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モンテカルロ計算によるNaI(Tl)シンチレーション検出器ガンマ線応答関数のデータカタログ

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日本原子力研究所東海研究所環境安全研究部
斎藤公明・森内茂

1987年1月29日受理

ガンマ線測定用に広く使用されている，NaI（Tl）シンチレーション検出器の応答関数をモンテカルロ法を用いて計算し，計算結果をデータカタログとしてまとめた．JIS規格ならびにこれに準ずる円筒形検出器5種類（1"φ×1"，2"φ×2"，3"φ×3"，4"φ×4"，5"φ×4"），球形検出器3種類（2"φ，3"φ，5"φ）について0.04から10 MeVの範囲の28単色エネルギーガンマ線に対する応答関数を計算した．原則として，区切りの良いガンマ線エネルギーを選び，応答関数の変化の大きい低エネルギーではエネルギー間隔を密に，変化の小さい高エネルギーではエネルギー間隔を疎にとった．さらによく使用されるガンマ線源のエネルギーも加えた．検出器の軸に平行に，一様な密度で入射するガンマ線の応答関数を円筒形，球形両検出器について，また，結晶の表面から10 cmの距離にある点線源からのガンマ線の応答関数を円筒形検出器についてそれぞれ数表にまとめた．数表の1チャネルあたりのエネルギー幅は，1keV，2 keV，5 keV，10 keV，20 keV，50 keV，100 keVの中から，応答関数全体が100チャネル以内に収まるよう選んでいる．そして，本報告書に表わした応答関数を実際の検出器に適用する際の注意ならびに手順を具体的に示した．さらに，全検出効率と全吸収ピーク効率，また，Kエックス線と消滅ガンマ線のエスケープ確率等のデータをまとめ考察を加えた．

Data Catalog of Gamma Ray Response Functions for NaI(Tl) Scintillation Detectors by the Monte Carlo Calculation

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Abstract

This report provides gamma ray response functions of NaI (Tl) scintillation detectors being widely used in gamma ray spectrometry. The response functions have been calculated with the Monte Carlo method for eight kinds of NaI (Tl) detectors, that is, 1"ϕ×1", 2"ϕ×2", 3"ϕ×3", 4"ϕ×4" 5"ϕ×4" cylindrical detectors and 2"ϕ, 3"ϕ, 5"ϕ spherical detectors. The structure of detectors were taken to be subject to the JIS (Japan Industrial Standards) code Z-4321, which was decided on referring to the IEC (International Electrotechnical Commission) publication 412. Twenty-eight kinds of mono-energy gamma rays from 0.04 MeV to 10 MeV were assumed to enter the detectors in parallel along the detector axis. In case of cylindrical detectors, the response functions have been calculated also for a point source at 10 cm from the crystal surface. Basically, the incident gamma energies were taken to be round, and the energy intervals were selected to be dense where the response function changes rapidly as a function of incident energy, on the other hand, to be sparse where it changes slowly. Also, energies of commonly-used gamma ray sources were added. Every calculated response function was shown in a table with a channel width selected from 1 keV, 2 keV, 5 keV, 10 keV, 20 keV, 50 keV and 100 keV so that the whole of the response function can be given within 100 channels. An application method of the response functions to an actual NaI (Tl) detector was described. Physical values concerning the response functions, such as total efficiencies, total absorption peak efficiencies, escape probability of K X-rays and annihilation gamma rays, have been summarized.

Keywords: NaI (Tl) Detector, Gamma Ray, Response Function, Monte Carlo Method, Data Catalog, Detection Efficiency, Scintillation Efficiency, Escape Probability

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1. 序　　論

NaI(Tl)シンチレーション検出器(以後，略してNaI(Tl)検出器と呼ぶ)は，検出効率が高いこと，エネルギー情報が得られること，取扱いが容易であること等の特長を有するため，ガンマ線検出器として様々な分野で利用されてきた．

NaI(Tl)検出器では入射ガンマ線のエネルギーの情報が出力電気信号パルスの波高に含まれる．同じ条件(エネルギー，入射方向，位置)のガンマ線が1個ずつ入射してもその都度出力されるパルス波高が異なるが，多数回繰返しデータを記録すると決ったパターンのパルス波高分布を示す．決った条件のガンマ線に対するパルス波高分布を応答関数と呼ぶ．

一般に，検出器の測定結果が，必要とする放射線の強度を直接表さないため，測定結果を解析してガンマ線の強度に変換しなければならない．この際，検出器の応答関数を必要とする．ある時は応答関数全体の形が問題となり，ある時はその一部例えば全吸収ピーク効率のデータのみで十分な場合もある．

NaI(Tl)結晶に入射したガンマ線ならびに結晶内で生じた二次粒子の反応過程の複雑な組合わせの結果として応答関数は形成され，検出器の形状や大きさ，ガンマ線の入射エネルギー，入射方向等により応答関数は異なる．従って，使用する検出器の形状，大きさ，また測定するガンマ線の入射条件に合わせた応答関数を知る必要がある．

使用する検出器と標準線源を用い，良い条件下での実測から応答関数を求めることが理想的である．しかし，①使用可能な線源が限られ必要なエネルギー範囲を十分にカバーできない；②実測の際，周囲からの散乱線あるいは妨害となるガンマ線を省き，必要なガンマ線のみに対する応答関数を求めるのが難しい；③時間と手間がかかる：などの問題点がある．従って，予め広いエネルギー範囲をカバーする現実的な応答関数がカタログとして表されており，これを容易に利用することが可能であれば便利である．

本レポートでは，シミュレーション計算により多くの条件下での応答関数を計算し，これをデータカタログとして表すことにより，NaI(Tl)検出器を用いてガンマ線を計測する際必要なデータを提供することを目的とした．

シミュレーション計算には，以前我々が開発したモンテカルロ法を利用した応答関数計算プログラムMARTHA[1-3]を使用した．このプログラムでは，光子の反応過程として光電吸収，コンプトン散乱，電子対生成を，また，電子の減速過程として多重散乱，衝突損失，制動放射を考慮している．MARTHAの特長は，検出器の容器等の影響の考慮，電子が減速する過程での発光効率の考慮が可能なことで，このプログラムを用いて計算した応答関数は実験値とよく一致することが確かめられている[1-5]．

JIS規格ならびにこれに準ずるNaI(Tl)検出器8種類をモデル化し，プログラムMARTHを用いてモンテカルロ計算を実施して，単一エネルギーガンマ線の応答関数カタログを作成した．入射ガンマ線のエネルギー範囲は40keVから10MeVまでとし，円筒形検出器に対しては，検出器軸に平行なビームおよびNaI(Tl)結晶表面から軸上10cmの距離にある点線源を考え，球形検出器に対しては平行ビームが入射した場合のみを考えた．

本レポートに表わされた応答関数を，実際のNaI(Tl)シンチレーション検出器に適用する際の注意事項――ゼロ点の補正方法，ならびに，応答関数を統計的に分散させる方法――をまとめた．これらの処理に必要な数式および数値を与え，具体的な作業手順を示した．

さらに応答関数に関連した量として全検出効率，全吸収ピーク効率，Kエックス線エスケープ確率，消滅放射線エスケープ確率，ガンマ線発光効率のデータを図ならびに表を用いて示し考察を加えた．これらは，NaI(Tl)検出器による測定結果を解析する場合，また，モックアップの応答関数を作成する場合にも重要なデータとなる．

これまでにも，応答関数を得るために実験およびシミュレーション計算が多数行われてきた[1-21]．なかでも，Heathがまとめたスペクトルカタログ[6]は，豊富な実験データにもとづきガンマ線応答関数の性質について深く言及したレポートで，NaI(Tl)検出器の教科書的存在として広く参照されてきた．我々は，本レポートがHeathのスペクトルカタログと同様な位置付けで使用されることを期待している．シミュレーション計算の長所を生かし，検出器の形状，寸法，入射ガンマ線のエネルギー，入射条件を広くとっているため，さらに広範囲のデータを供給することが可能である．

2. 応答関数の計算

2.1 計算モデルの概要

プログラムMARTHAを用い，モンテカルロ法によりNaI(Tl)検出器ガンマ線応答関数を計算した．MARTHAの計算モデルの詳細については他の報告を参照されたい[1-3]．ここでは概要を述べる．

MARTHAの特長の主なものとして，①NaI(Tl)結晶のまわりの反射材，アルミニウム容器，光電子増倍管等（本論分では，結晶と対比し，総称して検出器構造材と呼ぶこととする）をモデル化して計算に組入れることが可能；②電子が減速する過程で，電子エネルギーによる発光効率の変化を考慮しながら，パルス波高を計算する；の2点があげられる．これにより，シミュレーション計算した応答関数に大きな改善がみられ，実験値とよく一致するようになった[1,2]．**Fig. 1**にMARTHAで用いられている検出器モデルの構造をしめす．なお，本レポートでは検出器構造材は等価のアルミニウムに置き換えて計算を実施している．

MARTHAには高エネルギー版と低エネルギー版があり，普通入射ガンマ線エネルギー300 keVを境界としてこれらを使い分ける．

高エネルギー版で考慮している物理過程は，光子に対して光電吸収，コンプトン散乱と電子対生成，また，電子に対しては多重散乱，衝突損失および制動放射である．電子対生成により生じた陽電子は電子と同様に減速し，停止した時点で2本の0.511 MeV消滅放射線を放出するとしている．検出器に入射したガンマ線ならびにこれの反応で生じた二次粒子（電子，陽電子，光子）は，検出器集合体の外へ逃れるかまたはカットオフエネルギー以下にエネルギーが落ちるまで追跡される．そして，電子，陽電子がNaI(Tl)結晶内で失ったエネルギーを発光効率を考慮して積算し発光量としている．電子，陽電子の減速過程の取扱いは，高エネルギーガンマ線の応答関数を計算する際の重要なポイントのひとつであり，取扱い方をむやみに簡略化することは，応答関数の計算に大きな誤差を与える[2]．電子の減速過程を現実に近いかたちで組み込んでいることが高エネルギー版MARTHAの特色である．

一方，低エネルギー版では300 keV以下で応答関数の形に大きな影響を与える，Kエックス線のエスケープを考慮できることが特長である[3]．光子の追跡は高エネルギー版と同様に行うが，計算時間短縮のために電子の追跡は全く行わず，電子は生成した地点でその全エネルギーを失うものとする．これは，300 keV以下の電子の飛程，制動放射の影響の度合いを考えて妥当な取扱いであり，電子の減速過程が計算結果にほとんど影響を与えないことが確認されている[2]．

本レポートでも300 keV以下のエネルギー範囲では低エネルギー版MARTHTを用い，それ以上では高エネルギー版MARTHAを用いて計算を実施した．

2.2 計算入力データ

今回，応答関数カタログの対象とした検出器は，JIS規格Z−4321（放射線測定用タリウム活性化よう化ナトリウムシンチレータ）ならびにこれに準ずる1"φ×1"，2"φ×2"，3"φ×3"，4"φ×4"，5"φ×4"の円筒形，および，2"φ，3"φ，5"φの球形，合計8種類のNaI(Tl)検出器である．このうち5"φ×4"円筒形検出器と5"φ球形検出器にはJIS規格は存在しないが，JIS規格に準ずる構造を持つと想定した．**Table 1**に実物の検出器のアルミ容器ならびに反射材の厚さを，**Table 2**にこれをモデル化したアルミ構造材の厚さと密度を示す．

NaI(Tl)結晶とアルミの光子断面積はStormとIsraelのレポートLA−3753[22]のデータを用いた（**Table 3**, **4**）．Hubbellは最近の信頼のおけるデータに基づき光子全断面積を評価し，今までに広く引用されてきた他の断面積データとの比較を行った[23]．この結果，Hubbell自身が以前にレポートNSRDS−NBS−29[24]で発表した断面積データおよびStormとIsraelが雑誌Nuclear Data Tableに表したデータ[25]と，今回のHubbellの評価値は，ほとんどの場合1%程度の違いで一致することが確かめられた．Hubbellはこの評価値の誤差を5 MeV以下で5%以内，5から10 MeVで2%以内と見積っている．本研究ではStormとIsraelがLA−3753に表した断面積を用いているが，Nuclear Data Tableに示した値と重要な食い違いはない．従って，光子断面積に起因する本計算の誤差は，全検出効率で最大5〜6%程度ありうるが，平均的には数%以内に収まると考えられる．断面積の誤差が応答関数の形全体に及ぼす影響は単純には評価できないし，また，定量的に表すことも難しい．しかし，入射エネルギー以下の断面積全体の平均的な誤差が影響すると考えられるため，本計算で応答関数の形が大きく歪められたことはないと予想される．

粒子の追跡を中止するカットオフエネルギーは，入射ガンマ線エネルギー300 keV以上の場合と以下の場合で

異なる値を用いた．分かり易いようにカットオフエネルギーの一覧を **Table 5** にまとめる．300 keV 以下では，前述したように，電子の追跡は一切行わない．300 keV 以上の計算で，結晶内のカットオフエネルギー 400 keV は一見高過ぎるように感じられるが，計算結果に大きな影響を与えないことが確認済みであり，計算時間短縮のためにこの値をとった．

原則として，NaI(Tl) 結晶に 10万個のガンマ線が入射することとした．ただし，アルミ構造材のぶんだけ，検出器全体は結晶自体よりも大きくなっているために，ヒストリー数は 10万よりも少々多めにプログラムで設定される．高エネルギーガンマ線については計算時間の関係で，一部 6万のヒストリー数で計算を実施したが，結果は 10万入射の場合に規格化して表わしてある．円筒形検出器については，結晶の表面から 10 cm の軸上にある点線源および平行ビームについて計算を行った．球形検出器については，その用途を考慮して，平行ビーム入射の場合のみを仮定した．

この他，高エネルギー版では電子の追跡に必要なデータ――電子の飛程，制動放射の生起確率，制動放射線エネルギーのサンプリング用データ，光電子放出角度のサンプリング用データ，多重散乱角サンプリング用データ――を入力するが，膨大な量になるためここでは数値は示さない．プログラム MARTHA は公開されており，ここに表さなかったデータは原子力データセンター(NEDAC) あるいは OECD/NEA のデータバンクを通して参照することができる．

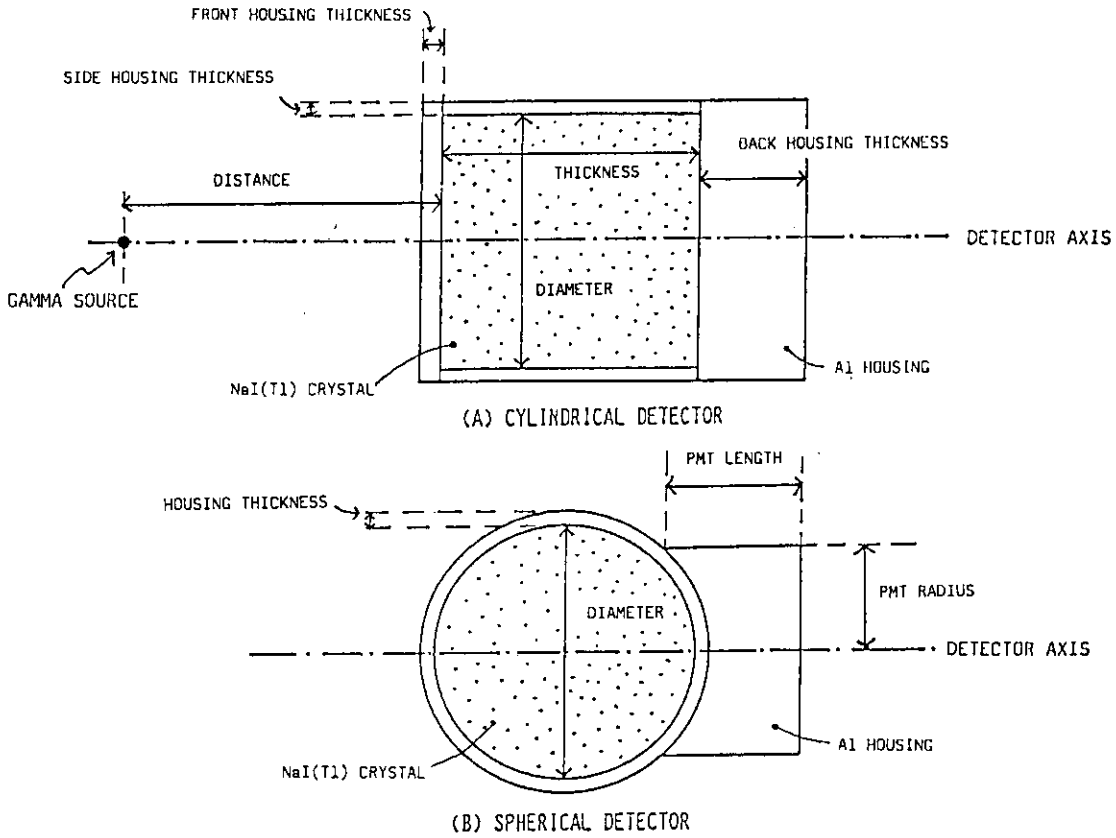

Fig. 1. Structure of the detector models used in this calculation.

Table 1. Dimensions of NaI (Tl) scintillation detectors subject to the Japan Industrial Standards.

CRYSTAL	REFLECTOR THICKNESS (cm) FRONT	SIDE	Al CAN THICKNESS (mm)
1"×1" CYLINDRICAL	3.3	2.0	0.8
2"×2" CYLINDRICAL	3.3	2.0	0.8
3"×3" CYLINDRICAL	3.3	2.0	0.8
4"×4" CYLINDRICAL	9.6	3.5	2.0
5"×4" CYLINDRICAL	9.6	3.5	2.0
2"ϕ SPHERICAL	1.5		0.8
3"ϕ SPHERICAL	1.5		0.8
5"ϕ SPHERICAL	1.5		0.8

Table 2. Dimensions of NaI (Tl) detector models used in this calculation

(a) for cylindrical detectors

CRYSTAL	HOUSING THICKNESS (cm) FRONT	SIDE	BACK	HOUSING DENSITY (g/cm^3)
1"×1" CYLINDRICAL	0.41	0.28	3.0	1.41
2"×2" CYLINDRICAL	0.41	0.28	5.0	1.41
3"×3" CYLINDRICAL	0.41	0.28	5.0	1.41
4"×4" CYLINDRICAL	1.16	0.55	7.0	1.45
5"×4" CYLINDRICAL	1.16	0.55	7.0	1.45

(b) for spherical detectors

CRYSTAL	HOUSING THICKNESS (cm)	PHOTOMULTIPLIER SIZE (cm) RADIUS	LENGTH	HOUSING DENSITY (g/cm^3)
2"ϕ SPHERICAL	0.23	2.1	5.0	1.59
3"ϕ SPHERICAL	0.23	3.3	5.0	1.59
5"ϕ SPHERICAL	0.23	4.5	7.0	1.59

Table 3. Photon cross sections of NaI (Tl) crystal in g/cm^2 [22].

Energy (MeV)	Compton scattering	Pair production	Photoelectric absorption
0.01	0.0676		140.0
0.015	0.0843		45.7
0.02	0.0950		20.6
0.03	0.107		6.50
0.03317	0.109		4.87
			30.3
0.04	0.113		18.3
0.05	0.116		10.0
0.06	0.118		6.07
0.08	0.117		2.74
0.1	0.115		1.46
0.15	0.108		0.470
0.20	0.101		0.209
0.3	0.0891		0.0671
0.4	0.0802		0.0316
0.5	0.0738		0.0177
0.6	0.0685		0.0113
0.8	0.0602		0.00575
1.0	0.0539		0.00362
1.5	0.0440	0.000705	0.00170
2.0	0.0376	0.00246	0.00104
3.0	0.0296	0.00635	0.000563
4.0	0.0248	0.0101	0.000368
5.0	0.0214	0.0132	0.000274
6.0	0.0189	0.0157	0.000217
8.0	0.0154	0.0199	0.000152
10.0	0.0132	0.0234	0.000117

Table 4. Photon cross sections of aluminium in g/cm^2 [22].

Energy (MeV)	Compton scattering	Pair production	Photoelectric absorption
0.01	0.106		25.7
0.02	0.137		3.06
0.03	0.147		0.826
0.03317	0.148		0.593
0.04	0.150		0.324
0.05	0.150		0.157
0.06	0.148		0.0875
0.08	0.144		0.0348
0.1	0.139		0.0170
0.15	0.127		0.00469
0.20	0.117		0.00193
0.3	0.102		0.000551
0.4	0.0955		0.000228
0.5	0.0837		0.000114
0.6	0.0775		0.0000672
0.8	0.0681		0.0000312
1.0	0.0612		0.0
1.5	0.0498	0.000167	0.0
2.0	0.0424	0.00067	0.0
3.0	0.0335	0.00191	0.0
4.0	0.0279	0.00317	0.0
5.0	0.0241	0.00426	0.0
6.0	0.0213	0.00520	0.0
8.0	0.0174	0.00683	0.0
10.0	0.0148	0.00819	0.0

Table 5. List of cut-off energies used in the calculation.

PARTICLE	MATERIAL	CUT–OFF ENERGY (keV)	
		LOW ENERGY VERSION	HIGH ENERGY VERSION
PHOTON	NaI (Tl)	15	40
	Al	15	40
ELECTRON	NaI (Tl)	–	400
	Al	–	40

3. 計 算 結 果

3.1 ガンマ線応答関数

円筒形検出器の平行ビームに対する応答関数を**Table 6～10**に，結晶表面から10 cmの距離にある点線源に対する応答関数を**Table 11～15**に，また球形検出器の平行ビームに対する応答関数を**Table 16～18**にそれぞれ表わす．チャネル幅は1 keV，2 keV，5 keV，10 keV，20 keV，50 keV，100 keVのうちから入射ガンマ線エネルギーに従って選び，応答関数全体が100チャネルまでに収まるようにした．

入射ガンマ線の全エネルギーがNaI(Tℓ)結晶に吸収された場合，この事象は応答関数の中で全吸収ピークとして記録される．従って，応答関数の全吸収ピークの部分が入射ガンマ線のエネルギーに相当する位置となる．

未知のエネルギーのガンマ線を測定する場合，あるいは，多くのエネルギーのガンマ線が混合した場で測定する場合，得られた波高分布のピークやその他の部分の形がどのエネルギーのガンマ線に起因するものかを判断する際に，予めエネルギーの分かった線源を用いて測定系のエネルギー校正を実施しておく必要がある．

測定系のエネルギー校正を行う方法として，次の2つを定義する；①電気信号のゼロ点と，^{137}Csの662 keVガンマ線の全吸収ピークの位置，の2点から校正する方法；②チェッキングソースをもちい，2つ以上のガンマ線の全吸収ピークの位置から校正する方法――例えば^{226}Raから放出される，複数のガンマ線のピークの位置をもちいる方法．

NaI(Tℓ)検出器応答関数の全吸収ピークの位置と，入射ガンマ線のエネルギーが，完全な比例関係にある場合には，①の方法を用いても②の方法を用いても校正結果は同じである．残念ながら，NaI(Tℓ)検出器の場合この条件は当てはまらない．すなわち，NaI(Tℓ)結晶の発光効率には入射ガンマ線に対するエネルギー依存性がある．

3"φ×3" 円筒形検出器の，発光効率の入射ガンマ線エネルギー依存性を**Fig. 2**にしめす．この図には，過去に他で行われた実験のデータに重ね，MARTHAを用いた計算から得たデータを表した．プログラムMARTHAでは電子の減速過程での発光効率を考慮しているため，この図のように入射ガンマ線エネルギーに対する発光効率のカーブを得ることができる．

結晶の大きさによる発光効率の違いを，3種類の検出器を選び**Fig. 3**に示す．結晶の大きさは発光効率にそれほど影響しないことが分かる．**Table 19**に，3"φ球形検出器のガンマ線発光効率の数値データを，0.662 MeVで1に規格化し表わす．これらのデータはいずれもシミュレーション計算により得たものである．

発光効率のエネルギー依存性により，①と②の校正方法で，波高分析器のゼロ点ならびにチャネル幅がことなる．2種類の方法によるゼロ点の違い，および，チャネルエネルギー幅の比率を各検出器について**Table 20**に表す．本報告書で表わした応答関数は①の方法でエネルギーを校正した場合のものに相当する．これを，②の方法で校正した応答関数に修正するには，低エネルギー側を**Table 20**に示したゼロ点のぶんだけ切り取り，チャネルエネルギー幅を同表の比率で割ればよい．

次に，**Table 6～18**に示した応答関数は，電流への変換ならびに増幅の過程で統計的に分散される以前の，NaI(Tℓ)結晶内での発光スペクトルそのものであることに注意して頂きたい．実測で得られる応答関数は，結晶内の発光が，光電子増倍過程で電流に変換され，増幅された電気信号のスペクトルである．この過程での統計的なばらつきの影響で(主として，光電子増倍管の光電変換効率により決る)，単一量の発光が光電子増倍管に入っても，ガウス分布に従って分散したスペクトルがえられる．従って，**Table 6～18**に示した応答関数を，実際の検出器の応答関数として用いるためには，ガウス分布により分散させる必要がある．ここで，あえて分散後の応答関数を示さないのは，検出器――NaI(Tℓ)結晶と光電子増倍管の組合わせとしての――により分散の幅が異なるためである．つまり，統計的分散は検出器系に特有のものであり，全ての検出器に共通して使えるデータとして統計的分散前の応答関数を提供するのが適当であると考えられる．

なお，ここに表した応答関数を実際に利用する場合に必要な統計的分散の手順については別項にまとめる．

応答関数の入射エネルギーによる変化を，3"φ×3" 円筒形検出器を例に取り，**Fig. 4, 5**に示す。それぞれ，統計的分散を施す前と後の応答関数である．図には，参考のため，検出器構造材の影響――構造材で散乱したガンマ線および構造材内で生じた電子，陽電子に起因する部分――また，NaI(Tℓ)結晶内でおきた電子対生成に起因する部分をわけて示した．

Fig. 4, 5をもとに，ここで表した応答関数の特長をまとめておく。応答関数は基本的に全吸収ピークとコンプトン連続体からなる。**Fig. 4, 5**で500 keV，800 keVのガンマ線に対する応答関数はこれの典型的な例である．

全吸収ピークは入射ガンマ線の全エネルギーが結晶内で失われた場合に現れるピークである．まず，入射ガン

マ線が直接光電吸収あるいは電子対生成により電子（陽電子）にエネルギーを与え，これらの二次粒子が結晶内で全エネルギーを失う場合が考えられる．これに加えて，入射ガンマ線がコンプトン散乱を繰返したのちに光電吸収や電子対生成をおこし，その過程で生じた二次粒子――コンプトン散乱で生じた反跳電子も含め――のエネルギーが全て結晶内で失われる場合もある．

どの場合も，入射ガンマ線のエネルギーは全て結晶内で失われるのであるが，その過程により二次粒子に分配されるエネルギーが異なる．電子はそのエネルギーにより，単位損失エネルギー当りの発光効率が違うため，全吸収ピークには自ずと基本的分散（光出力量のばらつき）が現れてくる．これは，統計的分散前の応答関数（**Fig. 4**）のピーク部分を観察すると良くわかる．但し，この基本的分散は，実測スペクトルでは，統計的分散の中に埋もれてしまっている．

全吸収ピークよりも低いエネルギー部分に現れるコンプトン連続体は，結晶内でコンプトン散乱を受けたガンマ線が結晶外へ逃れ，エネルギーの一部が発光に変換された部分である．コンプトン散乱の際にガンマ線が反跳電子に与えることが可能な最大エネルギーがガンマ線エネルギーにより決まっているために，コンプトン端と呼ばれる連続体の切れ目が出現する．

全吸収ピークとコンプトン連続体の面積の比率は結晶の大きさで明らかに変る．これはガンマ線がコンプトン散乱を受けた後に全吸収ピークとして記録される割合が結晶の大きさに従って増えるからである．コンプトン散乱を受けたのちに全吸収ピークとして記録されるものの散乱回数については以前に示した[2]．

さらに応答関数の形を複雑にする原因として，結晶内で生じた決ったエネルギーの光子が結晶外へ逃れる現象がある．

入射エネルギーが低い場合，光電吸収が起きたのちに結晶内で放出される ^{127}I の K エックス線が結晶外に逃れる現象が，応答関数に大きな影響を与えるようになる．低エネルギーの場合，光電吸収断面積が非常に大きいため，入射ガンマ線は結晶の表面近くで高い割合で光電吸収を起こす．従って，表面近くで放出される K エックス線が結晶外へ逃れる確率も高くなる．

この現象は 300 keV 以上の入射ガンマ線に対してはほとんど問題にならない．しかし，低エネルギーガンマ線の応答関数では全吸収ピークから 30 keV 程度低いところに明らかにエスケープピークが出現する．分散前の応答関数を観察すると，ごく近い場所にエスケープピークが 2 本分かれて存在することがわかる．これは，光電吸収により生じた K 殻の空席に L 殻から電子が遷移してくる場合と，M 殻から遷移する場合で放出されるエックス線のエネルギーが異なるためである．統計的分散後の応答関数では，この 2 本のピークは 1 本のピークに収っている．

逆に，1.022 MeV のしきいエネルギー以上では入射ガンマ線のエネルギーが高くなるにつれ，電子対生成が生起する頻度も高くなる．電子対生成により生じた陽電子が電子と結合して放出された 0.511 MeV 消滅放射線が結晶外に逃れる現象がしばし起こる．特に，2 本のガンマ線を放出するため，このうち 1 本のガンマ線が逃れる場合，2 本とも逃れる場合の 2 つのピークが，全吸収ピークより低いエネルギー部分に現れる．さらに，0.511 MeV ガンマ線がそのエネルギーの一部を結晶内に与えたのちに逃れる場合もある．このエスケープの確率については後で議論を加える．これらのピークは，2.5 MeV 以上の応答関数に明らかに現れている．

さらに，結晶のまわりの検出器構造材（反射体，容器，光電子増倍管等）が応答関数に影響を与える．主な影響は構造材で散乱を受けたガンマ線が結晶内に入ることにより生じる．この影響の顕著なものが，後方散乱ピークと呼ばれる応答関数の低エネルギー部分の小さなピークである．また，散乱を受けたガンマ線の影響は応答関数全体の中に入り込んでおり，そのため，全吸収ピークとコンプトン端の間の谷間も埋められている．検出器構造材を考慮しない理論計算では全吸収ピークとコンプトン端が見事に分離する．

以上に述べたように様々な過程の組合わせの結果として応答関数が形成されるため，応答関数は結晶の形，寸法，検出器構造材により違ってくる．

3.2　ガンマ線検出効率

本計算で得られた全検出効率，ならびに，全吸収ピーク効率を **Fig. 6～8** と **Table 21～33** に示す．ここで全検出効率は結晶に入射する全ガンマ線数に対する全検出カウント数の比，全吸収ピーク効率は同じく全吸収ピークに記録されるカウント数の比率をさす．

Fig. 4, 5 からわかるように，100～200 keV のエネルギー領域では，全吸収ピークはすぐそばに K エックス線のエスケープピークを伴い，どこまでを全吸収ピークとみなすかが難しい．ここでは全吸収ピーク効率を K エックス線ピーク部分のカウントも含めたものと定義した．一般に行われている定義はこれと異なる．しかし，全吸収ピークとエスケープピークの分離が可能か否かが，検出器の分解能やその他の条件により必ずしも一義的に決らないことを考慮して，あえてこの様な定義を用いた．

一方，8 MeV 以上の高エネルギーでは，全吸収ピークがコンプトン連続体と分離できない場合もあり得る．これも検出器の分解能等に左右される問題であるが，分離不可能の場合には，そのエネルギー以上では全吸収ピーク効率は無意味となる．また，スペクトルの解析にピークを利用する場合には，全吸収ピークの代りにエスケープピークを利用することとなる．

全検出効率のエネルギー特性は，NaI（Tℓ）結晶の光

子反応全断面積の変化を基本的に反映している．すなわち，入射ガンマ線の反応の確率が高ければ，全検出効率も大きくなる．ただし，100 keV 以下の低エネルギー部分では，検出器容器により入射ガンマ線が減衰する影響で，NaI(Tℓ)結晶の全断面積は増加するけれども，全検出効率は低下する．

全吸収ピーク効率は，低エネルギー領域では，全検出効率とほとんど等しいが，100 keV 以上では全検出効率に比べて一方的に減少する．これは，光電吸収の断面積が，コンプトン散乱の断面積と比べて，減少するのに対応している．

結晶が大きくなるほど，基本的には，検出効率が高い．また，結晶表面から 10 cm 距離の点線源に比べて，平行ビームのほうがジオメトリーの関係で検出効率が高い．

3.3　Kエックス線および消滅放射線のエスケープ確率

ここで述べるエスケープ確率は，モンテカルロ計算の中でKエックス線あるいは消滅放射線にフラッグをつけて結晶外に逃れた数をカウントし，光電吸収あるいは電子対生成の生起した数で割ることにより得た値である．Kエックス線や消滅放射線が，結晶内でコンプトン散乱を起こしたのちに，結晶外へ逃れた場合もエスケープに含めて定義する．但し，Kエックス線が散乱後に結晶外に逃れることはごく稀である．

平行ビームガンマ線入射の場合の，Kエックス線エスケープの確率を，**Fig. 9, 10** および **Table 34～41** に示す．距離 10 cm の点線源の場合もエスケープ確率はこれと大差はない．**Fig. 9** には円筒形検出器，**Fig. 10** には球形検出器のエスケープ確率を表わした．

球形検出器と円筒形検出器のエスケープ確率の違いを **Fig. 11** に示す．球形検出器のエスケープ確率が円筒形検出器に比べ大きいのは，球形検出器の結晶表面が全体にわたって凸に湾曲していることによる．

エスケープが重要な役割を果たす 150 keV 以下のエネルギー領域では，結晶の大きさによるエスケープ確率の違いはほとんどない．ただし，極端に結晶の小さい 1"φ×1" 円筒形検出器の場合は，60 keV のあたりから，ほかの検出器とエスケープ確率が異なっている．この原因は，1"φ×1" 円筒形検出器では，結晶側面からのKエックス線のエスケープの寄与がきくためと考えられる．

入射ガンマ線数 10 万に対する，結晶内での電子対生成の生起数，これに起因するシングルならびにダブルエスケープの発生数を **Fig. 12～14** に示す．**Fig. 12** は円筒形検出器に平行ビームが入射した場合，**Fig. 13** は円筒形検出器に結晶表面から距離 10 cm にある点線源からのビームが入射した場合，**Fig. 14** は球形検出器に平行ビームが入射した場合の計算結果である。平行ビームに対するエスケープ数と 10 cm 点線源からのビームに対するそれを比べると，検出効率に起因した絶対値の違いはあるが，電子対生成数に対する割合はほぼ同じである．また，この割合はエネルギーによってもほとんど変化しない．

Table 42 に，各結晶についての消滅放射線のエスケープ確率（電子対生成数を 1 としている）を示す．結晶が大きくなるほど，0.511 MeV 放射線 1 本のエスケープの割合は減るが，これはダブルエスケープ確率の減少，逆に，シングルエスケープ確率の増大，そしてエスケープ確率の合計の減少，という現象となって表われる．エスケープ確率の値から分かるように，電子対生成が起こってもこれが全吸収ピークとして記録される割合は小さく，特に，1"φ×1" 検出器では僅か数パーセントに過ぎない．

3.4　カタログデータの利用法

検出効率，エスケープ確率，ガンマ線発光効率のデータを利用する場合は，3.1～3.3 項に示した図あるいは表から直接読み取り使用できる．

応答関数そのものの利用者は，次に述べる手順に従い，3.1 項で **Table 6～18** に表した応答関数を統計的に分散させる必要がある．

理論計算によりえられた応答関数 M_j を，ガウス分布に従う統計的分散をもつ応答関数 G_i に拡げるには次式を用いる．

$$G_i=\sum_{j=1}^{j_{max}}\frac{M_j}{\sqrt{2\pi}\,\sigma(E_j)}\cdot\int_{E_i-\frac{W}{2}}^{E_i+\frac{W}{2}}exp\left\{-\frac{1}{2}\cdot\left[\frac{E_j-E}{\sigma(E_j)}\right]^2\right\}\cdot dE \qquad (3.1)$$

E_j　：jチャネルの平均エネルギー

$\sigma(E_j)$：エネルギー E_j でのガウス分布の標準偏差

W　：チャネル幅

標準偏差のエネルギー依存性を表現する式はいくつか提案されている．代表的なものとして，3 つの式[29,13,18]を紹介する．

$$\left(\frac{\Delta E}{E}\right)^2=A+\frac{B}{E} \qquad (3.2)$$

$$\frac{\Delta E}{E}=A+\frac{B}{\sqrt{E}} \qquad (3.3)$$

$$\frac{\Delta E}{E}=\frac{\Delta E_0}{E_0}\cdot\left(\frac{E_0}{E}\right)^n \qquad (3.4)$$

ここで，

ΔE　：ガウス分布の半値幅，標準偏差とは $\Delta E=(8\cdot ln\,2)^{1/2}\cdot\sigma(E)$ の関係がある．

A，B：定数，(3.2) 式と (3.3) 式で異なる．また，厳密にはエネルギー依存性をもっている．

E_0　：基準エネルギー，例えば，^{137}Cs のガンマ線エネルギー 0.662 MeV を表わす．

n　：定数，1/3 程度の値を取るのが普通[18]．

(3.2)～(3.3) 式のうちのひとつを選択し ΔE を計算し

ながら，(3.1)式に従って応答関数を分散させる．そのために，対象とする実物の検出器について，エネルギーの異なる線源を最低2つ用いて，全吸収ピークの半値幅を測定し，(3.2)～(3.4)式の定数を決定しなければならない．

この際，注意しなければならないのは，ここに表した応答関数は，3.1項で述べた様に，光電子増倍過程における統計的分散と別の，基本的分散を既にもっていることである．この基本的分散は測定値にも含まれている．そこで，(3.2)～(3.4)式の定数を求めるときに，基本的分散の影響を除いた半値幅をもちいる．

よく用いられる線源のガンマ線に対し，全吸収ピークの基本的分散を**Table 43**に示す．この表のデータを用い，次式により純粋な光電子増倍過程における統計的分散$\Delta E/E$を評価し，これを用いて(3.2)～(3.4)の定数を決定する．

$$\left(\frac{\Delta E}{E}\right)^2-\left(\frac{\Delta E}{E}\right)^2_{Obs}-\left(\frac{\Delta E}{E}\right)^2_{Int} \qquad (3.5)$$

ここで，

$(\Delta E/E)_{Obs}$：測定された全吸収ピークの半値幅

$(\Delta E/E)_{Int}$：**Table 43**に示す基本的分散

重複するが，本カタログ利用者の便宜を図り，スペクトルを分散する作業の手順をまとめて書いておく．

① 標準線源をもちい，対象とする検出器の$(\Delta E/E)_{Obs}$を測定する．

② **Table 43**から標準線源のエネルギーに相当する$(\Delta E/E)_{Int}$をひろいだす．

③ (3.5)式を使い$\Delta E/E$を計算する．

④ (3.2)～(3.4)式のうちの一つを選び，定数を決定する．

⑤ ΔEを計算しながら，(3.1)式により応答関数を分散させる．

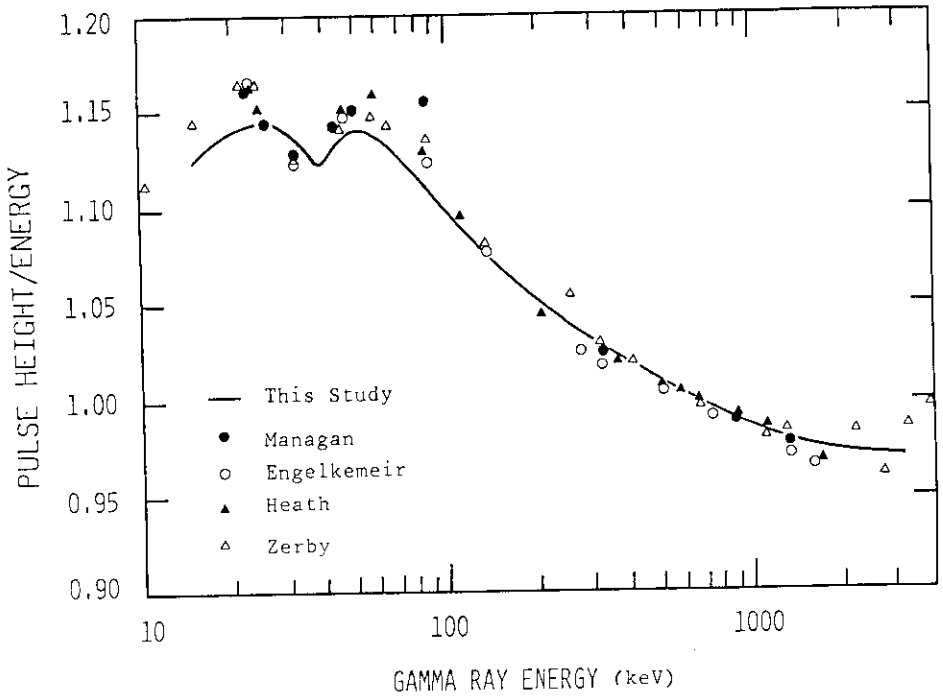

Fig. 2. Comparison of calculated gamma ray scintillation efficiency for a 3"ϕ×3" NaI (Tl) crystal with experimental data of Managan[26], Engelkemeir[27], Heath[6] and Zerby[28].

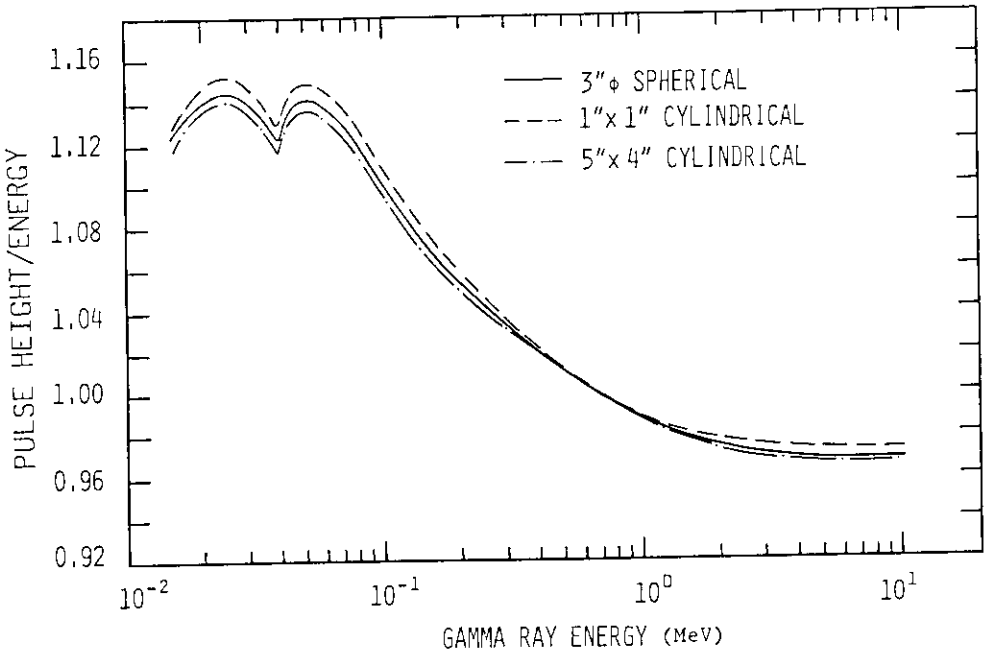

Fig. 3. Calculated gamma ray scintillation efficiency for three different-volumed NaI (Tl) detectors.

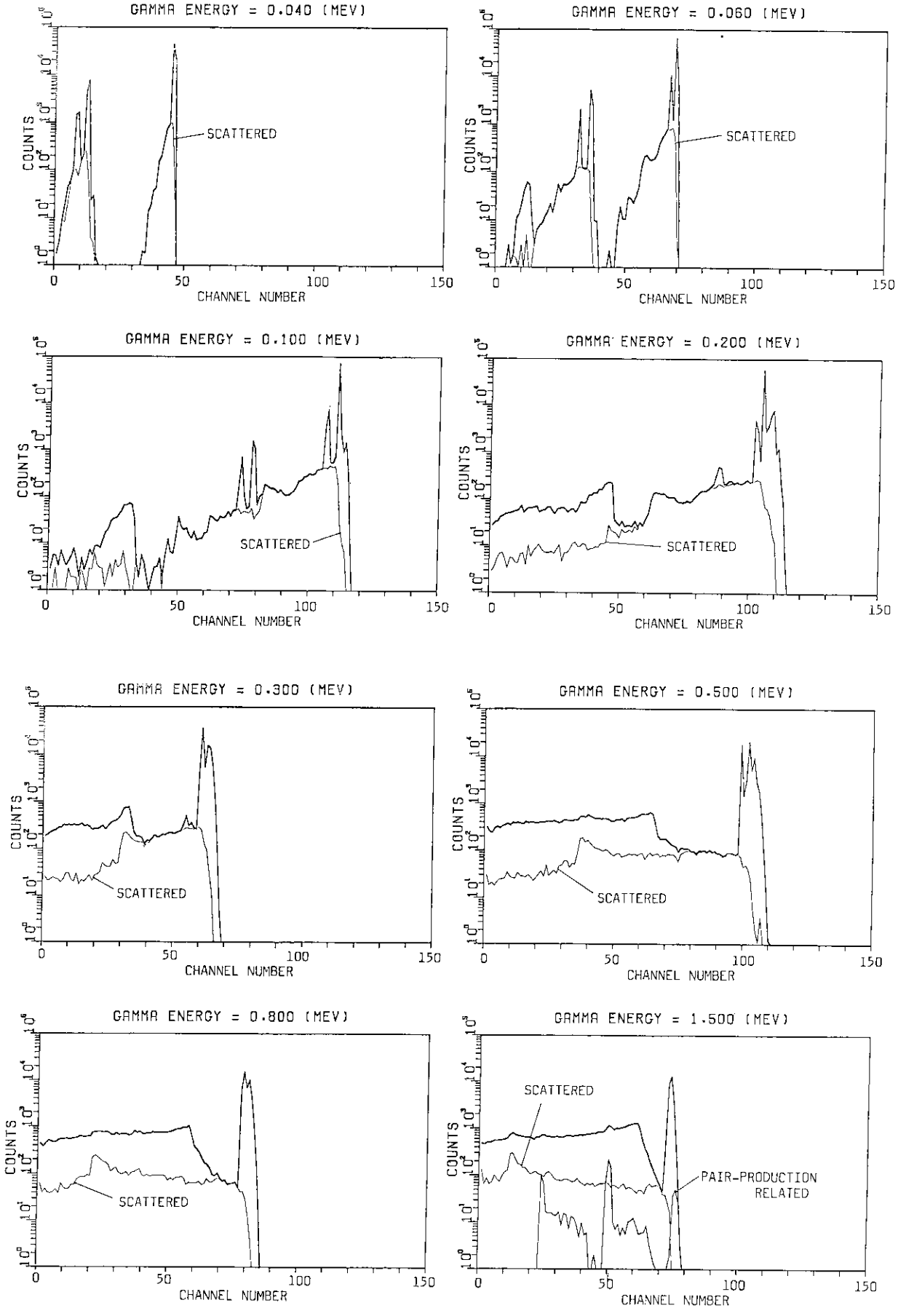

Fig. 4. Non-smeared gamma ray response functions of a 3"ϕ×3" NaI (Tl) detector for parallel gamma rays.

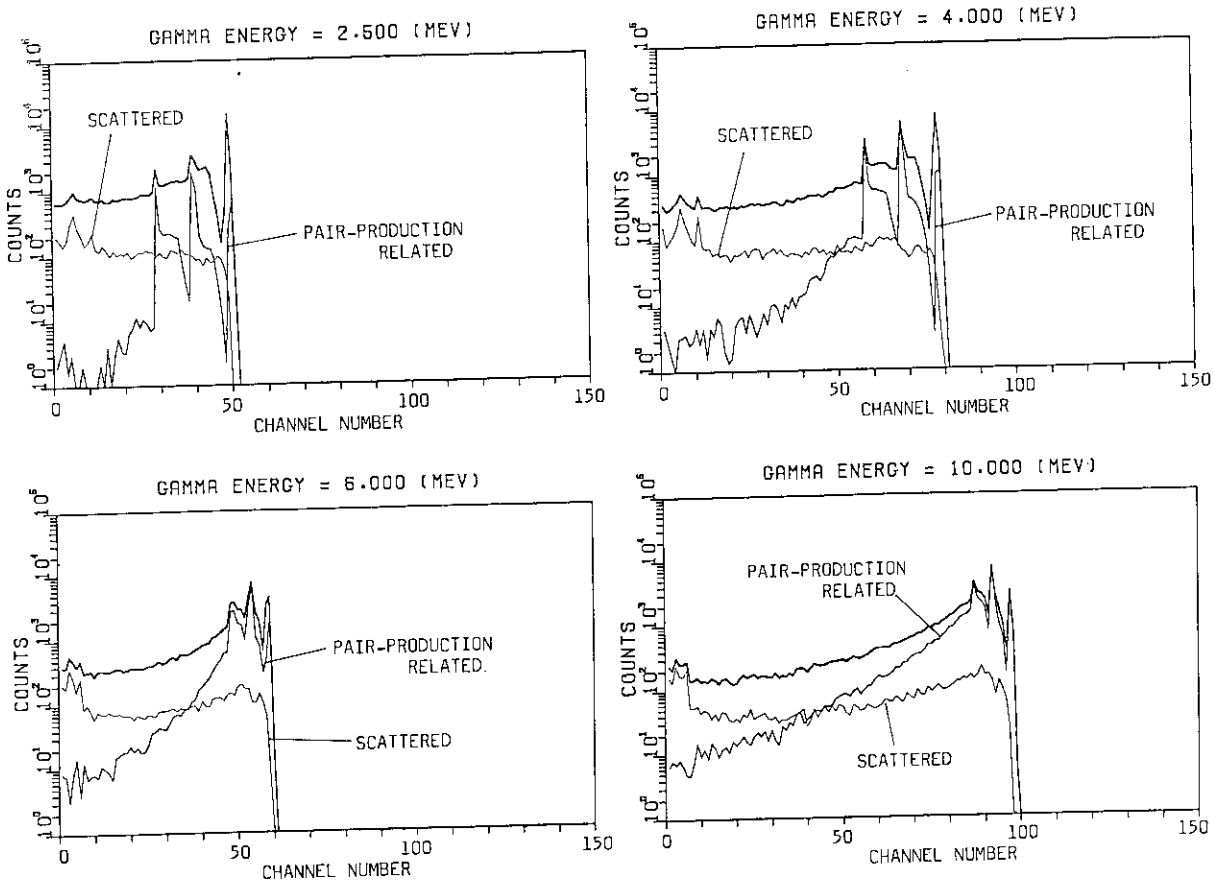

Fig. 4. Continued.

