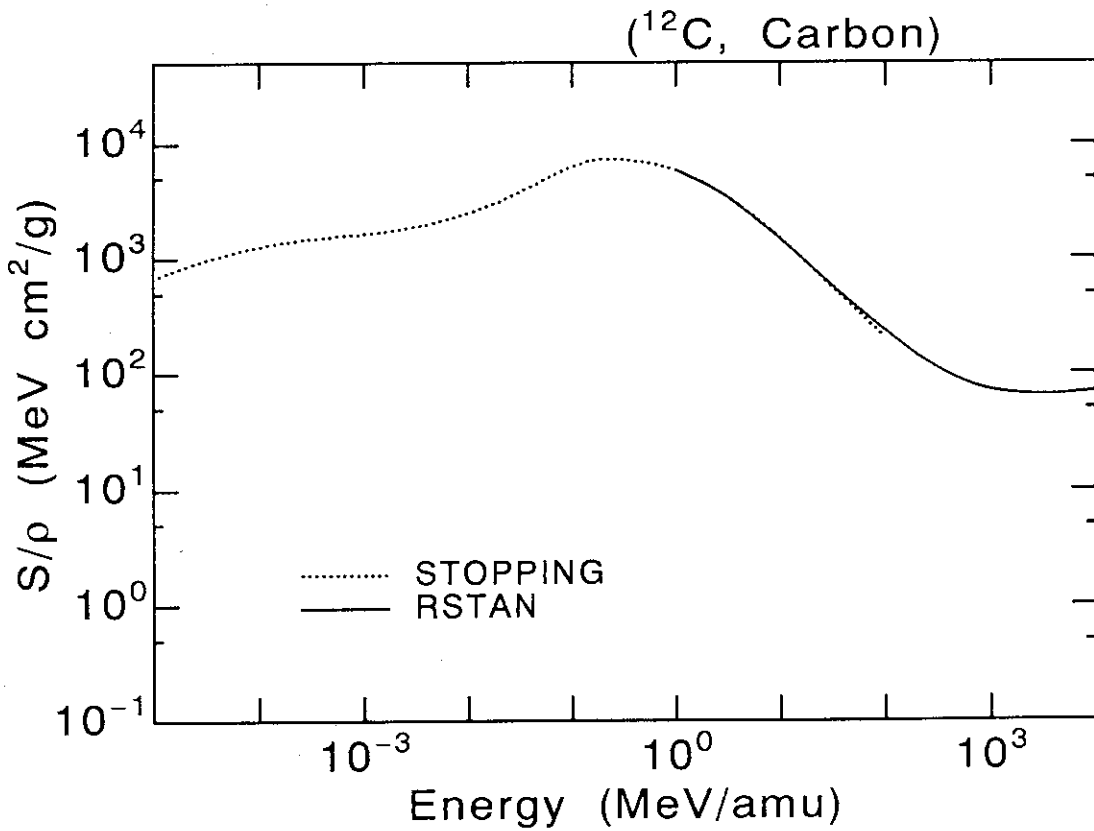
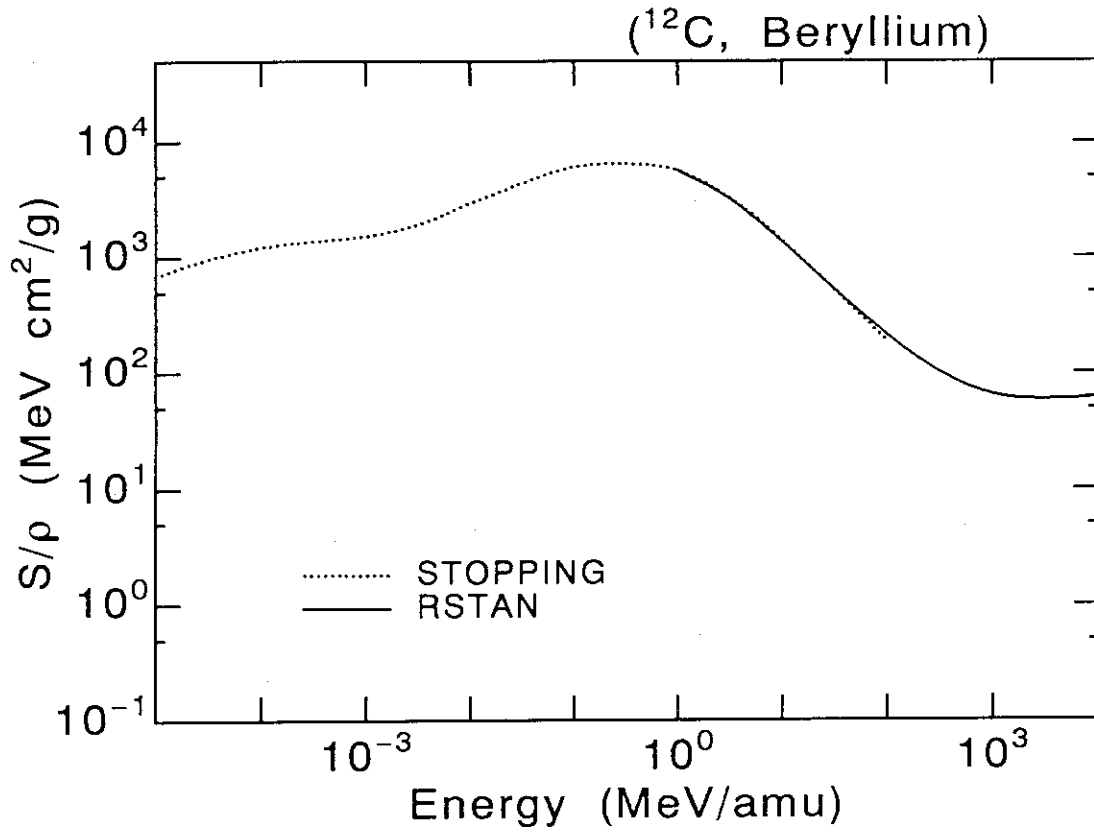