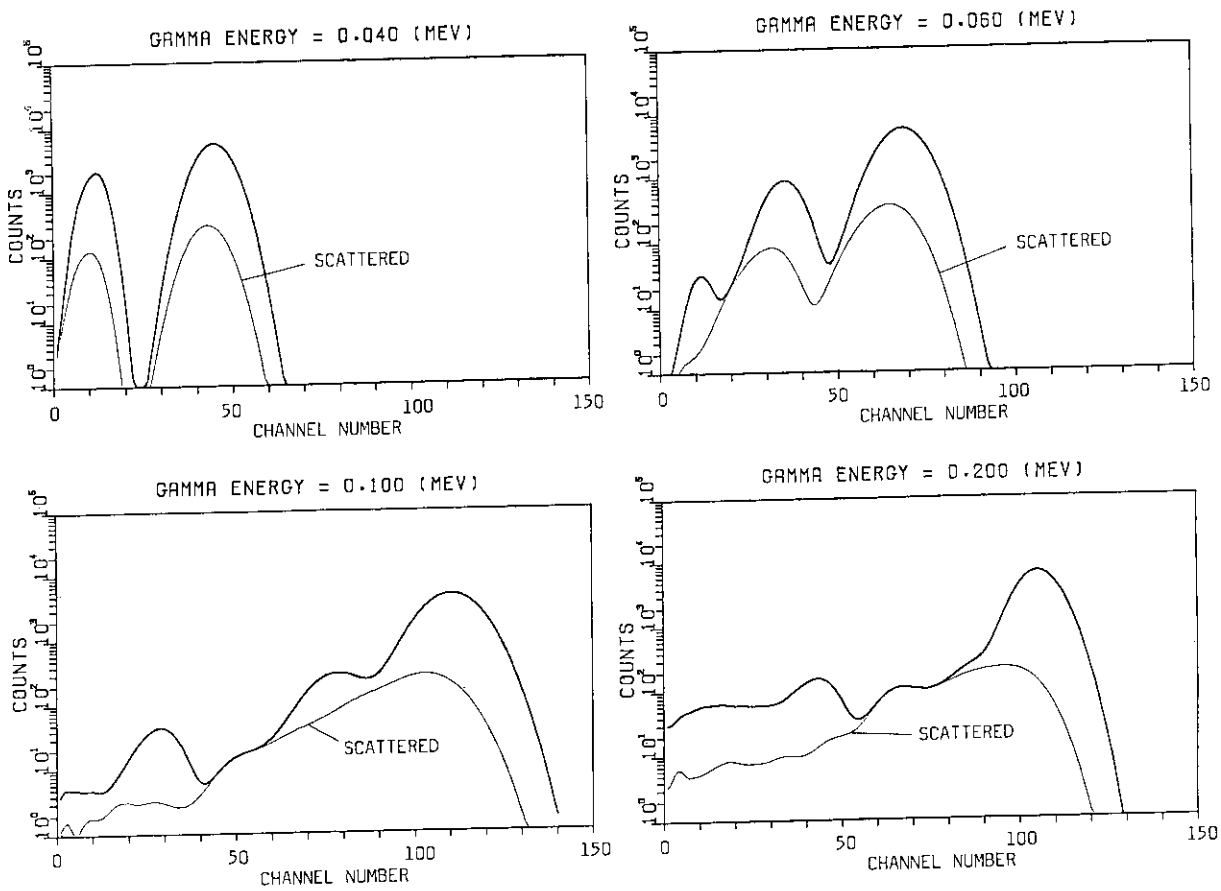

Fig. 5. Smeared gamma ray response functions of a 3"ϕ×3" NaI (Tl) detector for parallel gamma rays.

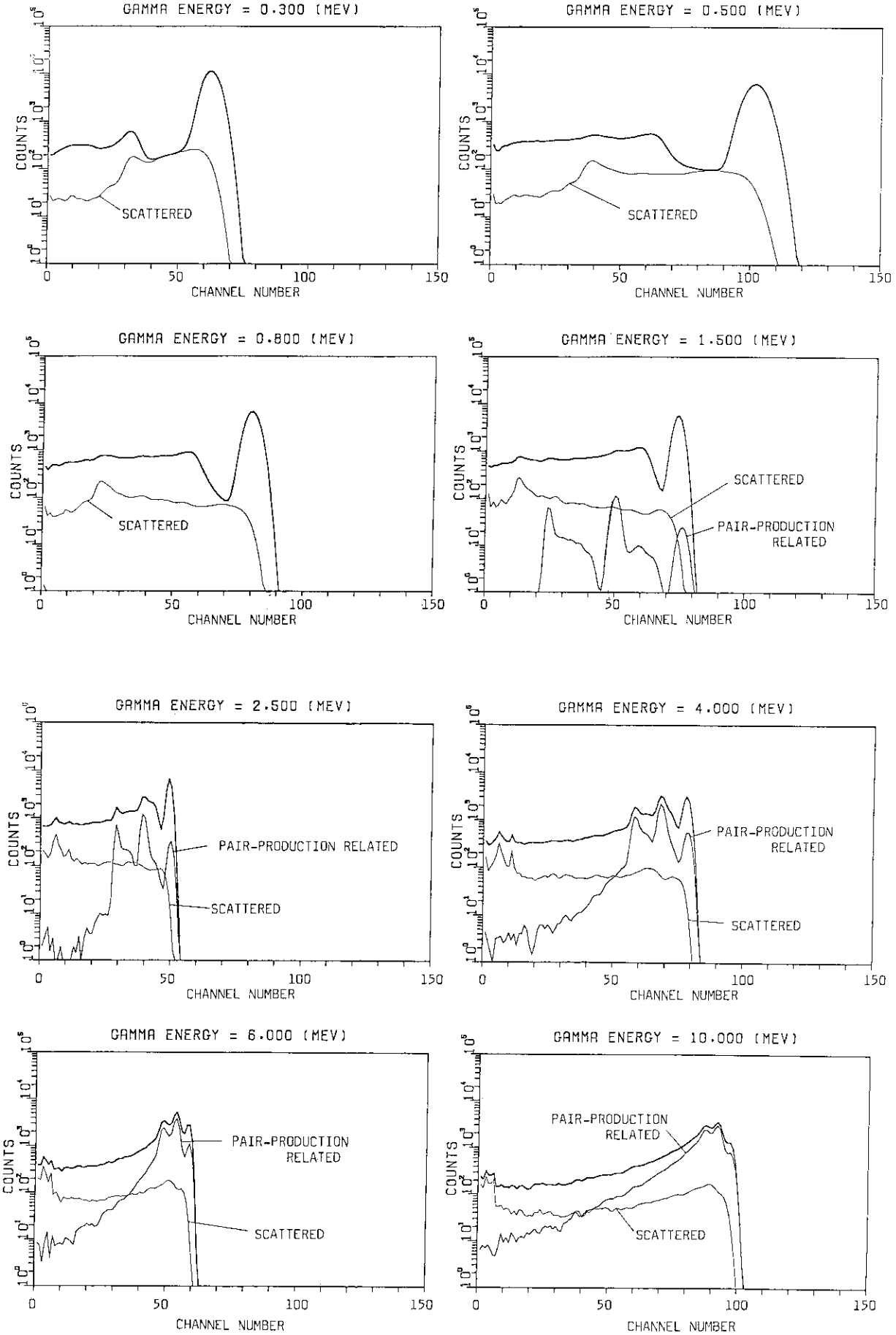

Fig. 5. Continued.

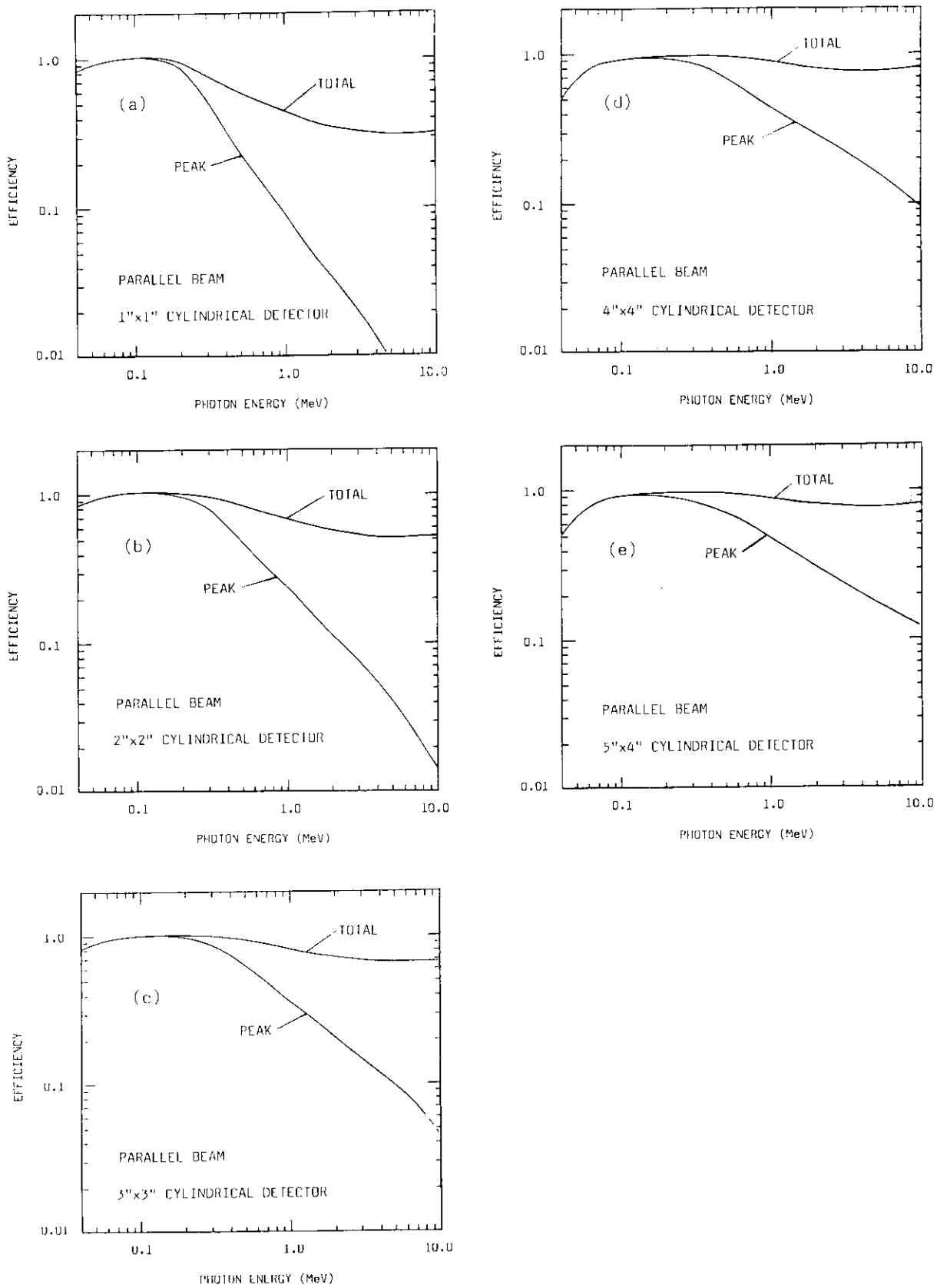

Fig. 6. Gamma ray detection efficiencies of cylindrical detectors for parallel gamma rays.

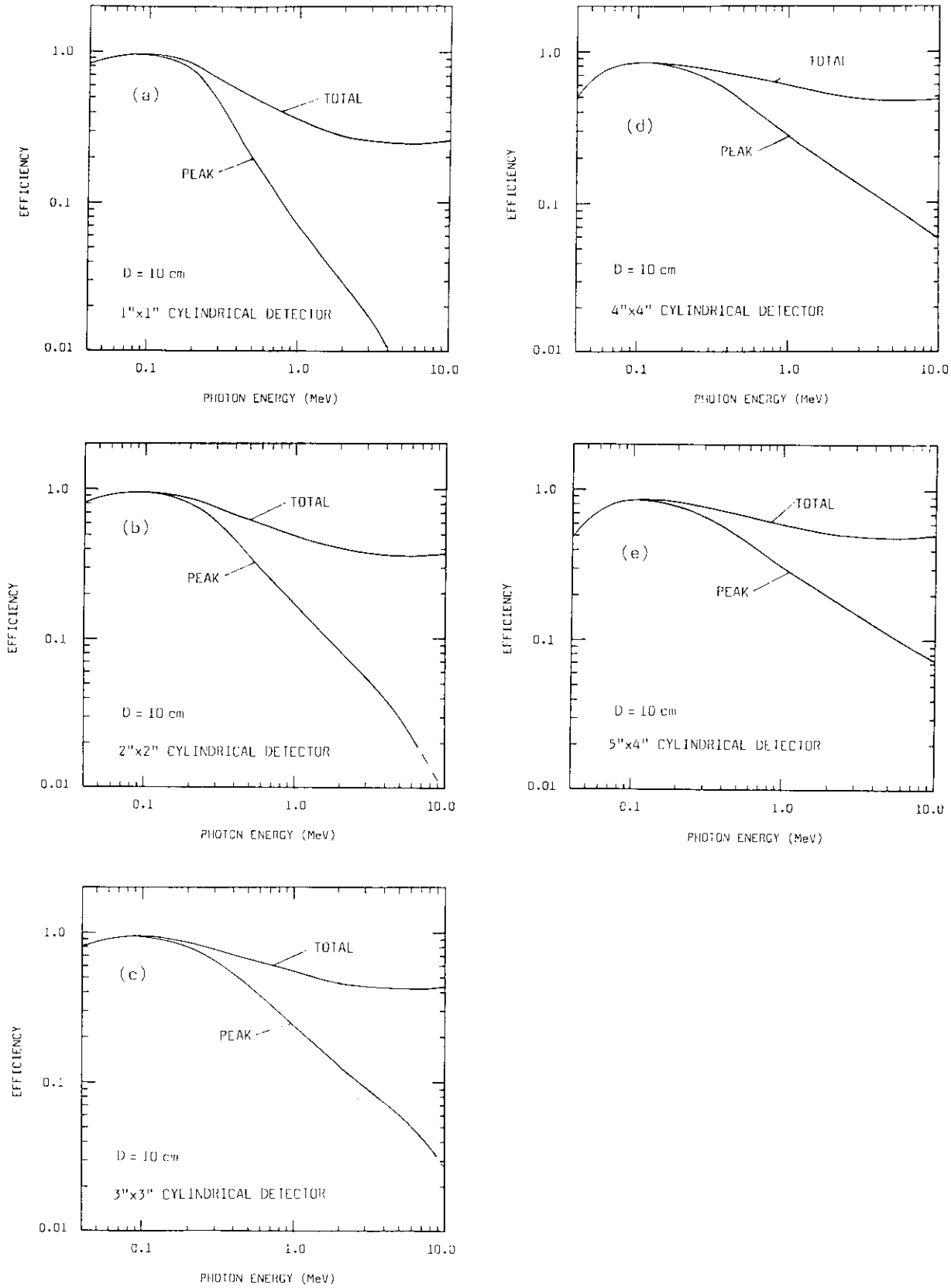

Fig. 7. Gamma ray detection efficiencies of cylindrical detectors for a point source at 10 cm from the crystal surface.

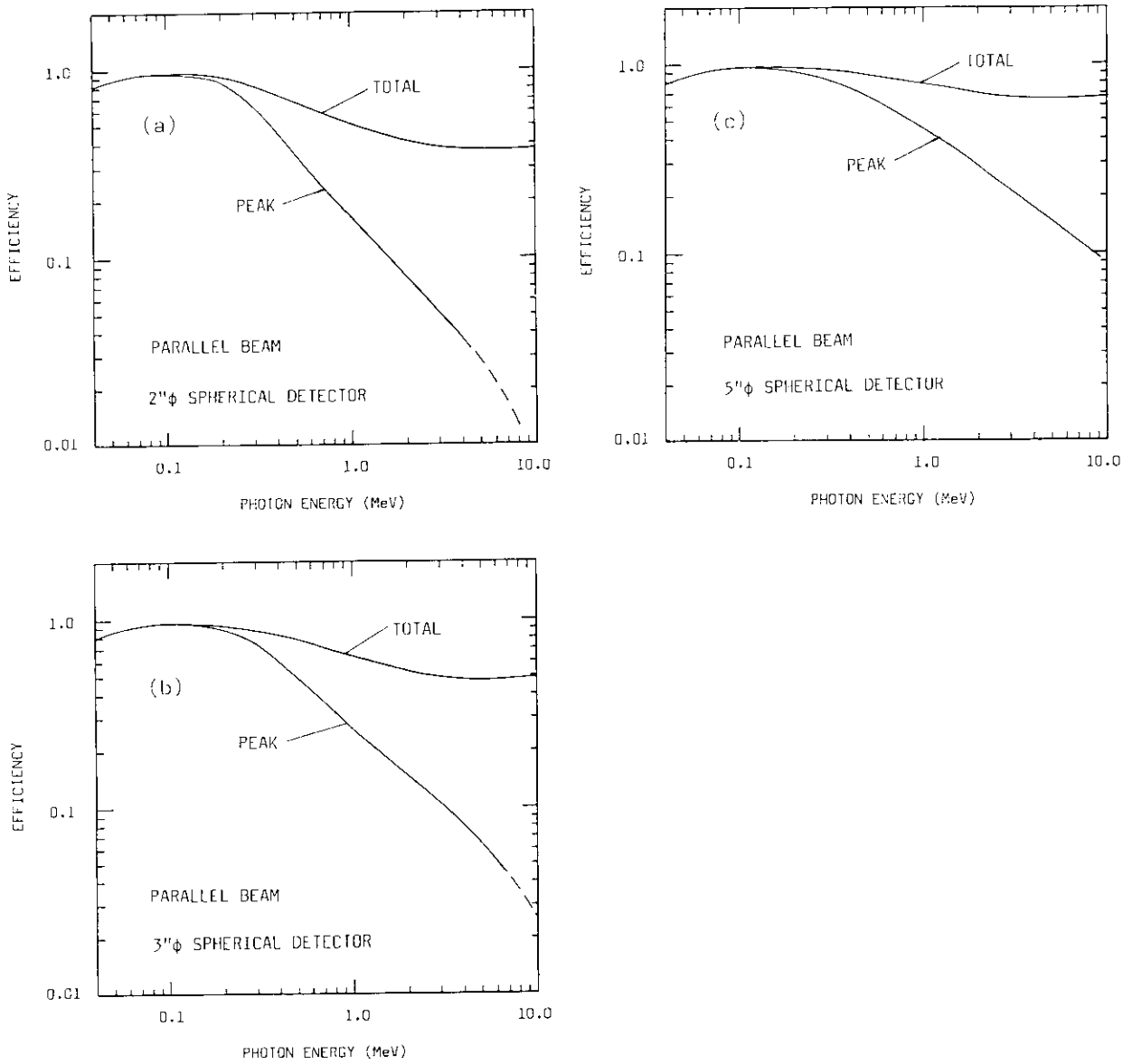

Fig. 8. Gamma ray detection efficiencies of spherical detectors for parallel gamma rays.

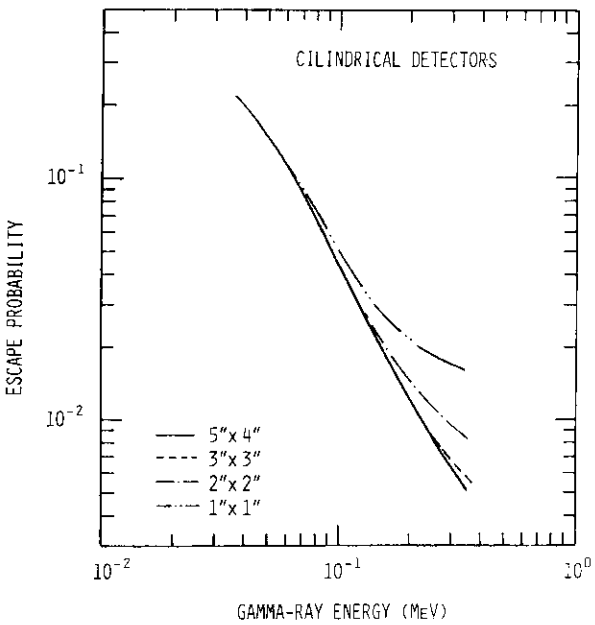

Fig. 9. K X-ray escape probability of cylindrical NaI (Tl) detectors.

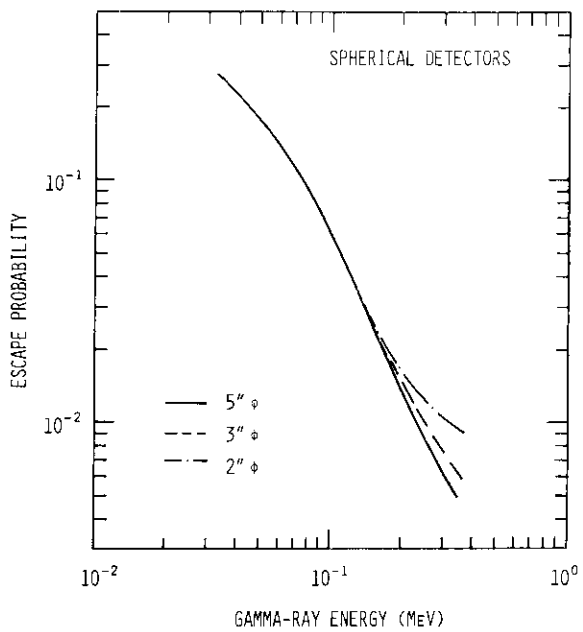

Fig. 10. K X-ray escape probability of spherical NaI (Tl) detectors.

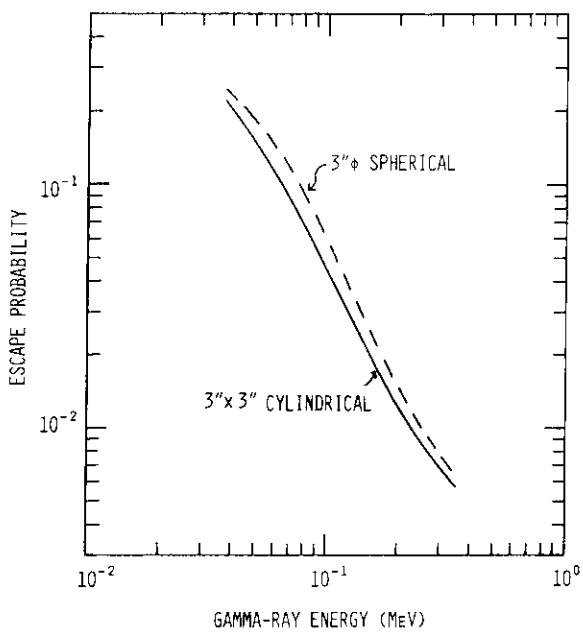

Fig. 11. Comparison of K X-ray escape probability between a 3"ϕ spherical NaI (Tl) detector and a 3"ϕ×3" cylindrical NaI (Tl) detector.

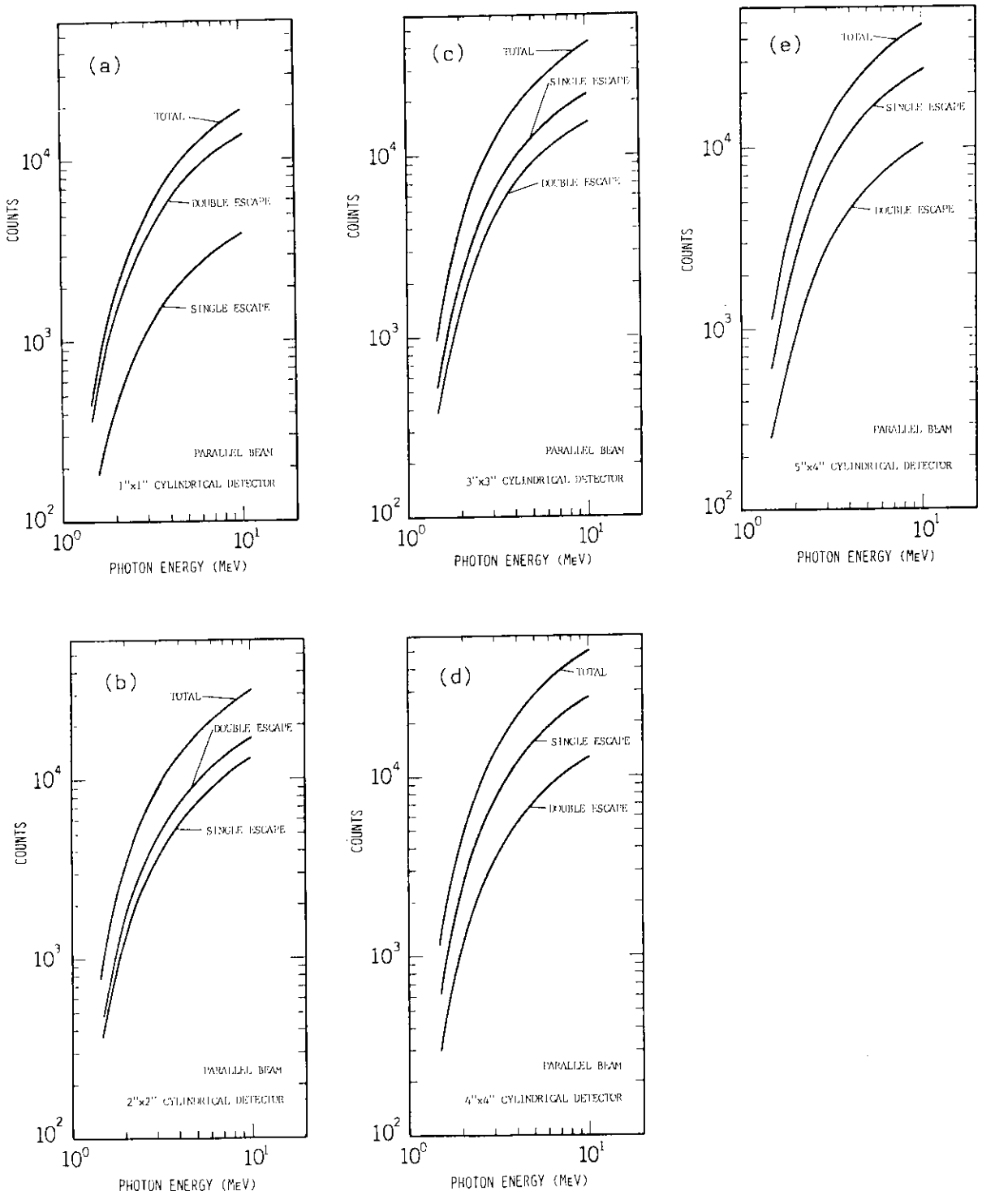

Fig. 12. The number of pair production induced in a NaI (Tl) crystal by a hundred thousand photons, and the numbers of single escape and double escape of annihilation gamma rays. Parallel gamma rays were assumed to enter a cylindrical detector along the detector axis.

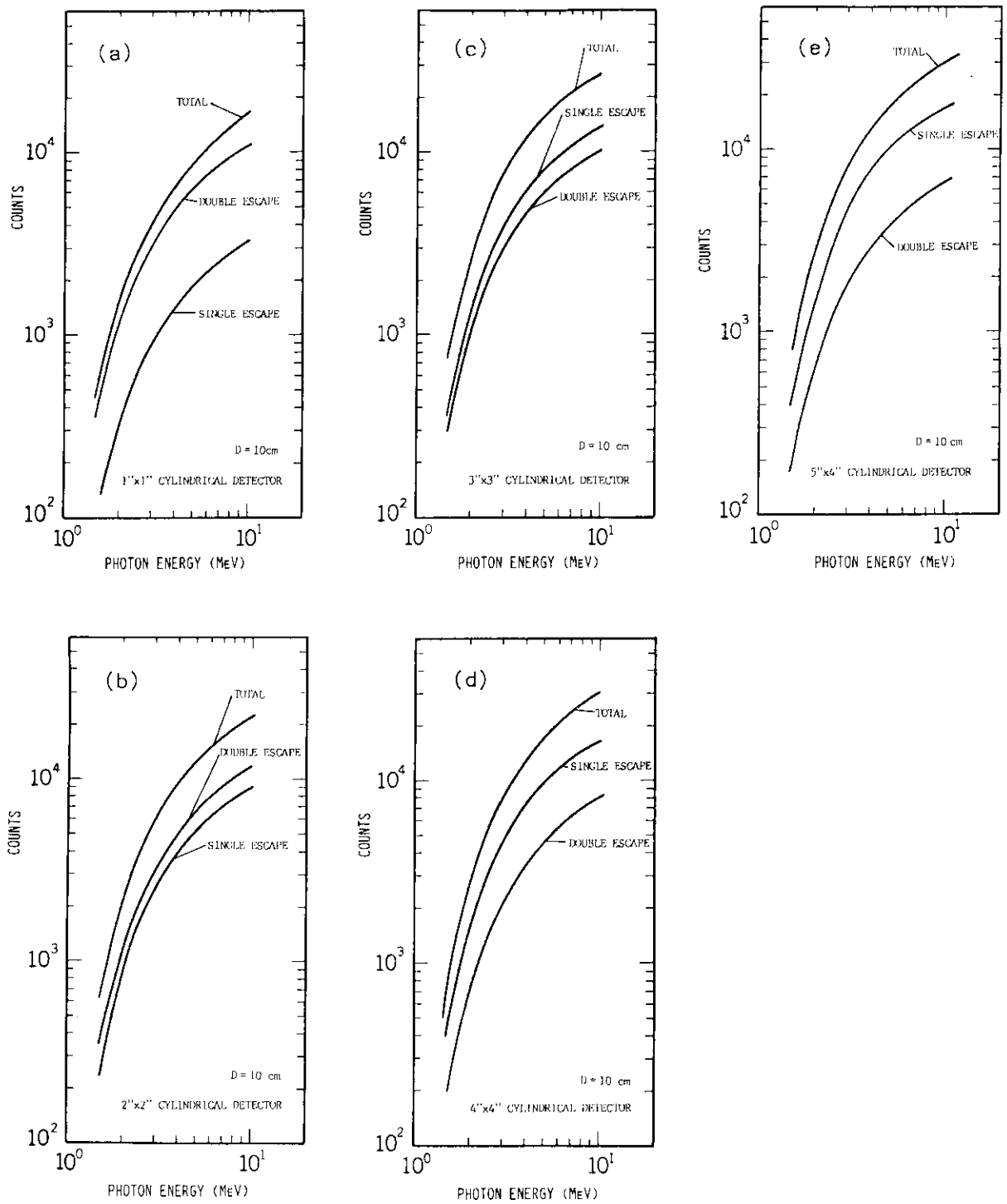

Fig. 13. The number of pair production induced in a NaI (Tl) crystal by a hundred thousand photons, and the numbers of single escape and double escape of annihilation gamma rays. Gamma rays from a point source at 10 cm were assumed to enter a cylindrical detector.

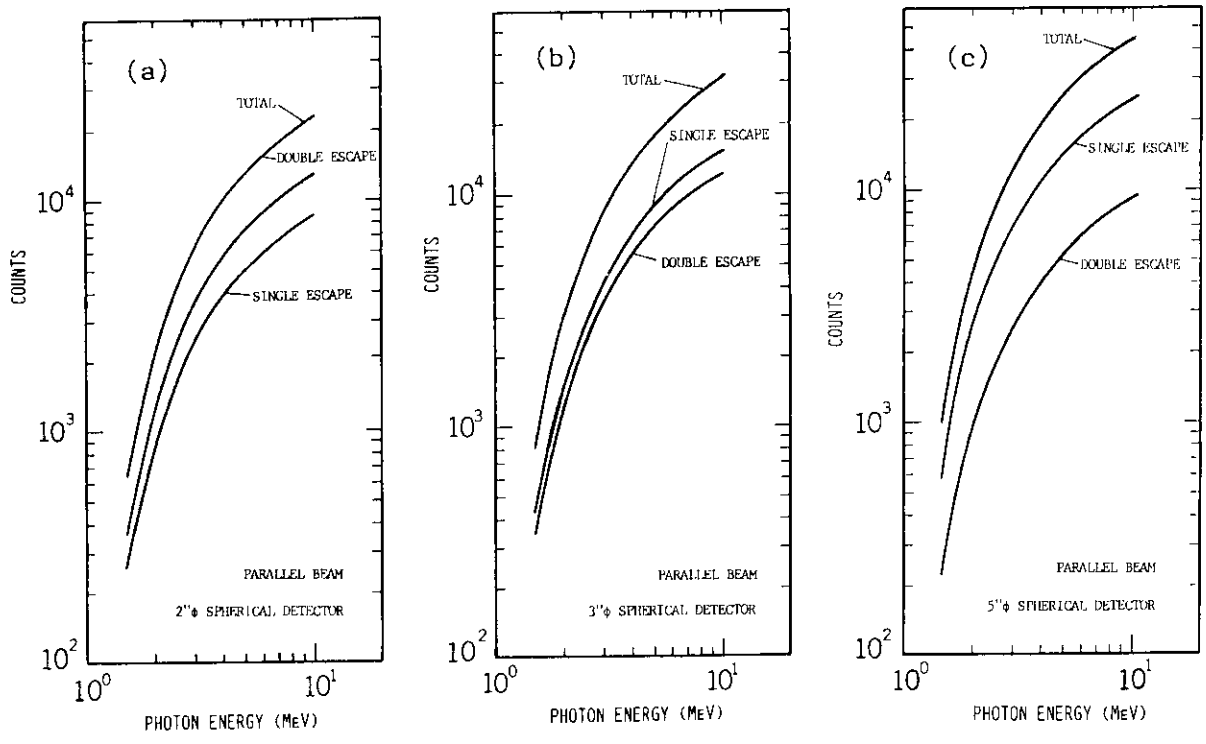

Fig. 14. The number of pair production induced in a NaI (Tl) crystal by a hundred thousand photons, and the numbers of single escape and double escape of annihilation gamma rays. Parallel gamma rays were assumed to enter a spherical detector along the detector axis.

Table 6. Response functions of a 1"φ×1" cylindrical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.5	6.0	31.0	38.7	70.5	86.2	158.6	801.9	2488.1	208.2
10	259.1	863.4	11594.0	23.4	21.9	3.4	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	2.0	12.1	35.5	47.6	54.2	258.7
40	394.8	475.7	803.4	1037.7	1875.0	60829.1	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.8	2.8	5.8	3.6	6.1	22.2	19.5	38.9	46.0	15.5
10	28.4	39.4	21.2	32.4	49.2	129.0	123.1	130.6	94.2	615.4
20	2233.8	178.7	199.7	253.2	10208.7	30.3	20.4	13.1	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.4	1.8
40	2.8	20.7	26.4	24.4	32.1	31.4	42.8	153.4	413.6	395.6
50	363.9	318.6	371.0	574.9	926.6	1478.4	10318.6	58509.3	3621.9	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.3	5.7	4.0	4.0	5.7	3.3	6.6	16.3	24.4	19.5
10	26.2	56.5	45.7	16.5	5.8	4.9	7.2	6.4	14.7	30.4
20	22.9	27.1	20.2	105.8	95.7	78.6	94.0	93.4	58.1	86.7
30	129.5	1283.5	1068.8	152.2	163.9	820.9	7142.4	23.4	15.8	2.8
40	0.0	1.0	0.0	0.0	2.7	5.0	6.3	17.7	22.0	23.4
50	33.7	23.5	35.0	38.1	49.3	122.2	397.1	424.8	385.2	325.6
60	305.9	290.8	388.3	499.3	617.4	812.4	10523.3	963.1	36016.0	32525.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.4	3.4	10.0	12.8	5.3	5.2	4.9	7.1	5.3	4.4
10	6.2	6.1	13.4	15.2	19.3	30.4	30.6	35.1	43.9	53.9
20	49.1	63.9	46.8	1.3	2.9	4.6	1.7	3.8	3.9	7.1
30	1.0	3.3	7.5	23.1	26.4	19.1	12.5	55.7	68.2	58.5
40	50.9	43.4	46.9	38.1	33.2	36.8	45.0	51.3	63.6	61.1
50	65.8	78.9	319.1	1222.1	97.0	99.2	70.9	4406.1	539.7	61.7
60	23.0	19.8	32.3	25.7	35.7	37.2	38.3	41.4	76.1	96.6
70	280.3	343.2	351.9	325.8	282.7	264.1	241.3	238.3	248.7	221.8
80	319.7	366.1	431.7	453.9	543.9	589.0	743.1	10263.9	724.3	744.9
90	64677.1	8549.4	784.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.9	14.3	6.9	17.0	16.0	16.6	12.2	11.1	18.4	7.8
10	12.3	9.3	10.8	9.2	15.6	8.6	14.9	12.0	11.4	15.5
20	23.8	20.6	24.2	32.1	46.3	49.3	46.0	53.9	62.0	76.4
30	65.6	83.3	63.1	4.9	6.3	2.2	3.6	4.1	4.3	4.6
40	1.8	5.0	4.4	3.0	7.4	11.2	12.8	11.7	14.5	45.1
50	40.0	48.7	34.1	29.7	22.5	33.1	30.9	23.3	26.3	23.0
60	17.5	19.9	21.5	29.6	36.2	49.8	45.4	47.9	37.6	49.7
70	53.1	67.5	53.4	225.6	831.6	60.7	69.8	83.1	3160.1	84.5
80	101.8	125.7	218.8	291.6	280.1	255.2	258.3	221.1	192.9	174.4
90	181.6	191.3	162.3	180.9	168.9	189.8	239.0	253.9	298.9	295.4
100	303.3	351.3	364.2	393.1	413.8	417.5	5477.8	5091.1	580.3	568.5
110	8510.5	65437.3	725.1	871.6	1468.5	190.5	6.7	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	22.2	48.3	59.9	46.6	55.4	48.4	53.3	53.1	47.2	41.1
10	52.0	59.4	62.9	49.8	52.3	38.0	65.7	78.1	101.4	118.7
20	121.1	152.0	150.8	187.5	168.4	9.9	8.7	6.8	6.9	10.9
30	14.3	14.4	51.3	50.9	29.6	28.4	30.9	33.4	44.6	34.3
40	47.0	49.6	65.0	55.9	84.1	80.0	87.2	122.5	245.9	476.6
50	420.8	554.6	746.5	315.4	2211.4	254.1	301.2	236.8	248.7	306.0
60	374.6	423.6	422.0	457.7	506.8	505.6	537.5	551.2	9714.0	838.2
70	66459.2	6749.0	2476.5	3126.4	199.3	7.3	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	87.1	104.1	118.1	96.7	97.8	115.2	107.5	114.5	122.0	104.8
10	116.5	106.4	118.0	106.6	105.2	103.7	98.1	106.7	100.9	88.9
20	88.6	80.7	82.1	108.5	89.3	90.4	103.4	132.9	152.0	150.6
30	158.4	192.4	195.4	215.0	193.7	163.7	19.7	19.4	14.5	35.5
40	39.0	37.0	28.9	44.2	31.5	30.0	32.4	28.8	33.6	33.3
50	44.2	36.3	54.1	58.5	76.6	111.2	344.4	321.1	278.7	286.4
60	238.4	209.3	181.9	180.9	172.4	167.2	157.2	154.7	166.2	574.6
70	210.2	1554.6	249.1	260.0	356.0	289.4	287.0	277.7	304.2	317.2
80	300.9	329.4	339.2	358.8	364.5	8418.0	559.7	1053.8	64336.4	2689.2
90	3246.3	5689.6	493.8	396.8	28.7	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	207.8	193.2	187.3	169.3	165.4	180.4	181.8	195.1	204.5	208.4
10	189.4	171.6	187.2	191.8	189.2	167.4	162.8	157.5	155.5	146.1
20	172.1	141.1	150.9	148.9	164.7	131.9	121.8	135.6	137.0	141.7
30	118.8	127.6	129.0	139.2	145.6	149.6	144.0	164.8	156.3	186.0
40	189.7	210.1	202.1	238.8	228.9	238.7	288.8	119.8	45.3	48.2
50	39.8	39.9	31.0	33.7	29.1	36.5	39.2	29.5	34.9	58.6
60	73.6	98.5	275.3	250.9	234.5	215.9	191.9	182.0	166.8	142.4
70	142.9	107.4	127.0	125.1	102.2	109.8	124.3	106.1	114.8	98.2
80	107.6	147.0	165.1	172.6	150.1	171.7	331.2	275.7	882.9	459.6
90	230.6	215.3	329.3	200.6	198.8	209.5	204.4	210.7	205.4	221.3
100	215.1	209.6	6347.8	904.5	603.0	53688.9	2439.5	2632.5	5809.3	5313.8
110	720.5	937.3	101.1	39.3	1.7	0.3	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	798.2	632.2	661.1	619.4	669.6	712.8	692.5	636.6	623.3	647.0
10	681.1	616.7	613.6	565.9	563.2	561.9	577.5	545.3	552.9	542.6
20	523.4	511.0	525.5	487.0	519.8	517.6	556.5	538.9	546.3	759.1
30	1069.6	1051.6	932.1	678.2	298.0	258.3	214.8	177.5	170.2	147.4
40	156.4	148.0	163.6	158.6	130.7	150.7	166.5	189.2	170.9	159.5
50	145.9	182.4	178.6	242.1	676.2	216.2	293.4	231.0	195.1	879.4
60	3032.1	28322.8	3790.5	12317.6	3114.1	771.7	136.6	7.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	710.1	557.5	571.9	574.9	549.5	572.5	563.3	617.1	614.4	638.4
10	635.1	613.1	584.8	599.1	578.1	562.2	582.1	581.5	604.8	562.4
20	567.0	567.0	526.7	535.9	551.0	511.9	535.9	553.2	539.2	553.6
30	517.1	544.3	504.5	710.1	811.5	778.7	699.6	638.0	659.2	634.6
40	638.5	628.4	630.4	637.6	655.1	620.1	679.1	621.0	673.4	401.4
50	188.9	181.9	158.7	150.0	124.9	125.7	106.4	104.1	119.3	99.4
60	79.2	79.5	70.9	73.7	69.8	76.7	98.1	76.1	77.0	86.0
70	70.7	90.7	91.3	67.4	71.2	70.0	68.5	63.5	71.9	62.2
80	17536.9	873.4	8158.3	3779.1	3227.6	748.2	293.2	38.8	6.1	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	571.7	391.4	458.6	513.5	463.6	449.0	443.5	485.4	477.5	492.3
10	527.4	482.1	466.7	524.1	514.5	469.8	465.6	500.4	496.6	453.4
20	469.4	475.2	480.4	484.5	449.1	441.4	468.1	479.9	446.1	461.1
30	452.6	461.1	467.3	460.3	467.7	487.2	744.9	676.6	632.0	614.7
40	560.2	553.8	540.6	511.5	528.8	536.4	510.8	494.6	458.3	439.7
50	453.7	440.3	452.6	497.9	491.6	460.0	558.3	515.4	512.1	480.0
60	573.1	585.9	600.3	590.6	603.8	541.6	165.9	143.1	153.6	122.9
70	114.7	103.2	97.7	91.6	105.6	73.8	67.3	64.0	55.2	54.6
80	54.1	60.6	44.9	37.2	44.6	44.1	45.5	50.6	56.5	43.6
90	43.0	40.1	36.0	44.5	31.8	38.3	26.7	31.9	24.3	10553.5
100	549.5	1768.2	7395.3	1656.3	2058.1	512.5	209.7	39.6	6.3	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	871.6	871.4	882.6	927.9	925.7	960.8	991.1	974.7	952.4	965.4
10	914.0	896.2	936.9	942.7	903.4	907.6	933.3	920.0	1234.5	1263.8
20	1059.1	1037.4	1004.9	955.6	970.1	929.0	950.0	941.9	990.3	982.3
30	1034.3	1116.9	1157.2	1184.8	407.8	275.8	217.8	187.7	162.0	119.1
40	113.7	99.6	87.4	76.3	82.1	85.2	91.1	90.9	67.8	54.1
50	9808.0	990.6	8887.3	3385.7	572.5	33.3	0.6	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	765.4	720.6	764.5	739.7	769.7	759.9	783.9	783.6	803.6	774.9
10	818.6	711.6	753.2	823.9	768.4	842.6	819.0	768.2	816.5	1117.6
20	1111.6	948.9	920.1	854.4	857.4	812.5	785.2	809.1	791.9	757.0
30	793.7	755.7	794.2	826.6	808.2	836.3	905.3	956.3	979.8	993.1
40	1059.8	607.0	250.1	199.0	184.9	157.3	124.3	106.8	88.0	68.5
50	67.3	53.8	72.0	59.7	49.3	46.9	48.8	41.6	3634.7	3492.4
60	7429.1	3008.4	869.4	107.4	6.4	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	652.2	647.7	643.3	652.7	652.8	707.1	709.4	661.6	704.9	701.9
10	675.4	706.6	741.0	684.0	686.4	695.5	705.6	677.3	687.4	902.8
20	1054.3	915.1	802.6	805.4	741.9	724.6	769.8	730.8	687.8	693.0
30	703.5	674.7	702.0	742.5	720.7	728.6	708.3	744.6	759.2	795.8
40	755.6	766.1	839.1	859.4	892.9	989.7	867.3	268.3	206.9	172.6
50	156.8	122.8	105.6	81.1	73.0	51.2	46.0	44.8	52.2	43.3
60	38.6	38.3	31.3	31.0	5167.0	517.8	6732.1	2550.5	969.8	146.8
70	8.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	489.5	481.9	496.2	525.9	485.5	497.1	523.9	524.6	509.1	519.0
10	536.0	553.7	533.1	524.4	552.0	522.0	575.6	544.9	539.6	582.1
20	710.0	792.4	697.7	664.3	634.0	616.2	619.2	569.6	599.1	569.7
30	568.3	561.0	527.8	569.4	562.6	594.3	598.6	553.6	525.1	544.6
40	552.0	508.2	532.1	556.3	564.3	590.8	565.6	589.8	570.4	600.7
50	630.9	633.0	679.6	711.1	758.2	771.0	738.1	822.6	766.1	261.4
60	202.9	178.1	158.3	134.8	113.6	81.2	61.3	43.6	51.2	45.3
70	49.1	22.8	20.5	23.8	20.3	18.8	12.6	11.3	3441.4	5001.3
80	2093.1	1092.9	240.2	28.4	2.4	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	503.0	431.1	452.4	429.0	475.3	503.9	480.4	518.8	471.8	490.1
10	489.7	517.1	526.9	503.0	502.7	509.6	575.0	508.2	578.0	488.7
20	658.0	782.3	706.7	666.7	609.5	534.2	514.1	550.8	535.2	554.6
30	551.6	528.3	555.5	547.1	514.9	503.4	566.0	481.5	530.1	539.8
40	546.8	542.2	504.4	517.8	546.0	557.3	519.9	544.4	559.1	558.6
50	547.1	555.1	568.9	597.8	650.4	686.4	692.8	725.4	718.0	752.0
60	775.7	750.9	320.6	233.9	161.7	156.5	115.6	108.3	89.5	64.2
70	47.8	41.8	39.3	38.3	37.8	34.1	29.0	21.8	21.8	14.5
80	15.7	3001.9	3561.9	2727.0	1699.8	417.8	57.4	5.3	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	417.8	338.8	376.0	340.0	346.4	373.2	371.5	385.3	385.2	378.2
10	385.2	374.1	387.7	384.8	379.1	387.3	366.5	417.9	415.6	407.1
20	425.6	538.2	602.7	534.4	490.7	448.9	463.6	444.0	459.8	455.2
30	388.5	425.0	403.4	396.5	391.4	378.8	430.5	429.0	437.6	401.4
40	382.8	381.1	406.0	422.7	401.1	403.3	367.8	424.9	390.3	409.3
50	419.9	430.7	416.7	389.6	402.4	408.0	426.3	448.0	463.3	435.2
60	426.9	452.6	438.7	458.3	410.1	454.2	466.7	512.9	409.1	500.8
70	583.6	570.4	620.8	569.4	634.3	655.4	650.4	284.3	206.3	159.6
80	131.5	113.2	103.8	71.4	65.5	43.7	34.6	25.0	25.9	27.8
90	22.8	16.9	12.0	18.2	14.2	13.0	12.6	2117.8	3308.6	2090.8
100	987.4	293.7	57.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	533.8	512.8	537.7	520.4	528.5	528.2	563.6	558.6	578.1	600.5
10	546.3	824.2	719.3	691.3	688.2	623.2	530.6	542.7	610.3	588.9
20	551.2	590.0	574.8	586.1	532.9	518.4	582.9	536.1	553.0	540.4
30	535.4	551.7	573.9	559.4	546.6	613.8	631.7	568.6	599.6	639.1
40	670.1	694.3	709.9	689.4	677.4	728.1	798.0	799.6	857.7	914.7
50	982.6	974.8	492.4	267.0	183.9	148.0	102.1	56.8	48.6	36.4
60	33.8	16.9	1160.4	3963.8	1199.2	103.8	3.2	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	441.8	381.7	410.3	408.8	420.5	434.1	450.3	468.8	416.5	451.0
10	474.6	638.6	674.5	553.0	515.3	478.0	491.3	482.0	478.6	469.4
20	397.1	418.1	424.9	561.2	605.6	460.9	411.5	434.1	481.4	438.2
30	464.3	455.9	437.9	462.2	469.9	445.5	474.9	432.0	445.7	460.7
40	440.7	427.7	477.0	490.6	483.8	504.6	504.4	526.7	514.3	558.0
50	566.8	563.2	611.9	587.1	582.2	634.7	647.9	727.6	734.9	768.7
60	860.0	841.6	375.9	188.1	139.9	124.7	84.0	61.5	35.2	29.5
70	22.5	14.3	947.8	3253.3	1031.9	104.3	6.5	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	380.2	295.1	328.5	346.3	332.7	348.0	328.8	320.2	298.3	350.5
10	330.2	426.4	519.3	422.2	413.0	381.9	321.8	344.5	312.4	359.2
20	328.1	344.0	339.1	323.4	305.5	321.4	340.1	298.2	292.5	333.9
30	314.7	303.7	319.8	314.5	347.6	339.6	324.1	337.2	361.9	538.7
40	738.3	354.6	364.5	368.6	366.0	352.2	358.8	340.2	345.2	354.8
50	362.6	356.8	368.0	362.9	374.5	401.9	397.5	335.4	377.2	412.3
60	404.4	433.4	428.3	449.6	425.6	584.7	574.8	468.1	468.3	467.0
70	544.2	572.5	525.6	583.8	665.1	668.3	688.3	596.5	335.4	194.7
80	140.1	108.6	77.7	53.9	44.0	25.6	11.9	12.7	347.1	2030.3
90	1360.5	207.5	19.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	346.2	244.5	255.8	267.2	276.5	294.9	294.3	311.0	308.1	292.2
10	252.0	369.6	483.1	407.6	358.3	332.6	314.6	325.9	337.4	284.9
20	280.4	295.4	293.1	276.4	289.4	281.1	265.1	282.4	265.7	274.4
30	287.1	268.7	260.9	276.0	283.6	281.7	272.1	247.5	279.6	281.2
40	257.4	275.8	282.7	307.1	315.8	297.2	295.7	948.4	490.3	318.6
50	296.0	336.4	321.1	335.5	340.6	354.3	327.7	337.3	336.3	325.2
60	348.9	345.9	337.5	356.3	362.5	367.7	357.6	349.0	364.4	400.6
70	422.1	390.6	430.9	552.9	539.2	429.7	452.7	459.1	521.8	504.7
80	540.1	503.9	563.6	584.3	603.6	559.5	249.7	173.3	163.1	120.1
90	78.0	51.4	34.1	23.0	11.1	10.2	346.4	1895.5	985.1	191.0
100	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	568.8	489.0	511.9	506.0	663.9	760.0	574.8	532.3	545.7	514.7
10	567.4	542.0	496.2	501.1	469.4	438.0	470.3	504.0	574.3	517.9
20	523.0	557.2	530.7	538.4	566.2	575.7	550.8	576.6	1934.9	831.6
30	736.6	682.1	764.5	784.5	757.3	772.9	791.9	843.4	994.9	1274.2
40	868.7	1044.8	1102.1	1155.4	436.6	223.7	81.0	22.1	1851.7	671.4
50	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	507.0	432.2	450.6	473.5	562.8	665.9	528.1	476.3	483.0	453.2
10	484.6	459.5	429.7	442.7	436.9	413.5	444.0	427.8	416.3	407.9
20	439.3	476.0	458.6	439.0	468.9	434.3	471.5	487.6	517.1	520.2
30	516.7	530.0	549.8	2221.9	815.6	690.9	694.8	724.7	697.1	722.5
40	747.2	641.0	666.0	1043.2	1164.3	865.0	959.4	1026.4	940.5	326.0
50	155.3	76.4	26.6	1811.7	519.0	4.3	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	471.6	407.1	394.6	435.5	464.3	640.6	477.0	441.7	392.7	381.9
10	409.8	385.7	401.9	349.6	368.6	391.9	350.5	334.7	352.2	351.8
20	388.3	361.2	384.4	363.3	386.5	378.9	357.2	392.0	409.8	412.2
30	426.0	443.0	434.4	472.6	456.3	507.6	460.7	507.8	2683.2	649.6
40	681.6	675.2	700.3	719.3	703.1	670.2	654.9	614.2	1297.9	927.0
50	746.2	808.9	897.4	721.6	269.0	144.5	55.3	54.1	1744.6	211.7
60	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	354.6	267.1	276.6	286.6	298.6	414.8	354.4	291.5	276.6	248.0
10	284.3	245.6	260.0	203.3	240.6	246.9	237.8	246.6	211.4	229.3
20	227.9	238.2	241.2	231.6	228.6	273.2	286.6	253.5	218.5	234.2
30	257.5	234.9	248.6	267.9	278.1	253.5	242.7	249.8	268.1	269.7
40	287.4	266.1	282.1	306.1	314.3	332.9	340.6	317.0	351.7	379.6
50	408.5	415.2	421.5	442.0	458.2	447.1	438.1	2794.0	1306.3	665.5
60	640.6	628.0	656.4	651.4	624.1	505.3	519.5	931.1	1272.3	534.0
70	559.8	630.7	578.2	245.3	146.1	63.7	24.0	723.4	498.1	14.9
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	397.9	320.3	418.9	319.6	287.4	288.5	265.7	265.0	261.4	279.6
10	252.1	284.0	256.8	227.2	253.1	268.9	256.1	267.1	287.7	277.7
20	271.1	262.6	297.7	264.9	287.8	298.3	284.1	298.4	334.1	296.2
30	342.6	342.7	388.6	389.5	382.2	395.3	422.0	449.9	466.8	526.6
40	550.5	571.1	614.6	685.9	828.6	1013.2	1011.9	795.7	4340.4	1210.0
50	1119.4	996.5	607.7	1826.1	644.4	593.2	219.9	66.1	587.3	10.2
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	345.5	233.7	328.8	264.5	233.5	241.8	181.7	179.0	151.8	160.8
10	173.7	170.7	177.4	176.1	179.1	176.7	166.8	181.8	169.4	166.2
20	185.1	166.9	200.0	177.4	181.9	178.1	202.6	201.0	186.9	175.3
30	190.6	207.7	213.4	204.7	234.6	202.9	213.3	246.5	236.8	251.0
40	250.4	263.1	248.0	281.1	279.9	314.1	300.2	335.6	337.3	342.5
50	352.6	343.9	368.2	402.1	402.6	441.7	442.5	537.6	572.5	591.8
60	643.0	722.8	805.4	934.1	962.4	1062.7	906.6	3391.9	1225.7	899.6
70	839.8	542.1	1261.7	592.6	313.4	211.7	57.4	241.3	94.1	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	274.3	191.1	256.4	202.5	158.5	190.7	127.9	131.9	134.3	120.4
10	136.9	132.1	137.3	123.9	126.8	139.8	148.3	160.2	134.8	132.7
20	125.4	145.8	133.8	133.6	136.6	134.2	132.1	138.4	151.9	157.4
30	161.8	136.3	139.7	157.7	164.2	140.3	160.4	168.0	149.2	151.5
40	156.6	171.8	180.7	168.8	171.9	192.5	200.0	195.7	199.0	186.6
50	234.2	227.9	219.0	234.8	231.7	239.9	243.2	247.4	270.2	282.6
60	281.2	315.0	295.6	286.5	298.4	335.4	370.8	355.2	371.2	442.7
70	394.2	443.4	460.3	505.7	518.7	564.9	593.2	611.2	699.0	749.5
80	748.7	804.5	895.4	939.1	1070.0	1027.7	1503.1	2033.7	790.9	716.3
90	532.9	475.3	810.6	251.4	167.2	73.3	55.1	135.9	2.5	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. Response functions of a 2"ϕ×2" cylindrical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.8	2.2	19.0	21.1	54.9	81.4	128.9	1221.1	1892.4	168.9
10	222.9	3186.4	8770.3	20.3	26.7	2.5	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	1.6	2.5	14.6	22.8	47.1	48.5	213.9
40	275.9	450.8	841.2	946.8	38511.2	23939.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	0.0	1.0	1.0	3.4	23.3	22.3	42.0	46.4	12.8
10	15.4	29.5	14.0	19.5	32.9	73.7	87.3	87.1	105.4	558.2
20	2158.7	164.4	167.8	270.5	9594.3	22.3	24.0	7.7	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.2	1.8
40	4.2	11.5	21.8	23.4	23.8	26.1	29.5	144.5	251.6	249.4
50	242.1	235.1	378.8	629.1	891.1	10299.3	1692.7	61713.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.0	1.0	0.0	3.8	1.2	3.1	1.6	8.9	19.8	17.1
10	37.1	49.5	53.8	13.8	5.0	4.4	10.8	9.4	13.5	27.4
20	18.7	18.7	24.6	83.1	56.6	72.7	60.9	70.2	78.4	84.2
30	117.4	2105.8	122.1	142.1	132.7	3852.7	3688.7	14.8	11.9	0.7
40	2.0	0.0	0.1	1.9	3.9	1.1	6.3	17.8	18.1	18.1
50	28.6	26.7	31.9	31.2	62.8	143.6	292.2	305.6	235.1	242.9
60	261.4	266.5	390.2	559.6	656.7	859.7	10380.6	1038.1	57425.8	10814.6
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.0	0.8	6.6	2.8	4.8	1.7	3.8	7.5	1.5	2.5
10	4.3	4.5	8.5	15.9	23.7	20.1	24.5	26.4	43.8	55.8
20	62.4	71.1	22.1	2.2	2.9	4.0	2.0	2.9	3.4	4.1
30	4.9	5.2	10.8	16.2	18.0	17.1	16.6	49.4	53.7	50.3
40	36.8	23.9	36.9	41.6	36.1	32.9	36.6	48.5	66.9	58.7
50	57.6	69.6	268.1	1106.8	71.2	67.8	74.9	4495.9	73.3	56.3
60	20.1	19.9	20.3	18.9	25.5	31.1	22.4	63.3	66.8	111.4
70	255.0	261.1	234.6	231.6	198.2	173.0	172.0	214.9	231.2	243.3
80	345.3	400.6	433.7	470.8	497.9	553.4	10248.5	731.1	737.7	11734.2
90	62084.1	980.4	180.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	7.5	3.5	7.5	8.4	9.9	5.6	3.1	8.6	3.9	5.9
10	3.2	10.5	2.2	3.6	7.6	7.7	4.3	10.5	10.1	12.1
20	15.6	15.5	21.1	33.3	32.1	35.1	51.1	39.6	63.5	74.1
30	74.9	63.8	39.6	2.0	1.9	4.9	0.1	2.0	1.2	3.3
40	4.7	3.1	1.6	5.3	5.1	12.5	10.6	8.4	13.9	39.0
50	36.7	27.6	28.6	22.6	13.9	22.8	13.3	18.2	18.3	17.6
60	14.7	24.4	34.9	32.1	30.2	47.7	32.6	32.1	57.2	51.8
70	44.4	46.4	134.5	473.9	386.0	58.6	61.4	567.5	2248.1	80.6
80	88.2	121.0	205.6	198.5	198.0	172.8	186.3	156.5	145.1	144.1
90	144.7	136.8	127.5	173.5	181.9	217.3	243.7	300.7	290.8	317.9
100	306.7	323.1	362.8	378.4	403.9	460.7	10062.1	561.1	547.0	605.9
110	65065.3	9434.5	896.9	1391.7	625.1	18.4	0.1	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	19.5	29.5	26.4	24.4	34.6	31.5	24.9	24.6	35.4	33.3
10	28.8	36.2	26.9	40.1	19.2	28.8	47.1	51.9	77.9	92.9
20	133.8	129.4	165.1	170.7	144.1	8.4	10.3	5.6	5.6	6.4
30	15.9	16.3	52.4	31.5	27.5	19.9	22.9	29.7	35.5	39.6
40	45.6	57.7	67.9	60.8	67.7	64.6	86.2	90.1	245.9	320.7
50	321.4	754.9	255.2	1177.2	837.0	192.6	280.5	218.7	306.3	326.9
60	367.2	388.1	401.4	436.4	499.9	486.8	541.4	1456.2	8912.8	875.3
70	72197.9	2209.8	4132.2	945.1	120.4	0.6	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	35.0	46.9	54.9	39.4	38.9	49.6	65.0	58.1	66.5	59.8
10	50.5	47.3	62.3	54.9	59.6	50.6	57.7	43.7	46.5	63.4
20	62.3	45.4	57.2	60.8	67.3	79.9	86.4	93.0	117.8	136.9
30	149.2	167.1	191.1	193.7	200.7	114.0	10.1	20.1	16.2	30.9
40	32.9	23.5	38.9	33.0	26.2	22.8	36.4	28.4	36.2	42.2
50	30.3	38.9	43.8	50.1	65.3	132.4	240.1	214.9	196.2	194.4
60	195.2	175.3	169.9	160.4	143.5	130.7	135.4	147.2	219.0	439.4
70	238.2	1235.6	253.8	277.6	339.0	284.4	278.7	309.7	323.3	307.2
80	324.2	337.1	355.9	358.2	869.3	8134.6	665.3	65460.5	3038.0	3060.3
90	7034.7	1289.3	600.7	131.4	5.8	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	56.9	59.0	66.3	75.4	74.8	83.5	85.4	86.0	80.2	79.4
10	84.3	103.3	83.7	101.5	88.1	90.1	94.1	95.6	86.3	87.4
20	81.5	82.0	93.9	75.9	92.1	84.8	80.3	81.1	72.6	84.3
30	88.6	79.3	76.1	92.1	97.6	99.9	109.9	133.3	132.7	146.5
40	149.5	166.2	184.0	202.6	242.5	225.7	247.2	45.6	41.1	27.6
50	35.4	40.6	30.9	27.4	32.3	42.1	25.1	24.8	27.0	56.6
60	43.9	96.9	178.0	180.1	171.4	158.7	160.7	157.5	134.6	135.1
70	116.2	94.3	97.9	113.4	90.1	90.8	96.6	101.9	106.7	119.7
80	153.5	180.9	172.1	149.7	165.1	208.8	380.8	354.6	741.3	223.0
90	231.0	241.4	327.9	217.2	202.9	203.6	224.0	255.7	258.3	275.6
100	274.9	921.6	6812.4	480.5	48001.4	11839.9	3487.4	4324.8	9810.5	950.3
110	1111.3	510.8	100.4	6.4	1.9	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	439.3	349.6	392.2	418.7	399.2	486.1	463.5	416.6	441.3	458.0
10	480.7	438.6	451.0	455.0	428.5	414.0	441.6	414.9	421.6	390.5
20	365.5	414.7	384.1	388.9	415.3	417.7	462.3	461.1	534.1	630.2
30	877.4	856.6	845.6	531.3	259.0	221.6	222.2	191.1	165.2	141.0
40	154.1	159.6	180.7	192.5	181.6	200.8	191.4	211.1	213.2	215.2
50	224.4	238.5	229.1	325.4	565.0	288.1	376.3	266.1	253.7	4496.1
60	16055.7	22173.7	8694.3	16865.6	5476.4	919.0	101.9	1.7	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	519.8	364.6	409.8	431.2	462.0	491.1	503.9	525.1	516.2	532.6
10	495.0	545.0	581.6	480.4	541.7	513.6	524.3	541.1	540.7	506.7
20	512.9	483.2	525.9	556.1	497.8	514.7	503.0	477.3	450.8	485.7
30	467.8	501.8	524.4	653.0	668.3	642.7	639.6	597.5	613.5	633.8
40	570.3	579.3	584.1	613.7	667.5	627.5	698.2	672.7	682.8	294.3
50	201.5	191.3	184.8	167.0	164.3	153.7	118.9	135.3	127.8	126.2
60	120.3	101.4	112.6	114.0	122.1	142.1	97.7	116.6	127.2	127.8
70	137.7	129.3	117.9	124.3	107.3	117.1	134.3	119.9	116.3	24178.2
80	1190.8	3042.6	18694.8	4528.9	5749.9	1708.8	375.8	40.8	3.2	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	441.0	342.8	368.2	401.7	437.9	422.6	458.0	453.8	455.9	459.7
10	494.9	488.1	477.1	468.8	467.9	499.1	496.6	520.0	485.5	484.5
20	473.9	513.9	487.5	450.9	473.0	469.1	511.2	462.0	463.6	541.0
30	493.6	484.4	504.8	502.8	527.9	518.7	687.1	684.7	640.1	631.0
40	593.3	601.0	538.9	587.5	540.9	514.2	507.8	481.5	477.5	530.4
50	479.0	475.1	520.8	527.3	557.8	507.1	559.8	634.6	601.4	618.3
60	620.3	616.9	603.6	644.6	637.6	442.2	213.6	186.2	173.5	197.8
70	169.6	127.5	120.1	126.4	102.4	107.2	116.6	100.3	85.2	69.6
80	76.6	77.7	78.5	74.9	90.4	72.1	72.8	83.9	66.0	79.3
90	86.0	71.5	68.8	64.5	72.7	54.2	73.4	50.6	15121.6	844.0
100	1927.9	15954.8	2737.4	5994.4	2756.3	1441.1	328.3	76.2	17.9	0.7
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	792.2	764.1	848.4	851.8	896.1	967.7	931.1	916.4	935.2	997.2
10	966.9	950.0	958.1	991.4	1004.0	954.4	1039.5	1052.1	1361.7	1272.3
20	1222.0	1097.8	1067.2	1044.7	994.0	988.9	934.4	1014.4	1084.4	1076.9
30	1175.2	1178.7	1224.2	1239.9	383.1	368.0	293.7	235.4	217.2	183.6
40	146.6	154.7	137.8	146.2	141.8	142.9	137.8	109.4	126.8	113.2
50	14312.2	5619.4	17051.2	7729.2	1357.5	72.3	1.4	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	674.8	717.5	757.3	748.5	810.6	790.1	860.9	837.0	854.9	844.4
10	850.0	834.4	830.5	814.4	872.3	905.9	919.2	919.8	1011.7	1211.7
20	1178.4	1070.0	1036.1	1032.4	965.0	958.6	937.4	917.9	946.2	954.5
30	936.3	888.7	917.1	974.5	946.3	1044.9	1051.5	1094.0	1127.6	1128.6
40	1184.3	485.5	352.8	299.8	260.1	209.4	183.4	130.0	126.7	113.7
50	118.1	122.1	109.1	103.1	110.5	106.4	91.3	101.1	9867.3	2661.4
60	15666.3	7854.1	2423.2	355.0	7.6	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	644.6	620.5	677.4	662.2	710.3	678.3	751.5	744.1	732.6	737.4
10	780.7	764.7	818.0	734.6	774.7	771.1	801.2	806.5	807.6	1018.0
20	1109.4	1076.0	940.2	1010.1	912.8	866.4	864.0	897.9	865.7	891.7
30	883.8	912.5	842.1	895.9	861.6	890.6	925.0	893.7	902.2	915.9
40	931.2	1059.9	967.2	1006.5	1066.7	1042.1	786.6	359.3	308.0	236.3
50	215.9	173.0	157.9	117.4	83.2	89.9	95.5	107.9	93.8	92.0
60	86.6	69.1	59.1	61.0	8045.7	5923.8	11610.4	7019.8	2219.8	359.0
70	25.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	533.4	508.7	512.5	559.3	555.4	610.8	544.0	618.7	549.2	585.4
10	612.5	614.1	589.3	621.5	623.3	640.4	683.9	707.7	660.5	650.9
20	872.5	882.4	849.5	749.2	736.7	746.1	778.0	756.6	723.0	721.1
30	685.2	717.8	702.6	693.8	705.8	699.8	735.9	770.0	796.4	717.8
40	749.3	759.0	743.3	728.0	741.4	719.4	795.6	788.7	771.0	772.4
50	785.4	858.5	896.7	913.0	911.3	937.6	953.0	997.9	794.9	358.7
60	295.5	263.1	175.1	173.3	151.1	127.9	88.4	85.4	62.1	74.6
70	56.9	71.6	48.6	50.0	41.7	40.8	34.7	4803.2	6388.4	7741.4
80	6674.5	2472.7	666.0	85.3	9.3	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	544.7	456.8	500.7	518.1	556.0	542.5	553.4	551.0	541.1	550.1
10	597.6	587.7	586.9	609.9	608.7	621.9	634.4	655.6	614.7	656.8
20	780.9	865.3	847.2	775.7	727.1	736.8	695.1	702.9	658.4	677.3
30	638.2	656.6	696.5	683.3	638.0	675.4	659.2	696.9	669.4	645.7
40	674.7	714.2	712.4	713.2	729.5	723.0	710.8	660.6	723.5	742.9
50	738.2	751.1	804.6	832.9	781.2	857.0	849.7	873.4	870.4	902.9
60	940.5	816.9	342.3	269.8	251.0	203.2	178.6	145.1	108.3	109.7
70	81.5	73.2	53.3	68.2	57.7	54.8	50.6	41.7	49.5	33.6
80	4273.9	1043.0	10855.1	6691.8	3423.0	1122.5	215.5	25.1	2.4	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	439.9	345.0	411.7	384.7	385.6	447.5	441.9	414.7	460.7	463.5
10	459.1	482.0	430.8	460.4	503.4	498.4	522.6	499.9	505.2	500.9
20	518.8	642.0	707.7	683.0	606.2	624.4	626.8	583.6	569.8	540.8
30	536.9	545.2	537.8	495.9	548.0	565.8	589.2	565.2	577.8	501.7
40	546.7	534.5	544.9	524.3	522.2	553.5	566.9	580.9	541.6	564.0
50	547.0	546.3	586.2	573.9	581.9	598.3	606.5	597.7	663.8	589.6
60	601.8	607.6	623.2	635.0	622.6	651.5	627.1	652.4	709.9	712.3
70	719.1	752.1	750.9	758.7	819.3	819.1	700.4	338.6	286.4	234.1
80	180.8	164.2	132.8	106.8	97.6	57.3	58.4	49.2	57.4	39.9
90	45.1	45.4	43.1	29.4	32.2	24.7	2834.0	2529.2	8295.7	6025.1
100	2295.3	792.8	158.8	22.1	2.2	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	634.3	574.7	591.6	628.0	648.7	700.4	656.9	674.2	691.6	730.2
10	777.4	1086.4	1040.9	907.2	854.3	845.2	772.7	711.9	743.6	781.4
20	716.4	735.4	809.5	804.0	751.4	757.9	752.6	728.1	756.9	787.4
30	824.4	832.3	783.8	840.4	854.3	837.8	893.9	857.6	905.1	982.4
40	878.3	907.8	959.8	969.6	1003.6	1076.3	1116.7	1181.6	1216.0	1255.7
50	1286.0	1246.4	597.8	384.4	280.3	209.3	140.0	95.7	70.8	58.2
60	47.2	36.9	6305.2	8476.1	2779.4	276.7	17.0	2.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	522.9	464.9	520.3	493.9	530.3	576.8	526.2	555.1	564.2	594.1
10	648.4	850.6	783.0	701.2	647.3	659.8	607.5	638.9	601.3	608.4
20	626.4	638.1	609.5	732.6	733.7	663.4	662.4	646.4	608.2	603.5
30	588.1	605.2	647.1	649.1	637.8	648.3	672.8	681.5	655.6	633.8
40	696.1	669.1	704.5	710.2	721.3	748.0	750.5	765.1	831.3	869.2
50	984.5	889.7	853.8	890.5	945.1	899.6	1024.1	1030.8	1107.9	1190.0
60	1150.3	891.9	501.8	352.8	264.0	188.4	124.5	79.6	70.0	42.2
70	41.9	27.8	4538.7	8088.4	2268.6	266.1	20.8	2.1	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	433.5	373.6	399.9	370.1	436.6	454.1	419.3	439.6	402.0	450.1
10	467.8	584.9	631.3	568.1	502.4	542.0	476.2	472.3	465.9	446.8
20	440.8	443.1	417.8	419.7	446.1	470.6	462.2	407.5	419.1	462.9
30	444.0	438.6	401.9	431.1	476.2	430.7	441.5	455.4	453.9	826.7
40	704.9	517.4	498.6	515.8	500.5	501.9	529.9	540.6	533.6	557.7
50	509.1	506.4	512.7	580.7	607.4	579.6	570.1	552.5	620.7	613.3
60	574.6	632.7	619.1	677.5	829.9	1028.6	947.6	723.8	740.6	748.5
70	809.0	847.9	879.1	914.9	926.3	1008.5	992.8	776.8	414.8	319.8
80	243.6	181.2	108.6	87.4	58.5	42.3	25.4	20.4	3113.9	6165.3
90	2770.0	452.7	78.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	436.0	307.7	341.2	350.5	363.1	371.4	375.2	371.5	403.5	417.5
10	411.0	452.2	632.2	513.2	503.0	415.0	414.1	407.8	394.5	387.4
20	419.4	392.3	400.7	363.9	416.3	417.4	394.1	343.6	402.0	361.4
30	362.9	392.7	375.9	382.4	390.2	404.5	387.5	380.4	389.1	444.4
40	382.4	393.4	397.4	385.3	420.6	410.2	418.4	1213.4	570.6	480.4
50	475.4	497.0	499.0	459.7	491.6	457.4	516.9	485.7	493.1	529.4
60	532.7	556.2	501.7	550.7	581.5	551.2	560.6	530.4	589.9	559.6
70	597.4	621.1	904.4	1150.9	872.5	714.8	724.6	736.4	732.4	781.2
80	852.0	858.9	908.0	951.9	913.7	626.7	374.6	289.7	212.6	176.1
90	103.8	54.5	45.6	25.5	31.0	22.1	3031.5	5759.9	2127.4	385.0
100	72.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	640.1	620.2	669.4	650.9	866.9	974.9	821.1	760.8	652.6	706.9
10	743.9	664.2	677.0	698.3	641.7	619.4	664.3	721.3	654.3	695.2
20	714.4	751.2	765.4	731.4	788.7	825.4	814.2	787.2	2255.1	1104.0
30	1167.6	1106.3	1183.3	1203.6	1255.7	1199.9	1269.2	1286.8	2209.4	2288.7
40	1530.8	1740.1	1810.4	1594.8	704.7	331.9	134.9	51.0	7643.7	1318.3
50	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	650.9	592.9	554.0	567.6	754.0	901.1	716.9	612.4	619.6	594.6
10	628.2	559.3	609.2	520.2	560.9	564.1	559.3	572.8	625.6	593.7
20	575.1	604.5	580.2	626.4	650.9	618.1	648.5	643.5	697.1	702.6
30	718.6	755.0	737.9	2641.9	1128.5	1078.9	1106.9	1190.8	1151.3	1166.0
40	1096.7	1101.6	1103.7	2712.7	2088.6	1532.1	1670.8	1832.3	1402.0	610.4
50	315.0	138.3	246.9	6711.7	955.8	9.4	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	531.4	492.3	524.2	560.3	653.6	835.3	637.0	550.8	513.2	591.7
10	573.7	507.5	488.4	510.2	507.1	501.9	491.6	514.7	545.1	536.4
20	503.6	503.3	526.3	562.6	527.5	532.6	557.9	549.0	561.1	612.3
30	600.7	599.7	626.6	685.6	729.6	687.2	717.6	956.3	2815.3	1070.0
40	1073.0	1101.0	1152.1	1164.2	1136.8	1026.9	1077.0	1100.5	3467.8	1600.2
50	1442.6	1475.7	1603.5	998.4	506.0	232.3	85.1	1173.4	5624.9	427.0
60	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	393.9	320.8	351.5	337.4	442.2	579.8	443.6	373.6	353.8	348.6
10	464.0	300.2	277.3	302.6	327.0	294.8	298.8	317.1	330.2	298.2
20	314.4	328.6	334.0	311.4	342.9	357.7	334.2	318.2	347.9	322.9
30	314.5	345.7	344.3	340.1	377.9	355.7	362.9	358.3	337.4	419.1
40	407.8	379.3	399.4	415.7	436.5	423.9	453.9	509.2	493.3	530.7
50	524.7	578.7	582.4	572.8	668.2	616.2	630.6	3667.0	1194.7	1139.6
60	1131.6	1152.5	1124.9	1023.4	984.9	865.3	821.4	3600.6	2139.0	1117.7
70	1164.3	1234.9	963.2	498.4	275.8	104.6	320.6	3874.2	1121.0	35.8
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	415.3	388.3	578.5	471.9	365.4	451.9	312.8	320.1	327.4	325.0
10	317.0	304.4	329.0	359.6	369.3	323.9	316.4	336.1	333.9	350.8
20	343.3	341.3	345.5	392.9	371.6	381.2	378.8	406.0	412.9	412.4
30	475.8	423.1	496.9	558.2	548.7	500.9	573.8	659.8	648.8	707.9
40	749.6	794.6	957.9	1020.0	1200.4	1326.5	1307.6	2964.2	4138.6	2322.3
50	2261.5	1752.1	1863.2	5386.7	1576.5	1321.5	488.3	915.5	2355.4	17.9
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	315.1	259.3	453.9	334.6	204.8	386.7	214.2	205.6	198.1	173.7
10	190.4	176.7	187.4	192.6	185.1	223.7	202.1	215.7	197.1	230.8
20	235.6	202.1	215.1	230.0	240.2	243.4	247.0	254.2	238.9	228.9
30	261.5	263.0	284.3	297.4	282.5	261.1	281.8	332.9	316.7	326.7
40	304.2	345.1	363.9	346.2	379.1	406.0	416.7	453.7	463.4	526.2
50	486.5	522.9	535.6	581.3	646.2	644.1	682.3	753.6	805.4	915.4
60	989.4	1050.4	1231.6	1302.6	1473.9	1559.2	1848.9	4595.1	2317.0	2239.3
70	1776.2	1249.1	4959.8	1248.1	1004.8	504.0	243.7	1737.0	145.9	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	263.9	241.9	331.7	250.0	226.5	256.2	134.7	156.8	141.4	132.9
10	148.4	148.1	171.4	148.9	140.0	136.4	118.4	132.6	157.0	158.0
20	151.0	149.2	175.4	144.9	152.8	166.7	179.3	169.1	159.0	148.4
30	176.3	183.9	168.9	172.1	185.7	184.4	186.7	161.4	196.9	197.6
40	203.9	213.2	207.6	217.4	229.7	242.2	232.6	232.3	264.0	263.3
50	257.4	287.6	288.5	302.7	309.0	309.1	310.4	322.1	339.4	355.2
60	357.4	382.1	411.9	436.6	453.2	468.9	488.5	483.3	551.2	559.5
70	587.4	641.6	688.1	760.9	804.4	817.6	889.9	946.5	1008.6	1094.3
80	1207.1	1243.1	1329.1	1630.0	1552.7	1581.6	3821.7	2317.6	1935.2	1729.5
90	1069.1	3264.1	1941.3	855.0	555.9	158.0	886.0	449.8	1.8	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. Response functions of a 3"φ×3" cylindrical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.8	3.2	9.4	21.1	45.3	60.4	95.3	1433.1	1602.3	151.0
10	215.9	4385.0	7566.2	24.0	29.5	1.5	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	1.0	0.0	2.0	1.8	13.4	18.6	39.0	43.1	154.7
40	198.2	415.5	730.8	924.5	42621.8	19763.3	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.0	0.0	0.0	1.0	2.9	18.2	27.7	40.8	33.6	13.2
10	18.0	16.8	14.6	19.4	31.9	65.5	65.2	58.2	83.5	557.4
20	2105.4	150.7	143.8	223.5	9571.7	21.8	20.8	7.6	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.8
40	8.5	15.9	14.4	23.5	18.1	24.1	28.7	126.7	182.1	198.8
50	196.0	191.2	414.1	616.9	846.7	10260.6	1843.5	61096.1	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	0.0	1.0	0.0	3.0	1.2	1.8	11.0	13.3	23.4
10	43.7	63.2	54.9	9.2	3.2	6.3	7.7	8.6	12.0	15.1
20	22.0	14.5	29.1	56.4	39.4	57.4	55.4	59.1	67.9	78.5
30	147.4	2012.6	126.6	118.8	121.7	5192.7	2277.2	10.1	9.6	0.0
40	0.0	0.0	0.0	2.3	0.7	0.1	7.1	19.0	10.7	10.6
50	30.7	29.1	22.9	32.3	49.2	122.6	209.7	232.6	187.9	181.4
60	197.3	244.2	415.4	531.5	631.2	843.7	10394.3	1251.3	63351.4	4604.9
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.4	1.4	1.6	2.8	5.8	1.4	3.2	2.4	0.6	6.4
10	1.8	2.3	8.5	10.9	19.4	17.5	24.0	25.9	47.6	57.2
20	60.9	59.6	12.8	2.8	1.9	2.4	0.7	0.0	5.5	2.4
30	5.4	7.2	5.3	15.4	16.3	12.9	14.7	47.1	29.0	38.3
40	33.0	21.6	27.7	24.8	36.4	27.9	33.2	48.6	68.8	59.0
50	56.9	64.6	351.8	1012.5	75.8	56.4	81.2	4291.3	77.2	39.2
60	20.9	12.5	30.9	23.7	29.3	28.1	21.4	44.8	64.3	101.2
70	210.9	177.4	180.4	154.2	161.7	133.6	143.2	182.4	178.0	247.3
80	320.9	393.0	406.5	459.4	478.9	582.4	10356.3	652.9	700.8	46752.9
90	27061.2	918.2	60.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.9	5.6	5.5	3.4	7.0	4.7	3.4	4.3	5.4	7.7
10	4.4	2.0	4.9	2.7	4.1	7.2	5.6	8.5	8.8	7.9
20	11.4	17.5	19.7	30.1	34.5	35.4	41.1	50.7	68.1	67.4
30	73.4	69.5	34.6	4.1	2.0	5.7	3.8	2.0	0.9	1.9
40	3.2	3.2	4.8	2.1	5.4	12.3	6.6	6.0	13.5	37.5
50	23.0	19.4	21.7	15.5	12.8	18.0	11.7	12.6	12.5	17.0
60	17.2	39.1	37.4	32.8	30.7	38.9	36.1	37.8	49.3	38.8
70	53.1	52.1	192.2	697.7	111.5	56.9	62.4	1573.2	1074.1	69.8
80	105.3	116.2	188.2	171.4	155.7	156.2	147.8	124.0	143.8	120.1
90	108.4	111.2	123.4	134.1	168.4	222.8	225.2	269.5	276.8	315.1
100	294.5	310.3	373.1	389.9	396.5	3229.3	7144.8	541.9	534.3	737.2
110	72431.6	2277.9	906.7	1440.9	257.4	11.3	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	6.9	24.3	14.9	16.7	20.4	18.5	23.5	22.0	20.0	19.8
10	17.6	31.0	29.9	25.9	22.6	19.9	40.4	61.8	74.7	92.7
20	109.1	135.6	166.6	174.6	139.0	12.3	6.8	5.5	5.9	8.4
30	15.7	15.2	40.3	21.6	15.4	10.8	22.1	25.0	37.1	30.9
40	38.4	49.3	64.8	69.1	61.1	51.4	82.6	86.5	239.6	258.2
50	259.7	700.6	210.0	1368.9	515.1	183.5	243.0	204.9	290.6	331.0
60	362.7	381.6	375.9	424.1	493.7	542.0	540.4	6343.9	3982.9	28038.8
70	45139.4	2321.7	4318.7	415.3	71.3	0.7	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	23.6	24.5	28.6	25.5	31.0	34.1	36.2	35.4	37.0	42.5
10	40.8	33.9	39.3	37.8	35.2	44.8	42.1	37.7	38.6	30.2
20	38.8	37.6	25.4	43.6	49.2	70.6	85.6	91.4	121.9	128.3
30	143.7	169.7	173.9	195.9	195.7	102.0	13.9	11.9	18.9	29.9
40	25.2	21.9	29.5	24.3	25.5	36.6	29.2	24.5	31.3	29.7
50	36.1	35.7	37.2	48.8	57.3	124.9	201.2	177.2	174.2	143.1
60	155.8	148.1	156.4	135.7	129.5	123.7	116.6	140.3	297.2	316.9
70	292.8	1046.1	236.1	250.9	335.4	263.0	267.9	279.6	319.5	319.5
80	302.3	346.4	358.8	394.1	5320.3	3815.0	812.0	65600.3	3103.0	3536.3
90	7088.5	852.7	581.6	43.5	8.6	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	27.4	32.8	33.4	41.5	44.5	48.7	50.1	50.9	54.7	57.1
10	60.1	73.3	52.7	61.6	66.7	65.8	68.0	71.1	53.2	58.4
20	59.2	67.8	69.8	57.1	48.8	62.4	64.2	68.0	62.2	53.9
30	59.8	62.9	52.4	65.4	89.4	83.0	86.3	121.8	122.6	138.7
40	134.2	162.5	161.8	199.5	222.5	230.6	221.6	35.8	31.7	26.9
50	33.8	26.0	27.5	26.9	26.6	34.4	25.8	31.6	27.2	36.6
60	47.9	92.6	134.7	140.2	135.6	131.9	135.7	118.0	109.3	113.6
70	110.1	91.4	87.2	86.8	87.0	95.3	88.1	96.4	116.6	125.6
80	150.8	152.4	152.7	166.8	188.4	211.4	323.3	502.0	472.3	213.5
90	221.4	253.5	250.7	219.4	234.4	224.0	220.5	234.0	267.5	235.6
100	243.0	4824.7	3117.4	690.3	58130.0	2905.1	3635.4	6159.8	8003.4	980.3
110	1222.5	222.0	84.3	6.6	0.4	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	186.6	202.7	222.2	242.1	247.9	281.1	277.9	318.9	308.9	320.3
10	307.0	324.2	309.9	315.3	336.5	296.8	313.6	287.8	250.4	267.7
20	259.5	279.2	309.5	258.2	296.8	351.6	375.4	394.1	440.1	515.9
30	715.2	755.2	767.9	429.4	218.3	184.5	180.9	170.1	125.1	150.3
40	144.0	167.8	193.6	174.3	181.7	201.5	198.2	213.5	219.9	212.9
50	213.7	228.9	241.7	320.2	502.4	307.7	354.5	273.3	262.3	4960.4
60	36309.0	5494.9	15594.4	13689.6	5732.0	1021.2	98.1	5.2	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	281.2	242.0	255.4	289.7	312.2	335.1	364.4	338.4	391.2	382.3
10	381.6	363.5	379.3	394.0	380.4	412.5	377.1	375.0	418.1	438.4
20	424.0	412.2	382.4	410.5	393.4	428.5	418.2	389.2	384.9	404.8
30	355.0	377.5	400.3	463.1	468.2	487.7	496.5	463.7	513.2	513.4
40	525.2	552.6	517.6	526.8	571.4	601.9	641.3	645.9	656.9	227.3
50	200.2	169.3	178.4	177.1	161.0	163.5	145.0	127.5	155.1	140.9
60	136.8	143.6	137.2	113.9	137.1	133.4	134.4	134.4	144.0	134.6
70	161.2	147.0	129.8	130.1	130.6	142.7	168.5	134.9	132.7	26695.6
80	1986.6	5240.9	22022.9	7626.6	6054.9	2097.5	411.2	37.4	2.1	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	306.8	253.5	237.0	294.7	321.5	296.1	329.5	348.6	365.6	343.7
10	385.7	377.0	392.3	374.1	358.5	409.8	384.2	394.6	394.9	377.5
20	389.5	399.2	390.7	409.6	412.8	404.5	428.0	397.0	383.4	412.1
30	449.8	434.0	432.5	418.8	455.9	439.2	520.5	533.9	506.1	578.1
40	526.7	502.0	466.1	490.7	469.5	478.2	474.2	455.9	409.1	414.0
50	458.2	453.1	469.8	415.3	486.3	493.1	503.2	506.9	532.6	565.1
60	602.2	581.9	596.1	638.7	596.8	368.6	206.7	173.1	179.2	176.9
70	153.8	135.3	127.9	120.3	93.5	114.9	111.2	109.5	109.0	96.2
80	98.1	86.3	103.5	97.6	102.2	92.7	104.8	93.0	97.1	88.7
90	87.7	77.5	79.6	91.1	90.7	89.0	82.5	88.0	17343.4	1495.8
100	3148.8	20137.5	5277.9	9307.6	2953.4	1805.3	574.3	87.7	15.8	1.2
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	544.4	535.6	577.2	663.1	675.2	736.2	784.2	732.8	738.2	766.7
10	752.8	834.9	816.0	825.7	789.8	868.5	824.8	859.3	1107.4	1067.3
20	1025.7	1019.3	913.7	907.7	878.2	872.3	863.6	934.0	953.6	1030.6
30	1117.2	1165.9	1256.1	1155.7	399.8	362.8	315.0	272.3	230.7	201.8
40	158.6	177.1	171.6	187.5	174.4	178.4	182.9	163.2	170.9	188.4
50	16585.2	11522.7	20535.7	10260.9	1610.9	80.5	1.7	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	503.2	548.9	605.5	563.8	643.4	654.5	675.9	689.0	718.1	761.9
10	713.2	729.1	733.5	752.1	748.4	763.4	777.9	841.2	896.3	1053.7
20	1013.5	930.1	875.9	904.5	855.6	858.5	876.7	878.9	851.9	874.5
30	812.2	799.4	916.5	865.6	966.2	961.1	953.6	1070.8	1082.5	1124.2
40	1183.1	458.8	321.8	291.4	256.7	238.3	176.9	148.6	131.6	115.1
50	139.2	140.3	126.9	140.7	136.3	104.7	111.7	128.2	11761.6	9133.0
60	17507.9	11420.9	3848.1	552.4	25.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	515.9	416.1	508.1	535.2	566.2	615.0	595.0	652.6	701.7	636.7
10	669.8	686.5	684.8	707.9	667.1	709.4	719.7	736.4	756.7	828.6
20	981.4	945.8	865.2	906.7	856.0	831.9	795.6	830.5	817.7	788.6
30	853.4	895.4	829.0	876.9	851.5	827.7	889.5	888.4	851.6	882.9
40	956.6	982.1	998.8	1016.3	1078.2	1106.1	697.9	354.6	328.3	255.0
50	215.3	172.8	134.3	136.3	116.3	103.5	106.1	105.7	128.6	121.8
60	99.8	97.0	90.1	102.3	9783.5	14370.7	11756.4	9998.6	3634.4	644.9
70	47.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	438.3	377.1	445.7	506.5	495.6	460.6	481.7	532.6	542.3	550.9
10	560.1	546.5	557.1	572.1	580.8	631.9	615.3	596.3	624.4	613.6
20	749.8	773.8	789.8	785.3	757.4	773.1	755.9	676.9	655.6	738.0
30	678.1	691.4	701.8	691.2	658.9	690.2	812.9	743.0	793.9	702.3
40	696.5	732.8	720.6	772.8	745.2	747.6	775.1	745.1	761.7	767.6
50	790.7	830.6	892.0	900.4	921.4	973.5	965.3	1056.1	666.4	390.9
60	334.8	286.3	216.0	169.9	158.3	132.0	95.4	90.4	103.0	80.4
70	70.4	73.9	60.2	62.5	62.8	66.7	52.0	6334.9	14815.3	6759.7
80	9918.4	4011.4	1097.5	172.2	20.6	0.3	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	430.7	403.3	425.1	429.8	477.5	514.5	505.2	481.3	507.2	521.3
10	504.0	541.7	536.8	547.2	566.0	583.5	557.4	568.8	618.1	639.4
20	694.2	788.6	764.7	735.8	737.3	698.0	701.8	714.9	647.6	657.9
30	619.3	665.3	640.4	679.9	718.4	690.1	741.2	692.7	695.4	713.0
40	686.7	715.4	689.0	718.8	747.6	746.5	754.6	743.3	680.5	757.3
50	685.6	726.1	788.8	861.2	870.0	830.9	872.5	884.1	944.3	931.8
60	980.2	757.2	380.2	302.5	253.1	221.7	193.1	162.2	119.6	107.1
70	102.8	72.7	68.4	80.2	67.5	69.8	66.1	57.2	47.2	51.1
80	5543.9	1177.2	16845.0	11267.5	4683.4	1838.4	369.5	47.6	4.9	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	357.1	349.5	349.8	370.1	371.7	403.5	390.7	402.5	427.2	433.3
10	450.2	480.7	422.7	421.8	449.7	453.2	481.2	489.5	478.2	480.2
20	493.6	598.6	686.8	627.9	582.3	606.0	579.6	568.1	525.3	535.9
30	557.0	539.9	531.6	543.9	556.6	535.3	540.8	550.4	556.6	511.2
40	542.6	547.3	569.1	587.2	566.5	562.8	591.8	549.4	531.0	617.9
50	564.9	629.1	571.8	597.8	608.5	660.3	598.9	637.9	602.8	622.0
60	602.5	655.6	654.3	646.2	663.6	671.4	725.0	682.0	784.4	724.1
70	795.8	837.8	864.3	839.5	861.4	872.3	668.1	351.7	313.7	251.5
80	212.2	189.2	178.0	115.2	89.8	78.0	77.6	65.2	51.2	61.5
90	58.7	45.7	48.5	49.6	38.8	39.8	3886.5	7929.2	10648.2	8301.1
100	3823.6	1246.1	269.9	37.7	3.0	0.1	0.9	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	565.2	522.9	555.1	585.6	632.2	670.6	657.6	645.2	685.1	705.8
10	681.9	954.0	907.8	860.4	858.2	807.2	793.7	761.7	812.1	836.9
20	811.4	793.2	802.0	813.9	820.0	845.1	821.0	818.3	847.8	831.7
30	846.3	873.9	818.1	901.3	888.1	909.9	925.1	984.2	1018.4	1081.9
40	1097.6	1081.5	1139.5	1087.5	1090.1	1154.6	1189.7	1297.1	1356.1	1378.1
50	1479.5	1297.1	651.3	438.0	310.6	233.9	156.3	111.2	89.6	85.3
60	62.8	425.0	10487.0	14081.3	4414.0	433.4	24.1	2.5	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	480.0	455.7	500.2	495.3	523.9	553.0	551.1	562.2	566.2	583.9
10	623.9	757.5	794.0	727.1	700.3	682.0	667.2	646.5	654.5	630.3
20	586.8	662.6	651.8	723.4	733.5	681.0	673.5	662.4	670.1	679.0
30	661.8	641.5	686.6	714.9	712.3	671.6	710.1	700.1	729.2	718.7
40	739.2	751.1	760.6	798.5	783.5	854.3	834.6	852.5	970.0	1149.4
50	1076.3	938.5	1024.7	999.5	1038.8	1068.1	1140.0	1189.6	1259.4	1286.5
60	1295.1	959.8	541.4	378.8	291.0	194.6	143.6	103.9	79.1	60.0
70	45.6	647.0	9266.5	12714.5	3340.3	427.1	47.9	3.8	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	404.1	345.6	391.3	423.5	399.1	424.3	452.9	417.9	427.3	455.9
10	445.0	571.9	646.4	580.4	573.1	535.6	495.6	472.9	500.4	469.9
20	437.9	474.9	470.7	486.4	486.0	478.6	463.2	438.5	451.7	447.5
30	474.9	476.0	494.2	479.2	468.7	500.5	486.8	507.0	514.3	805.9
40	665.5	549.5	542.0	596.2	591.7	593.7	567.4	591.0	600.9	570.5
50	625.2	607.7	659.3	612.7	663.1	647.7	657.2	695.6	667.0	670.7
60	743.9	735.6	745.9	729.1	1065.3	1305.8	1125.0	888.8	911.0	932.0
70	977.1	983.2	993.1	1123.2	1153.6	1135.6	1157.4	778.0	478.1	339.1
80	266.2	189.9	120.0	99.7	62.9	55.6	42.1	145.0	6811.4	10412.4
90	4010.3	690.3	111.7	12.7	0.3	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	364.3	285.3	364.5	376.7	355.9	395.1	371.9	363.5	390.9	415.9
10	423.2	468.9	600.0	537.1	501.0	489.5	479.6	432.0	406.6	427.5
20	407.8	419.2	399.2	435.2	434.8	467.5	448.9	397.9	419.2	440.7
30	422.9	400.3	405.5	414.8	449.5	403.7	435.6	448.7	413.3	446.8
40	435.3	462.9	460.9	435.6	470.4	450.1	472.2	1046.6	569.8	525.5
50	544.5	532.7	597.8	540.5	545.6	549.0	545.1	578.0	575.5	571.9
60	536.0	578.2	613.2	655.8	627.4	651.7	630.7	674.3	622.8	667.9
70	714.1	644.6	1176.1	1610.7	1032.7	808.3	847.3	914.9	930.6	941.9
80	963.5	1040.6	1028.7	1034.4	1028.5	675.6	436.0	357.1	267.0	192.6
90	102.4	75.4	68.8	52.2	41.5	471.9	7065.3	9250.1	3316.1	695.9
100	113.7	8.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	663.7	660.3	668.3	720.2	844.4	1004.1	804.3	777.4	740.4	764.1
10	843.8	737.4	727.9	768.3	695.9	694.2	769.9	733.2	775.7	792.8
20	803.3	785.7	803.0	825.7	908.0	891.9	872.9	947.8	2102.7	1245.0
30	1204.2	1275.5	1365.7	1378.4	1436.8	1367.0	1408.0	1504.6	3478.5	2784.9
40	2078.5	2138.5	2270.4	1817.6	862.4	420.2	159.3	465.0	14319.4	2300.5
50	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	543.8	542.1	573.4	659.0	723.1	901.7	780.5	616.4	642.3	657.5
10	757.4	616.3	586.4	583.0	635.4	608.7	628.4	641.2	685.8	620.7
20	669.0	629.8	693.1	700.4	670.4	686.9	727.5	796.4	812.7	831.6
30	814.7	886.7	860.9	2328.8	1256.8	1236.9	1311.8	1377.6	1400.4	1378.5
40	1305.1	1302.1	1374.4	4265.5	2510.1	1829.1	2073.4	2155.5	1587.7	723.8
50	364.3	157.3	935.8	13156.1	1705.4	18.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	491.0	497.9	530.9	533.5	678.4	847.5	649.3	557.1	573.2	589.1
10	641.3	519.3	529.5	517.1	530.9	558.7	546.9	533.2	542.0	539.2
20	549.2	552.9	571.0	581.3	540.7	631.9	653.1	594.6	640.3	627.1
30	689.0	675.1	690.6	741.1	712.9	794.9	767.5	1362.9	2161.9	1187.8
40	1228.3	1219.6	1396.9	1301.6	1337.6	1255.3	1274.4	1497.4	5142.0	2007.0
50	1862.0	1991.4	1992.2	1167.0	622.0	273.9	126.4	4438.6	9456.6	768.4
60	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	356.6	290.1	306.4	356.5	409.2	553.8	455.5	383.7	350.0	326.3
10	504.7	329.9	327.9	340.4	310.1	299.9	328.6	325.4	343.4	316.6
20	333.1	316.9	342.1	333.0	342.7	373.1	354.5	366.2	351.9	357.7
30	362.5	387.9	381.0	349.5	346.6	409.0	389.2	382.4	435.2	421.2
40	436.4	475.7	471.7	477.4	485.7	451.4	491.3	537.4	525.9	616.9
50	607.4	605.3	642.1	667.1	738.4	715.7	703.9	3290.4	1380.7	1284.6
60	1337.7	1386.4	1381.9	1388.3	1157.4	1103.8	1088.0	6091.0	2832.4	1636.3
70	1647.4	1640.3	1170.0	679.9	338.3	135.2	1198.8	7837.1	1963.2	50.6
80	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	393.1	390.9	572.9	492.1	399.6	483.6	318.6	324.4	336.9	285.1
10	340.2	344.5	340.9	326.3	347.5	367.2	370.8	343.9	349.8	368.8
20	376.6	370.1	367.2	371.6	404.5	398.7	433.2	466.3	433.1	449.9
30	514.5	547.8	505.2	601.8	589.1	588.8	630.9	684.5	722.1	811.9
40	844.9	879.8	1053.2	1123.2	1245.3	1411.9	1544.6	3560.0	3693.1	2898.1
50	2831.2	2150.0	4462.3	7359.3	2532.1	1926.1	668.1	3352.2	4387.6	17.9
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	298.8	298.9	432.2	360.5	233.1	416.1	184.7	194.4	198.5	198.8
10	185.8	201.9	201.1	178.6	226.5	203.4	211.2	224.6	208.8	210.1
20	223.5	223.0	228.8	237.1	218.3	243.3	230.8	224.5	257.9	271.1
30	259.2	248.5	268.5	251.1	291.3	311.1	315.8	324.4	342.7	316.2
40	367.6	359.2	352.0	369.1	416.6	406.6	405.5	454.9	500.0	475.2
50	510.8	579.7	662.7	663.3	704.4	717.8	767.1	783.6	872.8	983.3
60	1085.5	1180.5	1289.7	1397.1	1692.6	1722.7	2351.4	4587.0	2897.5	2951.1
70	2336.0	2034.1	8503.7	2304.4	1784.2	887.8	742.3	4552.3	283.8	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	238.5	211.5	320.9	260.2	257.1	284.1	141.9	146.6	159.4	138.9
10	142.5	136.1	156.5	147.4	127.2	149.6	154.5	137.7	126.9	127.5
20	154.1	172.3	156.8	168.0	175.5	155.4	163.8	164.2	158.5	154.1
30	181.4	151.7	165.5	159.1	178.6	163.9	205.2	210.4	210.6	183.7
40	214.0	244.6	231.2	228.9	236.3	252.6	263.1	264.3	269.2	278.2
50	257.5	285.4	306.5	294.8	288.3	311.9	330.4	368.9	405.2	419.2
60	419.1	434.3	419.6	472.4	494.2	495.7	536.4	556.0	610.7	621.9
70	686.8	686.9	757.9	853.7	848.9	932.7	939.7	1046.8	1127.3	1265.0
80	1325.9	1504.0	1695.6	1828.1	1841.0	2114.2	4116.5	2875.9	2731.9	2280.8
90	1345.9	7170.4	2529.4	1600.4	962.2	403.9	2951.0	869.9	6.5	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. Response functions of a 4"φ×4" cylindrical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.6	5.4	16.4	16.1	27.7	68.8	121.0	955.0	864.1	193.1
10	249.5	3276.9	4091.7	16.9	14.8	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7
30	0.0	0.0	2.0	1.0	6.6	40.1	28.4	45.2	60.6	134.1
40	183.0	361.6	772.6	1331.7	28458.1	9347.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.0	3.0	1.0	4.1	8.3	16.7	20.7	34.8	42.6	19.0
10	26.3	30.8	29.1	22.0	30.3	62.3	96.9	92.4	115.6	467.4
20	1613.6	200.9	270.5	353.8	6928.9	15.7	14.3	4.8	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	3.8	6.5
40	18.9	45.3	54.6	34.3	49.3	53.0	75.6	171.8	223.6	204.7
50	206.7	221.0	512.5	846.5	1320.1	8229.8	2459.6	43701.2	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.2	1.8	0.0	1.0	6.0	3.2	2.2	5.4	22.1	19.2
10	31.5	44.7	56.2	18.3	9.4	16.0	20.1	19.6	17.6	23.9
20	29.0	18.6	30.7	57.0	54.5	86.6	72.9	80.9	87.5	127.3
30	261.0	1623.4	197.0	219.7	195.4	4389.1	1398.6	11.9	9.2	1.3
40	5.3	4.9	11.6	7.2	6.0	12.8	20.7	36.8	51.2	60.9
50	50.9	66.6	74.7	75.1	115.6	144.3	240.1	267.9	236.3	246.1
60	291.2	353.0	555.8	864.3	1066.4	3557.4	6463.0	2015.6	52128.0	749.3
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.0	2.6	4.8	5.2	4.4	2.8	1.2	4.0	4.0	4.0
10	3.0	7.1	4.1	6.3	17.7	20.4	23.9	19.5	32.8	44.6
20	47.3	57.6	15.3	7.5	10.0	11.8	9.3	8.6	15.1	16.1
30	15.5	13.4	20.4	25.9	23.1	18.1	21.4	36.7	44.4	41.8
40	38.2	39.1	32.9	50.7	47.4	45.8	72.4	100.2	92.5	97.3
50	91.4	102.6	535.6	703.2	119.9	102.4	158.5	3521.4	92.2	63.6
60	59.4	56.5	64.1	68.2	68.6	67.5	54.1	110.9	118.3	161.8
70	276.3	242.4	260.3	248.0	237.4	253.2	273.5	268.2	302.7	395.1
80	552.8	662.1	733.0	840.3	998.2	1108.6	9057.0	1244.6	1258.4	51676.6
90	9774.3	680.7	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.8	4.5	4.2	7.8	3.8	3.8	4.3	4.4	1.6	2.3
10	4.8	3.9	6.7	2.8	6.8	7.1	3.6	11.6	7.1	5.3
20	7.1	11.4	21.0	37.0	30.6	34.7	40.1	27.8	45.0	57.9
30	59.5	66.5	29.1	9.3	6.4	10.0	11.9	11.5	7.6	11.6
40	10.9	10.3	7.4	7.8	7.6	14.2	14.3	16.5	18.3	34.4
50	37.5	26.1	36.5	27.5	21.7	24.8	26.1	26.1	29.3	35.8
60	43.2	36.7	54.7	69.3	82.9	91.7	96.2	84.3	91.0	99.6
70	120.9	123.2	229.2	617.8	103.0	120.6	128.0	1839.7	438.5	103.5
80	144.7	181.9	239.8	240.9	218.2	205.9	216.1	194.1	199.7	209.0
90	209.2	208.0	230.5	207.4	261.1	351.8	392.9	453.3	501.6	548.4
100	580.2	665.9	728.9	764.6	807.8	5766.2	3964.6	974.5	994.4	16866.5
110	47028.8	714.5	831.1	1196.8	35.1	2.1	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	10.8	16.6	19.3	12.6	19.4	13.3	12.8	14.8	21.8	21.0
10	19.1	20.5	21.3	22.8	14.2	25.4	50.7	55.9	85.6	69.2
20	100.2	124.4	157.4	156.3	88.2	14.5	16.8	18.3	15.0	13.7
30	27.0	28.9	50.0	53.4	47.9	46.7	46.4	67.6	95.2	92.8
40	116.7	131.9	156.7	140.5	142.7	141.1	153.0	177.6	321.4	377.9
50	390.5	676.8	324.7	1366.0	495.7	300.5	314.0	338.0	472.0	574.8
60	681.9	743.8	811.1	932.5	1019.5	1039.4	1135.4	8713.8	1672.6	39087.9
70	25034.3	2069.0	3462.3	254.8	28.8	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	19.0	17.7	26.2	25.0	25.0	33.6	38.8	26.7	27.6	19.9
10	27.8	33.0	35.1	32.3	24.6	28.1	31.5	20.3	27.7	42.9
20	22.2	22.1	34.8	40.6	42.8	60.4	71.9	95.9	85.1	97.5
30	116.7	141.0	170.0	175.6	212.6	99.4	20.9	26.6	36.6	55.5
40	53.4	57.8	71.9	76.1	75.5	76.2	69.0	77.9	78.6	87.6
50	80.7	98.0	95.7	99.9	119.0	219.6	273.5	308.0	239.2	265.8
60	224.3	217.2	223.3	205.0	219.3	216.0	202.2	222.8	393.1	354.2
70	612.3	946.9	450.9	526.6	551.2	511.5	618.9	607.0	673.1	630.4
80	688.1	719.6	742.6	789.4	7288.7	1504.6	1315.6	57624.4	2841.9	3328.9
90	5776.1	566.5	407.7	32.7	2.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	22.1	26.5	27.5	25.2	33.7	35.1	38.0	35.3	38.3	42.6
10	44.6	54.8	42.1	43.4	41.8	61.7	55.0	53.8	55.8	49.4
20	44.1	40.6	49.3	56.9	38.6	57.7	43.8	39.5	45.9	51.2
30	60.8	53.1	54.7	56.1	85.0	81.1	97.4	114.0	105.6	111.3
40	145.6	148.6	162.3	199.9	206.0	238.5	230.6	65.0	70.2	62.9
50	68.4	74.0	66.3	72.6	68.6	71.9	84.2	72.1	79.4	94.6
60	98.6	179.6	199.9	202.8	224.3	186.4	186.0	187.4	186.0	162.9
70	173.0	166.0	133.7	148.9	159.3	149.4	158.3	155.8	208.6	211.1
80	226.4	253.2	296.7	334.7	358.0	388.0	459.5	726.7	554.2	439.3
90	434.6	496.4	500.9	465.9	484.9	477.8	475.3	497.9	525.5	538.6
100	575.3	6486.8	1094.3	1025.2	51302.6	3028.3	3386.9	7493.6	4682.7	949.5
110	971.1	103.0	54.1	3.7	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	117.1	106.1	143.0	149.6	190.7	212.8	196.4	193.9	223.7	231.9
10	225.4	229.9	221.6	250.1	255.6	243.9	216.4	251.0	250.7	255.7
20	263.8	285.5	277.6	279.9	282.1	327.3	363.7	384.4	412.1	531.6
30	695.2	774.6	742.1	442.4	306.9	264.1	264.2	261.8	203.2	209.4
40	250.7	244.5	314.7	343.7	394.7	380.3	423.5	447.0	465.6	474.0
50	525.8	532.3	519.4	637.2	775.2	608.4	676.7	633.7	631.0	4833.4
60	34043.4	5488.4	18412.2	9055.7	5099.9	886.6	72.9	3.5	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	164.4	146.3	156.7	185.7	175.4	213.7	236.0	221.7	228.3	265.4
10	261.4	262.1	321.1	269.6	281.0	284.4	297.5	292.8	305.5	358.3
20	326.4	366.0	382.5	326.8	413.5	361.9	365.5	330.8	343.0	310.6
30	322.4	332.9	346.0	441.5	485.0	525.7	478.9	487.6	442.0	534.0
40	438.9	497.6	502.2	520.4	479.7	562.9	547.2	613.0	565.8	263.3
50	280.9	293.2	269.9	247.1	322.3	270.8	262.2	257.3	257.2	283.2
60	297.6	285.4	306.3	264.7	296.6	320.6	305.5	314.4	358.3	349.7
70	361.1	339.7	286.5	321.5	361.1	366.7	361.0	293.5	318.5	24844.5
80	2364.1	9712.2	17663.1	9276.3	5000.9	2050.6	409.9	61.6	3.1	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	193.4	182.0	174.1	166.2	194.1	225.5	234.4	229.1	248.1	263.0
10	267.1	278.1	290.7	314.0	298.4	290.0	299.1	297.8	305.4	320.0
20	341.9	371.0	335.0	372.7	346.6	358.4	351.3	346.0	355.8	382.8
30	370.0	368.6	363.3	367.4	375.4	440.3	495.8	547.3	484.8	490.7
40	522.5	510.0	482.1	496.5	464.8	455.9	428.7	395.9	366.7	377.0
50	385.1	362.5	454.4	426.2	449.3	416.5	451.9	481.1	465.6	567.3
60	551.0	618.1	602.5	625.1	598.1	378.5	248.7	297.5	276.4	257.8
70	241.0	242.6	196.4	201.7	207.6	194.1	193.6	188.1	178.1	200.0
80	207.7	202.3	200.4	208.7	246.6	205.3	231.3	244.9	228.9	177.1
90	201.0	196.1	208.1	207.6	238.0	207.7	177.3	150.7	17020.1	2001.7
100	5382.5	18550.4	7045.5	9026.5	3637.6	1715.2	594.1	95.7	20.2	0.4
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	377.8	380.7	414.4	460.9	529.1	534.2	560.7	553.4	552.6	618.9
10	629.3	683.5	670.9	793.4	658.9	765.1	733.5	778.0	1001.6	956.7
20	949.1	912.9	835.7	834.1	804.6	793.1	848.6	844.8	944.5	955.9
30	1123.3	1173.9	1215.9	1212.0	554.9	471.6	482.2	451.1	430.4	380.0
40	410.2	373.9	406.5	399.7	402.6	396.2	435.8	404.9	369.4	402.6
50	16479.9	16581.0	19505.0	9608.5	1825.5	95.5	1.8	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	336.7	350.4	385.1	424.0	533.1	518.9	543.3	529.4	546.1	571.5
10	554.1	560.9	672.9	649.2	617.3	716.3	686.2	708.7	706.6	959.7
20	961.5	888.9	852.0	804.9	892.5	879.5	787.5	769.2	838.7	844.6
30	821.9	881.4	862.9	848.9	961.2	969.5	1009.2	1153.4	1091.6	1148.9
40	1145.6	576.3	409.5	416.6	350.4	380.3	311.1	313.4	284.3	316.9
50	352.2	311.4	320.9	337.1	253.3	242.7	314.0	277.5	11816.0	12654.4
60	17157.1	12375.9	4261.0	622.6	21.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	360.9	353.0	390.1	384.2	458.4	432.4	468.8	515.5	527.4	538.7
10	581.6	547.1	542.5	607.6	641.9	649.0	654.8	663.7	670.1	790.7
20	909.8	817.8	817.1	870.9	763.6	749.4	772.3	745.4	726.5	785.3
30	695.6	780.4	834.8	806.1	851.6	782.7	799.8	907.1	872.1	857.0
40	896.9	934.2	964.0	987.1	1079.0	1052.2	672.5	428.4	374.1	397.7
50	351.4	281.2	298.1	242.4	269.9	243.6	237.0	271.1	261.4	246.7
60	228.9	213.6	252.5	1189.1	9077.1	16940.0	12996.5	11240.4	4256.3	775.7
70	49.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	324.7	292.4	307.4	357.7	403.1	432.7	373.1	427.1	445.7	488.3
10	491.5	499.1	486.7	465.5	532.7	578.6	580.9	560.8	558.4	577.0
20	746.1	855.9	647.5	700.9	726.8	730.3	729.4	700.6	627.5	657.6
30	653.7	662.6	646.5	625.8	683.4	754.3	699.4	704.9	756.5	698.2
40	701.4	737.2	725.6	720.9	685.4	718.2	757.5	722.4	789.7	723.3
50	777.9	824.3	854.0	889.7	905.7	958.1	985.9	989.5	652.2	429.2
60	374.6	309.6	316.2	268.2	235.0	218.4	191.1	178.4	181.4	174.0
70	187.6	203.8	176.6	159.5	188.9	149.1	130.1	6631.5	16725.3	9114.3
80	11509.7	4924.9	1459.1	249.1	22.3	1.6	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	325.0	314.1	363.4	358.7	363.7	348.3	399.6	416.1	496.9	455.8
10	413.8	455.6	493.0	448.7	513.8	554.8	536.7	505.6	567.9	650.0
20	600.8	702.8	696.1	733.2	673.3	674.1	688.0	706.2	611.6	656.9
30	597.1	603.9	635.5	626.6	716.6	656.2	639.6	646.7	707.3	683.5
40	657.5	736.1	711.8	665.4	710.6	702.6	748.4	758.1	762.8	706.3
50	718.1	732.4	740.0	830.3	830.8	816.0	844.6	872.7	891.6	870.5
60	850.5	707.0	425.6	359.0	302.7	275.1	239.9	224.4	184.3	206.7
70	185.1	181.7	163.7	165.2	163.1	149.4	143.9	114.6	134.7	148.0
80	5756.4	5597.1	15872.1	13339.9	5993.0	2291.2	486.8	75.9	3.8	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	332.5	250.7	278.9	309.4	337.4	332.1	332.0	368.4	365.9	341.8
10	401.0	398.0	410.1	389.4	429.8	403.9	471.2	467.8	464.2	452.8
20	426.0	605.0	674.7	627.3	584.7	568.8	525.1	552.5	501.1	494.2
30	560.8	566.7	509.5	544.4	563.3	483.3	533.4	552.5	603.1	575.0
40	572.1	596.0	578.3	567.1	531.9	536.6	552.4	592.9	652.7	624.7
50	579.0	600.7	611.5	624.2	570.3	576.3	630.7	666.3	662.5	647.7
60	597.9	666.0	667.7	649.8	643.1	632.4	670.4	696.4	667.0	712.1
70	766.1	725.8	739.1	793.3	860.9	852.6	640.6	411.1	294.6	258.5
80	233.5	233.2	225.6	213.1	173.4	161.0	142.4	114.7	113.0	131.6
90	103.7	107.1	96.3	98.6	84.8	72.6	4265.1	11872.1	11744.2	9437.6
100	4978.1	1596.3	342.3	56.6	6.6	0.0	1.0	0.7	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	527.6	525.3	544.8	567.7	562.5	653.6	564.1	681.4	687.8	711.0
10	697.4	987.4	928.1	823.5	822.9	858.7	847.3	810.0	840.4	797.0
20	825.5	781.9	867.5	770.6	843.9	846.9	815.3	827.7	876.8	888.4
30	804.1	852.8	911.1	851.8	846.5	946.6	975.9	918.6	1045.0	1074.2
40	1122.3	1037.8	1078.0	1078.4	1123.6	1175.4	1196.4	1272.1	1274.5	1361.3
50	1319.8	1157.1	617.2	455.9	410.7	283.0	246.4	211.8	223.8	168.1
60	139.2	1230.5	12120.1	18989.5	5414.6	597.5	42.1	3.0	0.3	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	430.7	410.3	443.3	493.4	507.4	516.6	528.4	550.6	606.6	595.7
10	625.2	821.1	896.8	740.8	712.0	723.6	732.7	628.3	642.9	648.0
20	684.7	639.0	625.7	732.1	677.5	688.7	655.5	728.0	750.8	664.3
30	645.0	671.3	692.2	706.4	752.5	693.0	710.7	722.5	756.6	701.5
40	747.1	715.7	782.2	824.0	822.7	782.2	874.6	900.3	965.1	1159.7
50	1052.8	963.1	985.6	1035.9	1017.7	1079.5	1181.0	1148.2	1192.0	1227.4
60	1231.7	882.8	536.3	449.8	333.1	242.8	183.5	194.3	158.4	98.7
70	93.9	1212.2	13614.5	15317.7	4341.7	591.1	73.9	4.1	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	352.8	309.7	391.5	436.5	379.4	377.1	377.5	420.4	497.5	476.8
10	463.6	605.1	719.7	666.8	573.3	560.2	535.6	507.2	534.2	508.2
20	489.9	558.7	561.5	512.6	537.4	502.1	500.2	517.0	545.4	534.3
30	489.3	518.4	504.0	459.6	509.7	523.4	512.1	541.4	483.8	731.7
40	595.9	562.0	551.5	548.7	630.1	567.8	668.9	607.4	596.0	664.7
50	667.3	631.1	613.8	646.0	663.2	651.9	710.2	707.1	732.7	707.8
60	718.3	754.7	761.4	798.0	1111.6	1430.0	1113.9	860.9	939.1	943.4
70	915.5	949.6	994.2	1069.4	1095.5	1132.5	1132.9	770.5	487.1	411.3
80	293.4	267.1	165.0	162.9	116.4	104.0	80.1	624.3	9740.8	13998.6
90	4756.9	940.4	199.2	22.8	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	324.2	298.3	367.9	329.8	325.9	371.2	359.4	399.2	403.9	486.3
10	373.3	454.3	728.6	588.9	529.6	481.6	490.0	484.4	463.2	418.2
20	454.6	473.3	441.1	398.2	427.6	509.0	517.5	428.4	405.6	401.5
30	417.4	460.4	425.1	416.8	476.9	474.1	431.5	476.8	449.9	483.8
40	464.6	425.3	394.4	452.5	484.3	466.2	520.6	961.7	552.8	553.9
50	543.4	586.4	520.5	581.7	571.6	512.4	581.6	578.3	574.9	597.2
60	622.9	666.6	681.2	686.3	635.6	583.4	633.3	681.9	710.2	676.6
70	711.6	719.9	1271.9	1875.0	1108.1	858.6	863.5	935.6	941.2	982.4
80	1016.0	1058.5	1136.9	1041.1	896.8	690.2	477.3	349.0	300.2	227.2
90	159.0	136.7	105.2	79.5	65.5	938.0	10749.6	11736.6	3788.1	996.3
100	153.1	10.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	636.6	685.8	730.3	788.4	929.1	1224.5	1006.2	845.4	816.9	783.2
10	871.2	866.3	785.6	856.9	789.7	744.8	775.4	871.6	822.9	849.2
20	844.6	845.3	834.9	888.2	891.9	845.4	918.6	989.8	1847.7	1246.0
30	1250.2	1320.0	1396.7	1388.7	1397.4	1486.3	1496.4	1549.7	3788.7	2885.9
40	2112.0	2245.4	2271.0	1948.9	930.6	485.4	242.9	974.4	20765.7	3035.4
50	35.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	586.5	619.8	654.7	767.2	872.2	1056.4	819.1	756.7	717.1	781.9
10	864.9	691.1	712.4	692.6	701.2	695.0	718.6	682.1	708.5	653.5
20	705.9	719.7	750.2	710.3	704.8	786.7	831.2	858.4	851.1	834.3
30	830.4	834.9	896.8	2049.6	1251.1	1228.4	1335.3	1315.6	1379.7	1510.2
40	1419.3	1397.1	1404.4	4973.5	2681.1	2076.8	2176.6	2248.6	1645.1	857.4
50	465.8	221.6	2202.7	18246.3	2234.6	24.8	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	505.3	539.2	596.1	716.7	751.1	930.5	807.1	725.1	615.9	669.1
10	838.1	669.5	613.6	566.7	610.4	613.6	575.7	647.5	615.2	591.7
20	587.0	566.6	649.3	615.6	608.4	656.7	683.3	607.1	611.2	684.2
30	715.9	747.4	734.4	766.5	830.9	788.1	819.6	1325.5	1591.9	1148.9
40	1248.3	1291.9	1449.9	1320.9	1434.0	1330.7	1339.9	1819.3	5727.7	2199.5
50	2055.9	2052.2	2150.2	1278.4	644.9	339.5	178.5	7803.8	12779.3	1050.1
60	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	415.4	374.7	440.4	474.1	610.7	684.0	532.3	512.0	455.1	404.1
10	765.2	390.4	391.7	406.4	390.6	385.4	384.4	377.7	415.9	370.3
20	373.6	414.3	416.6	392.3	398.2	370.8	427.8	366.3	408.1	431.0
30	430.6	436.7	422.0	420.5	427.5	452.4	459.2	455.1	421.6	466.4
40	416.3	531.1	503.1	536.6	511.8	474.9	574.9	549.1	597.6	637.6
50	601.7	607.7	635.6	690.5	714.4	749.4	998.0	2302.4	1221.9	1270.8
60	1286.4	1454.9	1409.2	1324.6	1288.0	1165.9	1461.6	7395.9	2986.1	1821.0
70	1919.7	1851.7	1288.6	779.4	398.1	176.9	2889.2	12031.5	2593.8	88.7
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	472.3	531.8	848.9	657.7	630.8	810.9	456.8	417.0	381.6	412.7
10	403.5	414.6	402.0	434.3	380.8	391.7	421.4	385.5	366.1	402.5
20	457.6	395.9	473.6	463.1	478.8	515.8	509.6	475.5	550.5	560.5
30	565.0	595.6	522.3	629.3	635.2	631.4	696.1	723.4	801.5	824.3
40	847.5	901.7	956.0	1150.6	1224.9	1379.4	1470.1	3300.7	3235.6	2956.4
50	2985.7	2247.5	6543.1	7951.1	3466.7	2401.1	858.4	6298.5	6545.3	50.3
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	379.4	385.4	549.8	503.9	325.7	796.9	249.6	254.4	259.0	264.4
10	250.0	254.0	230.4	239.0	243.3	247.4	273.3	256.9	259.2	236.9
20	287.3	258.3	286.0	281.6	280.2	284.6	333.9	294.5	290.1	318.9
30	304.8	329.9	334.2	318.7	300.7	309.1	365.2	342.7	382.6	389.4
40	396.6	434.7	417.7	468.7	431.4	457.3	484.3	546.7	619.7	563.0
50	597.8	622.4	619.9	633.2	674.7	741.0	850.1	899.3	871.4	987.6
60	1071.9	1140.4	1294.4	1429.8	1605.4	1664.9	2554.9	3897.0	3134.8	2940.4
70	2417.9	3561.6	10179.5	3190.7	2493.7	1080.9	2106.6	7623.2	334.5	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	333.8	320.2	450.6	384.1	404.1	506.9	194.0	196.0	169.6	195.8
10	186.0	155.4	173.7	185.6	158.5	162.1	173.0	205.8	184.5	185.7
20	180.7	164.0	170.7	189.2	201.9	180.1	195.1	181.4	170.0	190.4
30	203.7	177.3	213.0	218.9	252.0	190.9	206.9	264.2	243.4	253.6
40	253.2	270.1	220.1	237.7	255.2	266.3	263.0	307.4	263.0	304.1
50	305.1	342.1	345.2	324.6	387.4	385.1	374.2	422.0	421.4	405.6
60	457.1	493.9	522.8	556.3	500.4	540.8	545.1	621.7	615.7	646.4
70	705.9	763.7	847.9	825.2	875.2	912.7	1023.6	1034.7	1155.7	1245.0
80	1355.1	1545.4	1684.2	1787.6	1977.2	2124.6	3999.7	3087.4	3010.9	2671.2
90	2560.6	9182.4	3510.4	2376.9	1295.6	788.8	6015.6	1282.0	3.4	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. Response functions of a 5"φX4" cylindrical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.6	6.0	15.2	17.5	33.0	60.7	106.6	1013.8	841.5	187.3
10	252.0	3487.6	3848.2	16.3	13.8	0.9	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6
30	0.0	0.0	1.0	1.0	11.4	39.7	31.0	46.6	64.3	130.9
40	152.7	366.4	770.2	1343.7	30295.2	7432.9	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.0	2.0	3.0	2.8	6.7	13.7	23.0	30.4	35.4	16.7
10	22.7	29.7	25.8	13.1	30.1	63.8	87.5	87.3	108.1	430.3
20	1638.4	200.4	260.7	347.3	6853.6	13.4	13.7	3.4	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.9	8.5
40	25.4	50.1	46.7	35.4	42.5	57.0	66.0	155.0	194.9	177.3
50	176.3	205.2	496.7	836.3	1284.1	8181.9	8928.7	37151.5	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.2	0.8	0.6	1.4	1.0	1.2	2.6	4.4	18.8	18.2
10	32.0	44.9	53.4	16.5	8.4	12.0	14.0	13.7	13.3	17.5
20	33.0	16.7	20.0	48.9	46.8	69.0	76.2	79.4	82.3	128.1
30	272.5	1617.7	204.0	178.7	191.4	4636.7	1226.1	9.4	11.4	0.6
40	5.2	3.8	7.4	8.0	6.4	12.0	26.1	39.9	46.8	49.6
50	55.7	65.6	58.4	69.5	98.0	143.9	223.0	223.7	200.4	225.6
60	248.3	329.2	530.9	842.5	1058.3	4882.2	5113.0	2055.2	52609.6	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.4	0.6	3.4	3.2	6.4	0.4	0.6	3.0	2.0	3.1
10	2.9	4.8	1.4	6.7	12.5	16.1	18.8	22.4	32.3	47.4
20	49.3	57.5	13.7	8.9	8.7	9.1	9.0	11.0	15.4	12.2
30	12.4	9.1	22.2	22.4	19.9	18.5	18.6	42.0	29.8	40.7
40	34.2	32.3	30.0	42.8	38.3	34.7	53.9	92.2	83.8	96.5
50	103.2	107.0	601.5	587.7	118.7	97.0	158.4	3445.9	85.7	66.4
60	58.7	58.5	62.8	76.5	64.1	62.9	56.4	100.6	98.0	147.0
70	232.6	197.5	222.2	207.0	205.4	202.7	227.8	252.2	267.5	392.9
80	522.6	626.2	694.6	796.4	926.1	1108.7	8989.6	1216.0	1224.0	53615.0
90	7851.0	654.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.9	4.7	5.0	5.2	5.7	6.6	3.5	2.5	1.6	3.6
10	1.8	1.2	3.8	3.8	7.7	5.2	3.3	11.4	5.6	9.6
20	8.5	12.2	24.7	39.1	25.8	33.7	41.1	34.6	42.9	58.3
30	62.8	56.7	21.3	10.5	7.2	11.0	9.8	8.4	7.7	7.7
40	10.0	8.1	12.6	8.6	8.7	12.5	9.3	13.6	21.8	31.4
50	36.0	13.5	25.4	21.9	19.0	20.8	24.5	24.1	25.0	33.2
60	37.9	42.7	66.6	69.6	83.8	78.6	87.0	81.1	92.8	90.7
70	112.1	120.0	224.3	585.1	99.9	120.5	123.3	2019.6	173.9	99.4
80	134.0	160.9	190.7	203.2	171.8	201.4	181.0	162.0	150.2	160.9
90	175.9	168.1	193.4	184.4	253.6	318.7	415.4	459.4	492.9	551.1
100	572.2	650.7	707.5	706.3	799.4	7200.1	2513.1	940.3	945.5	26240.8
110	37561.0	726.1	896.1	1071.2	29.1	0.9	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	7.0	13.6	15.5	10.7	17.5	5.4	14.4	13.5	11.8	18.7
10	20.5	18.3	12.8	16.8	15.6	21.5	31.5	41.2	80.3	67.3
20	98.3	119.6	146.7	161.7	91.6	12.6	13.3	18.0	13.9	22.7
30	25.2	31.3	48.4	31.5	47.6	53.7	42.2	73.6	85.4	84.6
40	106.5	139.3	152.4	144.8	129.2	150.4	154.3	166.7	294.4	337.6
50	344.2	622.4	291.6	1375.5	395.7	256.2	293.9	287.6	467.0	559.1
60	665.1	694.4	791.4	898.6	926.2	988.2	1069.3	9019.4	1349.7	45469.5
70	18554.1	2047.7	3353.8	241.7	14.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	13.7	13.0	18.3	20.0	17.9	16.0	31.9	23.7	18.4	18.0
10	21.5	20.3	24.8	28.4	27.5	21.2	24.8	24.0	26.5	31.8
20	23.6	21.2	25.3	38.7	38.1	54.8	53.3	84.9	80.7	91.4
30	115.9	125.4	156.5	178.1	201.6	87.3	19.5	28.1	34.4	47.5
40	53.5	48.4	64.3	64.8	70.0	71.3	81.0	84.1	87.5	81.8
50	78.8	91.7	104.6	116.6	105.1	185.4	263.2	257.0	220.4	229.6
60	217.4	179.9	222.4	187.1	197.3	185.6	171.6	210.1	398.2	338.4
70	657.7	763.2	457.1	513.1	534.6	525.1	552.7	568.6	640.9	603.0
80	671.5	667.3	696.9	726.7	7860.4	911.8	1396.5	58074.3	2837.1	3341.4
90	5513.5	498.9	384.0	32.4	0.9	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	15.1	24.7	14.4	28.0	22.1	30.0	31.7	28.0	38.9	41.5
10	45.7	45.5	35.4	29.9	42.0	40.0	45.6	59.6	31.9	33.4
20	39.4	33.8	45.2	48.3	30.9	42.0	42.3	29.7	41.8	46.1
30	49.1	43.6	42.7	46.8	63.2	75.9	94.3	94.4	103.3	97.1
40	124.0	142.9	151.1	183.6	215.6	235.3	195.5	58.0	58.7	58.6
50	70.2	58.8	59.5	69.5	57.5	71.4	77.6	61.7	62.6	85.7
60	68.5	133.7	178.7	181.9	180.9	163.4	174.1	151.9	156.1	142.6
70	139.2	132.2	124.5	146.3	131.9	117.9	140.1	158.7	195.2	204.1
80	219.1	245.7	291.0	290.9	315.1	400.9	411.3	697.3	502.6	420.6
90	457.6	513.9	454.6	456.4	463.9	473.4	469.2	481.9	487.6	512.8
100	556.0	6805.6	732.6	1090.3	51338.5	3270.4	3435.7	8588.6	3459.6	980.6
110	895.3	102.0	44.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	94.9	101.0	121.4	127.9	140.6	146.5	160.4	175.9	182.1	185.9
10	192.3	197.7	186.8	194.6	194.5	183.5	166.4	189.1	215.3	225.0
20	218.1	240.7	242.3	229.2	288.6	337.0	332.4	348.9	381.8	511.0
30	608.6	722.9	711.9	364.8	252.9	235.2	227.0	213.4	185.9	203.9
40	243.3	260.2	312.6	341.8	350.8	383.1	418.6	435.1	454.1	453.6
50	500.7	541.7	547.9	602.7	708.3	598.9	668.2	601.9	588.9	4784.9
60	34095.6	5951.5	20927.7	7228.9	4853.3	816.2	82.3	1.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	132.4	126.8	139.3	161.3	199.5	179.5	197.8	195.2	197.4	229.9
10	203.6	222.2	260.0	231.6	233.7	262.4	270.1	258.7	256.7	261.4
20	289.3	274.6	270.7	289.3	352.7	312.9	316.3	289.4	287.0	255.8
30	291.9	287.6	277.8	382.1	430.6	438.4	430.1	414.9	380.7	443.6
40	410.2	472.9	436.5	470.2	478.6	498.7	536.1	592.9	580.6	274.1
50	258.1	263.5	247.9	304.8	280.3	256.0	270.7	268.0	261.0	248.6
60	283.0	288.4	243.5	254.1	304.1	327.2	327.2	315.3	304.4	323.5
70	320.1	313.5	318.9	290.3	324.7	329.1	336.4	299.4	319.0	25307.3
80	2507.5	13355.0	14872.2	10321.4	4604.4	1923.1	353.6	45.2	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	165.0	137.3	142.8	155.0	207.1	182.9	194.1	242.8	213.8	207.2
10	233.6	253.3	262.2	246.4	246.2	228.5	264.1	257.2	273.1	254.0
20	306.9	277.5	321.6	289.8	319.0	329.2	319.7	305.7	334.1	345.5
30	336.9	327.0	309.3	293.9	332.5	385.2	427.4	405.9	427.1	412.0
40	383.8	401.5	398.7	411.6	363.0	401.2	342.9	345.2	310.3	300.1
50	346.9	351.3	397.0	350.4	402.3	402.0	392.1	491.9	442.1	513.4
60	510.3	554.5	572.6	609.8	640.6	397.4	218.6	260.5	225.3	239.2
70	207.4	196.3	255.5	200.2	204.5	200.9	185.5	190.0	192.5	180.3
80	193.7	198.5	200.2	195.2	195.5	182.7	214.3	247.3	231.7	188.7
90	215.2	205.1	195.5	175.5	221.7	204.0	192.9	844.8	16268.6	2098.6
100	9108.9	16350.2	8053.4	8764.7	3895.0	1669.0	595.1	123.7	17.0	3.3
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	338.1	345.4	387.6	429.2	448.0	455.4	532.6	458.7	503.8	554.4
10	575.9	576.9	564.4	616.4	564.4	637.5	679.2	736.4	858.1	898.2
20	818.0	777.2	691.8	745.3	641.5	629.8	767.6	727.9	866.7	914.8
30	969.1	1054.3	1207.2	1067.0	513.5	456.6	486.1	443.6	403.7	396.6
40	356.7	369.6	406.1	438.4	432.7	376.0	406.9	395.2	395.0	381.9
50	16762.2	19482.1	19151.0	9391.2	1676.3	80.6	1.7	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	331.8	326.1	361.0	375.0	422.1	453.8	483.0	508.5	499.0	487.6
10	533.8	523.4	562.6	577.0	579.9	628.2	625.6	611.5	655.8	819.9
20	876.7	734.7	785.6	672.0	777.6	682.3	659.2	685.8	681.7	703.6
30	698.4	717.9	757.5	703.6	806.1	845.6	908.8	1002.3	1058.7	1095.6
40	1038.3	528.4	403.2	440.6	373.2	335.8	301.6	295.9	269.2	280.2
50	349.8	317.9	305.8	293.7	272.4	299.0	295.7	250.9	12052.3	14831.1
60	17047.7	13293.1	4503.4	585.8	31.1	0.7	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	309.7	312.1	350.0	349.2	439.0	388.8	418.2	489.9	431.2	499.6
10	537.5	570.9	489.4	509.4	574.9	591.1	591.9	578.0	614.5	694.7
20	877.9	756.6	744.2	769.8	704.8	683.8	579.1	666.1	673.5	621.1
30	644.5	716.9	729.4	701.1	701.9	718.1	714.9	758.2	740.6	806.7
40	815.5	836.9	878.8	888.8	962.6	1045.6	608.5	421.9	354.2	382.1
50	343.7	287.4	271.4	278.6	262.8	254.6	243.1	286.5	245.1	220.6
60	255.5	210.8	247.7	2707.6	7545.8	18449.9	13513.6	11787.4	4548.2	757.5
70	48.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	296.6	268.3	297.6	331.8	354.0	362.7	424.9	395.4	407.0	407.7
10	507.8	453.1	433.8	474.9	436.0	482.3	534.5	532.1	533.3	515.7
20	642.5	756.0	642.7	641.4	654.4	645.4	647.6	617.6	561.1	620.2
30	585.5	577.5	543.4	553.4	653.5	680.5	613.1	628.0	661.9	567.3
40	636.9	629.5	650.2	667.6	600.1	613.3	649.0	659.9	680.7	650.5
50	701.9	815.2	797.2	849.6	788.9	807.9	869.9	935.0	603.1	374.7
60	353.5	304.0	298.7	272.9	223.7	209.9	186.8	190.5	206.2	181.1
70	219.7	178.8	180.4	171.7	160.9	159.8	164.6	6495.1	17544.3	10878.1
80	12005.3	5310.7	1548.9	247.1	18.0	1.3	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	321.8	264.9	287.0	334.6	341.3	351.5	432.3	397.8	403.3	400.7
10	430.1	396.4	459.0	507.0	509.3	489.3	479.1	468.3	490.4	534.6
20	640.7	636.7	667.2	656.7	617.7	555.0	579.5	579.8	570.6	567.7
30	561.1	558.2	599.9	606.9	622.5	595.5	563.9	539.0	614.1	656.7
40	667.6	625.4	599.3	607.6	600.2	602.1	644.1	614.8	631.4	642.2
50	629.7	639.2	694.3	701.5	693.0	716.2	727.5	803.1	819.4	848.9
60	850.6	672.8	428.2	361.0	345.0	282.9	228.5	238.7	208.1	187.1
70	190.5	167.2	190.2	180.4	185.1	136.4	131.3	144.7	166.0	115.7
80	5825.6	8576.6	14821.4	14111.1	6701.4	2263.8	557.1	62.7	7.3	0.1
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	329.3	235.7	280.3	325.0	327.8	302.5	322.7	362.5	372.9	351.9
10	380.1	361.3	396.1	359.0	371.6	401.6	428.0	456.4	462.5	436.9
20	465.2	615.1	613.4	576.6	583.6	492.3	446.0	510.7	455.7	474.9
30	503.0	463.3	463.1	500.9	499.8	443.0	486.0	465.8	533.6	542.3
40	508.1	499.9	569.7	574.0	519.6	477.1	533.0	521.8	544.7	527.1
50	475.7	541.0	521.9	513.2	531.0	551.1	557.2	577.5	526.7	622.2
60	555.0	590.7	615.4	568.9	603.4	545.7	626.9	643.3	651.6	739.7
70	728.1	738.1	736.1	784.2	822.9	743.9	538.7	340.9	308.9	264.6
80	237.0	217.3	188.1	138.5	171.7	164.0	141.5	141.4	130.8	123.9
90	117.4	113.9	120.9	83.9	113.6	112.1	4398.4	13847.1	12216.1	9528.4
100	5182.6	1710.5	430.0	56.0	8.1	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	455.0	457.6	488.2	489.1	521.1	620.8	600.3	617.5	668.4	716.0
10	643.9	948.5	918.3	756.4	753.4	739.1	724.1	729.9	698.7	719.4
20	705.2	680.4	726.8	768.0	705.5	850.9	762.6	764.4	788.6	808.4
30	763.3	774.5	871.4	812.0	796.9	827.1	946.1	815.8	943.9	1016.6
40	949.6	954.6	980.5	1025.3	986.1	1058.1	1063.9	1127.6	1265.3	1256.3
50	1330.5	1093.0	604.4	452.4	346.9	310.3	217.1	191.8	201.1	201.9
60	133.2	1608.0	12478.4	20704.9	5722.1	673.1	44.0	2.1	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	388.7	395.9	428.4	482.7	491.1	502.6	513.3	571.8	552.3	664.3
10	582.2	773.3	789.1	657.4	642.7	645.7	600.6	592.9	541.1	595.8
20	580.1	608.2	586.2	677.8	631.7	684.5	577.0	602.9	625.7	615.6
30	590.9	626.0	621.4	685.9	735.9	696.9	679.5	691.0	715.0	704.4
40	692.4	297.0	705.0	751.9	712.6	745.8	761.0	879.2	964.4	1064.8
50	962.1	892.7	869.2	895.6	874.3	1054.4	1062.2	1023.9	1059.3	1116.1
60	1185.5	854.6	515.5	423.2	329.5	263.3	196.8	183.9	159.3	137.2
70	150.8	1512.7	15825.4	15449.0	4521.3	610.3	100.9	7.9	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	336.8	321.4	334.7	370.5	381.6	416.0	431.5	377.9	421.9	487.7
10	439.9	579.7	677.9	654.4	564.6	540.3	561.5	552.9	521.6	436.9
20	481.0	494.1	477.5	448.2	490.9	479.9	518.8	512.7	523.1	479.9
30	483.5	473.0	524.1	487.9	507.8	504.7	546.8	483.7	530.8	664.6
40	510.4	506.6	567.3	554.4	488.5	532.1	537.4	562.8	534.9	555.9
50	567.1	566.5	581.1	573.3	627.8	538.9	654.3	644.8	655.8	578.9
60	665.4	651.9	679.3	674.8	1043.7	1417.0	1085.6	818.5	825.9	871.6
70	887.2	948.7	923.2	1004.8	971.6	1057.5	1109.9	671.4	473.0	372.0
80	284.5	240.7	185.4	146.4	123.4	100.9	88.6	884.1	10973.2	15138.5
90	4957.6	1046.6	198.5	20.8	1.3	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	311.1	287.6	342.3	350.3	326.8	397.8	389.3	383.3	424.1	442.9
10	463.7	460.4	601.8	569.8	534.5	459.4	465.3	484.2	446.5	452.2
20	433.8	384.3	370.4	395.4	411.2	523.2	466.2	395.4	398.2	372.8
30	432.7	394.9	402.3	407.9	390.4	429.1	394.3	429.6	430.3	461.0
40	437.5	443.3	440.0	448.0	429.4	427.2	427.7	792.5	516.7	508.8
50	518.6	511.6	536.1	538.0	513.0	478.7	521.6	583.4	528.6	603.9
60	548.0	534.0	613.7	583.8	552.7	596.4	595.6	651.8	672.7	652.5
70	673.9	654.3	1163.5	1785.0	1019.0	751.7	792.8	813.2	886.0	936.2
80	899.8	1004.5	1055.9	1034.4	963.6	644.9	422.7	346.0	255.1	192.9
90	158.8	124.7	113.1	90.9	74.2	1275.6	12707.9	12435.8	4015.3	959.5
100	173.9	17.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	609.1	615.7	725.4	812.1	945.0	1115.5	998.7	846.7	761.7	785.2
10	928.1	799.2	732.1	749.0	815.2	733.0	773.6	798.2	795.8	787.2
20	845.8	822.5	770.0	858.1	832.5	852.5	839.4	927.1	1551.8	1075.9
30	1079.2	1195.4	1284.9	1346.9	1248.6	1351.2	1368.5	1379.5	3752.4	2654.6
40	2023.8	2205.8	2375.1	1881.7	860.2	487.2	266.6	1240.6	23079.1	3091.0
50	47.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	537.3	567.3	660.6	680.2	803.3	1026.7	838.8	725.2	685.6	676.6
10	758.6	653.5	632.4	708.0	715.6	712.6	658.0	697.3	669.7	642.9
20	665.1	702.8	691.2	709.4	742.0	778.8	746.3	734.8	834.2	772.0
30	830.4	862.7	798.5	1674.6	1155.3	1067.4	1249.1	1230.4	1206.7	1317.4
40	1278.8	1259.3	1336.1	4672.1	2424.4	1832.3	2015.0	2231.2	1508.8	870.8
50	428.2	231.0	3285.7	19881.8	2455.7	40.9	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	474.7	474.4	655.7	624.9	749.8	954.8	765.6	700.8	559.6	619.5
10	809.8	537.9	622.7	633.7	549.6	480.7	542.8	581.7	594.1	547.4
20	602.2	618.5	600.2	589.0	630.1	635.8	598.0	616.5	619.4	686.0
30	709.0	729.7	704.1	772.4	767.2	732.3	802.6	1276.7	1384.3	1167.7
40	1079.1	1150.6	1252.9	1220.6	1391.9	1255.7	1212.0	1783.2	5624.9	1959.6
50	1870.6	2018.4	2016.0	1197.9	660.9	387.9	192.2	9563.8	13830.2	1113.9
60	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 10. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	340.6	337.1	402.4	447.0	526.9	713.4	534.3	476.8	392.6	415.1
10	794.3	430.9	418.3	379.1	398.6	380.4	369.0	376.3	395.8	371.1
20	362.7	389.7	376.7	386.7	338.4	310.5	368.1	364.4	385.2	400.1
30	397.0	367.9	377.5	406.7	443.5	421.0	416.3	409.1	433.1	450.1
40	464.7	417.7	490.8	454.6	443.5	473.0	470.8	504.9	538.1	532.1
50	521.4	612.6	667.9	623.8	664.2	680.1	952.3	1835.0	1138.5	1149.6
60	1155.1	1228.9	1229.4	1252.4	1128.1	1117.6	1497.4	7075.2	2723.0	1946.8
70	1959.4	2001.1	1351.9	847.6	427.4	200.1	4082.4	13456.7	2674.9	97.5
80	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	430.4	462.2	757.4	608.9	617.2	749.0	408.0	344.8	387.4	400.6
10	379.8	359.3	378.1	388.3	382.9	426.5	369.8	379.0	381.6	445.3
20	442.0	423.7	410.9	417.2	477.0	454.6	434.7	487.4	516.6	505.2
30	545.6	598.7	546.7	614.6	620.2	641.7	664.0	697.0	738.5	860.5
40	751.7	866.2	975.8	1102.1	1178.5	1348.4	1365.0	2783.0	2796.3	2762.9
50	2662.1	2185.4	7285.5	7681.5	3518.9	2357.7	847.4	7955.9	7345.7	38.1
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	322.6	369.7	521.7	442.8	297.0	728.0	263.7	207.1	208.2	244.8
10	274.1	211.3	219.1	213.1	248.1	250.7	228.0	218.3	256.9	234.9
20	201.8	236.3	238.4	257.5	260.1	248.9	266.4	254.1	291.7	287.7
30	283.6	293.9	301.2	263.4	302.0	309.3	380.7	377.6	374.1	365.5
40	330.1	369.0	372.5	374.6	435.4	456.1	469.7	449.8	485.2	491.3
50	591.6	566.0	577.4	603.7	661.9	683.3	729.6	804.9	862.1	894.3
60	999.0	1060.4	1201.0	1343.4	1476.8	1477.2	2259.9	3236.9	2906.6	2920.4
70	2384.4	4263.7	9952.6	3348.2	2597.2	994.9	3246.7	9178.9	233.0	0.7
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	310.5	322.1	474.5	362.7	379.9	453.8	168.3	176.1	144.9	145.3
10	113.1	169.0	165.3	125.4	118.6	179.2	146.2	163.0	170.4	143.1
20	185.4	170.5	153.2	189.6	173.6	178.1	138.4	195.6	166.2	181.8
30	188.8	178.6	170.1	197.0	217.3	215.9	210.7	218.6	236.6	225.0
40	244.3	233.9	234.1	228.7	233.1	269.3	284.5	251.7	254.3	328.4
50	296.4	283.3	319.4	332.1	283.6	317.8	405.6	377.6	397.4	357.3
60	418.9	424.3	468.5	484.7	519.7	522.9	511.3	603.7	585.2	602.8
70	624.9	658.5	735.4	788.4	824.7	789.0	897.6	941.8	1044.0	1162.6
80	1209.8	1414.9	1567.9	1642.1	1664.6	2020.3	3577.6	2908.6	3057.5	2511.8
90	3025.0	9208.3	3752.4	2597.1	1308.4	1054.1	8271.3	1122.4	3.2	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. Response functions of a 1"ϕ×1" cylindrical detector for a point source at 10 cm from the crystal surface. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.8	2.3	18.5	19.7	65.0	62.6	98.4	726.1	2442.3	177.4
10	191.5	787.8	11611.0	26.9	22.8	4.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	2.4	13.3	19.7	21.0	30.8	143.7
40	220.4	312.7	667.0	813.4	1590.0	60501.5	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	5.2	2.2	1.6	6.0	11.4	20.0	36.1	38.3	10.2
10	14.5	14.3	10.0	14.4	22.8	66.7	66.3	80.4	63.3	595.1
20	2224.5	144.6	149.7	210.3	9980.8	23.3	14.3	17.4	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
40	1.0	18.9	16.9	15.2	17.2	15.9	19.8	65.1	170.6	160.1
50	182.1	155.7	242.9	426.1	761.3	1179.5	10092.0	57853.3	3577.4	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.0	2.3	2.2	3.2	3.2	0.1	1.4	8.1	16.9	28.5
10	24.1	43.6	50.0	9.8	2.7	2.3	2.6	6.1	6.6	15.3
20	13.6	8.9	12.2	37.3	33.1	54.2	45.9	52.9	43.2	60.7
30	110.5	1222.2	1026.4	96.0	108.8	782.3	7026.6	19.7	16.4	0.4
40	0.0	0.0	1.0	0.0	1.7	2.2	2.2	11.7	16.0	10.8
50	16.9	21.4	19.3	22.3	27.1	60.8	136.8	172.0	153.6	146.5
60	143.3	181.6	263.9	391.1	478.4	646.9	10282.1	748.0	35383.6	31985.7
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	5.8	7.8	7.0	10.0	7.0	8.7	2.7	10.0	4.0	3.3
10	2.3	7.5	8.4	13.9	18.9	26.1	27.9	30.4	53.7	52.7
20	62.6	65.1	30.2	0.0	0.4	3.2	1.9	6.1	3.3	3.0
30	1.7	2.5	3.2	7.9	9.4	8.9	4.4	18.2	23.6	17.0
40	17.6	16.8	13.6	22.8	27.4	23.3	34.8	32.8	40.3	46.9
50	49.7	58.1	287.6	1192.5	65.1	54.9	59.1	4318.4	520.3	68.2
60	23.4	13.2	18.3	14.8	16.9	16.7	21.9	18.0	26.8	35.6
70	84.0	102.8	133.5	105.8	106.3	117.9	102.3	113.3	110.9	144.3
80	223.4	270.1	300.7	345.3	406.9	421.8	585.0	9952.0	594.2	565.6
90	63438.1	8257.2	776.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	15.0	16.6	13.3	16.3	20.3	9.6	10.5	9.8	17.6	10.2
10	11.4	14.6	12.2	13.7	11.7	10.1	12.5	10.8	12.8	15.4
20	14.3	23.4	19.2	37.2	36.2	36.8	45.4	62.1	57.9	60.3
30	77.1	66.7	57.6	4.4	2.0	0.9	2.4	3.6	2.4	1.7
40	0.9	0.9	3.7	2.4	0.6	8.4	7.2	6.4	4.8	9.3
50	10.3	16.0	14.4	14.8	8.8	11.1	8.6	12.2	11.0	7.9
60	18.5	19.9	21.9	33.9	32.5	28.2	31.7	21.7	32.5	36.0
70	36.2	31.4	36.6	200.5	814.1	43.3	48.1	43.5	3150.9	43.2
80	51.6	90.4	62.6	74.7	91.9	101.0	94.1	104.4	89.9	92.2
90	73.6	72.5	106.2	95.2	113.0	134.4	168.6	172.8	206.9	224.7
100	253.2	245.9	277.1	313.6	307.1	361.1	5137.2	4805.3	444.2	441.7
110	8122.2	63353.3	710.7	864.9	1387.9	182.0	8.1	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	61.5	60.2	68.1	63.1	58.1	52.1	53.4	52.5	53.2	49.1
10	56.3	56.5	49.4	44.7	42.9	46.9	62.9	72.7	93.7	88.8
20	116.6	140.4	154.1	175.5	174.0	6.2	3.8	3.0	6.4	3.1
30	7.6	12.1	20.2	13.6	20.9	15.4	9.7	15.3	26.5	18.8
40	28.2	30.1	35.3	26.5	36.4	35.3	39.6	53.2	93.5	162.8
50	162.3	333.7	556.1	163.6	2007.5	140.5	205.4	152.6	181.6	228.2
60	252.1	296.6	341.1	336.2	398.0	399.7	424.1	444.7	9052.6	621.5
70	62345.9	6352.0	2320.5	2921.8	195.3	3.7	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	101.7	128.1	96.2	104.0	107.6	95.9	104.1	92.9	109.3	111.5
10	122.9	124.5	95.2	111.8	102.8	91.9	107.3	75.4	90.7	75.0
20	76.0	77.4	88.9	80.4	67.5	90.3	97.9	107.9	108.1	131.1
30	145.9	145.5	190.7	183.7	204.5	164.6	11.5	11.3	7.6	14.8
40	21.5	17.1	20.9	17.2	17.9	10.6	16.4	10.5	19.4	15.0
50	19.2	25.7	20.5	31.9	40.3	43.5	110.1	130.2	112.4	118.4
60	115.4	114.0	120.1	95.7	104.5	100.8	85.3	110.1	148.1	532.4
70	157.1	1422.5	216.9	221.1	280.2	218.9	216.9	225.6	253.8	230.3
80	251.5	286.9	256.8	265.7	269.2	7548.2	441.7	871.5	58255.6	2352.8
90	2925.1	5076.6	429.7	331.9	20.8	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	189.3	212.6	167.1	146.0	144.4	160.1	166.1	169.2	153.8	156.5
10	170.7	162.5	154.7	155.0	147.3	148.2	156.7	151.6	132.7	142.7
20	136.1	139.5	143.9	133.6	121.8	119.4	123.6	121.8	115.8	130.2
30	104.4	113.2	104.9	97.9	102.8	114.4	140.4	121.8	131.9	165.1
40	180.0	184.0	173.9	210.2	201.9	231.0	253.9	85.9	28.5	24.1
50	19.9	23.7	23.4	20.1	16.4	12.4	16.8	18.0	20.4	30.7
60	49.5	41.7	98.4	112.4	113.5	79.3	97.9	96.9	88.4	88.3
70	85.8	93.2	81.5	78.4	78.6	67.1	63.0	82.3	102.6	93.9
80	112.7	117.7	123.5	121.6	127.6	125.5	274.9	252.0	781.9	371.1
90	185.9	182.1	241.2	186.2	162.1	153.7	171.8	171.7	160.6	174.2
100	205.4	172.8	5740.9	776.6	524.0	47054.6	2022.4	2309.2	5030.8	4682.3
110	673.4	777.4	80.9	31.4	3.5	0.3	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	715.1	526.4	537.2	576.1	574.1	593.6	559.1	537.2	538.1	565.9
10	539.0	522.8	475.4	533.0	485.1	522.6	510.8	479.8	446.1	467.8
20	431.3	411.9	435.5	414.4	389.1	428.4	419.2	436.0	505.1	601.4
30	720.9	701.2	711.7	550.3	188.8	202.9	171.2	141.0	114.2	131.3
40	126.7	133.9	132.2	121.9	149.3	119.5	143.0	129.7	136.0	135.8
50	125.1	141.9	141.6	184.4	657.1	189.1	227.8	166.0	153.3	747.2
60	2599.9	24128.4	3153.4	10069.0	2649.4	638.6	114.5	7.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	625.7	457.9	451.7	467.0	449.8	525.7	474.0	531.4	493.1	488.3
10	489.1	488.0	508.5	504.1	495.6	466.7	517.3	465.4	491.0	478.5
20	464.7	443.0	422.7	423.4	437.0	481.9	454.4	441.0	409.6	406.6
30	438.8	416.9	424.0	553.4	574.1	561.6	504.1	487.7	455.7	455.7
40	524.7	505.7	496.4	525.0	525.1	533.6	564.9	543.3	574.4	357.7
50	135.6	144.3	160.4	104.4	105.3	119.5	96.8	79.9	81.8	82.8
60	79.9	59.3	69.6	67.8	70.4	70.3	71.2	73.0	58.2	63.9
70	78.5	64.8	71.1	64.7	65.4	61.6	58.9	40.9	43.8	49.4
80	14858.5	707.4	6686.0	3086.1	2655.5	639.9	231.3	25.7	1.3	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	453.0	351.0	344.9	350.3	374.1	379.7	395.2	423.7	399.9	418.8
10	432.7	441.1	379.1	400.8	404.4	413.4	392.3	394.0	365.4	389.8
20	368.9	366.6	376.7	394.0	410.5	373.7	394.6	380.2	398.5	382.4
30	400.9	402.2	357.9	372.2	393.0	388.5	456.2	496.6	467.5	470.3
40	446.3	425.3	424.9	422.1	398.8	391.9	375.2	393.5	410.4	397.6
50	358.5	377.7	366.2	400.5	416.0	365.4	419.6	436.9	422.2	420.9
60	490.6	498.2	470.9	454.3	497.8	447.7	122.9	121.3	106.9	99.2
70	109.5	93.0	103.0	77.6	75.2	59.0	58.5	51.1	52.8	36.3
80	31.0	42.4	40.2	37.1	34.0	36.5	29.6	32.0	36.4	37.3
90	36.8	32.7	32.3	30.7	28.1	29.8	21.6	20.8	20.6	8481.5
100	466.7	1471.0	6063.5	1426.1	1640.5	400.3	179.8	32.1	9.2	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	795.2	696.5	747.6	747.3	784.9	824.3	755.9	750.0	732.5	763.8
10	779.4	771.4	798.7	744.4	703.0	772.8	773.6	740.3	987.0	881.1
20	820.8	762.0	822.2	775.5	750.4	770.8	721.1	785.0	799.6	805.6
30	845.5	924.4	949.5	983.4	348.7	228.8	191.7	157.3	130.6	101.9
40	76.9	73.9	80.6	73.9	56.1	75.8	64.4	51.4	53.6	41.0
50	7976.7	817.2	7272.0	2795.5	472.7	30.8	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	617.4	582.4	644.2	634.8	634.9	643.3	681.9	664.0	642.7	645.7
10	669.2	601.6	591.0	602.6	649.7	655.3	651.2	633.4	623.2	842.2
20	763.7	716.2	680.9	629.3	653.8	661.0	646.6	621.9	664.0	661.9
30	678.9	619.2	650.3	681.1	705.8	727.6	778.7	753.2	881.2	849.2
40	865.7	500.8	220.1	218.2	146.5	113.4	95.4	77.3	75.4	61.9
50	43.6	42.7	62.6	46.7	39.2	43.6	35.4	35.5	2971.8	2850.9
60	6159.4	2524.0	691.1	90.0	4.2	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	543.4	488.7	503.0	522.9	543.2	541.4	546.1	580.3	582.5	568.8
10	605.8	541.3	580.0	557.2	580.5	563.2	580.9	564.8	585.1	711.2
20	786.9	662.2	602.4	632.6	599.7	600.7	566.9	631.5	550.4	584.9
30	598.4	592.0	586.3	552.1	579.4	584.4	607.2	632.3	597.6	631.6
40	621.6	687.3	730.8	740.3	785.5	775.3	696.1	204.1	182.2	155.4
50	128.0	117.0	85.5	70.3	51.2	54.8	44.8	32.5	43.3	32.8
60	27.4	29.3	24.7	24.5	4241.5	410.3	5507.0	2103.1	808.9	120.2
70	4.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	423.2	381.4	363.6	373.9	446.7	438.3	423.6	390.9	423.0	446.1
10	431.7	447.2	401.6	447.4	453.7	484.8	411.5	481.8	421.9	431.0
20	587.9	613.9	547.7	519.2	489.9	467.0	496.9	465.9	474.3	489.4
30	459.2	456.6	490.2	419.1	444.1	452.3	508.9	459.6	483.4	440.3
40	435.2	450.9	448.1	463.0	449.8	454.6	465.5	489.6	496.8	503.6
50	539.2	495.0	539.9	581.9	586.1	621.3	630.0	655.0	679.9	233.3
60	153.1	154.6	127.6	100.9	82.3	69.9	45.6	30.2	34.8	24.6
70	36.5	22.0	19.2	22.8	15.2	13.5	18.0	16.6	2914.4	4103.1
80	1806.4	915.0	244.5	34.2	1.7	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	406.5	346.2	383.0	367.0	397.4	419.4	391.0	422.2	407.9	410.3
10	391.0	418.6	404.4	414.6	390.8	430.7	435.0	409.8	413.1	406.5
20	506.5	558.4	487.1	529.0	473.9	447.7	461.7	454.0	413.0	431.0
30	425.9	463.1	394.1	413.4	423.5	411.7	449.4	430.4	492.4	458.3
40	437.9	413.9	423.2	433.8	427.5	461.5	418.7	435.3	423.6	476.7
50	475.3	494.5	489.4	496.6	518.5	554.5	542.8	562.4	563.1	578.7
60	598.8	665.5	265.6	163.9	152.8	105.7	98.0	84.8	76.6	65.0
70	54.6	27.1	31.5	29.0	20.1	20.3	21.8	12.9	13.6	9.4
80	13.4	2480.8	2905.4	2202.6	1407.9	366.7	57.0	4.3	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	305.6	250.3	317.6	266.4	306.1	337.7	322.0	328.5	323.2	336.9
10	297.2	303.7	306.6	332.0	327.0	315.1	288.6	307.2	326.4	338.9
20	335.0	423.0	404.5	386.4	344.1	330.1	373.1	358.9	352.5	321.5
30	316.1	356.0	327.3	334.1	357.6	363.4	319.2	330.2	336.0	330.2
40	348.1	313.7	316.6	336.7	306.1	313.3	314.0	330.6	348.5	353.4
50	337.8	332.4	332.4	299.9	349.5	312.8	349.2	341.5	326.2	344.6
60	346.9	369.0	362.7	377.7	391.4	377.1	393.9	410.8	429.0	443.4
70	452.5	460.6	481.2	511.8	519.6	542.6	531.5	246.6	164.8	136.8
80	93.4	104.5	78.6	59.0	62.3	49.1	39.1	26.2	26.4	24.0
90	10.8	10.4	6.2	17.1	9.7	6.4	4.4	1667.7	2751.2	1720.7
100	798.5	275.8	49.3	7.5	1.6	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	416.6	393.6	395.8	443.0	445.0	455.1	458.5	473.2	448.8	445.2
10	444.3	599.3	553.5	573.7	532.0	488.9	476.0	473.4	468.0	464.4
20	430.1	447.7	441.3	465.1	440.8	432.8	490.5	480.6	489.7	451.9
30	422.2	436.1	436.9	453.4	483.8	455.5	502.1	472.2	476.9	552.0
40	552.6	524.5	510.1	549.9	540.8	561.3	602.1	691.3	681.3	735.1
50	811.2	781.6	423.4	212.4	169.4	136.5	74.5	50.0	34.7	25.8
60	13.7	8.6	906.6	3344.2	961.2	77.5	1.4	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	350.9	311.3	323.2	356.7	338.8	353.2	346.9	368.2	366.9	410.5
10	370.9	452.6	398.3	416.9	385.3	395.4	409.4	355.0	380.0	378.8
20	414.6	383.4	400.6	431.0	510.3	348.6	355.4	360.6	382.8	363.9
30	362.9	328.7	332.2	346.2	360.8	402.9	344.6	378.0	367.6	383.9
40	403.6	423.6	372.6	403.6	392.7	400.1	392.1	449.6	461.3	506.7
50	467.7	413.7	434.0	481.6	475.2	532.9	561.6	590.1	625.4	640.6
60	635.4	627.3	280.7	173.0	116.3	110.6	77.5	44.4	34.4	22.5
70	14.5	6.5	801.6	2554.9	781.4	83.6	5.9	1.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	299.9	231.8	267.4	248.1	272.8	254.7	263.8	275.4	277.3	279.6
10	256.0	338.4	373.2	300.8	318.0	309.4	277.8	259.1	275.0	282.2
20	278.9	291.0	281.6	260.7	281.4	268.0	292.8	246.7	240.8	262.7
30	264.9	249.9	260.4	264.9	254.4	263.6	278.7	221.4	272.1	465.8
40	627.0	295.1	284.1	282.5	288.1	273.5	289.9	272.2	284.0	290.4
50	306.7	302.4	315.2	297.0	307.5	306.6	304.1	315.7	319.9	332.9
60	301.9	368.9	360.0	354.9	346.6	411.2	493.2	382.2	401.9	393.1
70	450.8	437.1	436.4	475.6	540.1	516.3	548.5	503.1	246.6	166.2
80	99.5	85.6	82.2	30.9	21.4	17.6	7.5	7.1	265.1	1683.6
90	1128.4	145.2	20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	262.4	205.9	227.5	255.1	219.8	234.3	240.1	243.2	253.4	252.1
10	215.6	278.2	343.9	289.9	230.0	265.4	230.7	243.7	226.2	234.0
20	255.5	234.8	214.6	237.2	230.2	250.1	226.0	222.1	238.2	233.1
30	235.3	212.2	243.9	220.0	244.0	256.8	220.5	207.6	234.1	236.8
40	202.6	214.0	226.0	225.9	226.1	254.0	221.4	841.1	429.9	280.8
50	278.1	249.5	243.8	272.3	275.0	266.6	288.1	272.3	290.5	243.2
60	283.7	286.6	278.1	282.3	301.7	314.8	278.6	254.2	331.3	305.0
70	299.6	304.1	393.9	474.1	455.0	382.5	362.5	399.0	385.8	372.2
80	404.9	468.1	462.9	490.3	488.1	420.5	241.7	119.5	117.4	93.0
90	64.7	46.1	27.0	18.2	14.2	7.6	271.0	1553.9	815.1	175.2
100	14.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	498.5	436.0	440.8	414.8	484.7	544.8	470.7	464.2	415.5	391.5
10	456.1	410.4	382.2	401.6	394.1	425.0	395.8	390.9	381.5	412.5
20	414.8	395.9	407.1	435.1	435.8	441.7	483.1	489.9	1543.7	770.4
30	549.4	603.4	638.2	619.4	610.1	608.7	618.9	613.9	802.1	1047.1
40	680.7	811.5	895.6	871.6	351.0	197.4	79.0	22.8	1553.0	588.9
50	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	434.6	396.2	352.3	391.9	419.6	483.3	414.5	364.9	333.7	360.5
10	348.1	360.1	340.9	330.8	309.7	346.1	336.8	367.3	372.8	322.1
20	352.8	353.2	355.7	360.8	332.7	343.9	343.9	363.6	414.6	394.4
30	437.5	439.0	439.4	1843.4	664.2	539.9	588.9	613.8	601.7	664.2
40	572.1	523.2	551.4	845.5	918.2	670.9	730.6	785.1	757.6	294.6
50	170.0	68.0	20.9	1447.5	390.9	2.9	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	378.7	324.9	298.2	305.5	360.9	434.3	390.8	370.4	350.6	334.6
10	346.8	292.9	305.1	321.2	334.6	278.3	243.2	303.0	300.1	312.4
20	297.7	307.9	320.4	320.6	299.7	304.9	299.4	309.3	298.7	322.9
30	373.4	348.6	360.6	386.2	416.9	395.7	382.6	388.1	2188.0	545.3
40	547.2	581.4	580.9	559.3	558.3	502.0	526.3	544.1	1090.0	733.2
50	659.9	676.8	721.4	603.9	226.9	140.1	46.9	41.6	1427.8	163.4
60	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	264.4	229.2	220.5	222.9	268.7	302.1	249.3	232.6	212.6	214.6
10	221.5	215.9	187.2	166.1	185.3	183.5	204.4	189.9	208.4	189.9
20	179.0	185.1	178.3	175.5	196.3	215.1	199.7	185.5	212.8	206.6
30	212.5	189.7	192.5	206.5	214.0	225.4	222.3	204.5	207.1	190.8
40	214.6	211.9	244.8	254.6	248.9	223.8	273.6	266.0	280.4	290.8
50	281.8	348.5	340.5	392.6	366.3	365.5	329.9	2300.1	1062.3	525.1
60	523.2	506.2	541.5	537.8	483.2	393.4	369.0	712.8	1023.6	448.8
70	456.6	494.0	453.7	203.6	131.6	54.1	16.5	601.5	394.3	12.1
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	297.6	239.4	308.2	268.0	221.4	243.2	225.8	218.8	209.7	202.9
10	219.7	221.5	198.9	228.4	218.0	191.8	211.1	206.4	209.1	211.9
20	207.3	225.6	243.5	258.7	231.8	244.2	246.1	239.4	282.1	282.5
30	300.2	300.8	289.1	305.0	305.0	314.1	317.7	349.8	375.3	426.2
40	421.0	479.6	495.3	556.3	636.8	783.3	854.0	660.8	3473.4	989.4
50	904.3	805.7	503.7	1554.3	487.8	457.2	158.1	48.7	434.4	7.3
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	205.6	160.6	219.1	190.1	164.1	184.1	156.8	163.0	144.1	131.5
10	120.3	131.2	144.4	143.9	152.5	150.0	142.1	114.8	141.9	146.0
20	131.0	133.5	139.9	144.5	149.9	157.6	152.6	153.0	145.2	167.6
30	159.8	146.8	175.8	146.4	198.9	170.9	176.2	173.6	188.8	168.7
40	204.3	187.4	221.2	239.3	226.6	247.5	231.4	247.1	256.7	282.9
50	292.2	280.2	320.2	321.1	329.7	345.9	429.5	422.1	430.4	485.3
60	526.6	618.7	644.4	685.0	807.9	882.4	729.0	2749.1	1009.5	798.3
70	730.8	417.5	987.4	489.2	270.4	160.2	55.2	200.8	60.9	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	186.1	134.4	172.4	166.3	134.1	130.8	110.1	102.8	117.7	94.1
10	104.4	108.9	101.4	100.7	111.2	106.7	110.6	98.6	104.8	113.5
20	106.2	114.2	114.7	109.3	116.1	112.3	99.6	110.3	123.4	131.4
30	113.5	131.3	120.5	132.7	113.5	133.5	117.5	120.8	135.7	144.8
40	150.7	142.6	138.4	149.9	157.6	158.9	165.5	158.8	152.2	180.4
50	169.6	176.2	196.0	168.8	185.0	190.7	185.4	195.4	196.7	209.5