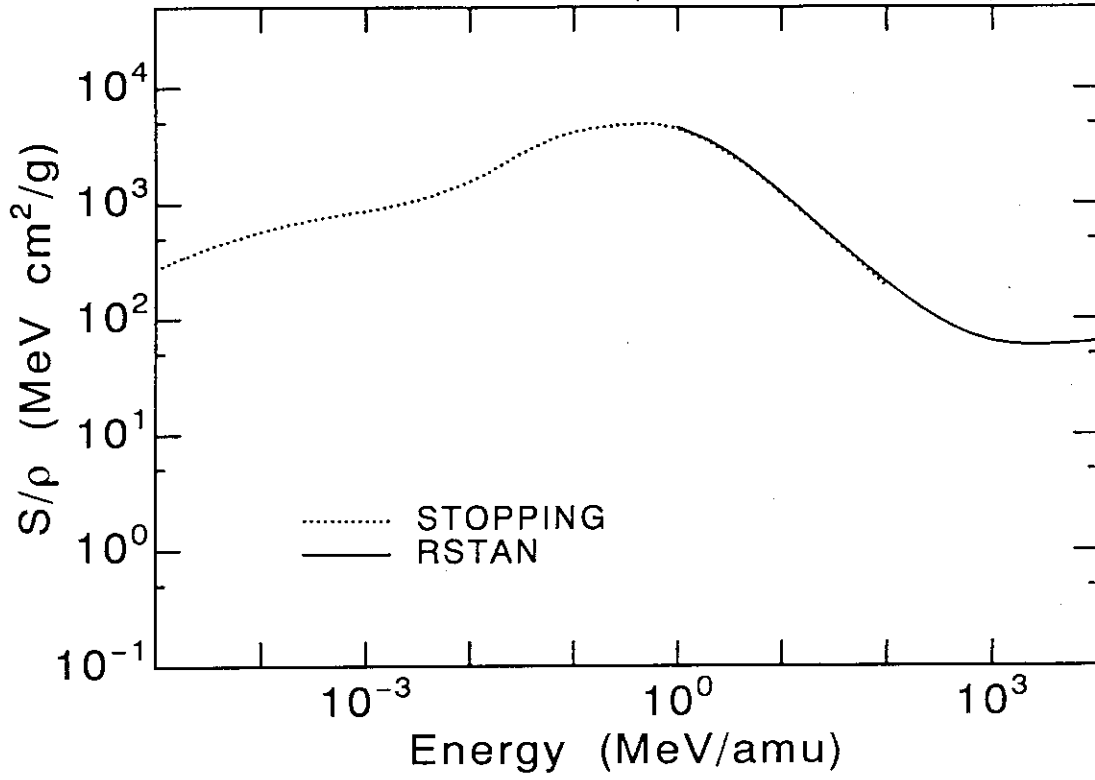








(¹²C, Aluminum)



(¹²C, Iron)