60	202.6	226.2	256.1	276.6	290.8	256.1	289.1	295.5	278.6	327.1
70	334.4	340.7	355.0	373.9	475.0	442.4	496.4	499.7	586.7	601.5
80	571.9	661.3	703.2	786.4	881.8	849.3	1198.5	1708.9	612.4	570.0
90	415.9	426.6	678.0	188.0	120.1	52.5	38.8	102.6	4.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. Response functions of a 2"φ×2" cylindrical detector for a point source at 10 cm from the crystal surface. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	1.0	9.7	20.1	55.0	55.0	56.8	1124.0	1897.2	178.1
10	183.0	3062.8	9031.1	25.1	38.4	1.8	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	1.0	0.0	9.3	18.2	26.4	27.3	70.8
40	92.7	332.7	632.8	789.9	37304.3	24055.6	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	0.0	1.9	1.1	4.4	16.5	21.5	30.8	45.9	10.0
10	5.0	6.7	4.0	7.8	12.6	30.9	40.1	51.7	57.0	517.6
20	2100.4	117.4	123.4	186.1	9716.2	23.9	28.8	12.5	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.1	0.9
40	4.2	17.8	11.9	18.7	17.6	13.6	22.8	44.1	64.7	76.6
50	65.8	130.8	225.8	424.4	676.2	9993.7	1433.2	60909.1	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.2	3.2	1.6	0.0	0.9	2.1	1.9	6.1	20.8	27.0
10	23.8	48.0	48.1	6.3	2.0	4.0	6.0	1.0	2.0	15.4
20	8.5	5.2	5.2	10.6	18.1	22.1	39.4	23.7	44.9	58.6
30	80.5	2016.2	115.1	78.2	109.5	3626.2	3791.2	19.7	16.7	0.0
40	0.0	0.0	0.0	0.4	1.6	1.0	4.9	13.9	13.8	11.1
50	18.0	17.5	17.2	18.6	29.3	29.1	54.9	67.7	70.4	61.3
60	93.4	149.7	244.2	338.9	479.6	607.8	10208.9	798.7	55963.1	11400.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	4.4	7.2	4.1	5.9	8.2	1.6	2.4	1.5	2.3	2.5
10	3.0	1.7	4.4	7.2	12.9	26.9	31.2	25.0	41.5	55.0
20	66.3	60.5	16.3	1.0	1.5	2.5	3.1	4.7	3.5	3.1
30	4.7	2.9	1.9	6.1	5.0	9.0	1.9	6.3	5.5	7.6
40	5.8	8.7	11.6	9.7	19.9	24.3	28.1	47.1	33.2	42.9
50	37.1	47.2	252.9	1077.8	55.1	43.7	39.2	4423.0	51.9	58.1
60	17.5	9.3	11.2	6.2	14.1	11.9	11.3	10.8	19.3	26.9
70	30.0	46.9	42.3	48.7	52.5	55.8	66.6	72.2	111.0	162.2
80	193.6	242.6	295.3	310.0	344.7	366.4	9240.4	1125.8	516.1	7599.7
90	64509.5	968.9	189.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	5.9	10.2	10.4	8.5	4.9	4.7	6.8	9.6	4.7	2.7
10	5.7	1.9	8.4	6.9	8.3	5.5	7.8	3.7	7.3	5.7
20	14.7	17.1	14.4	28.0	35.9	37.6	47.0	44.6	57.3	68.8
30	88.1	68.2	43.7	2.9	2.9	1.9	1.7	4.2	2.9	0.4
40	1.2	3.8	2.2	1.0	3.9	4.8	2.9	4.7	1.1	5.1
50	2.7	2.9	3.6	5.7	4.3	4.1	10.7	5.8	10.8	13.3
60	9.4	19.3	22.1	26.6	29.8	22.2	28.0	23.1	27.6	35.6
70	22.5	27.0	106.6	414.6	369.7	37.4	33.7	421.0	2359.9	35.4
80	63.5	58.3	34.5	41.2	40.7	35.4	32.6	34.9	44.0	44.0
90	40.4	53.4	61.4	80.8	101.4	133.4	128.9	163.1	173.0	199.5
100	218.5	211.1	235.1	284.1	290.1	286.2	9397.9	385.9	396.8	446.9
110	62449.9	9701.3	795.9	1354.2	641.3	15.7	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	41.2	40.5	42.4	45.8	26.5	33.2	34.7	39.1	24.0	28.2
10	31.6	33.6	20.5	27.1	24.5	29.3	49.0	51.7	70.7	70.6
20	106.7	124.6	158.7	171.3	134.1	7.3	2.5	3.7	5.8	3.6
30	7.7	5.8	8.3	3.7	4.9	7.0	4.9	10.9	19.6	17.3
40	29.2	31.9	30.0	33.7	33.1	26.6	41.2	45.0	54.2	81.9
50	81.8	556.3	98.0	1010.3	833.0	99.8	163.8	134.6	165.2	169.4
60	241.0	248.5	287.2	291.4	329.6	357.7	363.6	658.1	8580.4	629.0
70	67775.9	1981.6	3828.5	1047.3	118.1	0.4	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	78.5	87.9	59.8	48.6	64.0	63.8	59.8	60.1	59.0	47.1
10	65.1	56.5	65.1	55.0	53.4	63.6	55.1	46.6	50.4	35.7
20	45.1	33.5	39.5	53.7	51.8	62.8	64.4	85.4	100.6	101.5
30	121.2	152.6	156.7	191.2	192.6	129.3	12.3	9.8	8.4	13.1
40	13.3	9.4	16.9	15.4	15.0	12.7	9.3	15.7	14.5	19.8
50	23.7	16.7	18.2	27.2	29.0	47.8	59.5	71.6	55.3	57.0
60	51.4	44.9	52.1	51.7	50.4	62.6	75.2	87.3	168.3	361.7
70	125.0	1096.4	182.3	163.9	228.2	190.6	209.6	199.4	221.6	207.9
80	225.5	228.0	252.2	235.1	254.6	7534.5	469.7	56337.2	5167.9	2721.8
90	6361.0	1433.6	557.7	139.9	4.1	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	116.5	117.8	105.9	67.0	80.1	89.4	92.9	95.2	79.2	92.6
10	97.4	87.2	90.3	76.3	86.8	100.1	81.8	94.3	71.3	74.1
20	88.2	81.0	75.2	67.9	61.7	70.8	68.7	78.3	63.8	56.0
30	67.8	72.5	65.1	62.6	84.1	81.1	101.1	111.1	104.0	115.5
40	127.4	162.4	155.7	178.2	202.1	207.4	215.4	38.1	23.5	22.6
50	22.4	13.4	21.0	15.0	15.3	11.2	14.4	16.2	14.8	21.8
60	28.5	31.8	49.3	48.1	57.9	40.8	53.3	55.2	38.2	43.9
70	35.1	43.1	37.3	38.8	50.3	50.4	62.1	86.3	80.4	85.1
80	87.3	92.8	94.3	104.4	106.2	117.8	276.1	238.0	649.5	182.5
90	152.8	156.1	200.6	153.9	145.4	146.4	151.4	158.8	176.6	177.3
100	166.7	398.2	6211.9	367.9	38518.7	12967.6	2871.5	3539.1	8844.8	820.8
110	938.9	495.2	74.3	5.7	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	418.4	324.4	366.6	353.5	388.7	350.9	404.0	412.7	393.0	382.3
10	396.6	383.7	366.2	350.6	356.6	383.4	343.5	363.8	311.1	302.6
20	316.7	297.7	293.7	283.8	290.8	304.3	319.8	343.2	386.7	468.6
30	513.0	616.6	599.5	369.2	142.5	127.9	126.1	118.4	116.9	115.5
40	123.4	129.1	112.3	126.7	138.2	155.1	152.5	161.3	158.7	160.1
50	169.2	159.9	183.2	252.0	418.4	211.9	268.6	178.9	168.0	3578.8
60	11162.3	18884.7	6598.5	13200.9	4392.2	741.4	82.9	5.4	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	443.5	339.4	368.2	346.3	372.5	365.4	418.9	430.4	420.3	416.5
10	413.5	394.8	421.4	423.8	435.8	397.1	446.2	395.0	403.4	402.0
20	375.1	411.8	377.6	377.7	381.6	381.3	384.8	376.0	364.5	334.8
30	334.4	379.6	370.2	397.3	396.2	429.6	410.4	359.6	360.9	400.7
40	364.1	448.6	442.5	439.9	465.8	475.7	490.8	524.3	556.0	267.0
50	158.9	142.3	150.6	134.8	134.2	106.0	111.7	93.8	101.9	90.2
60	92.8	77.6	73.5	85.8	91.7	91.5	95.4	92.1	88.6	72.5
70	102.6	94.3	98.3	95.7	85.4	84.2	68.3	70.4	59.6	18407.9
80	858.8	2120.6	14106.9	3278.3	4285.9	1277.6	298.4	39.5	4.1	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	418.0	296.2	318.5	339.2	318.9	325.9	356.2	334.6	375.9	384.1
10	378.6	381.4	373.3	409.0	383.3	386.5	362.6	386.3	380.2	389.7
20	377.6	341.8	382.2	382.4	392.9	372.9	375.0	361.0	368.0	345.1
30	338.3	348.9	343.9	379.1	338.4	373.3	454.0	459.6	409.8	420.6
40	404.5	391.5	398.6	377.9	361.5	331.7	365.8	342.9	368.9	382.7
50	353.0	340.7	342.9	367.9	381.4	408.1	432.5	428.5	416.7	453.6
60	472.8	479.3	480.0	489.3	465.8	386.1	150.0	134.4	137.6	116.2
70	100.5	100.9	110.9	80.9	93.4	84.8	73.2	73.6	59.5	52.1
80	59.8	43.1	51.7	42.2	61.3	43.7	60.6	60.1	46.2	41.9
90	51.9	54.1	54.3	44.0	43.5	36.9	43.6	28.4	11046.9	674.5
100	1351.1	11911.7	1927.4	4408.0	2146.6	1098.3	227.0	68.8	11.6	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	668.6	650.9	659.6	687.3	709.2	728.0	755.9	699.6	767.7	715.3
10	741.3	695.7	747.5	689.3	705.3	727.4	738.2	768.1	899.2	837.6
20	759.1	783.2	808.6	722.2	720.7	723.9	728.5	730.1	767.1	787.6
30	821.4	920.9	985.1	977.6	328.7	258.7	223.2	184.1	171.6	120.1
40	123.0	106.1	92.3	99.8	102.7	105.6	108.3	90.3	81.7	83.7
50	10604.3	3858.1	12577.0	5730.5	1050.9	59.0	0.4	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	603.9	497.1	562.6	593.1	664.4	639.4	659.2	603.6	631.3	643.1
10	675.1	620.1	672.0	657.7	687.2	674.8	651.8	638.9	664.4	822.9
20	749.1	759.5	688.1	734.0	679.6	692.4	665.0	680.0	660.6	686.2
30	659.4	706.7	663.7	668.8	702.1	715.6	742.5	790.2	828.8	916.4
40	932.1	382.9	240.4	211.5	175.7	155.2	123.4	116.6	94.8	82.1
50	89.1	87.5	74.9	60.7	63.0	53.5	49.9	49.1	7323.0	1596.2
60	11619.6	5732.1	1640.7	261.9	14.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	526.5	489.3	508.4	521.2	540.4	558.2	555.6	632.5	567.4	568.4
10	571.6	580.3	577.6	576.6	626.8	595.9	599.4	620.2	602.1	681.4
20	738.8	675.9	672.6	666.2	649.2	629.0	602.4	588.5	591.0	617.7
30	660.7	666.4	642.3	599.1	636.9	636.0	614.8	618.1	657.5	620.7
40	674.4	702.5	708.9	745.9	789.0	819.6	622.4	263.3	215.9	212.9
50	153.1	114.8	113.5	97.6	76.2	71.7	70.0	76.1	61.1	62.4
60	54.7	44.0	45.9	35.9	5966.4	4002.6	8950.9	5152.6	1601.3	279.6
70	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	463.8	389.8	431.5	413.5	414.2	469.2	408.4	493.0	407.8	463.1
10	473.9	473.8	418.9	470.9	460.5	464.5	460.1	466.2	516.8	462.0
20	516.7	603.9	551.7	543.8	559.9	509.9	540.5	536.0	520.9	516.2
30	535.9	524.6	516.6	486.5	538.3	542.8	533.1	517.5	536.4	538.6
40	533.7	554.2	537.6	510.0	471.2	523.8	522.5	560.1	519.5	573.3
50	597.5	611.0	622.0	628.1	646.1	633.7	699.3	733.3	592.6	243.5
60	226.1	186.9	172.4	115.9	95.4	87.6	68.9	54.9	45.2	47.8
70	46.5	40.5	41.1	35.7	36.1	19.7	23.9	3241.4	4447.8	5940.2
80	4891.4	1840.2	510.7	67.2	10.4	1.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	415.1	350.6	379.8	373.0	406.6	409.1	433.3	430.8	434.2	466.3
10	420.7	443.4	479.0	423.6	438.4	467.2	466.5	449.4	474.0	479.8
20	495.9	546.9	568.6	525.1	546.1	487.8	468.0	491.8	488.1	487.9
30	500.9	487.0	491.6	510.4	503.0	507.7	488.0	507.0	511.4	495.2
40	499.1	520.3	512.4	518.2	503.1	494.4	494.0	498.9	482.6	488.9
50	512.1	524.0	560.2	553.4	565.2	636.8	624.5	645.1	645.2	672.4
60	687.8	639.0	264.1	194.2	185.8	165.9	125.3	111.9	80.3	58.2
70	60.1	39.5	60.9	41.2	37.3	33.8	28.8	21.4	19.2	30.0
80	2898.8	918.3	7819.3	4825.6	2556.1	846.0	174.1	20.9	1.5	0.3
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	346.2	268.6	284.5	356.1	342.0	323.2	314.9	341.0	337.0	320.3
10	307.3	322.5	336.3	342.2	362.4	350.4	315.9	350.7	355.5	383.2
20	347.9	437.6	460.2	426.8	414.4	394.9	364.8	407.4	370.0	385.0
30	397.8	377.1	369.8	403.5	387.3	396.2	419.4	405.4	398.9	371.7
40	361.4	383.0	381.7	375.8	376.1	398.1	401.4	406.6	432.2	422.7
50	419.2	390.8	398.4	389.3	408.9	418.1	421.7	438.1	435.6	399.4
60	407.9	430.9	422.6	470.2	450.6	457.5	441.9	465.8	521.3	550.8
70	534.1	560.8	533.9	560.3	592.2	609.9	562.3	293.1	208.4	149.0
80	141.4	119.7	97.6	56.9	60.7	56.6	40.6	40.7	30.6	35.1
90	28.2	23.1	28.5	21.0	14.1	17.3	1855.1	1895.5	5830.1	4245.1
100	1733.8	574.6	128.4	17.8	0.7	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	467.2	456.7	411.1	459.1	506.0	490.4	460.9	489.0	518.9	523.1
10	478.1	652.6	609.9	601.0	625.4	556.0	553.3	555.7	550.6	571.1
20	552.5	516.7	543.7	497.4	539.5	592.7	539.3	556.9	574.6	532.5
30	556.0	550.2	599.4	592.0	568.8	633.2	594.6	639.4	616.1	644.8
40	728.8	650.2	674.9	703.6	726.7	752.9	823.1	868.2	910.1	867.0
50	972.2	930.8	439.4	282.9	209.1	147.9	96.3	67.9	38.0	42.9
60	46.4	29.2	4235.2	6209.0	2010.2	198.3	7.9	0.4	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	353.8	365.6	396.2	396.7	410.3	394.6	414.9	357.2	424.1	421.5
10	389.2	534.2	499.1	452.5	470.4	442.9	405.2	417.4	439.6	420.8
20	427.1	403.4	443.6	496.1	530.2	494.5	426.5	460.5	455.6	426.6
30	440.4	449.6	422.4	450.4	432.3	436.6	468.3	442.9	487.3	489.9
40	435.2	469.0	474.6	483.1	531.7	495.8	513.7	554.5	537.6	673.7
50	647.2	594.9	560.6	579.7	685.4	705.5	725.4	765.9	785.3	855.5
60	818.7	712.0	323.8	234.1	166.4	154.8	82.0	68.9	55.1	35.9
70	29.9	15.2	2985.7	5837.3	1736.9	165.7	17.5	2.7	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	284.8	244.0	274.0	308.4	299.2	304.1	307.8	308.3	279.2	322.6
10	350.9	349.2	408.3	342.7	356.6	350.2	293.1	314.1	354.8	344.3
20	320.1	336.1	325.7	310.3	315.2	307.5	307.9	323.2	316.0	326.0
30	316.8	319.4	333.7	303.6	302.9	325.8	327.7	314.1	324.9	576.6
40	466.1	360.4	365.7	368.9	334.8	373.5	360.2	344.3	375.8	398.0
50	398.4	367.9	381.4	377.1	411.0	424.9	447.5	397.6	408.6	424.2
60	421.5	413.5	432.9	466.1	568.5	740.2	642.3	526.4	529.2	559.1
70	547.2	558.6	620.0	663.9	678.2	695.2	743.9	548.5	289.6	223.7
80	174.5	139.2	80.8	59.4	33.1	34.7	21.4	13.3	2061.9	4419.3
90	1854.9	310.1	52.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	264.0	222.7	259.8	242.1	261.3	245.3	263.5	236.9	281.0	297.9
10	291.8	289.0	392.6	301.5	297.4	301.8	308.3	301.0	283.3	298.2
20	274.3	262.4	260.7	280.2	280.3	314.8	285.3	289.3	297.3	292.5
30	265.8	299.9	252.5	276.3	259.5	262.6	273.8	272.2	291.6	296.9
40	269.9	249.4	316.6	265.6	310.4	294.4	280.6	829.2	389.8	320.9
50	317.4	301.0	306.5	372.4	349.4	346.5	361.1	376.3	354.9	370.9
60	368.6	362.0	361.1	368.0	391.8	381.3	380.2	379.0	386.1	399.2
70	427.6	416.6	658.1	800.4	627.0	479.8	513.4	494.7	564.6	590.8
80	596.0	656.1	670.1	671.1	613.2	461.2	273.9	195.9	153.0	110.7
90	80.4	63.2	46.2	34.1	23.1	17.6	2075.5	4025.8	1554.5	263.8
100	54.9	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	451.4	466.0	454.1	480.9	538.0	615.4	538.0	536.3	501.8	448.2
10	524.0	507.8	484.3	465.6	500.1	472.0	505.8	504.6	480.1	496.5
20	538.3	507.4	530.3	527.5	542.3	558.8	598.7	599.2	1632.1	833.4
30	759.3	829.4	878.7	825.6	869.4	796.4	845.7	911.8	1550.8	1665.7
40	1096.3	1268.5	1292.3	1192.4	434.5	278.7	120.4	35.1	5306.4	1024.2
50	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	423.3	384.3	396.1	422.7	460.7	520.1	469.6	459.8	391.7	400.2
10	422.1	423.5	405.0	427.1	405.7	412.9	391.9	411.9	456.3	396.0
20	415.2	412.4	440.7	417.3	440.2	469.6	440.7	483.3	468.1	446.8
30	553.2	528.5	506.0	1852.7	819.4	804.3	848.0	803.2	791.4	844.8
40	820.6	793.9	789.9	1879.3	1446.9	983.8	1152.9	1212.4	1004.2	435.2
50	198.4	89.6	143.1	4929.2	699.9	9.8	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	358.8	310.5	348.1	395.0	428.5	504.5	399.8	373.6	376.5	372.3
10	406.3	367.6	336.6	333.5	356.1	361.0	341.2	354.5	358.6	330.9
20	335.5	365.4	381.2	387.6	364.8	387.4	377.8	383.8	411.6	367.9
30	416.7	399.4	433.6	455.8	470.7	467.7	506.5	685.2	2057.5	801.2
40	786.2	772.1	798.3	799.3	756.9	719.2	778.8	741.8	2434.8	1069.6
50	988.2	1022.5	1107.5	737.7	386.7	173.1	68.2	775.1	4125.4	334.2
60	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	208.6	185.9	230.9	240.9	229.6	343.8	259.3	220.9	251.7	224.3
10	283.4	215.8	229.4	231.1	239.0	216.5	206.0	232.1	211.3	202.8
20	213.6	221.9	236.9	218.9	251.4	230.6	219.1	217.2	218.3	228.6
30	259.0	250.8	265.7	249.9	239.1	241.7	240.4	232.4	277.6	269.6
40	273.6	259.3	290.1	305.1	295.8	297.7	351.4	336.7	322.9	369.3
50	390.4	376.2	429.5	430.0	447.3	451.9	432.9	2655.6	874.8	791.6
60	752.7	807.8	820.1	819.7	720.9	605.0	598.9	2415.9	1538.7	797.8
70	846.6	858.2	705.9	360.9	193.7	60.3	177.2	2612.2	811.0	28.6
80	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	278.9	240.7	318.9	298.3	275.4	272.5	227.5	229.9	227.6	208.4
10	198.3	228.5	222.7	234.6	227.5	243.1	217.9	229.0	228.6	228.2
20	240.4	259.1	253.9	258.6	287.3	255.8	269.4	270.8	310.2	322.1
30	299.0	360.0	354.8	359.0	355.7	412.2	412.3	426.3	489.7	500.6
40	557.9	563.7	718.7	734.5	807.6	907.5	1006.9	1961.3	2986.1	1637.7
50	1580.8	1133.9	1275.3	3730.6	1102.1	933.3	336.4	577.2	1612.7	21.8
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	178.6	197.5	248.5	192.8	154.9	207.8	147.3	127.9	128.1	138.7
10	138.0	138.4	139.5	125.5	146.1	130.6	150.6	119.3	162.6	141.5
20	149.5	163.1	155.0	153.0	162.2	144.8	167.5	165.8	190.6	156.6
30	180.4	174.8	189.2	175.3	193.4	187.5	197.4	205.1	202.9	205.2
40	217.1	235.0	272.2	251.0	247.1	261.8	306.1	330.7	320.3	341.7
50	364.5	367.5	398.7	405.3	440.3	447.7	481.7	533.8	547.6	633.8
60	697.0	775.7	840.0	897.9	1010.1	1074.2	1223.6	3285.0	1495.7	1530.5
70	1283.4	830.9	3413.7	940.7	724.6	390.1	155.9	1174.1	124.5	0.5
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	157.1	143.2	168.8	146.8	135.7	147.2	98.4	102.9	102.1	105.3
10	99.4	82.4	109.5	112.6	98.1	109.5	102.0	95.6	101.5	90.0
20	93.5	110.8	125.2	120.8	114.4	112.7	120.1	102.2	125.0	117.7
30	133.1	107.1	111.4	134.5	137.7	116.5	121.1	132.6	131.3	146.3
40	154.3	145.3	149.7	148.6	150.1	158.7	162.7	177.9	198.6	197.2
50	161.9	194.0	202.1	210.2	210.9	219.3	214.3	241.6	250.5	281.9
60	273.7	247.2	286.8	320.6	312.7	310.6	339.7	392.2	377.9	399.2
70	421.4	432.1	466.6	499.2	542.0	588.9	596.9	648.5	702.3	759.3
80	887.1	921.3	948.4	1130.3	1101.4	1056.0	2751.8	1620.4	1326.9	1202.9
90	745.4	2140.0	1403.4	557.9	374.0	121.4	565.2	307.5	1.8	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. Response functions of a 3"φ×3" cylindrical detector for a point source at 10 cm from the crystal surface. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.8	0.8	7.9	20.5	59.2	52.5	48.2	1351.2	1636.4	153.7
10	167.7	4182.1	7798.6	22.6	33.7	0.9	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	2.0	13.1	19.5	21.8	32.0	52.7
40	70.8	346.6	626.8	809.1	41380.3	20026.5	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.0	1.0	2.5	3.2	7.7	17.7	19.3	36.7	47.6	10.7
10	2.7	6.0	6.0	10.7	11.9	33.6	30.1	32.9	64.0	555.4
20	2127.8	117.4	112.7	188.6	9636.9	27.0	26.6	8.4	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.7
40	4.9	17.4	7.6	15.9	16.6	9.7	22.0	28.7	40.1	61.7
50	56.1	138.4	236.9	412.5	696.8	9989.2	1627.7	60443.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.0	0.4	2.2	1.2	1.2	1.4	6.0	3.8	17.2	31.2
10	27.3	43.2	49.7	10.2	3.9	3.3	3.4	3.4	1.0	6.6
20	4.6	4.7	9.1	13.1	17.2	28.2	24.6	24.3	48.0	57.0
30	90.7	2069.6	73.1	74.2	89.8	5092.8	2414.8	18.8	15.3	0.4
40	0.0	0.2	0.8	1.0	1.0	0.0	5.0	16.4	9.8	10.0
50	13.4	14.8	11.6	14.8	23.9	24.3	34.7	33.3	42.6	68.0
60	94.1	174.1	211.4	316.5	476.5	656.2	10039.9	953.8	61156.6	5502.3
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	4.8	7.4	2.2	3.6	2.0	2.8	4.8	2.4	2.0	2.0
10	3.8	3.8	6.8	10.4	12.9	24.1	35.3	32.5	47.1	46.1
20	61.0	69.2	12.1	1.0	0.0	2.0	2.1	3.1	4.8	1.9
30	0.4	3.1	2.8	2.8	3.7	6.5	1.4	1.5	6.7	9.6
40	6.2	8.1	10.5	19.1	26.5	24.5	23.4	32.4	40.2	38.7
50	43.8	39.9	261.8	1052.0	54.3	36.2	33.5	4407.1	60.3	42.2
60	11.6	15.0	11.0	14.0	12.0	9.8	13.6	17.4	19.5	22.3
70	27.1	33.9	35.5	32.0	34.1	41.1	77.9	73.9	113.2	141.1
80	198.6	208.6	265.2	305.7	332.0	368.0	9910.1	500.4	521.1	40281.7
90	31701.8	925.8	69.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	12.2	8.3	10.5	6.0	6.2	4.3	4.3	7.5	6.9	5.6
10	6.3	5.8	2.9	4.8	4.1	1.9	6.3	6.1	4.7	5.4
20	13.0	14.9	17.7	29.5	41.9	35.6	46.3	42.9	51.1	56.7
30	88.7	86.1	38.5	1.5	2.6	1.9	2.9	3.8	2.1	0.2
40	2.2	4.4	3.9	0.9	1.2	1.8	2.8	2.8	0.9	3.6
50	2.0	6.8	4.2	3.5	5.9	2.4	5.0	7.8	13.5	12.6
60	17.3	19.3	18.0	23.8	19.2	31.0	23.8	29.1	35.6	27.3
70	21.8	24.8	152.4	596.0	115.8	34.3	37.3	1451.0	1281.6	34.9
80	65.9	44.8	32.9	22.3	33.5	24.5	34.6	20.4	30.7	31.2
90	39.2	55.9	54.7	93.8	105.9	117.0	120.7	175.4	152.6	189.2
100	222.1	215.5	245.4	249.2	261.6	2164.7	7576.9	396.4	386.3	569.5
110	69191.5	3209.9	872.5	1425.8	280.4	5.9	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	39.4	36.3	22.6	20.5	17.5	19.2	26.6	24.9	17.3	21.7
10	20.2	17.6	10.9	18.8	25.9	27.8	41.7	51.0	63.6	67.2
20	111.9	127.9	147.4	191.4	122.7	6.4	4.3	8.7	3.7	5.4
30	5.6	1.4	7.6	5.6	6.4	2.4	4.1	8.2	18.5	33.4
40	19.9	35.9	31.7	38.2	26.4	35.7	34.8	39.9	51.7	44.1
50	57.1	535.1	62.1	1214.7	470.2	108.6	154.2	125.8	157.8	175.8
60	217.9	237.3	278.5	293.3	331.1	327.1	336.6	5078.5	4318.1	22127.5
70	46789.0	2085.9	4206.3	404.0	67.0	0.8	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	61.0	79.3	59.1	31.6	48.4	45.3	41.0	37.6	34.2	44.9
10	44.4	44.4	45.8	37.2	26.3	40.4	32.5	31.2	32.6	21.3
20	28.3	28.0	40.4	46.3	57.0	58.6	55.8	65.6	94.8	100.0
30	127.5	138.5	162.1	176.9	199.5	89.3	10.6	7.3	11.7	11.9
40	5.3	5.4	10.4	12.9	11.1	14.5	14.8	24.7	17.5	18.9
50	20.4	27.4	17.9	27.9	26.5	40.2	38.7	31.7	39.9	55.2
60	50.4	35.6	40.3	42.9	33.8	67.4	77.8	95.3	234.3	265.9
70	121.5	998.1	165.6	174.5	234.1	170.0	174.8	200.4	214.4	221.0
80	216.3	213.3	248.7	249.4	4000.4	3883.1	549.8	59855.6	2665.8	3140.7
90	6406.6	811.3	517.7	30.9	3.4	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	92.8	100.1	73.9	62.6	66.0	67.2	68.3	68.6	62.0	73.2
10	57.5	73.0	63.6	77.4	68.5	67.2	62.4	63.9	49.0	60.5
20	72.7	66.0	48.8	41.1	45.9	37.6	52.9	49.1	57.0	44.2
30	46.4	60.1	49.2	63.3	73.3	63.4	59.5	81.3	93.6	111.2
40	124.5	145.2	152.1	159.0	194.3	211.6	240.0	23.5	27.9	17.4
50	15.7	17.9	12.5	10.6	18.4	11.7	17.4	13.3	15.3	19.1
60	18.3	36.4	42.3	36.0	47.0	41.3	39.5	34.5	34.1	31.3
70	27.6	39.6	50.0	43.1	48.0	55.3	52.8	74.5	69.4	81.2
80	86.4	80.0	95.4	103.9	93.0	137.5	266.0	368.3	417.4	154.4
90	138.7	185.2	182.9	156.0	146.4	148.4	149.5	150.9	156.9	181.2
100	159.7	3604.8	3177.1	507.2	50221.5	2429.7	3042.9	4798.9	7487.8	869.6
110	1061.9	243.4	60.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	366.4	267.8	279.8	242.6	259.2	268.1	291.6	289.4	330.3	300.8
10	285.2	271.5	262.5	295.0	277.3	258.9	253.2	258.3	220.3	240.6
20	214.0	231.6	220.1	231.4	242.4	234.8	237.9	306.4	358.4	393.1
30	426.6	540.5	538.3	288.6	114.5	98.4	91.9	89.6	89.9	114.2
40	97.6	115.1	130.4	133.6	128.3	142.3	150.0	152.2	152.1	163.1
50	159.2	179.8	169.4	273.1	417.7	181.9	270.1	185.4	168.9	3816.4
60	26269.1	6110.7	11036.0	11401.1	4564.5	770.7	80.9	0.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	397.4	289.8	300.6	298.4	330.4	306.7	342.9	337.8	338.3	329.2
10	328.5	330.0	357.5	358.9	323.4	326.5	349.4	365.9	297.5	319.4
20	340.5	318.8	299.6	308.5	315.0	320.1	292.3	298.0	271.1	262.8
30	278.6	284.4	283.6	312.9	313.9	312.9	285.5	256.1	308.7	287.9
40	325.9	364.4	351.1	406.6	436.4	431.6	463.3	500.6	521.6	208.8
50	125.4	122.9	122.4	128.9	118.0	101.5	101.9	77.7	102.7	85.6
60	89.3	82.5	92.9	98.4	73.1	83.2	89.7	86.2	88.4	99.7
70	116.6	92.6	86.0	93.6	90.6	96.4	79.1	78.8	68.2	19901.5
80	1276.6	3506.7	16101.6	5260.9	4548.4	1547.6	304.0	43.6	2.9	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	343.9	251.1	270.4	291.5	275.7	252.7	268.5	257.9	307.9	333.3
10	305.3	299.6	279.7	323.1	280.7	313.8	340.9	312.2	289.8	314.7
20	308.2	325.2	301.3	299.9	330.0	318.2	321.0	319.3	299.6	281.4
30	305.5	286.7	302.9	330.2	322.7	309.6	368.1	355.2	341.3	342.8
40	309.3	350.6	325.5	312.6	309.9	306.6	282.4	297.8	289.5	309.7
50	302.7	290.6	289.6	324.8	368.3	328.5	368.7	352.8	391.3	410.1
60	435.3	420.7	462.0	474.8	487.7	308.7	140.3	145.4	127.6	124.6
70	106.4	102.9	84.6	87.6	73.8	84.6	78.3	71.3	65.5	57.7
80	60.6	52.4	58.6	67.9	68.1	68.8	49.6	53.7	56.1	52.4
90	63.3	59.5	54.8	52.3	53.2	46.6	48.7	34.3	12371.6	990.4
100	2134.5	14282.4	3583.5	6413.7	2217.7	1315.3	430.4	58.0	10.7	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	584.5	500.7	550.5	554.9	599.3	620.2	602.4	622.0	612.1	672.7
10	609.4	595.1	616.9	626.3	630.1	625.0	615.3	649.9	751.4	681.5
20	623.2	659.9	655.6	582.6	620.3	551.9	595.8	624.2	636.4	688.5
30	744.8	872.6	916.5	909.7	266.4	262.0	206.3	180.7	162.6	141.3
40	118.7	118.0	118.9	109.8	103.6	111.6	105.2	109.3	86.4	89.8
50	11896.4	7237.7	14850.3	7349.9	1240.5	70.2	0.8	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	497.0	463.9	518.6	485.8	532.7	544.4	568.9	536.7	539.8	541.9
10	605.1	533.9	536.2	580.7	525.9	579.7	561.0	593.4	574.0	677.9
20	625.2	620.0	596.7	594.4	598.7	596.9	614.0	624.8	584.2	574.2
30	576.2	626.6	575.9	592.7	622.5	668.2	704.3	759.5	792.0	842.1
40	910.4	315.2	249.1	211.6	192.0	145.5	150.8	114.7	89.3	90.7
50	84.6	94.3	89.9	93.5	79.4	86.0	68.6	49.9	8248.0	5721.5
60	12574.7	8104.9	2564.4	356.7	17.6	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	495.7	448.1	461.2	428.7	452.5	501.0	468.9	462.9	499.4	509.1
10	513.3	477.4	474.8	539.3	518.4	517.3	567.6	553.3	520.8	605.1
20	611.3	570.3	580.3	593.2	591.6	580.9	574.2	546.4	626.0	568.2
30	568.0	569.7	563.6	614.1	564.0	566.3	562.2	561.7	581.5	604.7
40	611.0	634.7	655.9	717.3	777.5	899.4	545.7	258.3	222.2	193.2
50	140.6	147.0	96.3	104.6	77.7	73.8	84.4	73.0	65.9	59.9
60	39.4	63.1	52.7	37.8	6953.6	9416.0	8256.1	7041.4	2364.3	432.7
70	26.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	386.4	358.1	345.6	410.0	395.1	413.9	396.1	408.7	395.1	411.4
10	425.1	431.4	399.2	412.6	422.4	419.7	413.0	467.1	463.0	434.9
20	476.3	556.7	490.2	511.4	468.9	489.9	485.1	533.0	477.7	497.4
30	491.1	496.2	511.1	476.0	527.7	489.1	473.1	494.9	517.8	529.2
40	476.2	493.1	487.1	509.7	511.4	517.7	525.8	490.7	527.0	540.9
50	564.3	566.5	585.1	604.4	622.4	630.2	674.1	709.1	510.6	273.0
60	219.5	178.1	170.9	125.6	119.2	93.7	66.6	57.4	56.1	48.5
70	41.7	50.1	45.9	27.1	39.2	35.0	29.0	4117.9	10112.3	4470.3
80	6836.4	2697.4	699.6	127.0	7.3	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	359.9	354.0	367.4	353.6	369.7	397.8	424.4	390.4	367.3	367.2
10	386.0	398.7	392.3	259.4	413.8	420.7	409.4	387.7	414.3	432.8
20	452.4	462.7	487.9	473.9	478.8	468.0	459.0	470.5	468.1	438.1
30	498.1	482.2	483.3	484.5	404.9	454.5	475.3	532.6	496.1	478.7
40	481.7	482.6	495.2	461.1	493.2	492.6	506.7	496.8	482.3	484.8
50	520.6	523.8	507.1	538.1	585.8	549.4	576.6	616.9	655.2	674.3
60	724.8	579.5	264.3	229.0	182.2	158.9	116.2	86.0	83.8	65.6
70	60.6	43.8	45.7	37.8	44.0	40.7	46.0	36.5	37.9	27.1
80	3820.2	783.7	11143.9	7425.2	3219.1	1213.8	244.8	33.9	0.6	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	301.2	285.7	267.1	331.7	294.2	314.4	301.4	349.0	315.2	310.1
10	304.0	333.0	330.2	332.6	318.9	340.1	314.8	335.5	340.9	346.3
20	324.7	433.1	421.8	387.7	379.0	361.3	367.9	359.5	368.3	361.4
30	359.8	365.4	359.2	382.0	405.3	392.7	407.4	387.8	375.7	413.1
40	397.8	376.8	384.1	385.3	363.1	359.2	395.4	408.4	384.1	406.7
50	405.6	440.4	403.1	433.0	441.4	425.7	423.9	406.7	421.6	414.8
60	449.0	428.8	421.3	421.3	407.2	473.2	447.7	476.6	441.2	512.0
70	536.2	547.3	561.4	568.6	584.6	591.5	474.3	262.7	219.6	165.4
80	145.4	101.0	98.3	79.6	72.4	53.8	53.7	41.0	41.1	40.8
90	33.3	21.6	26.9	17.2	31.3	19.9	2630.5	4808.2	7249.5	5648.0
100	2480.0	924.3	199.4	29.4	2.4	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	437.4	402.4	429.2	454.8	411.4	442.2	476.8	466.8	466.5	482.9
10	461.7	584.9	565.3	567.4	582.9	586.6	502.5	484.4	539.9	535.4
20	554.2	584.6	553.4	558.0	610.9	576.6	535.9	558.5	556.6	520.0
30	572.7	558.2	621.7	603.2	590.8	603.8	587.2	598.4	649.7	737.4
40	728.2	686.4	731.6	751.6	725.8	726.9	767.2	774.2	876.2	916.3
50	982.5	854.1	482.6	266.6	235.5	171.3	109.0	76.9	55.9	46.6
60	34.1	157.6	6839.1	9024.3	3005.4	298.0	11.0	0.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	360.7	355.8	357.4	375.3	405.6	360.1	370.0	405.6	382.3	409.2
10	386.3	472.9	468.1	433.6	468.7	430.1	440.2	418.3	428.1	444.2
20	437.1	411.5	409.3	542.3	489.3	442.2	493.7	477.9	428.4	468.0
30	448.1	477.0	489.9	481.0	469.2	490.5	486.1	451.5	486.3	532.6
40	502.9	525.8	486.6	507.0	516.5	517.4	528.1	599.3	608.7	711.3
50	690.1	630.1	673.0	673.5	666.1	694.8	753.6	770.9	877.4	867.0
60	908.2	703.4	360.4	247.4	190.3	150.7	92.9	52.0	53.0	43.4
70	26.0	318.4	5627.2	8490.2	2224.7	279.5	28.7	0.9	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	285.4	255.0	259.4	302.7	284.4	308.5	280.4	304.2	313.7	305.7
10	313.4	324.8	380.7	367.5	349.8	348.4	334.0	343.6	338.0	295.4
20	316.4	348.1	319.6	323.1	306.9	327.7	338.4	319.9	336.2	309.1
30	278.0	339.6	324.9	305.6	324.4	300.8	321.1	349.6	348.8	490.8
40	431.8	363.3	379.4	398.7	353.7	383.1	351.0	387.7	387.0	397.2
50	403.0	399.6	391.1	417.3	435.4	427.1	434.4	423.7	440.6	456.0
60	425.3	450.4	473.0	484.5	668.7	830.5	747.6	566.7	586.9	568.1
70	606.5	614.1	672.9	714.1	722.3	791.4	751.3	544.4	306.6	238.3
80	190.4	130.4	95.9	60.8	44.1	37.5	19.4	30.9	4264.4	6923.7
90	2685.0	455.0	86.4	10.2	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	244.4	218.7	243.1	248.3	249.2	252.6	263.1	268.2	263.1	254.7
10	260.6	332.1	336.1	309.4	305.0	290.9	288.0	301.9	274.5	262.8
20	280.2	274.1	283.9	256.2	291.8	304.6	321.3	278.4	292.0	273.2
30	291.8	245.8	273.9	254.7	272.9	305.3	291.0	293.5	283.9	281.4
40	256.7	270.7	308.9	304.2	303.7	286.1	272.3	713.6	377.6	333.1
50	333.4	333.3	334.9	368.6	375.7	377.6	393.2	359.9	388.5	404.9
60	380.4	392.7	436.5	436.7	397.0	402.8	450.1	428.7	399.1	448.6
70	425.0	451.4	753.8	1050.9	712.0	531.3	555.4	544.4	589.3	601.1
80	623.7	665.7	683.7	701.1	720.8	494.8	293.9	218.9	155.9	143.7
90	67.9	61.1	52.9	38.4	25.7	247.8	4370.3	5987.0	2137.3	414.5
100	74.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	407.5	430.7	443.4	456.9	540.0	628.5	529.3	461.8	470.2	492.4
10	520.2	496.4	525.2	470.9	488.1	495.9	515.5	479.9	524.4	527.7
20	567.0	548.5	519.7	537.3	558.9	601.7	576.7	602.0	1363.7	793.2
30	790.4	840.6	891.6	925.9	958.1	929.9	884.5	934.4	2194.3	1850.8
40	1251.7	1358.9	1493.5	1282.2	543.4	285.4	132.1	248.4	9114.9	1555.1
50	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	376.4	404.6	373.1	439.9	456.6	534.2	453.4	440.3	431.1	453.3
10	455.6	438.4	395.9	417.8	403.9	438.9	436.1	396.6	436.4	405.3
20	427.4	464.0	449.2	465.7	457.1	470.1	513.7	442.2	490.6	535.2
30	542.9	592.7	554.7	1565.0	775.4	756.9	841.6	867.5	857.4	877.8
40	871.9	824.9	879.2	2715.9	1569.5	1178.1	1249.1	1341.8	1092.9	538.1
50	261.7	98.5	539.1	8435.6	1168.3	14.2	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	337.9	331.3	319.6	391.4	414.9	482.3	402.1	351.8	363.0	381.4
10	391.1	349.2	386.9	356.9	358.3	327.9	372.3	376.6	357.6	349.1
20	382.0	373.0	396.2	405.9	405.3	400.4	406.4	403.4	424.2	439.5
30	386.0	432.6	464.9	470.5	541.4	555.3	557.8	905.6	1414.6	813.1
40	797.4	820.0	815.3	913.2	827.9	837.5	852.6	925.2	3446.8	1306.4
50	1137.6	1262.6	1321.3	839.1	409.9	186.2	78.9	2555.3	6151.7	478.8
60	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 13. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	225.3	186.8	224.4	224.7	231.1	298.0	268.4	235.3	221.0	254.1
10	265.3	206.3	227.4	227.1	223.5	198.9	204.3	256.6	242.5	191.2
20	203.0	232.5	230.5	218.6	237.1	226.6	232.7	233.4	199.0	258.6
30	245.6	227.7	261.4	245.2	263.4	255.3	277.2	283.7	296.7	260.6
40	279.2	332.9	297.5	302.8	281.7	318.0	323.0	353.4	353.0	368.4
50	366.9	387.8	459.4	436.7	431.7	437.6	452.1	2289.7	872.8	813.1
60	909.1	912.6	876.7	887.4	700.7	735.1	668.3	3881.6	1953.9	1014.7
70	982.4	1044.3	767.6	489.4	203.3	79.7	666.5	4974.1	1299.1	36.8
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	202.2	213.7	302.0	275.0	244.5	285.4	181.0	217.8	206.1	185.7
10	192.7	226.6	218.1	224.3	228.0	230.7	222.0	231.7	230.5	225.6
20	236.7	284.6	242.2	259.4	264.1	274.4	274.3	255.2	306.2	341.4
30	319.6	328.4	353.3	394.9	401.7	406.4	434.2	464.4	479.1	564.7
40	566.8	607.6	700.5	730.0	875.9	931.5	972.6	2372.7	2339.7	1874.0
50	1817.0	1400.5	2651.9	4881.0	1682.1	1202.0	434.8	1870.2	2851.2	13.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	131.9	167.3	230.0	188.5	139.3	199.8	132.0	145.8	126.7	119.4
10	130.4	128.4	131.9	130.9	137.2	117.8	148.0	138.6	131.2	140.5
20	156.2	143.8	145.2	149.9	147.5	160.9	158.2	179.8	183.9	154.0
30	162.2	176.0	179.7	169.3	177.3	188.1	212.5	170.6	218.1	216.1
40	246.9	232.7	254.7	269.1	263.8	291.7	283.3	304.3	328.1	330.3
50	369.6	353.3	417.5	404.9	446.4	478.6	491.2	576.0	608.7	601.2
60	712.6	790.6	858.2	990.2	1064.3	1027.6	1518.3	2915.7	1839.0	1894.3
70	1520.1	1191.5	5500.8	1473.5	1175.7	571.5	423.9	2751.8	187.5	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	114.6	116.0	156.7	135.0	134.4	148.3	80.6	91.0	99.5	96.7
10	100.0	103.7	101.0	113.0	86.9	105.4	87.1	99.8	89.9	88.7
20	98.5	88.8	102.4	95.9	103.2	90.8	107.2	97.8	114.1	94.0
30	98.4	112.5	117.3	115.4	116.7	131.5	125.2	141.2	127.1	123.1
40	128.9	121.6	157.4	143.9	158.7	144.2	145.3	165.6	154.4	200.2
50	185.6	177.0	170.1	195.0	211.4	206.5	226.1	246.3	258.1	254.5
60	273.0	298.1	302.0	319.4	297.9	355.8	360.4	353.1	423.3	438.1
70	436.8	437.9	494.6	546.9	581.9	591.6	638.5	689.6	736.4	780.1
80	919.7	999.1	1068.4	1190.9	1228.6	1338.2	2752.5	1871.8	1779.0	1554.0
90	930.9	4570.2	1661.3	1043.2	630.2	244.0	1868.4	629.4	5.9	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. Response functions of a 4"ϕ×4" cylindrical detector for a point source at 10 cm from the crystal surface. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.8	2.2	7.4	12.8	36.8	81.8	100.2	944.4	908.2	161.4
10	232.5	3027.6	4111.4	22.4	9.0	1.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.8	9.8	9.4	27.4	37.4	38.4	61.2	92.7
40	141.2	435.4	770.0	1153.1	26000.7	9932.8	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.0	1.7	0.3	6.1	7.1	5.9	16.6	31.3	52.8	22.7
10	16.3	14.6	17.4	25.5	28.7	38.8	57.0	71.8	96.5	446.9
20	1628.6	176.3	196.6	274.7	6891.0	17.7	13.4	4.9	0.0	0.0
30	0.0	0.0	0.0	1.0	0.4	0.6	2.0	4.9	2.1	7.6
40	29.8	44.0	44.1	49.2	55.9	66.6	57.2	83.9	88.3	95.8
50	149.2	290.0	465.0	748.8	1176.9	7727.5	2182.0	42028.3	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.2	2.8	1.0	0.8	4.2	4.2	5.6	5.6	19.0	17.6
10	29.0	37.6	49.4	14.4	9.6	12.4	14.2	13.0	15.8	18.6
20	19.8	13.2	22.0	16.8	28.2	37.8	35.0	73.3	99.3	116.9
30	204.0	1676.2	139.8	144.5	168.7	4319.3	1516.3	20.4	13.4	0.2
40	1.0	1.4	4.6	3.8	6.2	12.2	22.1	35.0	35.8	52.0
50	63.0	55.9	71.4	61.8	65.0	76.4	103.2	116.3	126.2	166.4
60	240.1	351.4	501.1	695.2	911.9	2690.7	6616.7	1753.8	49731.0	1468.2
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.0	0.8	3.4	2.4	4.4	5.4	2.6	1.0	3.2	2.8
10	2.8	4.0	8.4	10.4	11.4	24.2	16.4	26.8	35.0	51.6
20	62.8	56.2	13.3	7.4	7.2	9.4	6.8	4.2	9.8	7.8
30	8.4	11.0	15.8	13.8	14.0	15.4	10.2	13.2	17.2	18.0
40	12.2	13.6	35.2	31.8	31.3	63.6	70.9	67.6	76.5	81.5
50	95.1	99.2	455.5	754.9	109.3	83.6	102.6	3636.6	97.5	64.6
60	52.9	65.2	41.9	54.3	61.8	64.8	55.3	66.9	81.1	57.1
70	88.7	87.6	83.1	85.6	112.2	137.0	181.1	239.9	285.2	324.4
80	436.2	511.1	594.1	687.1	772.5	946.2	8666.7	1002.8	1076.2	48971.3
90	10233.2	694.3	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	4.8	9.5	5.9	9.8	3.6	2.4	8.3	3.4	3.1	5.8
10	5.0	7.5	2.9	4.7	5.4	3.7	6.9	7.1	10.7	11.4
20	11.7	17.5	13.1	26.9	26.1	30.6	35.9	47.1	64.2	60.3
30	60.4	70.5	24.4	4.9	6.5	6.8	9.5	2.9	4.6	6.7
40	7.1	6.9	7.8	10.7	10.4	5.1	6.7	6.9	11.8	18.4
50	7.6	6.8	7.4	9.3	7.7	11.3	18.9	20.8	29.0	26.2
60	27.5	41.9	64.4	54.3	65.9	81.0	82.8	96.3	82.0	93.3
70	103.4	88.2	210.5	614.9	91.0	77.7	82.2	1747.6	561.9	75.6
80	98.2	70.2	86.6	66.2	79.3	81.6	71.6	75.9	89.6	105.3
90	139.9	149.5	175.5	197.5	237.7	281.2	318.9	347.4	383.5	409.6
100	455.1	512.9	548.9	595.2	654.8	4714.9	4266.7	756.1	804.7	11395.8
110	49543.5	688.6	784.8	1190.4	82.4	4.3	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	22.8	27.3	31.8	20.2	12.2	12.0	12.1	11.5	10.6	16.1
10	14.3	19.2	14.7	17.0	21.9	25.7	45.9	52.6	60.9	64.3
20	111.1	115.2	121.6	158.0	90.3	10.0	13.6	12.1	12.2	16.0
30	15.4	15.9	18.7	20.2	27.8	28.0	31.5	69.3	90.1	94.3
40	106.8	114.2	115.4	102.4	100.9	99.5	109.7	131.1	126.4	139.5
50	152.2	521.4	115.2	1225.4	412.9	239.6	312.2	327.8	375.9	443.4
60	539.5	538.3	626.1	682.5	799.3	827.6	865.1	7196.7	2008.7	32941.2
70	27011.1	2026.9	3362.4	300.5	29.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	69.9	68.7	41.1	37.0	44.8	35.8	29.6	30.5	40.2	39.3
10	41.9	31.9	38.6	22.4	27.0	26.6	20.8	23.6	25.2	30.1
20	31.8	39.4	51.0	42.1	42.3	50.7	62.7	67.0	81.8	104.0
30	110.3	124.4	118.7	165.2	180.5	74.1	10.6	12.1	30.7	26.9
40	35.0	33.6	60.9	55.9	49.6	52.4	67.2	82.1	62.3	69.5
50	66.6	73.4	73.5	94.5	85.4	84.5	106.1	100.6	89.3	90.0
60	111.0	87.7	120.8	115.4	146.0	164.4	182.2	218.2	394.0	331.1
70	470.8	891.4	334.2	415.5	409.3	420.9	449.6	487.7	463.2	525.6
80	531.2	576.2	564.5	611.6	5933.3	1837.4	1048.4	51828.6	2522.6	2962.8
90	5330.8	590.0	429.0	25.2	2.6	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	84.3	73.3	67.1	48.9	58.2	59.9	54.2	64.1	47.6	65.8
10	53.3	65.5	48.0	55.0	69.1	46.4	47.1	49.6	39.1	39.1
20	47.5	42.2	44.6	38.1	24.0	40.4	35.0	41.4	56.3	55.6
30	54.9	59.1	64.0	57.0	51.6	56.8	55.2	72.1	84.8	99.1
40	115.3	126.7	137.9	165.2	174.1	190.0	183.7	49.0	48.5	53.5
50	58.6	48.2	70.6	51.4	54.5	45.6	48.8	56.0	47.3	64.7
60	59.2	74.9	75.8	86.4	74.8	83.7	84.6	74.2	73.6	87.3
70	86.5	100.4	117.6	122.0	128.9	140.2	155.8	166.4	168.6	189.2
80	176.5	211.3	243.6	241.7	238.1	330.3	371.4	599.3	482.2	335.8
90	329.3	383.5	373.3	367.7	391.5	383.9	393.4	381.4	416.6	398.9
100	421.0	5180.8	1345.2	801.0	44460.7	2500.8	2793.2	6013.5	4708.7	806.5
110	900.6	123.2	45.5	4.1	0.1	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	293.2	200.2	204.0	227.2	244.4	213.2	219.8	224.6	217.4	209.0
10	277.4	213.4	236.0	208.2	219.0	222.6	202.2	188.0	182.0	190.2
20	200.7	246.4	209.4	220.6	265.9	246.3	267.2	268.2	313.7	395.0
30	453.5	533.8	512.2	291.2	147.8	177.5	175.4	197.4	196.8	226.1
40	224.7	270.9	278.9	280.0	275.9	314.3	337.5	315.9	355.9	355.7
50	378.5	433.1	421.5	499.9	592.4	464.3	481.1	459.8	419.4	3648.3
60	26953.4	3893.9	13235.1	7749.6	3987.6	752.8	53.6	0.6	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	271.9	221.3	212.9	259.9	258.5	274.4	305.3	271.5	267.0	316.3
10	272.6	236.4	247.9	291.9	272.6	292.2	271.0	294.4	258.0	267.3
20	296.2	268.5	261.6	287.9	291.8	252.6	270.0	247.6	252.4	265.9
30	254.0	285.3	219.1	287.1	290.2	252.7	260.9	294.7	305.6	295.1
40	324.8	320.3	320.4	377.7	408.3	389.5	449.3	491.8	525.2	243.4
50	208.2	207.8	199.3	191.7	203.6	196.6	207.8	206.1	191.6	220.8
60	195.4	220.7	220.3	206.2	205.1	237.8	222.1	220.9	195.7	240.2
70	228.1	242.8	241.4	230.6	225.2	194.1	211.1	214.3	206.1	18981.5
80	1491.7	5551.5	13899.7	6301.9	3842.2	1537.6	314.4	26.0	0.5	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	288.8	198.9	220.8	274.0	240.1	234.6	242.8	242.4	286.7	257.1
10	255.5	235.2	252.0	252.1	250.5	265.1	229.5	257.1	236.3	272.2
20	270.0	263.6	277.4	285.8	305.9	241.0	286.4	301.6	298.8	270.1
30	285.2	259.1	287.4	299.6	251.9	322.8	319.0	323.4	335.3	328.2
40	299.4	306.1	303.1	296.5	279.9	298.0	259.8	271.0	303.9	302.8
50	316.4	294.1	331.1	321.7	307.9	335.4	375.9	354.6	351.1	369.9
60	392.7	435.9	446.5	433.6	504.6	288.7	162.5	170.6	178.1	170.1
70	167.5	158.8	141.7	165.1	143.7	172.3	141.2	140.6	114.5	127.6
80	153.5	130.2	135.7	142.9	161.4	135.3	121.1	150.8	145.3	134.4
90	156.1	145.2	142.6	113.9	139.3	134.0	119.3	122.4	11787.9	1263.8
100	2630.2	14355.7	4475.6	6604.3	2368.9	1148.6	420.2	88.0	8.9	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	442.3	499.4	446.5	501.8	481.3	488.9	490.5	515.8	472.9	510.4
10	539.2	522.7	560.0	562.9	591.0	551.7	546.2	548.5	581.0	623.9
20	568.5	597.5	646.0	607.0	602.3	557.8	614.6	629.1	675.9	699.4
30	818.6	788.0	859.2	830.0	383.3	371.6	338.3	286.5	274.7	253.2
40	238.7	244.9	241.7	275.8	247.9	273.9	249.9	239.1	201.5	251.0
50	11761.5	10667.2	13972.1	6911.3	1241.6	62.8	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	405.4	352.4	453.4	473.4	476.9	471.1	427.5	480.3	518.9	511.3
10	492.3	493.8	492.7	522.0	573.9	538.5	567.4	548.0	523.8	641.0
20	585.5	590.0	579.6	599.2	542.9	520.6	603.1	596.2	582.3	531.3
30	566.2	579.6	606.9	593.3	621.1	660.9	684.2	696.4	797.8	790.0
40	882.9	365.9	324.8	282.7	282.0	240.2	225.6	231.4	206.7	181.6
50	189.7	184.2	225.1	184.1	189.8	183.5	197.1	147.9	8069.5	7876.9
60	12099.9	8447.9	2806.7	412.1	16.8	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	392.2	334.5	350.2	428.2	409.3	409.5	421.0	465.2	401.7	414.4
10	460.2	472.6	418.9	483.4	510.3	475.6	532.4	500.8	501.9	561.8
20	552.2	599.7	544.6	536.5	512.2	587.5	527.4	534.1	551.7	580.9
30	592.3	596.6	588.3	567.9	560.1	550.8	561.3	555.0	616.2	585.0
40	565.6	618.5	675.4	722.4	762.1	841.6	503.1	302.8	294.5	289.8
50	226.8	203.2	202.4	168.2	158.9	177.8	164.4	169.4	179.0	159.0
60	157.0	154.4	147.9	247.7	6640.8	11118.0	8683.2	7561.9	2671.4	477.0
70	36.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	359.6	317.9	327.9	352.2	370.2	377.4	357.6	429.7	367.3	380.6
10	382.2	421.5	393.4	439.5	435.7	452.6	423.6	429.8	425.4	383.9
20	495.4	486.4	482.8	470.2	488.8	416.9	453.2	479.9	469.7	447.3
30	475.2	457.6	464.5	499.1	543.6	525.3	451.9	529.9	515.8	486.9
40	481.7	493.7	493.2	470.0	545.7	489.3	498.8	488.3	490.4	512.3
50	446.7	507.3	590.4	559.6	581.1	621.8	680.7	646.4	471.7	286.1
60	276.8	232.8	213.4	179.4	165.2	134.9	115.0	121.1	131.2	119.4
70	111.3	103.7	83.9	98.5	85.8	90.2	74.9	4392.5	11104.4	5727.6
80	7429.6	3123.6	877.1	165.4	18.8	0.1	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	336.5	307.7	323.5	366.3	314.1	312.8	373.2	345.5	340.0	324.2
10	413.4	378.4	392.5	386.2	431.0	432.9	418.9	388.3	413.6	356.5
20	455.7	443.5	472.9	470.1	489.1	471.3	463.8	406.0	416.8	492.7
30	478.4	464.8	431.2	481.9	410.2	494.5	414.4	475.2	461.7	483.6
40	462.1	478.9	485.7	495.9	504.2	503.8	458.3	487.8	468.3	450.0
50	473.2	469.7	499.8	528.8	505.1	523.2	543.8	624.3	590.6	582.9
60	655.1	524.0	317.9	237.9	210.5	175.7	147.8	137.9	146.8	95.6
70	120.8	138.9	102.6	137.4	112.9	106.1	111.6	92.2	75.2	75.1
80	3895.9	2764.6	11123.9	8382.1	3704.4	1340.8	322.4	41.2	1.4	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	280.3	236.7	265.4	275.9	286.9	300.9	276.9	281.1	306.9	321.9
10	301.6	327.6	344.9	319.3	314.6	346.2	312.2	305.9	363.4	331.5
20	319.3	378.1	423.1	398.2	393.2	357.7	326.9	334.6	384.5	356.7
30	390.2	401.7	359.7	357.3	413.4	382.1	381.9	372.1	366.9	376.7
40	404.6	436.5	387.1	391.8	382.9	418.2	398.0	401.9	380.3	389.7
50	336.1	406.9	416.3	380.9	430.9	416.3	428.3	443.7	375.8	403.0
60	400.5	423.3	404.1	438.4	388.6	389.3	426.4	453.6	440.2	411.2
70	489.4	492.0	479.1	492.2	556.3	653.2	390.7	244.1	238.7	189.8
80	157.4	117.7	139.5	129.8	85.6	98.2	88.1	70.4	82.8	95.1
90	90.1	68.5	69.7	54.9	52.3	45.7	2825.4	7313.6	7673.1	5908.6
100	2939.8	1011.9	287.3	53.4	5.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	393.5	403.3	393.2	452.5	452.8	491.9	498.1	477.0	473.9	495.6
10	490.5	567.0	624.9	637.0	606.3	573.4	595.4	591.7	609.1	562.9
20	546.5	568.9	538.3	576.4	547.1	544.3	548.7	599.1	541.4	567.9
30	602.6	571.6	573.2	547.1	600.3	614.6	577.7	602.3	641.8	688.3
40	703.6	690.8	643.2	691.2	666.8	689.5	716.9	773.2	840.0	830.0
50	840.3	812.7	441.4	266.8	256.9	180.5	165.7	125.9	118.5	80.9
60	74.6	650.2	7688.4	11845.4	3402.0	391.1	24.4	0.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	351.1	365.9	361.8	390.2	388.5	358.8	389.9	422.5	456.0	384.1
10	393.1	516.7	470.8	454.6	439.2	443.0	431.9	507.7	529.1	489.7
20	446.3	454.5	469.3	514.6	502.2	471.1	487.7	472.3	489.7	471.2
30	479.6	482.6	443.7	482.9	482.0	439.3	451.6	506.3	484.6	452.6
40	522.9	472.9	516.3	531.4	440.4	563.5	553.7	558.3	603.8	699.2
50	659.1	595.6	599.0	596.2	624.0	720.2	672.0	743.1	727.9	809.1
60	874.1	604.8	373.4	237.8	220.5	158.0	125.4	96.7	87.8	72.4
70	66.6	693.3	7878.9	9806.4	2639.0	332.8	42.7	6.9	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	272.1	283.8	254.3	267.2	330.3	330.2	326.2	395.2	310.9	334.9
10	336.1	366.6	394.2	363.6	372.6	354.4	350.0	354.9	390.3	378.4
20	330.3	341.2	345.9	337.8	341.9	346.7	355.2	362.4	342.6	376.9
30	327.1	339.2	362.9	330.5	346.2	329.1	329.3	356.0	290.1	479.3
40	396.3	360.3	375.7	366.7	359.4	347.7	426.3	376.3	392.4	381.9
50	367.4	392.7	393.5	418.2	418.6	421.5	448.9	452.6	476.8	458.1
60	457.9	439.8	424.3	459.8	658.4	933.6	683.8	509.4	597.2	532.3
70	559.0	577.5	580.4	625.2	677.4	678.7	757.6	521.8	345.7	248.3
80	205.0	160.3	121.9	125.6	77.7	66.8	49.6	330.8	5679.5	8646.9
90	3119.2	626.4	103.8	5.2	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	264.3	247.2	271.9	268.1	286.4	302.7	253.1	317.1	278.4	298.7
10	300.7	294.5	389.5	366.8	344.9	323.1	307.7	337.2	328.0	307.0
20	315.9	282.0	334.8	311.8	297.5	372.3	355.7	263.7	290.6	285.5
30	298.6	294.7	284.5	290.8	301.3	309.6	304.0	279.5	249.9	285.1
40	323.6	302.2	334.4	280.2	339.5	276.0	310.1	563.8	381.6	349.6
50	324.6	346.4	334.0	344.5	345.2	339.6	374.6	418.2	386.4	357.6
60	391.7	388.7	348.6	350.8	362.4	427.7	402.8	423.8	458.9	415.1
70	429.9	460.3	736.1	1148.9	683.4	520.4	539.5	526.8	557.1	566.9
80	597.6	620.4	705.7	665.1	622.9	454.6	329.0	244.2	171.4	136.7
90	108.8	86.9	77.1	61.7	35.6	549.8	6473.5	7282.7	2566.9	580.1
100	97.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	425.1	476.4	529.6	567.0	596.1	667.8	641.3	626.3	542.7	579.7
10	669.8	565.7	559.5	530.8	502.8	553.6	511.7	523.9	507.9	560.2
20	558.6	546.3	548.0	507.0	573.5	602.7	574.5	558.2	1126.9	767.7
30	783.1	782.1	824.1	875.8	917.9	906.4	902.8	1008.5	2256.9	1829.3
40	1299.6	1354.1	1386.3	1208.0	573.7	332.8	168.4	503.8	12595.2	1964.8
50	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	425.7	397.4	457.6	514.5	513.2	624.2	541.7	543.1	485.7	548.3
10	700.4	471.5	453.9	457.4	488.5	435.7	434.3	466.2	444.1	450.1
20	420.6	487.2	469.2	453.0	456.1	511.5	514.1	484.0	548.6	577.0
30	562.6	542.7	546.0	1211.1	763.8	778.9	745.6	815.2	857.1	886.1
40	919.7	865.4	942.5	2944.6	1614.4	1163.2	1358.3	1369.2	1074.2	577.9
50	310.3	126.4	1120.1	11412.0	1401.4	16.6	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	353.4	412.6	377.0	453.1	506.2	545.3	515.7	410.7	434.2	447.1
10	580.7	403.4	355.9	381.8	391.0	422.8	415.3	341.4	408.6	390.9
20	339.6	377.5	378.5	409.3	397.1	426.4	398.0	491.4	452.5	437.7
30	411.7	449.0	474.7	473.5	509.7	510.4	543.1	841.7	1071.6	716.3
40	651.4	848.1	833.3	842.4	791.4	823.9	849.1	1030.1	3654.4	1275.2
50	1154.8	1374.6	1371.5	820.9	475.5	210.5	95.3	4463.0	7826.6	705.9
60	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 14. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	241.3	260.5	282.2	284.9	278.9	419.3	313.1	297.4	269.2	278.9
10	522.1	292.9	283.5	258.6	282.4	236.9	220.6	236.3	252.1	243.7
20	242.1	279.5	239.4	245.7	261.3	255.6	259.9	251.0	292.4	263.9
30	268.1	250.5	249.3	240.5	261.2	281.9	237.5	288.4	298.6	302.7
40	298.6	285.7	293.2	309.9	323.1	314.4	342.9	335.4	361.8	411.5
50	392.4	409.6	426.9	398.1	434.5	414.2	522.2	1533.6	778.2	777.2
60	815.4	853.5	833.5	844.6	792.5	741.4	890.6	4398.6	1911.2	1123.0
70	1121.1	1153.1	794.3	509.7	261.0	100.2	1397.9	7162.8	1657.6	54.9
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	307.6	312.6	381.8	388.1	374.6	536.8	295.6	257.1	275.9	258.2
10	274.4	268.1	260.0	250.7	244.1	289.7	263.9	266.7	284.4	318.6
20	292.5	255.3	296.4	307.9	311.1	312.8	314.4	307.9	346.4	364.4
30	358.0	342.6	424.0	416.8	453.2	448.5	447.9	444.1	480.9	498.4
40	552.5	564.2	658.0	748.5	785.4	806.6	907.6	1933.5	2099.7	1828.4
50	1785.5	1479.4	3820.5	5064.4	2004.7	1484.0	503.3	3418.8	4060.7	28.9
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	198.6	193.6	278.9	244.7	179.0	401.5	198.0	200.5	186.9	134.6
10	157.2	160.6	171.2	171.5	179.0	176.7	178.5	175.4	160.5	150.4
20	161.7	157.5	192.3	168.8	192.4	193.4	195.9	184.7	190.4	201.7
30	258.6	240.3	213.0	180.2	220.9	245.9	249.5	228.2	224.4	251.1
40	257.2	278.1	286.7	281.1	302.2	252.9	333.9	352.2	347.1	387.2
50	358.2	359.5	424.4	451.9	428.4	494.0	473.8	553.6	615.8	639.0
60	683.4	767.6	769.2	906.6	921.7	1028.4	1638.9	2448.5	1874.0	1890.3
70	1499.2	1889.1	6386.3	2006.7	1469.2	665.5	1052.2	4656.8	262.2	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	134.2	139.3	173.6	172.0	224.3	257.7	132.6	133.4	127.2	110.2
10	130.7	131.7	111.0	105.4	112.4	105.3	123.7	114.2	122.2	129.4
20	131.5	110.1	139.9	120.4	105.2	125.8	125.6	126.3	127.0	113.4
30	131.3	152.3	155.5	128.0	152.0	168.6	166.0	178.2	160.9	169.3
40	168.8	163.0	152.9	154.8	189.2	186.1	192.3	182.1	178.2	203.3
50	215.6	217.8	227.3	246.3	240.9	230.0	264.9	270.4	258.1	247.9
60	303.2	287.7	297.6	314.2	356.3	338.4	353.0	395.3	410.4	450.0
70	413.6	424.9	477.3	567.2	527.4	585.4	637.1	701.1	694.7	744.2
80	823.8	972.9	990.8	1132.7	1230.3	1361.6	2433.3	1848.8	1919.6	1540.4
90	1457.8	5599.1	2088.8	1448.6	776.4	462.2	3564.1	848.2	8.4	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. Response functions of a 5"φ×4" cylindrical detector for a point source at 10 cm from the crystal surface. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.6	2.0	8.2	14.7	31.7	64.2	91.4	957.2	855.6	150.5
10	230.8	3119.3	3900.5	23.9	14.5	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30	0.9	1.0	1.0	7.9	11.0	35.3	38.3	49.7	57.5	78.9
40	159.8	464.4	776.4	1164.9	26523.4	8454.5	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.0	1.7	0.3	8.1	8.1	8.9	15.3	30.1	46.0	23.5
10	12.7	14.4	13.5	27.2	42.5	32.9	66.1	73.8	106.0	498.4
20	1582.8	173.2	190.4	312.9	6872.3	19.1	16.2	5.3	0.0	0.0
30	0.0	0.0	0.0	1.0	0.5	0.5	2.0	3.0	4.8	2.8
40	26.3	41.9	45.4	43.9	55.6	75.6	59.7	71.1	94.2	100.9
50	179.2	283.5	483.7	744.6	1191.4	7701.9	3014.1	40607.3	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.2	0.8	0.0	3.6	2.4	5.4	7.4	7.6	14.1	16.6
10	27.0	39.5	40.1	9.7	8.5	11.9	12.4	17.5	14.9	15.6
20	16.1	19.2	20.9	33.2	28.9	43.9	48.7	85.4	106.5	118.7
30	243.5	1612.1	142.8	137.9	184.4	4415.2	1388.5	19.1	13.6	1.0
40	0.0	1.0	4.0	5.9	8.4	9.5	21.2	38.1	39.5	51.4
50	61.7	59.9	65.1	72.9	62.5	68.5	94.0	112.4	128.9	169.2
60	275.7	421.8	513.6	691.3	893.5	3498.4	5783.0	1802.1	49866.0	453.1
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.4	0.6	4.0	1.6	1.4	4.4	1.4	2.4	3.0	2.8
10	4.8	4.8	12.2	10.7	17.5	17.3	17.4	25.2	35.0	43.8
20	64.2	47.9	7.9	6.8	8.6	7.6	11.4	12.5	19.8	9.7
30	12.1	9.3	10.2	12.5	10.2	14.8	15.1	13.3	9.8	13.0
40	14.9	22.7	31.4	44.1	42.6	61.4	62.5	73.5	84.6	83.2
50	95.9	99.1	485.0	690.0	84.7	90.2	109.3	3660.9	91.9	73.9
60	56.8	66.9	47.8	56.6	66.8	69.0	57.4	78.5	75.4	61.1
70	80.3	89.7	105.2	95.7	135.8	148.8	198.3	254.6	306.2	348.9
80	409.8	494.9	579.9	680.2	761.6	947.8	8523.1	978.6	1096.7	49847.0
90	9039.8	649.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	5.8	8.4	4.3	3.2	2.9	3.0	5.9	2.4	4.7	5.4
10	0.5	6.5	1.9	3.8	5.5	4.2	7.8	7.2	9.0	14.0
20	19.9	20.7	17.9	21.6	13.7	25.0	37.6	59.5	55.6	57.4
30	70.3	56.6	24.9	7.1	7.2	7.2	5.9	9.5	5.8	10.5
40	6.9	4.8	8.0	10.1	6.7	5.7	9.9	10.0	13.7	15.9
50	9.7	16.0	8.1	15.3	13.1	15.2	28.2	28.8	28.1	23.6
60	26.4	51.8	52.5	44.2	67.5	68.4	84.3	105.1	85.9	95.7
70	102.1	85.5	209.8	627.8	99.4	102.2	95.0	1994.1	389.9	86.3
80	109.5	72.9	78.3	71.2	84.5	73.4	69.3	61.1	113.2	98.6
90	142.7	153.3	191.8	225.9	266.7	293.7	317.5	341.4	357.7	386.1
100	457.3	492.9	582.6	590.9	630.6	5654.1	3416.5	785.4	845.1	17433.0
110	43411.2	672.9	793.2	1180.9	31.7	2.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	16.9	24.9	22.4	14.7	26.1	21.1	14.3	18.6	10.4	13.8
10	11.9	17.7	16.9	16.4	20.9	19.9	38.8	41.4	46.6	70.4
20	93.9	112.1	124.0	157.4	82.2	17.4	13.5	8.9	19.3	17.2
30	13.5	20.5	22.4	20.1	30.1	25.2	34.9	68.6	83.1	100.8
40	107.5	117.2	124.0	122.9	108.5	97.5	118.9	127.1	123.8	116.5
50	153.6	529.0	135.4	1300.0	414.9	254.5	323.5	339.9	397.6	446.3
60	524.4	552.1	609.8	686.6	761.6	830.7	873.9	8205.7	1217.7	37638.9
70	22141.1	1971.7	3293.2	271.8	31.7	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	54.2	58.2	32.5	24.5	43.3	34.0	30.4	30.8	23.6	25.3
10	28.5	18.4	26.2	25.4	22.1	25.5	26.4	26.5	32.4	18.8
20	22.6	34.3	43.2	45.4	48.4	55.3	49.0	61.5	83.0	90.8
30	119.6	121.0	115.6	153.0	173.3	71.3	19.3	17.3	30.8	29.4
40	33.6	39.4	49.0	53.7	65.0	70.9	64.1	67.6	62.1	69.7
50	69.5	61.2	72.1	78.3	75.2	79.1	99.1	89.2	95.7	84.6
60	114.2	95.3	124.0	138.1	147.8	187.1	205.0	201.7	395.3	313.2
70	540.3	815.7	351.4	393.4	390.5	380.5	446.0	459.2	431.7	526.3
80	525.6	535.9	583.5	605.2	6671.6	1136.3	1119.5	52424.6	2581.1	3036.1
90	5382.4	539.1	405.3	17.5	0.6	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	95.5	72.3	67.8	43.2	52.5	45.5	41.9	57.6	45.5	41.9
10	45.0	44.6	41.2	35.0	42.8	42.0	47.9	33.5	32.3	38.6
20	40.6	34.5	28.3	25.6	31.9	28.9	31.4	38.4	54.5	50.2
30	56.4	55.1	52.3	55.4	50.8	61.0	57.4	74.2	93.9	102.3
40	94.5	112.7	135.0	157.5	178.0	196.4	176.5	49.4	40.1	51.5
50	71.2	55.6	55.4	52.6	47.1	47.1	47.2	61.5	60.3	65.3
60	60.7	66.6	75.9	82.6	83.4	78.6	80.9	83.8	85.8	84.2
70	99.1	87.5	112.5	107.0	133.6	146.8	162.8	146.8	189.6	202.3
80	195.1	230.7	209.5	230.5	258.8	346.2	378.2	585.6	463.2	328.5
90	335.1	386.6	347.1	336.0	349.1	365.4	385.7	364.2	398.3	402.1
100	405.2	5739.9	744.2	852.2	45243.5	2582.7	2803.9	6777.0	3974.7	837.6
110	871.8	108.6	44.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	287.7	228.0	194.3	210.8	236.8	210.4	218.4	188.1	214.4	207.1
10	190.6	175.3	188.3	177.4	190.2	177.8	151.4	155.4	190.0	185.2
20	190.4	219.6	185.1	226.0	225.1	233.3	238.1	273.7	308.5	361.2
30	473.4	478.6	511.3	246.8	175.5	181.6	187.2	194.7	199.7	212.4
40	217.9	249.4	268.4	280.0	279.9	304.4	324.9	367.5	360.8	343.9
50	374.4	383.2	405.8	513.3	624.2	460.1	512.7	443.4	429.6	3726.9
60	27137.1	4283.9	14893.0	6994.4	4078.8	673.4	53.0	0.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	286.4	250.0	240.1	235.4	255.1	253.4	246.4	251.0	230.8	247.0
10	236.3	270.4	242.7	234.4	208.4	280.8	214.8	238.9	262.4	221.4
20	260.5	243.8	230.9	261.4	248.9	290.1	256.9	242.0	221.5	181.1
30	242.8	212.2	239.7	267.3	248.4	233.3	259.2	241.9	274.5	283.5
40	303.4	282.0	342.4	366.5	418.6	380.4	497.0	500.7	510.9	244.7
50	215.2	199.7	220.4	200.2	187.6	201.4	214.6	231.7	188.1	201.6
60	203.6	209.9	207.5	210.9	211.6	220.5	173.2	222.9	225.2	253.3
70	208.6	232.1	185.4	223.9	219.8	184.5	215.4	225.5	242.3	19250.9
80	1588.0	7647.1	12903.1	7148.3	3777.5	1504.2	312.0	28.2	1.7	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	245.3	173.1	197.7	253.4	229.4	246.4	242.7	251.5	216.4	253.9
10	247.4	239.3	224.7	233.1	203.5	247.0	219.4	235.9	200.7	254.3
20	270.5	256.5	295.1	263.4	284.6	256.1	261.3	318.0	270.3	261.9
30	254.4	249.0	233.5	270.0	252.8	251.9	294.5	308.2	253.4	278.9
40	255.3	280.8	270.4	226.6	258.4	217.6	224.5	308.8	272.9	275.0
50	251.8	299.3	319.3	318.7	319.7	326.4	372.5	348.4	374.6	382.5
60	373.2	458.9	457.2	496.5	515.2	290.6	195.4	164.3	166.9	170.4
70	164.9	178.3	147.9	157.2	124.1	123.8	142.6	147.9	141.2	129.5
80	125.5	144.1	132.9	135.9	154.4	159.5	155.8	128.2	138.9	143.6
90	166.3	153.6	158.2	139.0	149.1	129.0	128.0	115.1	12070.6	1405.8
100	4464.1	13530.2	5113.8	6722.9	2768.5	1204.3	442.6	89.5	11.5	0.4
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	452.2	491.7	459.6	470.2	487.8	482.3	529.5	434.3	510.2	497.9
10	481.2	545.2	548.4	517.2	508.9	506.5	545.6	506.7	557.6	524.6
20	494.1	523.0	547.5	499.9	533.6	560.8	590.6	651.2	657.7	603.4
30	718.3	759.0	871.7	841.4	343.8	350.6	317.7	297.2	332.2	260.5
40	266.1	246.8	250.4	298.2	254.4	313.2	317.9	264.4	253.6	266.0
50	12025.5	12536.1	14358.6	7030.4	1211.9	70.1	0.6	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	426.9	419.8	393.0	429.9	457.1	468.1	427.7	443.1	467.8	466.4
10	463.2	441.3	451.1	527.9	470.6	536.4	491.4	502.0	523.8	554.2
20	543.7	578.3	571.2	525.6	547.3	538.9	557.3	472.4	553.6	582.7
30	547.1	557.6	539.1	578.5	532.6	590.1	643.3	694.5	734.0	777.5
40	766.9	348.5	316.4	274.0	306.6	229.9	208.9	190.3	213.1	204.4
50	188.8	185.8	217.0	156.7	196.1	182.7	193.7	167.3	8358.1	9275.5
60	12412.5	9421.6	2981.6	435.6	19.2	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	405.2	374.8	366.9	376.2	396.9	418.4	400.0	411.4	404.3	404.3
10	480.7	454.3	442.1	519.5	479.5	431.2	451.6	479.0	472.2	549.7
20	539.9	562.0	522.8	444.9	516.7	514.2	493.8	500.5	525.4	521.6
30	540.7	491.6	532.9	520.0	539.2	520.5	502.8	530.6	571.7	520.1
40	566.1	518.0	661.3	630.2	711.2	822.8	492.6	278.7	303.4	236.3
50	222.6	227.4	188.0	178.6	194.9	195.8	200.9	213.6	186.2	156.0
60	159.7	168.5	150.1	1013.7	6273.1	12292.0	9370.4	7927.0	3083.6	538.4
70	28.8	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	325.7	275.1	300.1	337.1	359.1	360.0	348.2	392.1	370.4	396.4
10	362.4	398.4	351.0	417.0	411.7	403.7	360.2	400.0	423.8	412.6
20	452.6	511.3	421.4	411.8	420.4	466.4	448.9	453.6	442.2	476.5
30	450.1	439.2	510.1	418.3	449.7	500.3	480.0	474.6	511.7	474.7
40	454.4	484.2	492.7	454.4	478.1	426.0	464.4	453.0	436.7	496.1
50	457.2	476.1	472.9	556.3	578.3	577.2	637.0	652.9	452.8	290.2
60	222.2	212.7	209.5	207.4	141.0	149.1	118.1	134.4	144.2	136.7
70	140.2	111.3	106.7	115.6	115.1	108.4	77.2	4553.0	11634.8	6631.2
80	8050.7	3421.4	966.7	184.4	20.9	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	312.5	279.2	315.2	326.6	321.9	337.1	373.6	344.2	392.8	363.7
10	369.0	343.1	406.2	359.4	429.1	403.4	410.9	382.1	365.9	418.8
20	439.7	477.1	451.5	445.3	416.9	428.7	420.2	437.9	429.4	450.1
30	470.6	418.3	428.8	424.1	398.2	439.7	420.4	489.5	448.2	457.6
40	501.7	412.3	441.4	437.8	405.9	475.9	440.0	456.5	428.6	457.5
50	415.6	404.8	449.1	459.6	502.2	460.1	528.8	516.5	527.0	549.7
60	602.8	481.4	261.6	222.7	214.4	191.2	160.3	160.1	144.4	113.0
70	122.5	136.1	123.0	116.5	114.4	103.2	93.1	79.7	94.0	78.6
80	4044.1	4090.6	10955.9	9276.9	4192.6	1475.2	317.2	31.6	3.3	1.7
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	274.7	251.2	265.0	279.4	331.4	280.3	271.7	286.4	285.4	295.7
10	295.1	315.0	319.2	307.9	348.1	293.0	281.4	311.7	330.4	325.3
20	308.8	356.8	408.7	353.0	366.5	351.5	390.4	381.9	384.4	342.3
30	362.6	370.9	398.2	364.9	428.4	385.8	368.3	366.0	400.1	371.4
40	370.1	365.9	346.2	358.8	387.7	363.1	366.7	346.6	369.8	358.5
50	371.3	409.9	392.0	345.9	370.1	388.1	392.2	401.4	374.2	347.3
60	327.6	356.2	328.1	365.4	361.6	368.1	407.2	401.9	447.9	448.0
70	433.7	455.3	463.0	453.7	515.3	611.7	403.9	227.5	194.2	201.3
80	142.1	117.7	123.3	132.6	114.3	91.7	85.3	89.9	92.2	87.0
90	70.3	68.6	68.8	80.6	80.6	53.8	2955.0	8618.9	8200.2	6380.7
100	3278.8	1165.0	250.6	52.4	9.6	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	394.6	414.2	408.7	446.9	450.1	488.3	460.4	477.5	482.2	509.7
10	522.9	579.9	585.0	553.4	554.7	540.6	569.3	557.1	586.9	578.9
20	515.2	554.6	551.9	572.7	534.9	534.5	535.9	543.2	561.9	515.1
30	520.5	543.3	566.7	550.0	529.0	553.0	596.9	629.1	582.7	635.1
40	674.0	649.2	611.9	707.7	653.1	625.4	627.8	660.7	766.5	801.2
50	913.5	780.1	408.0	258.0	223.2	179.0	150.3	128.4	123.3	102.1
60	104.4	896.4	8565.4	13436.2	3715.4	430.8	36.1	0.6	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	348.5	305.0	365.1	387.7	389.9	393.9	400.6	413.9	457.2	414.0
10	375.4	454.3	478.7	405.7	477.1	444.2	453.1	482.8	479.8	450.8
20	462.6	445.9	467.1	534.5	447.7	455.7	449.1	488.6	450.8	456.2
30	463.2	456.4	452.2	493.6	430.6	471.2	468.2	478.1	455.6	470.4
40	463.4	472.1	454.9	476.6	455.1	465.6	520.8	570.8	548.7	718.6
50	619.6	522.7	580.6	564.2	604.7	572.3	558.5	684.4	723.7	809.4
60	787.9	550.3	325.5	281.6	215.8	164.4	154.4	131.2	81.5	75.7
70	83.7	810.9	9367.2	10449.9	2972.4	409.3	68.8	5.7	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	230.8	217.3	259.5	246.8	324.3	301.4	296.9	321.8	322.5	347.6
10	342.1	372.6	416.7	415.9	358.1	338.1	347.6	344.4	417.4	351.0
20	312.9	319.6	376.7	361.5	387.3	398.6	369.9	380.4	355.4	323.8
30	290.7	331.0	355.3	326.7	331.0	376.0	348.0	365.7	331.8	483.9
40	348.8	336.5	349.3	373.6	354.1	390.9	372.4	402.2	364.7	368.9
50	368.8	376.5	377.9	369.6	360.1	386.8	403.2	388.5	435.6	427.9
60	405.5	398.2	446.4	420.6	653.1	930.5	678.5	538.7	517.1	515.7
70	543.4	586.2	583.3	609.4	658.8	700.7	721.6	502.4	329.6	235.6
80	195.0	155.4	92.5	100.7	105.5	71.6	51.2	455.5	6868.8	9855.9
90	3231.0	767.7	179.9	17.3	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	292.8	221.7	241.9	270.1	272.0	335.4	268.2	286.9	281.7	304.6
10	271.7	309.8	377.0	392.2	301.9	325.3	295.8	311.3	287.5	277.0
20	326.0	300.7	298.6	291.5	292.3	372.5	330.4	338.2	291.5	302.4
30	300.7	299.4	290.5	283.1	283.2	298.4	301.3	294.5	281.0	323.6
40	325.4	328.6	327.7	275.5	299.4	295.1	299.3	555.9	384.9	309.6
50	322.8	317.9	328.0	327.9	309.1	328.5	354.7	363.3	399.7	343.1
60	363.3	362.9	354.0	421.7	377.6	406.3	382.6	424.5	399.0	388.5
70	421.7	456.7	697.7	1135.0	640.0	502.7	504.9	507.2	525.3	533.8
80	555.8	638.7	595.9	660.6	593.9	414.9	307.6	195.1	205.1	141.9
90	109.1	97.6	68.4	58.4	50.9	695.0	7375.6	8032.3	2783.4	664.5
100	112.3	4.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	448.3	469.1	544.2	532.9	578.6	655.7	625.6	619.9	542.1	596.2
10	700.4	552.7	475.1	503.1	555.1	537.0	594.5	538.5	520.9	556.2
20	559.7	558.0	527.5	515.9	561.1	555.5	601.3	653.0	1035.0	730.3
30	737.9	789.3	869.0	819.1	870.7	822.4	864.4	933.4	2416.6	1815.0
40	1172.7	1293.4	1311.4	1192.2	614.5	322.6	161.0	679.6	14062.1	2274.5
50	28.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	377.2	416.4	426.7	489.8	479.4	570.1	625.3	527.3	447.1	546.6
10	630.8	457.5	517.7	437.2	477.6	450.3	476.6	499.8	445.2	408.7
20	445.7	433.9	482.2	473.7	466.5	438.2	467.6	501.1	498.0	580.5
30	504.0	556.1	481.4	1107.9	735.6	676.8	733.2	806.3	882.9	834.0
40	781.5	813.1	845.6	2920.1	1565.8	1203.6	1185.8	1361.4	1029.6	540.3
50	266.2	157.1	1626.0	12879.6	1618.6	26.3	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	323.4	376.3	400.0	457.2	476.6	551.0	503.9	428.0	442.7	507.9
10	538.0	443.9	392.7	407.3	410.7	405.6	424.9	405.3	391.3	401.9
20	415.5	407.9	431.2	417.0	431.8	399.7	417.5	412.6	421.1	432.2
30	429.0	432.6	469.3	491.6	496.6	502.5	538.4	764.7	963.1	673.6
40	698.9	744.7	774.9	775.6	751.2	769.7	784.4	1043.0	3588.9	1235.3
50	1166.3	1288.0	1430.5	854.9	466.1	250.4	129.0	5312.3	8932.8	823.3
60	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	300.7	266.7	259.4	297.4	326.2	338.8	320.4	323.7	273.6	331.6
10	541.2	282.5	257.6	253.8	233.9	256.5	215.4	244.3	276.5	252.7
20	230.5	265.7	243.0	278.0	256.5	237.2	231.6	257.0	242.2	246.9
30	242.1	232.7	280.3	257.6	243.9	303.3	268.0	333.4	302.5	253.9
40	299.8	321.2	348.7	313.7	307.3	326.0	304.8	344.4	360.2	383.8
50	352.7	339.7	409.0	432.3	421.0	462.0	560.6	1291.4	677.0	678.2
60	833.5	836.7	844.9	757.1	712.8	750.8	876.5	4443.7	1877.0	1175.1
70	1185.9	1208.0	872.6	525.2	277.3	160.5	1979.5	8361.1	1975.7	85.8
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	260.0	305.1	424.9	326.8	365.5	523.7	301.5	270.1	237.9	289.0
10	282.3	261.3	235.9	296.1	262.6	269.7	245.3	285.3	316.4	297.8
20	288.8	295.6	285.7	290.7	265.0	310.2	313.4	313.0	333.1	300.0
30	345.2	345.0	391.5	386.8	435.5	437.9	385.6	433.4	504.9	503.0
40	554.0	634.6	598.2	690.2	729.9	837.8	924.1	1778.0	1825.9	1697.8
50	1779.3	1407.4	4232.8	5134.3	2050.6	1551.0	592.3	4363.4	4906.1	34.4
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	198.1	183.1	304.1	276.1	228.0	382.3	185.1	156.3	136.3	124.5
10	148.9	134.0	155.4	137.8	159.0	158.1	150.8	153.5	173.5	175.9
20	185.3	160.5	164.0	178.3	166.9	177.7	199.9	185.0	217.1	186.1
30	197.6	206.4	176.6	206.6	194.3	205.9	232.1	242.3	248.5	214.2
40	252.7	249.4	233.6	286.0	289.0	297.6	330.7	347.3	346.2	339.1
50	326.9	397.8	405.2	439.2	438.0	450.3	571.9	504.9	600.1	650.5
60	636.1	698.2	820.0	844.5	987.1	991.0	1376.0	2144.0	1846.1	1872.9
70	1540.7	2314.5	6690.2	2109.6	1737.8	741.6	1506.0	5838.9	316.5	0.9
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	127.4	135.7	220.3	168.5	216.4	222.6	93.7	112.4	123.6	125.8
10	119.4	117.3	105.1	134.9	90.4	88.4	94.6	125.0	101.6	111.4
20	121.0	102.5	130.1	104.6	123.1	133.2	123.2	120.6	110.1	106.2
30	100.7	155.6	145.7	146.3	142.2	132.2	164.8	150.9	152.7	141.8
40	166.9	175.1	137.8	160.2	167.7	186.9	204.2	201.1	213.1	192.4
50	203.0	211.0	217.6	234.9	232.7	241.2	245.7	272.1	285.0	252.0
60	297.1	322.4	299.2	355.1	367.0	325.5	357.0	360.0	378.4	411.8
70	424.2	452.4	430.6	529.2	569.3	573.2	603.1	675.3	708.0	722.1
80	820.5	930.8	964.6	1027.9	1151.8	1291.0	2284.4	1872.8	1868.3	1644.1
90	1676.7	5799.6	2350.6	1585.6	886.3	620.6	4989.2	1011.0	5.8	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. Response functions of a 2"ϕ spherical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.0	3.0	14.6	30.2	46.0	57.8	59.4	1325.2	2360.4	141.8
10	153.6	3144.0	10964.7	30.6	35.4	3.1	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	1.0	1.4	13.4	18.4	26.4	34.7	131.5
40	227.1	490.5	566.6	637.5	33112.6	26585.5	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	0.8	3.8	5.3	12.2	14.2	16.3	16.9	35.9	41.9	10.3
10	7.4	11.7	5.3	10.0	21.2	44.4	57.8	55.1	72.1	580.5
20	2559.5	71.6	92.2	172.8	12038.6	32.7	25.7	12.9	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
40	1.7	9.8	12.4	15.6	14.4	18.0	30.1	54.3	133.3	157.9
50	209.2	264.1	293.2	384.3	552.1	9902.5	1253.4	58651.7	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	4.4	7.0	4.6	8.9	13.8	12.4	11.5	14.2	13.4	19.6
10	40.4	44.6	43.2	11.4	0.4	2.0	1.1	2.8	9.0	9.8
20	10.6	8.0	11.9	19.9	35.4	45.3	30.0	39.7	51.8	60.1
30	69.3	2415.4	267.2	76.6	73.5	4388.5	5662.1	26.0	19.1	0.8
40	0.0	0.0	0.0	1.1	2.9	2.0	2.0	8.4	9.6	8.8
50	17.8	11.1	13.1	13.9	33.1	43.0	118.3	138.1	150.9	152.2
60	211.1	217.6	259.7	272.0	357.8	484.7	10289.6	649.2	51842.3	12975.5
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	4.2	8.2	11.5	14.1	11.0	11.4	11.8	5.9	6.9	8.6
10	23.1	17.0	20.9	17.0	22.2	27.6	22.9	32.6	45.5	43.5
20	52.1	64.8	25.2	1.0	2.0	1.0	0.0	0.9	0.4	1.7
30	6.1	6.6	3.3	1.6	3.4	2.0	4.1	12.5	12.7	15.8
40	20.2	14.6	21.4	16.5	20.4	23.8	17.0	24.4	24.9	31.5
50	27.2	28.1	337.0	1409.2	52.5	51.9	54.5	6352.5	74.9	68.4
60	11.4	8.9	8.2	11.0	10.3	14.3	10.1	26.6	26.0	31.3
70	66.6	81.9	99.9	105.1	105.6	123.8	129.6	159.3	153.6	157.5
80	177.4	195.5	202.1	243.5	253.1	289.7	8144.8	2498.4	440.9	1142.5
90	69586.9	841.1	298.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.9	7.6	9.2	8.6	14.2	10.9	13.1	15.6	15.2	14.2
10	18.8	15.3	14.4	14.6	16.4	14.1	15.8	23.9	31.0	21.5
20	38.8	24.6	26.8	34.6	31.4	43.9	42.0	50.2	58.8	67.3
30	59.4	68.9	43.2	0.0	1.9	0.9	3.3	2.5	1.4	3.3
40	3.4	4.8	3.8	3.7	1.0	1.0	3.6	2.8	3.8	9.4
50	8.7	6.5	9.5	12.6	11.4	7.7	12.6	9.6	14.8	10.5
60	5.6	16.6	12.2	15.3	15.7	12.9	15.4	25.9	20.8	22.8
70	21.6	25.9	128.5	502.4	596.1	35.0	50.7	181.5	3881.5	53.9
80	77.4	78.4	45.0	65.9	76.7	71.2	89.9	79.8	66.7	101.3
90	96.8	88.7	102.7	106.4	117.3	127.9	119.1	131.1	140.4	147.8
100	143.3	190.9	188.2	200.2	210.4	247.9	10032.2	344.6	344.6	426.3
110	60354.4	11880.1	742.4	1232.3	758.0	28.1	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	11.8	27.8	25.0	30.6	30.2	39.5	43.5	51.6	44.3	63.0
10	48.6	52.2	62.6	68.3	60.7	74.2	63.7	74.4	86.1	105.9
20	115.1	113.2	153.8	167.0	126.1	8.3	7.4	4.3	5.0	7.0
30	3.5	6.6	10.9	4.9	15.6	13.6	12.9	13.1	16.9	20.3
40	17.8	27.1	24.3	26.3	26.5	34.0	35.2	37.3	46.4	95.1
50	107.8	699.8	222.2	1196.0	1330.0	179.0	226.9	133.2	154.5	149.3
60	188.9	183.8	220.3	250.4	266.4	280.0	316.6	357.6	9519.0	621.7
70	70367.7	1985.9	3495.2	1443.7	124.2	0.5	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	51.9	59.6	46.6	42.6	45.7	35.8	68.5	51.6	62.6	60.5
10	60.8	66.5	73.8	71.6	66.5	57.7	71.9	74.6	75.3	72.7
20	87.2	84.4	84.5	92.2	96.5	113.7	98.9	111.9	123.7	128.7
30	133.2	141.8	161.4	192.6	208.4	120.7	12.0	15.6	8.3	15.5
40	10.2	3.6	12.9	21.6	12.5	14.8	16.0	21.6	14.6	19.0
50	11.3	20.8	21.0	23.0	19.7	36.6	48.5	66.5	81.5	96.8
60	74.8	81.9	84.7	78.7	86.4	93.6	101.0	100.3	153.2	442.3
70	118.6	1485.9	149.4	173.1	226.8	139.4	174.6	166.8	162.8	169.8
80	169.4	195.3	181.4	218.9	215.5	8393.5	493.7	51098.2	14614.6	2728.6
90	5898.2	2186.0	590.6	168.8	11.7	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	119.1	112.0	89.2	70.6	93.9	101.3	93.1	87.3	96.6	96.4
10	80.1	92.2	105.7	98.6	95.8	104.7	95.9	109.1	87.6	90.7
20	90.7	98.4	104.2	85.9	94.3	94.6	110.3	89.1	95.6	89.9
30	116.3	125.0	129.3	101.4	132.9	106.8	115.9	138.7	135.7	156.9
40	135.7	160.4	174.5	188.8	197.1	224.3	216.9	42.5	21.1	32.9
50	21.8	23.2	22.4	14.0	20.1	8.6	19.0	23.5	23.8	17.5
60	16.9	29.6	65.7	65.7	68.1	68.3	69.5	60.0	65.1	57.5
70	72.4	70.6	65.9	67.6	71.2	73.0	81.7	81.8	59.3	74.5
80	74.1	72.8	80.0	75.3	92.5	115.4	340.7	180.2	839.4	119.5
90	148.5	151.4	186.2	118.7	112.7	119.6	124.0	131.2	122.7	136.3
100	135.7	153.3	6955.8	376.4	34052.7	21613.3	3158.6	3566.2	9666.7	836.9
110	991.2	587.3	80.1	17.3	3.5	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	580.5	433.5	469.3	451.1	453.1	454.2	449.4	461.8	433.2	433.8
10	461.4	421.0	419.6	434.1	384.9	400.0	430.5	407.1	399.6	342.6
20	381.1	392.2	390.0	390.0	385.9	407.3	402.4	391.1	458.0	469.7
30	628.8	644.0	644.4	448.4	168.6	164.3	140.3	140.1	111.6	108.8
40	100.1	117.8	99.4	107.0	93.1	113.8	117.8	112.4	105.9	101.2
50	118.8	135.5	120.7	209.3	508.0	168.3	201.7	148.4	139.2	3820.7
60	7826.9	24288.0	6791.2	14431.1	4570.8	802.4	76.8	3.6	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	543.0	446.4	436.7	446.4	481.1	432.8	427.1	456.9	471.1	491.0
10	434.7	453.2	482.4	449.6	469.6	497.4	463.4	437.5	428.5	458.0
20	439.9	413.2	435.0	437.3	449.7	433.8	383.9	409.6	426.7	395.1
30	418.8	433.3	457.4	572.1	521.9	530.6	461.8	479.4	478.0	505.1
40	502.7	479.0	488.1	496.1	483.4	554.2	546.5	553.7	593.4	285.3
50	143.6	129.2	116.7	95.6	94.6	99.1	94.4	89.2	63.1	55.7
60	77.8	73.8	74.5	51.0	67.8	65.9	60.3	66.8	83.0	60.5
70	69.8	69.3	75.0	65.8	58.1	61.7	47.9	63.9	43.2	17861.3
80	2502.6	1955.6	14961.0	3123.5	4682.6	1242.4	295.4	35.2	3.4	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	455.7	341.6	377.3	395.6	376.4	423.2	418.6	386.3	394.3	435.8
10	436.6	414.3	432.9	415.0	427.9	434.9	436.1	376.6	425.3	416.6
20	406.5	430.5	405.1	404.1	406.5	423.2	419.9	445.2	411.8	404.0
30	412.4	370.1	417.7	416.0	391.5	410.5	547.8	534.6	478.4	488.8
40	466.4	454.3	425.9	434.4	448.2	409.1	405.8	375.5	401.6	386.5
50	403.9	450.3	429.1	407.0	400.9	457.2	410.3	444.1	483.9	484.4
60	479.8	478.6	528.6	512.4	528.9	390.9	139.0	148.4	122.1	117.6
70	112.5	104.7	73.9	77.0	62.8	61.4	45.6	48.9	57.5	38.4
80	43.8	37.4	33.9	43.1	39.2	27.9	34.9	49.9	37.0	48.4
90	43.9	37.4	35.0	29.6	35.1	29.4	35.6	31.8	9964.9	2372.9
100	1301.2	12322.2	1796.9	4410.7	2252.4	1125.9	221.5	59.9	6.8	0.6
110	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	833.8	765.1	785.7	793.8	815.4	798.0	860.5	865.9	843.9	853.2
10	829.4	821.6	814.2	793.7	814.1	804.2	763.1	801.2	1037.2	974.4
20	852.3	846.5	848.1	824.1	824.8	766.7	807.6	833.5	846.3	794.6
30	878.2	928.4	1036.3	958.2	292.9	230.3	188.0	166.4	127.1	113.5
40	95.8	85.1	67.9	77.1	67.2	86.2	68.2	60.9	60.3	55.5
50	11397.1	3180.5	13159.1	5808.5	1086.3	38.2	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	735.5	610.4	642.3	639.0	716.0	698.3	695.0	732.9	739.6	704.9
10	712.6	747.5	677.0	671.9	724.4	692.1	709.9	686.6	692.3	947.8
20	908.7	812.3	798.4	764.8	771.8	728.6	771.1	760.8	739.1	748.1
30	719.1	686.6	748.4	687.1	754.3	788.0	804.9	866.8	877.5	907.4
40	965.9	448.4	255.0	212.0	180.9	132.3	104.7	85.1	59.4	63.2
50	62.8	54.6	41.6	37.9	41.1	43.3	36.6	43.7	7822.9	1231.4
60	12166.0	5770.8	1742.1	226.6	8.9	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	583.3	527.4	594.3	604.4	626.2	602.0	641.3	635.9	662.6	626.8
10	651.6	633.8	645.2	631.3	679.4	626.9	611.7	612.9	623.7	786.2
20	826.6	711.6	726.8	679.7	709.1	708.7	690.5	675.4	659.2	658.7
30	704.6	660.9	705.9	694.2	692.2	693.2	674.8	755.5	687.0	716.0
40	753.3	712.0	803.1	791.0	809.2	856.2	636.2	243.9	196.9	180.5
50	154.8	126.6	90.2	56.5	52.9	41.4	47.4	46.7	46.1	48.7
60	34.9	31.6	15.6	28.8	6238.8	2888.8	9608.6	5144.7	1540.3	250.0
70	16.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	469.9	412.7	473.3	447.2	487.2	509.4	538.2	522.6	472.5	513.6
10	532.4	520.0	499.0	510.2	510.9	507.4	548.9	479.4	527.8	548.5
20	706.6	674.7	598.8	560.5	588.4	560.1	600.3	541.1	550.4	586.4
30	554.6	562.9	547.7	561.6	513.7	560.3	537.1	535.1	540.8	535.7
40	566.4	555.1	525.4	567.1	593.4	578.7	566.5	598.5	608.2	628.6
50	624.6	653.6	674.8	654.4	647.4	686.6	665.3	734.9	668.7	251.8
60	233.2	188.7	161.2	111.7	91.2	87.3	69.2	50.3	35.9	37.6
70	44.1	36.2	28.7	24.5	28.2	22.5	16.3	2924.6	3974.9	6806.1
80	4608.5	1798.0	445.6	83.5	4.2	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	461.4	411.3	411.6	440.3	440.8	441.8	475.1	470.0	503.6	512.9
10	484.8	497.1	478.6	448.4	471.2	474.4	512.9	533.9	517.1	492.1
20	613.6	662.5	634.1	533.9	545.2	555.5	533.0	515.5	555.1	538.6
30	493.3	520.6	520.8	501.9	505.9	551.1	543.8	548.4	531.7	543.1
40	506.1	508.5	513.9	521.3	557.4	523.9	552.0	538.7	559.4	577.5
50	585.9	595.9	606.9	640.4	636.8	657.0	647.6	661.7	631.3	661.2
60	717.7	653.0	264.7	222.7	164.9	161.2	131.3	90.6	76.9	70.7
70	35.6	29.3	29.9	29.5	31.5	25.3	12.3	20.8	15.1	18.1
80	2455.6	1374.0	7785.6	4522.1	2472.9	845.4	137.6	15.3	0.9	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	325.2	316.5	355.5	345.0	312.1	348.9	344.9	398.6	378.4	369.2
10	388.2	343.6	382.2	338.4	370.9	383.4	410.6	375.8	398.0	383.2
20	361.8	524.6	543.3	491.9	430.5	439.9	379.6	419.0	398.6	410.7
30	406.6	409.4	414.2	394.2	431.3	418.6	412.9	413.0	428.2	449.2
40	434.9	397.3	414.2	393.9	390.4	417.7	387.6	413.1	405.0	403.8
50	426.1	400.2	395.6	390.7	423.6	473.6	436.3	472.5	445.8	449.6
60	474.9	464.8	442.9	463.8	497.9	475.7	447.0	557.9	569.0	558.3
70	575.7	514.7	556.9	570.8	623.2	661.3	595.9	257.4	226.3	171.6
80	145.1	117.4	120.3	95.0	63.5	41.4	23.2	27.2	27.2	29.6
90	21.5	19.5	18.9	12.4	10.2	11.9	1621.4	2062.7	5727.0	4194.9
100	1631.0	507.9	102.9	15.5	1.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	485.5	480.9	527.5	539.3	502.3	543.8	528.4	538.4	546.1	549.7
10	530.6	751.3	691.2	610.3	623.2	598.8	552.6	595.4	545.6	589.0
20	544.4	578.1	591.1	526.9	606.7	578.6	562.1	585.8	589.7	563.2
30	575.3	562.0	547.8	600.5	581.1	582.1	609.6	640.6	643.4	713.6
40	707.6	696.5	736.0	735.7	789.3	779.9	831.2	925.0	937.1	914.7
50	977.4	995.9	479.8	323.1	203.0	163.7	88.9	57.9	32.3	18.7
60	10.5	19.2	3786.3	6367.7	1942.4	160.9	13.9	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	402.8	368.7	425.2	389.4	440.8	405.5	414.8	401.4	441.5	466.6
10	451.4	620.5	635.3	484.1	514.6	517.6	475.9	501.7	480.8	459.4
20	466.1	462.0	484.5	552.6	579.7	461.0	474.8	460.8	460.2	424.9
30	479.2	462.0	499.0	455.0	482.6	477.2	461.0	515.9	477.9	476.5
40	523.1	503.7	503.6	486.6	523.9	507.3	550.5	564.0	607.7	688.8
50	678.7	624.8	625.9	683.1	683.5	746.6	796.0	769.6	752.1	851.5
60	929.1	760.6	355.6	277.7	197.6	143.2	79.1	58.6	43.8	22.1
70	21.2	9.4	2707.5	5657.7	1612.8	155.5	11.1	2.6	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	294.2	291.8	304.9	284.2	320.1	358.5	320.9	336.5	325.1	332.7
10	312.7	393.2	486.2	403.7	371.9	381.1	334.4	333.5	356.2	349.2
20	318.7	327.7	313.7	311.6	332.9	360.3	344.2	325.2	324.8	310.7
30	335.8	310.0	321.2	314.5	314.5	307.4	311.9	331.2	343.6	639.6
40	566.7	361.9	373.0	377.8	385.5	364.3	361.7	385.1	400.6	409.6
50	373.2	371.3	421.2	392.8	391.0	441.5	433.1	432.0	449.8	450.1
60	434.6	435.5	458.0	481.8	565.7	722.4	702.6	529.7	558.4	572.3
70	585.3	655.1	605.8	660.6	702.7	704.6	719.4	605.7	340.3	253.7
80	178.6	130.8	72.9	49.6	30.6	27.6	19.0	15.3	1848.0	4172.3
90	1942.7	285.4	36.9	6.4	1.1	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	274.6	251.8	271.5	277.4	278.7	253.2	274.1	276.1	275.2	266.9
10	315.3	366.6	479.6	417.6	330.3	312.8	307.5	299.0	300.3	310.2
20	301.9	277.8	264.1	292.2	284.4	299.6	295.4	259.1	300.5	261.4
30	279.2	289.4	275.5	299.7	284.1	287.6	297.2	300.4	292.1	297.2
40	300.8	306.5	281.5	261.2	303.9	282.3	316.6	913.5	408.0	353.9
50	367.2	361.2	349.0	354.9	394.9	358.1	249.8	377.6	358.7	404.8
60	387.9	393.9	394.2	401.1	397.1	386.2	439.7	428.4	410.4	427.4
70	409.2	465.5	632.7	851.1	672.7	520.4	513.9	545.1	561.2	614.9
80	616.3	635.7	661.6	692.5	713.3	537.9	314.0	226.5	164.4	127.8
90	86.9	55.1	30.9	22.3	15.5	11.9	1772.6	3829.3	1517.6	281.4
100	39.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	455.7	446.7	491.6	496.4	644.3	708.3	563.5	570.1	483.3	512.6
10	535.8	459.3	466.6	532.5	501.1	497.7	506.0	504.8	511.9	482.2
20	506.1	523.4	541.0	576.7	580.2	571.4	541.7	561.2	1831.4	843.4
30	799.1	856.2	898.0	896.1	900.9	850.3	951.9	902.1	1487.4	1654.2
40	1143.3	1222.6	1354.5	1210.8	509.6	228.5	103.1	28.4	4875.9	1024.4
50	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	412.9	373.9	413.4	426.2	504.1	607.9	494.6	457.1	461.3	426.5
10	441.8	386.9	441.2	385.1	407.7	448.8	398.2	440.0	409.5	417.6
20	425.5	450.2	412.3	452.9	448.3	448.6	506.1	483.4	479.6	492.8
30	506.2	540.4	587.9	1988.1	864.2	816.4	813.6	876.2	854.3	894.2
40	752.3	775.1	809.3	1874.3	1452.4	1082.7	1148.6	1231.1	996.9	401.7
50	201.2	88.9	77.8	4518.4	768.6	8.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	312.0	354.7	321.6	391.2	425.7	551.9	424.0	393.0	369.8	367.4
10	391.2	369.6	340.0	358.7	375.9	369.1	354.9	296.7	342.3	380.4
20	387.7	376.4	417.9	399.8	371.7	366.1	394.6	409.1	400.3	429.1
30	439.7	486.1	483.8	478.4	501.7	531.3	506.7	545.7	2299.1	850.0
40	839.0	878.1	810.7	888.1	843.2	752.1	753.6	767.3	2332.3	1054.7
50	1014.2	1083.8	1137.8	763.8	360.0	158.2	52.3	469.4	3857.1	295.5
60	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 16. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	196.9	222.9	218.5	245.0	243.4	380.3	275.5	225.3	241.2	239.2
10	305.2	235.1	217.1	203.7	203.4	221.8	180.1	218.0	224.9	209.0
20	237.8	237.4	218.2	192.9	219.8	240.7	214.0	254.7	226.4	244.1
30	251.7	254.9	277.9	272.2	264.5	287.4	290.0	279.2	256.6	278.9
40	322.8	305.3	319.4	320.0	305.9	305.2	307.5	317.0	343.0	383.2
50	404.1	418.2	412.1	451.7	481.9	489.9	463.9	2807.5	923.9	829.1
60	781.1	862.6	821.3	802.3	727.6	597.7	599.2	2273.4	1666.7	829.8
70	837.5	831.7	676.7	363.0	201.5	72.8	100.3	2475.4	816.2	29.6
80	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	283.5	259.3	358.6	280.9	243.8	300.6	216.9	227.7	219.6	204.7
10	231.4	228.1	216.1	234.2	230.3	226.6	241.1	250.2	230.6	243.1
20	264.0	249.0	277.2	262.9	278.8	272.8	288.0	289.1	290.7	328.3
30	327.5	345.1	361.2	380.7	363.7	413.7	444.1	449.0	457.5	518.3
40	579.4	603.1	654.6	804.6	873.7	997.9	997.3	1931.6	3426.9	1663.6
50	1592.8	1255.0	1231.4	3535.4	1017.0	827.1	339.0	419.2	1478.8	17.7
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	191.9	178.4	217.5	196.4	157.3	225.9	126.4	137.1	117.9	150.2
10	140.1	158.5	126.7	152.6	170.1	129.8	163.8	150.1	153.1	155.7
20	132.4	158.6	139.3	181.1	176.3	162.5	166.5	173.1	173.8	171.3
30	169.6	189.1	185.1	203.3	170.7	186.1	224.6	206.7	237.6	235.7
40	234.3	239.6	260.9	282.0	274.9	325.2	296.9	279.1	301.6	345.3
50	389.9	397.7	433.1	395.9	452.6	518.8	514.4	539.2	627.3	662.3
60	713.8	773.4	898.0	994.5	1061.4	1103.8	1234.5	3654.9	1640.1	1485.6
70	1234.8	810.3	3172.0	921.4	719.1	365.3	110.6	1023.6	132.9	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	160.1	136.8	219.2	153.5	145.7	175.7	94.3	98.4	108.7	100.0
10	113.0	103.0	101.1	85.9	105.4	106.9	112.9	114.8	101.7	119.3
20	110.0	93.0	122.7	130.0	136.4	116.5	104.5	124.4	139.4	126.7
30	117.2	118.2	136.3	106.1	114.0	122.5	121.3	156.2	147.1	141.0
40	170.0	150.7	139.9	156.5	154.4	154.2	142.1	185.4	182.6	176.8
50	200.2	200.1	210.9	218.6	222.5	225.0	257.8	260.4	237.0	274.2
60	281.1	316.9	322.2	334.6	349.6	358.1	395.5	390.6	432.9	442.5
70	448.9	460.6	524.3	546.5	541.2	586.3	598.7	657.4	682.0	761.8
80	843.6	969.7	1032.2	1118.2	1200.0	1063.8	2713.7	1702.5	1359.2	1216.6
90	728.2	1862.6	1429.1	504.9	341.3	114.9	430.9	293.1	4.5	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. Response functions of a 3"ϕ spherical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.0	3.6	16.8	28.6	47.6	51.1	61.5	1577.8	1955.6	114.2
10	144.1	4580.4	9258.7	35.5	26.3	2.3	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	3.3	11.5	22.2	24.2	31.6	135.9
40	246.1	491.0	567.3	626.9	38782.7	20574.7	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.7	5.0	5.3	7.7	17.0	21.3	16.8	36.5	36.1	10.2
10	7.7	13.7	16.7	13.3	25.4	46.5	63.4	54.5	79.5	617.1
20	2504.9	78.0	96.7	169.3	11953.0	39.6	28.9	9.2	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5
40	5.3	13.7	13.0	7.3	24.4	15.7	21.7	45.3	139.1	175.3
50	205.5	232.5	322.7	391.8	578.9	9757.7	1464.0	58217.8	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.2	10.4	12.6	9.2	13.6	13.3	8.9	11.1	14.0	27.2
10	38.1	38.6	50.1	7.7	0.0	1.1	2.5	4.4	6.7	9.9
20	8.6	9.5	12.6	21.2	43.7	50.2	43.4	53.9	47.6	45.5
30	73.7	2518.2	58.0	74.1	92.4	6399.1	3403.7	23.8	19.6	1.4
40	0.0	0.0	0.0	0.0	2.0	2.0	3.0	8.3	5.7	10.8
50	12.9	13.7	22.4	12.3	30.4	46.3	129.0	127.8	148.1	166.0
60	213.2	214.8	271.6	298.0	380.1	559.2	10004.6	866.2	58130.1	6637.1
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.2	6.6	7.1	11.1	11.9	8.9	13.0	12.5	7.6	12.8
10	22.7	20.3	21.6	14.9	22.9	33.6	28.2	32.2	42.1	40.5
20	45.0	74.8	19.4	0.0	1.9	1.7	1.4	1.0	2.5	2.3
30	2.5	2.8	1.1	5.2	5.4	2.6	3.4	8.5	13.6	16.9
40	18.0	14.4	19.0	16.7	15.8	22.8	21.2	28.2	20.1	26.8
50	22.9	32.2	341.3	1421.1	48.1	51.4	69.9	6178.1	73.3	43.9
60	9.0	12.6	10.2	5.2	14.3	21.2	11.6	19.9	28.2	31.4
70	63.6	74.6	98.4	93.4	133.6	131.1	124.8	144.5	157.2	181.2
80	172.0	208.9	228.2	252.4	264.0	293.2	10211.2	468.6	492.5	33940.2
90	36720.6	905.4	91.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.8	5.6	8.7	7.3	17.3	9.3	9.1	10.6	9.1	12.1
10	15.0	18.2	17.2	15.2	20.9	18.8	20.1	23.8	21.2	24.8
20	27.3	17.7	24.9	44.0	27.4	38.7	54.4	56.4	54.3	61.6
30	64.7	80.7	42.0	0.3	4.7	2.0	2.9	1.1	3.9	3.4
40	2.8	1.4	3.3	1.5	3.9	1.1	2.7	1.0	3.7	12.8
50	8.1	10.6	5.7	12.5	9.6	8.9	8.7	14.0	7.7	8.6
60	5.6	12.8	13.7	14.1	13.8	14.6	19.5	30.2	20.8	22.9
70	30.8	24.0	204.1	804.6	220.1	33.7	46.4	1872.6	2147.6	50.5
80	75.1	61.7	41.7	65.2	58.7	75.0	70.6	99.7	83.5	90.4
90	105.4	95.2	111.6	110.9	116.0	129.3	125.2	145.3	129.9	159.7
100	152.4	171.8	190.0	207.8	224.0	1399.6	8743.5	351.5	366.6	531.1
110	68200.9	4342.1	813.9	1371.9	357.3	12.8	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	13.5	23.3	16.7	19.9	38.4	43.1	31.3	36.5	35.7	50.2
10	44.2	46.9	48.0	55.2	58.6	70.4	57.3	78.2	88.8	92.6
20	111.3	134.6	152.0	161.3	123.2	6.5	9.3	5.4	2.4	2.0
30	4.6	6.8	6.9	4.9	10.7	10.7	17.0	12.5	24.6	14.8
40	17.7	19.1	20.1	21.9	20.7	29.0	31.2	45.5	67.6	84.2
50	122.4	728.8	132.2	1739.1	794.3	168.7	241.7	129.9	162.9	159.9
60	218.7	179.2	206.1	233.4	259.5	287.9	321.5	4598.0	5409.6	18485.2
70	52979.1	2049.3	4108.5	441.7	67.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	27.5	30.9	25.2	24.9	42.1	30.8	57.8	48.1	52.2	50.4
10	48.3	56.3	56.0	55.9	69.6	47.7	61.3	65.5	60.8	69.4
20	85.5	74.6	69.3	65.0	80.1	100.7	87.4	119.4	119.8	130.9
30	136.9	143.7	163.9	183.0	216.2	93.2	11.6	12.0	10.1	18.2
40	13.3	11.2	10.3	18.7	17.5	12.9	11.8	15.1	11.3	18.3
50	10.8	17.0	12.8	22.3	21.1	31.0	57.5	52.2	84.9	68.4
60	80.1	96.8	93.2	82.2	95.3	110.5	93.6	99.6	234.8	327.7
70	132.1	1429.9	163.4	163.4	207.8	144.2	169.6	167.8	171.1	174.6
80	175.6	204.5	186.0	243.4	3774.1	5095.9	530.2	64254.3	2865.1	3075.4
90	6648.0	929.3	584.2	40.6	6.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	53.2	50.6	44.9	38.2	41.4	54.1	56.5	45.6	71.3	69.5
10	81.9	63.6	72.1	66.5	60.6	75.0	71.9	70.7	69.4	74.5
20	78.6	81.6	87.5	81.3	74.4	74.5	91.0	77.4	92.5	90.0
30	88.6	97.6	111.7	102.8	114.5	106.7	124.2	133.9	125.6	147.8
40	133.3	157.0	176.7	192.1	205.6	211.3	236.7	17.3	21.9	29.8
50	19.7	19.2	18.4	17.8	13.6	14.7	16.8	22.3	13.8	25.8
60	15.5	34.8	36.0	43.4	59.4	67.3	59.8	54.5	63.1	65.6
70	58.7	54.5	73.2	57.4	56.1	78.5	80.2	79.1	63.4	64.4
80	83.1	83.6	95.6	80.5	91.5	122.2	296.3	430.6	603.6	136.3
90	143.5	172.2	169.7	113.3	114.2	131.3	132.4	138.6	149.5	136.6
100	160.9	3384.9	4069.5	510.3	55944.6	2660.9	3427.8	4708.7	8766.9	965.6
110	1114.6	287.5	69.7	6.6	1.1	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	405.4	283.5	314.8	310.4	311.1	283.0	339.1	327.6	304.0	312.9
10	329.8	332.8	292.7	330.4	323.3	333.0	323.3	313.4	301.8	313.6
20	307.9	318.5	326.0	308.5	339.0	363.2	355.5	352.6	423.4	446.7
30	544.1	635.7	609.6	357.0	130.3	138.4	133.2	114.0	123.8	111.2
40	111.7	110.6	107.4	105.0	113.1	118.2	127.9	132.9	130.2	127.3
50	123.7	139.7	128.9	222.0	420.0	174.7	232.5	178.2	159.7	4332.1
60	27506.5	9723.6	11826.9	13940.0	5256.5	965.4	87.7	1.1	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	421.3	321.3	371.0	362.4	383.1	359.4	379.4	348.3	397.2	405.0
10	369.4	398.5	411.8	387.7	385.2	389.7	389.9	383.7	417.2	394.6
20	375.2	384.4	391.2	361.0	358.9	391.2	351.2	365.4	356.3	363.9
30	358.2	396.7	417.9	467.3	461.6	448.3	405.8	471.8	476.1	465.5
40	434.1	448.4	466.3	455.6	524.5	543.4	555.8	597.0	591.0	220.2
50	167.2	149.0	119.4	112.2	119.2	110.5	94.6	88.1	82.1	76.9
60	71.1	75.5	66.7	67.8	60.3	65.8	81.6	91.0	72.5	96.1
70	87.5	87.1	79.2	76.7	64.5	58.4	72.1	81.7	74.6	22937.4
80	1400.2	3953.9	18386.0	5797.3	5443.9	1753.0	314.5	58.0	3.3	0.1
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	435.8	307.9	310.9	334.2	347.4	339.6	351.5	346.6	364.2	394.6
10	393.6	387.9	378.6	382.1	372.6	380.4	370.6	366.7	390.1	412.3
20	422.3	367.5	374.3	375.8	392.3	389.6	348.0	376.1	356.6	364.1
30	371.1	348.1	362.8	364.3	389.2	408.8	480.4	492.9	455.1	464.3
40	426.1	405.9	393.7	438.6	432.9	416.1	395.2	391.4	380.8	415.2
50	390.5	419.5	400.3	395.3	446.9	437.8	396.3	460.6	462.5	477.6
60	492.2	498.5	494.8	523.4	544.9	355.8	148.3	159.9	131.2	127.1
70	113.1	95.5	86.6	77.0	73.8	50.5	62.8	68.4	54.3	47.9
80	43.8	50.3	59.6	53.9	47.9	44.9	49.9	49.8	41.2	45.1
90	53.1	41.6	50.5	42.8	47.7	42.5	40.1	44.8	14444.8	1073.5
100	2309.6	16469.1	3821.2	7079.1	2449.6	1504.5	397.0	70.3	9.0	1.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	717.7	670.6	688.8	694.1	707.1	753.8	749.7	770.5	783.1	684.3
10	764.0	726.5	733.8	756.4	716.1	778.3	736.3	748.1	964.8	886.1
20	817.6	862.7	832.1	834.0	779.4	812.8	823.9	824.5	875.1	825.1
30	940.0	990.1	1066.9	1003.2	315.6	241.3	213.1	178.1	141.6	125.6
40	113.6	99.5	106.8	105.3	100.6	104.0	91.2	80.0	93.0	67.8
50	13808.7	7719.3	16893.4	8428.1	1363.7	67.6	0.9	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	606.9	541.1	598.3	636.1	656.0	614.3	637.7	693.2	701.2	685.4
10	722.4	652.8	614.8	685.4	666.5	696.5	722.3	668.9	710.3	850.3
20	850.4	802.1	753.5	764.4	749.1	749.1	738.5	780.8	743.4	797.1
30	755.5	756.3	710.9	804.0	820.5	823.7	816.8	861.9	914.7	939.6
40	996.0	381.1	270.0	222.6	187.9	127.4	128.9	105.5	89.1	67.7
50	73.7	70.9	66.3	60.9	69.0	60.4	52.5	59.9	9643.8	5747.8
60	14541.7	8948.1	2852.8	388.1	12.0	0.2	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	556.8	519.7	541.8	586.2	612.8	619.3	612.9	660.3	627.1	597.7
10	629.2	628.9	624.2	602.1	606.6	618.7	622.7	618.3	653.0	748.8
20	827.7	779.5	717.7	725.7	701.1	745.4	673.5	729.4	696.1	671.9
30	646.7	699.5	715.1	739.6	712.7	741.8	674.4	697.6	730.2	719.9
40	759.9	765.8	871.0	808.5	896.9	989.1	632.0	272.3	243.7	180.9
50	182.1	151.1	104.1	88.5	68.2	53.1	51.7	64.3	63.1	67.4
60	54.5	53.0	47.9	42.2	7958.9	9922.9	9878.1	7653.0	2759.5	479.6
70	35.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	486.8	432.6	440.1	485.3	470.7	463.6	479.9	483.4	511.8	509.4
10	507.8	516.1	518.0	502.1	540.2	538.7	511.3	520.7	507.3	565.0
20	683.2	666.5	617.1	623.1	620.5	597.9	633.1	586.3	558.0	580.9
30	600.1	618.6	544.5	601.4	554.6	575.8	582.9	575.8	600.6	585.9
40	562.1	585.8	597.3	613.7	585.2	610.9	619.3	674.5	675.7	642.9
50	686.4	728.1	727.0	707.0	735.0	757.0	786.4	816.5	619.4	277.6
60	253.1	217.2	144.1	129.5	114.1	88.8	64.6	53.3	60.3	47.2
70	51.9	42.5	39.2	31.0	30.1	39.1	28.4	4942.9	10500.2	5505.8
80	7416.9	2911.3	818.1	110.6	10.3	0.5	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	451.4	371.0	455.5	417.2	467.8	474.7	520.8	477.9	512.5	489.5
10	527.1	496.1	471.7	500.7	479.5	479.6	504.4	500.4	489.9	505.5
20	581.7	609.9	638.5	569.4	568.4	554.7	562.9	525.3	552.5	540.1
30	578.9	549.6	536.2	546.8	555.9	554.5	615.4	564.7	587.1	611.9
40	579.8	592.9	572.9	596.2	604.9	564.8	576.0	574.4	570.4	593.6
50	580.5	603.6	603.9	696.8	703.9	734.6	661.6	692.0	680.6	749.1
60	787.5	654.2	306.8	247.7	196.1	166.5	145.8	118.2	100.5	83.9
70	58.2	69.3	46.2	43.3	44.9	29.3	31.4	29.3	33.7	19.3
80	4415.8	818.1	12595.2	8136.1	3673.6	1354.7	273.6	29.7	0.3	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	379.5	316.4	339.8	337.2	367.6	385.0	372.1	341.4	389.2	357.6
10	371.6	396.2	398.6	404.8	382.3	382.7	408.0	429.0	430.1	382.2
20	389.1	530.1	549.8	526.8	499.3	445.8	445.6	477.8	428.3	457.7
30	451.9	425.6	452.5	460.2	460.7	474.1	460.9	440.5	444.2	408.5
40	415.0	425.1	448.2	427.6	484.7	458.7	423.8	417.7	422.9	486.2
50	487.1	474.6	517.9	434.6	513.8	523.2	506.1	497.5	548.7	510.1
60	534.9	522.3	545.1	569.7	528.1	567.0	551.0	609.4	573.3	613.2
70	656.3	629.2	614.7	636.4	678.5	680.6	553.6	265.5	243.5	183.9
80	177.9	122.8	100.3	94.9	56.4	47.7	39.4	36.5	29.8	25.7
90	33.1	22.6	31.8	20.8	17.0	21.1	3006.9	4846.0	8252.9	6362.7
100	2737.0	901.6	192.0	30.7	2.6	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	509.8	519.9	549.1	533.1	579.7	561.4	544.0	565.9	590.1	629.4
10	577.2	814.3	751.3	726.8	683.0	656.0	701.5	624.2	653.3	629.5
20	620.2	653.3	629.8	617.0	606.6	634.6	601.1	678.1	624.5	654.8
30	627.6	661.6	714.5	690.5	678.3	700.2	700.6	732.5	771.1	848.7
40	809.9	819.6	853.6	851.9	904.5	931.5	997.8	1044.0	1024.0	1107.1
50	1096.8	1038.0	529.9	359.9	245.5	175.6	100.3	80.6	61.9	35.5
60	34.9	31.8	7769.4	9820.2	3185.5	306.6	17.9	1.9	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	432.8	397.7	435.2	448.2	465.5	454.0	470.3	501.6	497.4	471.2
10	465.2	637.4	630.8	579.6	561.1	515.5	512.1	520.9	501.1	522.1
20	464.6	502.9	514.3	617.6	577.8	539.8	486.7	528.7	554.6	524.3
30	509.5	521.4	568.7	517.6	580.1	556.1	558.4	547.2	573.7	556.5
40	575.1	599.1	561.6	594.8	625.6	646.6	640.3	703.0	736.4	857.1
50	820.4	760.7	754.2	804.4	790.6	856.6	924.6	925.7	957.3	979.7
60	1046.5	750.6	418.5	314.0	212.6	153.2	96.4	62.2	42.0	35.8
70	32.5	263.5	5889.5	9347.2	2405.6	296.6	24.6	3.9	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	334.0	291.2	331.4	313.6	350.4	338.2	326.4	376.3	359.9	373.1
10	385.8	421.7	530.5	473.5	424.6	428.8	429.1	389.9	415.7	391.0
20	395.2	386.4	353.8	378.9	416.4	398.9	365.1	338.6	354.6	377.2
30	338.6	395.8	359.8	384.8	388.5	372.1	378.4	391.1	375.9	632.4
40	523.1	440.6	432.8	445.4	446.4	444.4	467.8	463.9	442.6	466.7
50	492.6	453.6	460.2	492.1	481.5	531.4	482.9	496.7	507.9	518.1
60	557.5	523.0	544.4	538.4	807.4	1003.5	876.1	689.7	638.9	716.2
70	724.7	758.5	764.8	802.3	819.0	873.4	922.7	650.6	353.5	295.0
80	205.8	144.9	103.3	59.0	40.4	29.4	21.1	16.5	4455.7	7359.4
90	2968.2	510.6	77.5	6.1	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	336.2	268.6	281.1	268.2	297.5	317.9	322.2	312.7	311.4	323.9
10	307.5	373.3	479.4	417.7	374.9	392.2	354.6	359.6	356.0	330.9
20	330.1	330.4	328.1	316.9	332.4	326.4	349.3	310.2	345.3	320.8
30	328.5	298.3	328.8	350.9	336.0	344.6	331.7	328.8	305.0	340.4
40	317.1	389.2	344.3	361.3	319.3	366.2	345.7	818.6	443.0	419.4
50	389.5	399.3	435.2	428.2	428.5	423.4	424.3	466.0	440.8	423.5
60	457.7	426.3	436.8	505.1	478.3	451.7	476.3	506.5	488.6	515.9
70	564.5	527.9	873.4	1217.7	828.3	692.2	666.1	645.3	716.9	749.4
80	732.8	803.5	811.9	875.6	833.5	572.1	354.1	255.3	183.1	125.5
90	96.2	65.6	38.8	23.0	20.7	196.5	4525.6	6475.7	2295.8	460.2
100	83.3	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	517.3	540.6	545.9	534.6	648.6	767.9	644.5	645.5	614.2	558.5
10	621.9	549.2	582.2	578.4	534.4	589.6	571.5	542.3	602.3	618.8
20	616.6	617.9	609.5	672.1	618.8	721.3	660.3	687.7	1690.1	971.0
30	953.0	986.5	1008.5	1080.2	1040.2	1019.2	1152.5	1070.6	2369.8	2143.1
40	1464.1	1583.5	1728.4	1480.6	605.1	300.4	105.6	201.2	10048.7	1555.1
50	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	424.5	446.7	497.3	493.7	564.6	716.5	531.8	505.7	493.8	529.2
10	562.5	496.5	439.9	471.8	454.3	458.9	492.8	523.5	505.7	526.9
20	505.4	513.4	516.2	541.2	552.5	579.8	531.7	558.7	589.7	587.4
30	644.3	655.7	650.4	1933.4	998.0	949.0	993.3	1027.7	1020.1	997.5
40	983.0	983.4	1037.0	3077.1	1994.5	1399.6	1498.7	1620.5	1195.6	551.9
50	300.1	106.0	531.0	8768.3	1160.6	12.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	375.8	376.9	408.7	392.3	439.9	632.0	517.1	444.1	430.6	471.6
10	512.9	410.4	392.2	360.9	387.3	410.3	360.6	414.8	395.7	424.2
20	456.3	449.2	459.5	448.4	441.1	461.1	463.5	477.2	484.3	476.2
30	497.3	531.9	520.3	549.1	578.2	590.0	617.5	989.0	1863.6	956.0
40	1017.5	991.2	1022.0	995.2	1082.5	965.4	995.0	995.1	3939.4	1521.7
50	1339.5	1448.7	1475.8	893.9	449.3	179.0	62.5	2623.2	6688.0	487.9
60	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 17. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	225.2	237.4	242.2	245.8	319.5	427.0	322.6	259.4	259.5	252.9
10	363.2	254.9	276.5	229.3	223.5	230.9	229.7	267.4	259.5	265.3
20	262.3	252.3	285.4	258.3	262.6	275.5	281.7	280.5	266.2	265.2
30	296.7	292.3	307.6	301.3	335.5	287.3	306.5	326.1	327.4	310.6
40	335.9	320.9	373.8	363.1	355.4	381.2	404.1	423.3	393.9	444.7
50	449.8	494.8	513.9	518.1	528.1	534.0	560.5	2645.2	1078.4	1019.7
60	1029.1	992.3	1041.9	1006.5	865.3	815.9	785.9	4264.7	2128.7	1081.4
70	1127.6	1229.5	855.1	482.8	237.3	78.5	653.3	5261.6	1330.4	43.4
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	293.0	278.4	422.0	354.1	321.6	388.6	269.7	260.5	230.7	248.7
10	258.5	245.4	240.2	262.1	251.5	263.3	247.8	279.3	271.4	272.8
20	283.1	309.3	291.8	288.9	340.0	328.9	311.8	361.9	346.9	380.0
30	396.1	397.4	410.8	442.4	440.8	452.4	459.2	535.4	536.7	598.8
40	634.8	700.1	837.2	861.3	995.1	1069.2	1151.3	2668.8	2981.7	2290.5
50	2156.8	1613.9	2827.5	5752.2	1819.2	1277.1	445.4	1790.6	2856.1	17.1
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	205.0	206.6	266.6	216.1	168.7	340.1	168.7	159.8	152.8	169.7
10	139.2	145.6	146.7	171.8	171.5	144.3	163.5	165.0	171.5	186.5
20	179.6	174.2	139.8	157.5	154.1	159.8	168.6	186.9	185.6	218.6
30	218.5	215.5	198.2	208.9	202.2	250.9	215.5	251.1	237.9	247.3
40	273.2	263.1	281.7	324.0	318.4	317.6	344.9	382.4	366.6	387.5
50	418.8	458.2	463.9	478.4	502.8	595.6	600.9	677.4	716.2	768.8
60	835.6	905.8	1018.9	1063.2	1319.0	1341.2	1750.2	3611.2	2190.2	2160.0
70	1689.7	1328.1	6082.4	1593.9	1220.6	561.9	424.0	2844.2	154.3	0.2
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	174.8	148.1	241.5	190.7	181.2	223.5	120.8	117.5	120.9	129.7
10	113.2	135.0	111.9	99.6	100.6	111.9	102.1	116.5	121.6	114.1
20	108.0	118.4	125.5	119.1	98.7	124.5	129.0	127.9	114.4	124.6
30	118.2	135.2	134.3	146.0	161.2	167.7	150.1	159.2	163.8	170.3
40	149.4	155.9	148.6	168.6	167.9	155.6	192.3	191.4	193.4	200.4
50	206.3	212.5	232.3	237.5	246.8	243.1	253.9	263.1	288.4	275.9
60	328.1	345.8	342.7	368.1	357.6	403.9	411.8	416.4	465.1	514.7
70	533.8	570.7	614.2	663.4	668.9	709.2	753.1	819.7	930.3	962.7
80	1035.6	1116.7	1242.8	1377.6	1428.4	1524.6	3273.3	2214.9	2094.7	1750.0
90	990.4	4803.5	1922.5	1054.3	627.7	216.0	1726.7	629.1	4.5	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. Response functions of a 5"ϕ spherical detector for parallel gamma rays. The number of incident gamma rays was taken to be 100,000.

GAMMA ENERGY = 0.040 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	3.8	3.8	18.5	36.4	50.0	51.0	56.1	1900.5	1619.0	120.1
10	137.6	6107.1	7667.3	28.8	25.1	1.9	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	1.0	4.2	13.7	20.0	30.2	31.4	172.4
40	285.7	537.7	556.9	754.4	45086.8	13487.4	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.050 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.5	3.2	3.4	10.4	20.4	23.7	21.9	34.3	44.0	10.6
10	9.0	8.6	20.0	18.8	26.9	35.5	60.8	66.8	89.9	617.3
20	2488.5	85.8	99.0	155.8	11856.3	31.5	32.6	4.7	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.9	1.1
40	8.2	7.2	13.4	16.0	20.1	22.7	23.4	73.1	125.9	157.6
50	216.6	227.7	304.2	418.6	643.1	9937.6	7211.4	51871.7	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.060 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1.	2	3	4	5	6	7	8	9	10
0	3.4	7.0	9.4	9.0	11.3	11.0	12.2	14.9	10.4	22.9
10	37.2	41.1	45.9	9.2	2.2	3.9	2.5	0.5	7.6	8.5
20	8.7	14.1	11.8	21.6	43.6	35.5	34.1	47.4	48.4	51.4
30	223.3	2320.2	63.0	68.6	98.2	7667.8	2135.9	19.4	17.9	0.0
40	0.0	0.0	0.0	0.9	3.2	0.9	5.0	6.5	4.3	10.8
50	14.8	8.2	19.6	13.5	30.6	48.1	100.1	126.1	148.4	184.3
60	204.1	213.3	269.0	284.5	420.6	4727.1	6044.5	1209.6	64051.8	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.080 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	2.8	5.8	6.6	8.8	11.0	8.2	10.7	12.4	13.0	9.8
10	19.7	21.6	15.6	22.1	25.2	27.6	30.8	39.9	45.1	39.5
20	54.6	68.2	14.0	0.7	2.4	2.9	0.0	1.0	2.4	1.6
30	1.0	3.8	5.2	5.1	2.1	5.8	4.9	6.6	14.5	16.7
40	21.3	17.2	17.0	18.0	18.0	23.3	20.9	22.4	31.0	32.6
50	27.8	35.0	777.7	924.3	53.9	43.2	80.9	6173.5	74.8	31.0
60	6.7	15.4	7.9	12.3	11.6	18.2	7.1	18.8	30.4	40.0
70	81.5	89.9	117.4	93.8	115.6	121.7	132.9	159.0	165.4	173.5
80	191.6	212.5	217.8	240.2	312.4	409.4	9985.1	488.0	508.0	60685.6
90	9896.1	813.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 0.100 (MeV) CHANNEL WIDTH = 1 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	1.8	7.0	6.7	6.5	14.2	8.4	9.0	8.8	13.8	12.0
10	16.9	17.6	20.1	17.1	16.0	17.3	21.5	24.4	21.5	20.5
20	24.4	21.2	29.4	33.7	30.9	40.6	50.8	52.6	51.1	59.4
30	58.6	71.5	32.7	0.7	6.3	1.4	3.6	1.0	3.8	2.0
40	0.9	0.2	3.3	0.7	3.0	2.2	3.4	4.6	3.3	8.7
50	3.9	10.6	9.4	16.8	11.2	10.2	11.6	10.0	8.5	9.9
60	8.2	13.4	12.6	12.7	17.4	18.7	25.6	24.2	26.9	20.5
70	24.8	20.9	225.1	915.7	30.4	39.8	55.9	3618.7	353.6	54.1
80	84.5	44.6	47.1	66.3	63.4	84.1	88.6	77.7	87.5	101.1
90	93.1	105.2	113.6	115.6	111.6	136.2	122.5	144.3	127.6	165.5
100	172.7	180.0	202.3	193.9	234.9	7201.1	2806.4	372.7	399.9	25758.6
110	46651.5	713.6	929.9	1318.4	47.9	2.9	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.130 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	10.8	12.0	16.4	20.3	22.9	24.6	25.1	30.5	31.3	50.2
10	38.6	39.1	49.8	63.4	52.4	53.5	51.3	71.3	89.1	102.6
20	115.9	123.7	157.0	169.8	106.1	9.9	8.3	5.1	3.7	2.9
30	3.9	4.9	9.1	13.2	9.9	14.9	8.7	10.5	22.7	21.7
40	17.9	17.7	20.0	26.6	33.6	25.6	36.5	58.9	57.4	96.6
50	106.6	737.7	132.0	2115.0	415.0	169.1	234.1	157.5	170.7	157.2
60	196.6	193.6	215.9	235.1	251.4	292.2	337.6	9313.9	637.5	49401.6
70	22566.2	2206.1	3863.1	277.6	21.6	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.165 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	17.3	17.0	24.6	14.0	29.4	27.4	43.8	38.0	40.0	43.8
10	39.6	53.9	47.1	61.4	60.4	51.7	53.1	60.7	63.0	70.1
20	62.0	82.2	72.7	64.0	82.4	99.3	89.2	101.5	111.0	119.6
30	140.0	152.2	182.5	211.3	208.5	77.6	12.0	8.9	10.2	12.2
40	13.0	6.2	10.4	12.5	12.6	15.0	12.3	13.5	9.1	16.4
50	13.9	19.8	12.2	17.1	22.2	32.2	38.3	69.3	85.8	61.7
60	76.1	88.9	82.0	93.3	97.7	96.6	84.5	98.7	383.8	194.7
70	674.6	902.6	155.1	162.2	167.6	154.8	160.4	138.6	177.1	159.6
80	189.4	205.9	207.5	238.5	8406.5	507.5	888.6	65023.5	2974.7	3551.0
90	6232.9	558.3	444.3	22.2	2.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.200 (MeV) CHANNEL WIDTH = 2 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	17.1	24.6	24.8	29.1	28.2	31.9	40.9	34.6	46.9	51.4
10	58.2	52.4	67.4	44.9	52.2	51.5	58.2	63.5	63.3	63.4
20	60.5	61.4	69.7	79.8	69.8	67.3	81.9	85.0	77.2	77.7
30	95.5	86.0	95.4	98.3	105.2	106.9	94.3	105.8	121.1	134.4
40	130.9	151.8	157.7	180.4	172.5	203.2	185.5	23.9	22.1	21.9
50	14.7	14.5	24.5	20.6	16.5	20.7	14.9	17.3	18.7	22.2
60	13.5	30.5	30.2	35.9	55.6	60.7	57.4	49.9	52.3	68.8
70	58.9	59.6	56.8	61.2	79.1	71.0	88.4	64.9	62.8	68.9
80	74.7	86.2	87.9	74.6	78.6	190.4	235.4	645.9	341.9	139.0
90	119.0	189.8	131.9	120.1	122.6	118.7	132.8	145.3	159.1	144.6
100	173.3	7212.7	402.1	718.9	57440.7	3238.3	3525.2	8779.9	4271.3	1074.8
110	1001.7	142.7	37.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 0.300 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	169.7	117.8	140.2	168.5	163.5	137.9	172.0	203.4	194.1	180.7
10	180.2	238.6	220.6	249.4	214.3	224.7	248.3	267.8	227.7	249.3
20	232.9	232.4	261.7	289.8	292.7	308.2	294.1	335.4	380.7	385.8
30	486.7	568.3	621.1	302.0	149.6	119.7	114.2	115.1	105.7	112.6
40	102.0	91.2	101.8	104.2	109.1	94.0	111.8	120.5	122.8	112.5
50	129.8	135.9	167.1	217.3	426.9	184.2	260.6	196.4	184.8	4701.2
60	36398.2	5868.1	20729.8	8179.1	5146.6	883.8	79.2	2.7	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.400 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	226.5	177.1	177.6	190.5	199.0	227.8	203.8	221.1	225.1	242.2
10	254.2	251.3	266.7	230.6	257.1	276.1	256.9	229.1	263.7	237.6
20	287.6	282.6	278.3	267.4	282.1	287.0	270.1	280.6	277.1	304.8
30	262.5	290.0	311.7	299.1	327.4	325.8	340.7	353.3	370.5	441.5
40	433.4	425.9	404.7	454.8	493.9	485.1	533.6	530.4	578.2	191.4
50	144.6	139.5	111.9	122.6	100.9	105.0	92.8	85.4	89.8	68.5
60	76.1	81.2	89.0	90.4	82.0	80.4	98.9	100.7	83.5	98.2
70	96.3	95.1	84.4	114.9	98.4	83.0	100.3	84.1	104.9	26038.7
80	2333.3	12345.2	15844.3	9974.5	4820.3	1986.9	391.9	44.1	3.3	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.500 (MeV) CHANNEL WIDTH = 5 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	231.3	205.8	198.9	208.6	196.2	212.4	228.2	230.5	217.5	250.6
10	254.1	230.6	243.4	255.2	245.2	265.8	275.5	257.3	262.3	278.0
20	277.8	291.6	296.0	281.7	255.8	282.4	282.1	266.8	283.7	272.6
30	274.5	276.7	300.8	291.1	301.4	315.1	321.1	339.5	332.9	318.9
40	338.6	337.2	326.4	358.2	383.8	347.0	350.7	345.8	379.4	358.8
50	372.3	369.3	374.5	331.6	368.8	377.4	391.3	398.2	430.4	431.8
60	428.1	499.0	484.9	513.8	512.5	267.6	160.7	152.8	135.8	118.8
70	112.2	94.0	88.1	82.0	76.6	71.3	76.9	76.0	76.3	57.6
80	62.8	57.7	62.7	62.9	59.4	59.1	57.1	73.4	51.0	51.2
90	71.0	65.3	64.3	47.9	63.1	58.3	70.8	47.0	17074.3	1990.1
100	7711.9	16950.8	7587.1	8655.7	3765.0	1676.7	594.9	102.2	20.0	2.7
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.514 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	407.6	388.6	438.0	436.0	461.7	516.9	514.0	521.0	518.8	493.1
10	526.5	532.0	551.2	554.6	515.2	553.1	553.3	591.1	632.1	638.0
20	627.8	654.9	658.3	673.2	643.5	671.5	762.2	706.0	748.3	741.6
30	843.8	951.9	1005.1	939.1	296.3	281.6	204.2	168.1	153.9	129.9
40	118.5	113.6	120.9	112.8	121.5	131.0	121.9	120.5	112.8	115.3
50	16527.3	18424.8	19328.0	9459.1	1706.6	104.4	1.7	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 0.600 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	407.1	384.4	422.7	441.1	424.6	452.5	476.9	459.1	501.0	529.9
10	488.0	510.8	490.6	491.7	505.1	510.3	552.1	506.6	565.7	616.9
20	635.5	635.5	637.4	634.1	654.4	666.1	623.6	636.9	655.6	642.5
30	648.2	716.4	681.6	703.8	729.2	735.2	717.5	826.0	876.8	944.3
40	941.5	344.6	254.1	225.8	191.4	150.6	144.5	113.7	99.6	83.5
50	94.1	82.6	77.3	86.2	88.5	77.1	96.5	71.2	11730.4	14025.0
60	16620.2	12745.6	4294.3	569.6	23.7	1.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.662 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	385.0	362.6	376.8	395.6	454.0	403.9	447.4	445.3	496.3	454.0
10	489.5	487.5	467.7	452.3	492.3	452.9	510.6	501.2	512.7	583.5
20	563.3	555.7	566.4	587.6	592.5	583.0	562.9	617.3	625.5	597.8
30	587.0	585.4	637.9	651.5	625.6	638.7	679.5	696.1	651.9	732.9
40	710.0	740.6	786.2	823.3	841.3	970.4	544.6	297.4	257.1	169.1
50	182.1	137.9	105.4	83.9	87.1	67.5	85.7	77.0	78.3	70.7
60	65.8	75.1	76.5	2059.2	7891.0	17386.2	12984.3	11482.6	4237.1	743.8
70	58.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.800 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	374.4	324.1	362.0	382.9	370.7	361.1	371.4	368.6	397.4	403.3
10	384.4	407.7	438.6	406.9	445.2	451.2	375.2	462.0	445.5	437.5
20	500.0	517.1	514.6	508.4	472.0	485.7	518.5	490.0	518.4	508.0
30	508.8	513.1	519.7	528.8	543.8	546.5	561.8	571.7	569.9	534.0
40	534.2	607.7	569.1	562.4	560.9	587.0	574.9	609.3	631.1	640.1
50	689.1	696.8	653.6	696.7	715.0	824.7	780.2	785.9	544.4	314.6
60	245.0	197.4	177.5	142.6	125.7	89.3	66.5	63.0	69.4	66.5
70	62.4	65.6	48.0	49.9	54.2	38.2	33.8	6431.1	16475.8	9796.0
80	11010.1	4986.7	1476.9	249.4	23.4	0.8	0.3	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 0.835 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	349.8	281.3	342.5	323.3	378.2	374.8	356.4	411.2	377.3	401.5
10	397.7	454.7	386.2	412.1	431.4	424.3	413.4	435.9	431.0	427.7
20	472.6	535.8	489.3	466.6	497.3	479.5	470.0	463.0	500.0	455.8
30	489.6	471.6	511.1	504.7	525.1	460.1	524.8	528.9	522.2	524.6
40	519.4	487.1	547.1	557.3	570.9	563.4	562.1	562.2	558.7	587.2
50	598.3	680.1	602.6	655.6	669.6	660.2	748.7	690.0	798.7	762.5
60	794.9	624.9	326.4	232.5	222.7	160.8	140.2	140.1	97.1	79.2
70	81.4	67.9	55.9	61.6	54.1	45.5	39.4	43.6	44.6	35.5
80	5468.9	7139.5	14454.0	13144.2	6237.8	2119.7	537.8	52.9	3.6	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 1.000 (MeV) CHANNEL WIDTH = 10 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	311.7	239.0	288.7	304.2	305.2	319.2	325.3	340.5	314.2	311.4
10	333.5	357.0	309.7	345.9	333.2	359.9	366.9	341.9	359.4	334.7
20	339.6	393.0	420.8	381.3	401.1	403.9	413.1	395.2	395.0	398.7
30	430.1	415.3	419.5	418.5	402.4	391.2	401.2	424.5	419.7	394.6
40	405.4	429.8	455.3	423.2	420.2	430.2	443.4	430.1	431.0	469.5
50	455.0	438.0	468.8	461.8	511.4	494.5	499.2	481.6	541.7	527.1
60	503.1	514.8	526.7	562.8	609.1	656.9	561.6	595.1	604.4	591.5
70	620.6	630.1	676.9	657.3	685.1	672.7	484.5	305.4	260.9	201.2
80	177.9	144.4	130.7	96.5	70.4	68.9	67.4	49.8	45.6	46.6
90	39.1	23.7	32.9	36.9	26.4	27.1	4256.9	12763.6	11400.4	8855.9
100	4753.2	1593.7	388.8	61.8	4.7	0.4	0.7	0.3	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.293 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	462.8	442.9	461.2	470.8	501.9	474.9	518.7	521.7	490.5	555.7
10	556.5	654.4	667.5	618.2	562.7	613.6	593.9	648.9	588.5	590.5
20	574.1	591.7	585.2	597.2	628.7	632.7	608.6	609.5	640.2	640.7
30	663.5	671.3	698.0	665.6	689.0	757.0	690.1	749.8	815.2	855.8
40	865.5	875.7	895.0	947.7	959.8	1023.4	979.7	1070.6	1155.5	1112.4
50	1186.9	1052.9	543.0	364.9	248.6	168.4	122.4	93.2	68.3	44.5
60	50.1	1390.1	11706.4	19086.8	5225.6	608.0	50.8	2.6	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.500 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	393.2	392.4	376.6	431.3	435.1	415.1	431.1	434.0	416.0	452.7
10	415.3	535.8	525.8	487.9	481.7	494.5	519.9	476.9	487.6	507.4
20	527.3	481.8	523.3	555.1	518.0	547.5	484.6	485.9	549.7	511.0
30	518.7	557.2	548.3	569.6	585.1	596.7	634.0	547.7	579.6	604.7
40	604.9	571.9	589.9	636.0	686.9	699.2	685.0	724.8	790.9	985.1
50	960.3	755.8	816.4	834.5	881.4	955.1	990.1	956.1	1031.1	989.7
60	1088.4	754.3	439.9	315.0	219.9	160.2	115.2	85.9	66.8	50.4
70	34.4	1223.9	13730.6	14420.8	4164.4	558.3	79.4	6.7	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 1.836 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	333.5	286.9	323.0	287.6	305.9	346.9	330.3	327.7	333.8	383.3
10	339.0	386.6	452.4	413.9	385.0	389.6	396.1	370.4	379.8	398.8
20	385.2	389.7	361.2	408.6	372.3	367.6	407.4	391.6	415.9	386.2
30	352.7	395.2	371.6	362.0	404.6	369.5	426.9	376.1	415.8	596.8
40	448.0	464.4	441.9	466.5	476.1	473.3	459.2	473.2	472.5	465.5
50	492.6	498.0	529.1	488.9	539.3	552.5	527.3	552.1	518.7	604.8
60	601.3	609.9	625.1	623.7	937.7	1343.4	958.8	740.3	772.9	782.1
70	836.6	860.8	892.0	947.6	975.1	1005.3	993.4	680.1	447.8	312.3
80	213.8	179.5	112.0	92.4	60.4	43.9	22.0	695.2	9714.1	13632.5
90	4439.8	920.9	178.5	21.2	0.9	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 2.000 (MeV) CHANNEL WIDTH = 20 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	279.9	249.3	253.2	268.2	261.7	276.4	292.0	293.7	305.2	289.5
10	310.6	319.0	397.7	389.7	367.0	333.8	331.1	346.1	329.7	313.0
20	333.2	343.5	337.4	336.3	321.2	291.1	345.5	324.6	326.9	295.6
30	320.8	327.6	313.6	310.1	327.9	335.5	346.3	345.0	363.4	328.5
40	326.3	343.5	379.1	355.4	342.2	375.7	389.8	662.9	402.4	438.6
50	412.7	445.0	441.1	458.5	442.7	429.2	448.4	471.8	496.7	493.6
60	497.0	476.7	561.7	544.4	533.7	522.5	520.6	535.8	580.4	576.4
70	624.4	637.1	1148.9	1767.3	978.1	749.9	729.9	777.0	807.8	858.7
80	847.6	921.9	924.3	950.9	871.2	563.9	386.1	298.3	221.4	151.6
90	95.2	78.3	66.4	31.5	28.1	1064.5	10828.2	11328.6	3816.4	910.1
100	175.0	14.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.500 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	482.4	539.4	545.8	526.2	608.4	748.0	582.1	620.4	616.2	586.0
10	615.8	633.2	543.9	540.8	563.4	607.5	606.9	602.9	609.7	654.5
20	623.9	643.9	663.0	663.3	718.2	752.8	759.2	750.0	1339.9	960.0
30	985.5	1099.6	1078.0	1140.3	1211.2	1220.3	1236.6	1341.3	3669.9	2646.6
40	1880.4	1944.2	2080.5	1703.1	730.4	336.2	115.3	982.8	20340.5	2762.4
50	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 2.754 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	419.4	430.0	466.2	473.5	477.7	612.1	559.1	493.9	518.1	471.8
10	496.1	506.6	502.0	470.4	525.5	492.9	499.8	512.3	497.4	491.0
20	532.4	449.8	516.9	571.4	603.4	597.6	640.0	618.9	668.7	678.1
30	659.5	697.6	716.4	1474.9	974.0	985.2	1052.9	1133.6	1180.5	1172.1
40	1161.5	1137.0	1201.8	4744.6	2345.1	1792.0	1793.1	1883.9	1403.7	666.9
50	281.7	116.1	2590.9	17852.2	2104.7	34.6	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 3.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	313.3	358.4	389.7	398.5	416.7	533.8	463.3	437.7	412.4	480.7
10	506.9	418.5	424.3	410.3	407.1	444.4	417.7	465.8	447.8	475.8
20	473.3	449.1	472.0	468.4	497.5	490.0	469.0	550.8	556.8	504.0
30	542.7	546.8	541.6	603.2	615.8	632.2	685.6	1077.2	1229.4	951.6
40	1009.3	1066.3	1123.7	1129.5	1121.1	1078.9	1108.5	1661.4	5372.7	1926.1
50	1814.1	1877.6	1933.0	1067.3	544.9	209.0	94.8	8078.8	12016.7	974.1
60	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 18. CONTINUED

GAMMA ENERGY = 4.000 (MeV) CHANNEL WIDTH = 50 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	220.1	224.7	243.3	257.5	283.7	365.4	314.7	301.1	254.2	247.8
10	345.2	254.8	237.2	269.2	258.2	242.8	278.9	234.4	279.8	279.1
20	256.8	243.4	286.8	276.2	248.9	288.2	276.1	258.3	248.1	290.0
30	285.0	285.7	344.9	314.8	342.3	302.8	304.6	362.4	305.2	334.0
40	359.2	359.4	363.2	393.4	411.6	399.0	432.5	419.3	461.7	499.4
50	459.4	538.3	515.2	493.8	583.8	627.2	809.7	1748.9	1031.7	1022.2
60	1075.4	1120.3	1176.4	1175.6	1009.2	1011.4	1426.9	7052.4	2603.1	1703.3
70	1719.4	1627.3	1188.1	629.3	287.1	96.5	3259.6	11574.7	2404.4	76.4
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 6.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	251.0	233.5	310.9	341.3	310.6	341.1	230.7	233.9	225.4	267.2
10	226.9	244.3	225.4	273.0	272.2	262.9	275.7	268.8	279.4	275.6
20	277.9	280.4	325.7	324.2	329.3	338.8	341.8	333.3	383.2	386.9
30	410.1	444.2	417.9	475.2	478.5	522.6	506.4	574.1	660.3	670.0
40	719.3	797.2	880.3	864.5	1018.6	1170.1	1235.7	2559.9	2658.5	2381.2
50	2439.5	1948.4	6441.4	7264.3	2963.9	1951.6	640.5	6592.1	6363.5	42.1
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 8.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	176.1	171.1	228.5	194.5	183.4	286.2	151.8	137.6	133.4	121.6
10	141.9	156.9	159.3	138.1	144.8	165.5	147.4	145.6	203.5	169.4
20	187.5	171.6	188.9	198.5	174.1	168.3	195.9	201.8	182.3	174.5
30	205.6	226.9	189.6	184.5	243.3	249.2	237.1	245.8	268.5	307.2
40	270.6	269.0	250.8	275.0	334.2	347.9	348.6	348.5	404.9	389.6
50	412.2	432.6	501.0	522.5	546.9	589.1	659.3	667.4	764.6	806.1
60	932.6	956.0	1105.7	1169.8	1338.0	1350.9	2131.5	3158.2	2536.2	2666.1
70	2075.9	3605.4	9479.9	2797.2	2042.8	815.1	2342.2	7702.2	263.8	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

GAMMA ENERGY = 10.000 (MeV) CHANNEL WIDTH = 100 (keV)

CH. NO.	1	2	3	4	5	6	7	8	9	10
0	125.3	99.0	155.0	154.7	162.5	191.5	106.0	94.4	102.1	108.0
10	95.8	112.9	111.1	87.1	109.1	97.0	104.5	108.4	115.7	92.7
20	101.7	118.7	122.2	104.7	128.1	117.3	113.2	126.1	130.4	118.5
30	123.0	137.7	138.4	147.5	140.9	147.1	142.6	117.1	149.9	172.8
40	161.2	181.9	178.0	168.9	168.0	144.7	200.4	206.6	228.7	192.4
50	210.6	237.0	226.2	290.2	268.3	263.9	282.7	274.4	304.2	280.8
60	315.6	347.7	372.5	363.2	401.9	434.9	453.3	452.5	532.4	514.9
70	558.1	582.1	592.0	687.1	731.8	742.0	783.9	855.1	929.6	968.9
80	1071.3	1207.5	1321.2	1574.1	1621.1	1947.6	3221.8	2590.2	2680.4	2148.5
90	2554.5	8668.9	3160.2	2031.9	1062.6	747.2	6666.1	1012.7	2.1	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 19. Calculated gamma ray scintillation efficiency of a 3"ϕ spherical detector. The efficiency was normalized to 1.0 at 0.662 MeV.

GAMMA ENERGY (MeV)	SCINTILLATION EFFICIENCY
0.016	1.125
0.020	1.140
0.025	1.145
0.030	1.140
0.034	1.133
0.040	1.123
0.043	1.134
0.050	1.141
0.060	1.137
0.080	1.120
0.100	1.100
0.130	1.078
0.165	1.064
0.200	1.052
0.300	1.032
0.400	1.020
0.500	1.012
0.514	1.010
0.600	1.004
0.662	1.000
0.800	0.994
0.835	0.992
1.000	0.987
1.293	0.980
1.500	0.977
1.836	0.975
2.000	0.974
2.500	0.972
2.754	0.972
3.000	0.971
4.000	0.970
6.000	0.969
8.000	0.968
10.000	0.967

Table 20. Parameters necessary for modification of response functions according to the difference of energy calibration methods.

CRYSTAL	PSUEDO ZERO POINT (keV)	RATIO OF CHANNEL WIDTHS
1"×1" CYLINDRICAL	17.7	0.970
2"×2" CYLINDRICAL	18.1	0.968
3"×3" CYLINDRICAL	18.2	0.967
4"×4" CYLINDRICAL	18.2	0.966
5"×4" CYLINDRICAL	18.2	0.966
2"ϕ SPHERICAL	18.2	0.968
3"ϕ SPHERICAL	18.1	0.967
5"ϕ SPHERICAL	18.1	0.966

Table 21. Detection efficiencies of a 1"ϕ×1" cylindrical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.825	0.825	1.0
0.05	0.922	0.922	1.0
0.06	0.966	0.964	0.998
0.08	1.006	1.001	0.995
0.1	1.018	1.009	0.991
0.13	1.026	1.006	0.981
0.165	1.013	0.969	0.957
0.2	0.967	0.883	0.912
0.3	0.793	0.565	0.712
0.4	0.675	0.359	0.531
0.5	0.602	0.253	0.420
0.514	0.594	0.242	0.408
0.6	0.550	0.189	0.343
0.662	0.527	0.164	0.311
0.8	0.481	0.121	0.251
0.835	0.479	0.117	0.244
1.0	0.440	0.0902	0.205
1.293	0.405	0.0660	0.163
1.5	0.382	0.0551	0.144
1.836	0.361	0.0413	0.114
2.0	0.350	0.0360	0.103
2.5	0.338	0.0266	0.0788
2.754	0.332	0.0251	0.0756
3.0	0.324	0.0216	0.0668
4.0	0.319	0.0130	0.0408
6.0	0.310	0.0063	0.0204
8.0	0.312	0.0035	0.0111
10.0	0.323	0.0021	0.0065

Table 22. Detection efficiencies of a 2"ϕ×2" cylindrical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.811	0.811	1.0
0.05	0.905	0.905	1.0
0.06	0.952	0.949	0.998
0.08	0.995	0.990	0.996
0.1	1.007	1.000	0.993
0.13	1.016	1.001	0.985
0.165	1.019	0.989	0.971
0.2	1.017	0.965	0.949
0.3	0.968	0.796	0.822
0.4	0.903	0.615	0.681
0.5	0.845	0.482	0.571
0.514	0.840	0.470	0.560
0.6	0.802	0.396	0.494
0.662	0.779	0.358	0.460
0.8	0.737	0.292	0.397
0.835	0.726	0.280	0.386
1.0	0.687	0.233	0.339
1.293	0.641	0.182	0.284
1.5	0.612	0.155	0.253
1.836	0.584	0.130	0.222
2.0	0.572	0.117	0.205
2.5	0.547	0.0936	0.171
2.754	0.539	0.0843	0.156
3.0	0.535	0.0769	0.144
4.0	0.522	0.0585	0.112
6.0	0.514	0.0325	0.0632
8.0	0.520	0.0210	0.0403
10.0	0.528	0.0146	0.0276

Table 23. Detection efficiencies of a 3"ϕ×3" cylindrical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.806	0.806	1.0
0.05	0.894	0.894	1.0
0.06	0.994	0.942	0.998
0.08	0.984	0.980	0.996
0.1	0.999	0.992	0.993
0.13	1.007	0.993	0.987
0.165	1.013	0.998	0.976
0.2	1.016	0.975	0.960
0.3	1.003	0.877	0.874
0.4	0.976	0.743	0.761
0.5	0.944	0.633	0.670
0.514	0.937	0.620	0.662
0.6	0.914	0.552	0.604
0.662	0.899	0.510	0.568
0.8	0.864	0.436	0.504
0.835	0.859	0.422	0.492
1.0	0.825	0.365	0.443
1.293	0.786	0.302	0.384
1.5	0.759	0.268	0.353
1.836	0.730	0.226	0.309
2.0	0.720	0.213	0.295
2.5	0.694	0.174	0.251
2.754	0.685	0.163	0.237
3.0	0.675	0.151	0.224
4.0	0.662	0.118	0.177
6.0	0.657	0.0867	0.132
8.0	0.661	0.0609	0.0921
10.0	0.671	0.0430	0.0642

Table 24. Detection efficiencies of a 4"ϕ×4" cylindrical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.507	0.507	1.0
0.05	0.690	0.690	1.0
0.06	0.791	0.788	0.997
0.08	0.890	0.886	0.996
0.1	0.930	0.923	0.993
0.13	0.956	0.944	0.987
0.165	0.970	0.948	0.978
0.2	0.980	0.940	0.960
0.3	0.989	0.874	0.884
0.4	0.981	0.783	0.798
0.5	0.972	0.693	0.713
0.514	0.970	0.677	0.698
0.6	0.957	0.606	0.623
0.662	0.946	0.582	0.615
0.8	0.930	0.520	0.559
0.835	0.923	0.504	0.546
1.0	0.901	0.450	0.499
1.293	0.874	0.390	0.446
1.5	0.852	0.356	0.418
1.836	0.524	0.189	0.360
2.0	0.815	0.288	0.354
2.5	0.798	0.253	0.316
2.754	0.794	0.232	0.292
3.0	0.784	0.222	0.283
4.0	0.783	0.182	0.232
6.0	0.779	0.141	0.182
8.0	0.788	0.116	0.147
10.0	0.805	0.0945	0.117

Table 25. Detection efficiencies of a 5"ϕ×4" cylindrical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.506	0.506	1.0
0.05	0.685	0.685	1.0
0.06	0.785	0.783	0.997
0.08	0.880	0.876	0.996
0.1	0.919	0.913	0.993
0.13	0.944	0.933	0.988
0.165	0.960	0.941	0.980
0.2	0.968	0.933	0.964
0.3	0.980	0.880	0.898
0.4	0.975	0.801	0.822
0.5	0.965	0.714	0.740
0.514	0.962	0.702	0.730
0.6	0.952	0.651	0.683
0.662	0.940	0.608	0.646
0.8	0.924	0.551	0.597
0.835	0.921	0.539	0.585
1.0	0.899	0.481	0.535
1.293	0.864	0.419	0.485
1.5	0.846	0.386	0.457
1.836	0.824	0.337	0.409
2.0	0.816	0.321	0.393
2.5	0.797	0.279	0.351
2.754	0.786	0.261	0.333
3.0	0.785	0.252	0.321
4.0	0.778	0.210	0.270
6.0	0.780	0.166	0.213
8.0	0.780	0.143	0.183
10.0	0.797	0.120	0.150

Table 26. Detection efficiencies of a 1"ϕ×1" cylindrical NaI (Tl) detector for gamma rays from a point source at 10 cm.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.806	0.806	1.0
0.05	0.888	0.888	1.0
0.06	0.923	0.921	0.998
0.08	0.950	0.945	0.995
0.1	0.952	0.943	0.991
0.13	0.935	0.915	0.979
0.165	0.894	0.854	0.955
0.2	0.834	0.761	0.912
0.3	0.662	0.476	0.718
0.4	0.556	0.297	0.535
0.5	0.488	0.206	0.422
0.514	0.482	0.198	0.409
0.6	0.450	0.156	0.347
0.662	0.430	0.134	0.312
0.8	0.395	0.102	0.258
0.835	0.388	0.0958	0.247
1.0	0.357	0.0740	0.207
1.293	0.327	0.0541	0.165
1.5	0.308	0.0436	0.142
1.836	0.292	0.0336	0.115
2.0	0.285	0.0296	0.104
2.5	0.272	0.0227	0.0837
2.754	0.266	0.0201	0.0757
3.0	0.264	0.0177	0.0671
4.0	0.255	0.0106	0.0416
6.0	0.250	0.0048	0.0193
8.0	0.251	0.0031	0.0122
10.0	0.260	0.0016	0.0060

Table 27. Detection efficiencies of a 2"φ×2" cylindrical NaI (Tl) detector for gamma rays from a point source at 10 cm.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.791	0.791	1.0
0.05	0.873	0.873	1.0
0.06	0.910	0.908	0.998
0.08	0.935	0.931	0.996
0.1	0.936	0.928	0.992
0.13	0.920	0.906	0.984
0.165	0.891	0.863	0.969
0.2	0.857	0.809	0.944
0.3	0.756	0.622	0.823
0.4	0.677	0.461	0.681
0.5	0.624	0.355	0.569
0.514	0.620	0.345	0.557
0.6	0.585	0.286	0.489
0.662	0.571	0.264	0.462
0.8	0.533	0.212	0.399
0.835	0.526	0.203	0.386
1.0	0.490	0.165	0.337
1.293	0.456	0.129	0.283
1.5	0.430	0.110	0.255
1.836	0.409	0.0897	0.219
2.0	0.402	0.0827	0.207
2.5	0.388	0.0663	0.171
2.754	0.379	0.0612	0.162
3.0	0.373	0.0558	0.150
4.0	0.364	0.0398	0.109
6.0	0.357	0.0219	0.0612
8.0	0.359	0.0166	0.0463
10.0	0.366	0.0096	0.0261

Table 28. Detection efficiencies of a 3"φ×3" cylindrical NaI (Tl) detector for gamma rays from a point source at 10 cm.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.789	0.789	1.0
0.05	0.870	0.870	1.0
0.06	0.903	0.901	0.998
0.08	0.931	0.927	0.996
0.1	0.935	0.928	0.993
0.13	0.919	0.906	0.986
0.165	0.892	0.869	0.974
0.2	0.860	0.821	0.954
0.3	0.780	0.675	0.866
0.4	0.719	0.538	0.749
0.5	0.676	0.445	0.658
0.514	0.669	0.433	0.647
0.6	0.645	0.382	0.592
0.662	0.627	0.349	0.556
0.8	0.595	0.293	0.493
0.835	0.586	0.282	0.481
1.0	0.559	0.242	0.433
1.293	0.520	0.195	0.376
1.5	0.502	0.172	0.342
1.836	0.478	0.146	0.306
2.0	0.468	0.135	0.288
2.5	0.451	0.112	0.248
2.754	0.443	0.105	0.236
3.0	0.440	0.0948	0.216
4.0	0.427	0.0742	0.174
6.0	0.422	0.0531	0.126
8.0	0.423	0.0369	0.0872
10.0	0.436	0.0277	0.0636

Table 29. Detection efficiencies of a 4"ϕ×4" cylindrical NaI (Tl) detector for gamma rays from a point source at 10 cm.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.484	0.484	1.0
0.05	0.656	0.656	1.0
0.06	0.750	0.748	0.998
0.08	0.834	0.830	0.995
0.1	0.857	0.851	0.993
0.13	0.866	0.855	0.987
0.165	0.851	0.830	0.975
0.2	0.833	0.796	0.956
0.3	0.774	0.677	0.876
0.4	0.728	0.571	0.785
0.5	0.694	0.476	0.687
0.514	0.690	0.468	0.679
0.6	0.667	0.411	0.616
0.662	0.655	0.385	0.587
0.8	0.630	0.334	0.530
0.835	0.620	0.323	0.521
1.0	0.595	0.286	0.480
1.293	0.566	0.243	0.429
1.5	0.546	0.217	0.398
1.836	0.828	0.308	0.372
2.0	0.517	0.179	0.345
2.5	0.500	0.154	0.308
2.754	0.497	0.142	0.286
3.0	0.488	0.134	0.274
4.0	0.478	0.106	0.223
6.0	0.481	0.0823	0.171
8.0	0.487	0.0685	0.141
10.0	0.496	0.0566	0.114

Table 30. Detection efficiencies of a 5"ϕ×4" cylindrical NaI (Tl) detector for gamma rays from a point source at 10 cm.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.473	0.473	1.0
0.05	0.650	0.650	1.0
0.06	0.742	0.740	0.997
0.08	0.830	0.826	0.995
0.1	0.859	0.853	0.993
0.13	0.866	0.855	0.987
0.165	0.856	0.836	0.977
0.2	0.838	0.804	0.959
0.3	0.783	0.692	0.884
0.4	0.740	0.583	0.788
0.5	0.710	0.505	0.712
0.514	0.708	0.496	0.701
0.6	0.685	0.441	0.644
0.662	0.673	0.414	0.615
0.8	0.643	0.362	0.563
0.835	0.633	0.350	0.553
1.0	0.610	0.314	0.516
1.293	0.585	0.275	0.470
1.5	0.560	0.244	0.436
1.836	0.544	0.217	0.399
2.0	0.530	0.200	0.377
2.5	0.515	0.173	0.337
2.754	0.506	0.165	0.325
3.0	0.505	0.155	0.307
4.0	0.497	0.130	0.262
6.0	0.495	0.101	0.205
8.0	0.504	0.0872	0.173
10.0	0.514	0.0754	0.147

Table 31. Detection efficiencies of a 2"ϕ spherical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.802	0.802	1.0
0.05	0.880	0.880	1.0
0.06	0.919	0.916	0.997
0.08	0.949	0.944	0.995
0.1	0.959	0.950	0.991
0.13	0.963	0.945	0.982
0.165	0.953	0.920	0.966
0.2	0.925	0.869	0.939
0.3	0.814	0.655	0.805
0.4	0.722	0.477	0.661
0.5	0.661	0.365	0.552
0.514	0.652	0.352	0.540
0.6	0.617	0.294	0.476
0.662	0.591	0.260	0.441
0.8	0.554	0.209	0.378
0.835	0.545	0.198	0.364
1.0	0.506	0.161	0.318
1.293	0.468	0.125	0.267
1.5	0.446	0.104	0.234
1.836	0.419	0.0862	0.205
2.0	0.415	0.0779	0.188
2.5	0.394	0.0628	0.160
2.754	0.383	0.0570	0.149
3.0	0.378	0.0494	0.131
4.0	0.370	0.0376	0.102
6.0	0.360	0.0190	0.0526
8.0	0.367	0.0131	0.0357
10.0	0.372	0.0080	0.0214

Table 32. Detection efficiencies of a 3"ϕ spherical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.794	0.794	1.0
0.05	0.876	0.876	1.0
0.06	0.916	0.913	0.997
0.08	0.947	0.942	0.995
0.1	0.960	0.951	0.991
0.13	0.964	0.947	0.983
0.165	0.963	0.934	0.970
0.2	0.955	0.908	0.951
0.3	0.894	0.767	0.858
0.4	0.832	0.613	0.736
0.5	0.783	0.503	0.642
0.514	0.778	0.489	0.629
0.6	0.745	0.426	0.571
0.662	0.728	0.391	0.537
0.8	0.687	0.325	0.474
0.835	0.680	0.316	0.464
1.0	0.642	0.266	0.414
1.293	0.601	0.214	0.356
1.5	0.573	0.185	0.322
1.836	0.548	0.157	0.286
2.0	0.538	0.143	0.267
2.5	0.516	0.123	0.237
2.754	0.507	0.109	0.216
3.0	0.500	0.104	0.207
4.0	0.486	0.0800	0.164
6.0	0.483	0.0527	0.109
8.0	0.487	0.0358	0.0735
10.0	0.499	0.0259	0.0520

Table 33. Detection efficiencies of a 5"ϕ spherical NaI (Tl) detector for parallel gamma rays.

ENERGY (MeV)	TOTAL EFF.	PEAK EFF.	PEAK/TOTAL RATIO
0.04	0.788	0.788	1.0
0.05	0.872	0.872	1.0
0.06	0.914	0.911	0.997
0.08	0.944	0.939	0.995
0.1	0.957	0.948	0.991
0.13	0.965	0.949	0.984
0.165	0.969	0.941	0.972
0.2	0.966	0.926	0.959
0.3	0.946	0.851	0.899
0.4	0.919	0.754	0.821
0.5	0.893	0.672	0.752
0.514	0.889	0.666	0.749
0.6	0.870	0.608	0.699
0.662	0.857	0.575	0.671
0.8	0.830	0.510	0.615
0.835	0.826	0.497	0.602
1.0	0.798	0.446	0.559
1.293	0.763	0.386	0.506
1.5	0.737	0.347	0.471
1.836	0.713	0.302	0.424
2.0	0.703	0.288	0.409
2.5	0.682	0.251	0.368
2.754	0.671	0.236	0.352
3.0	0.662	0.221	0.334
4.0	0.654	0.173	0.265
6.0	0.648	0.147	0.227
8.0	0.652	0.102	0.157
10.0	0.663	0.0826	0.124

Table 34. K X-ray escape probability of a 1"ϕ×1" cylindrical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.206
0.050	0.160
0.060	0.122
0.080	0.078
0.100	0.052
0.130	0.035
0.165	0.026
0.200	0.021
0.300	0.017

Table 35. K X-ray escape probability of a 2"ϕ×2" cylindrical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.199
0.050	0.152
0.060	0.116
0.080	0.072
0.100	0.046
0.130	0.028
0.165	0.019
0.200	0.015
0.300	0.010

Table 36. K X-ray escape probability of a 3"ϕ×3" cylindrical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.198
0.050	0.151
0.060	0.115
0.080	0.069
0.100	0.045
0.130	0.027
0.165	0.017
0.200	0.012
0.300	0.007

Table 37. K X-ray escape probability of a 4"ϕ×4" cylindrical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.201
0.050	0.156
0.060	0.118
0.080	0.072
0.100	0.046
0.130	0.028
0.165	0.019
0.200	0.013
0.300	0.007

Table 38. K X-ray escape probability of a 5"ϕ×4" cylindrical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.201
0.050	0.154
0.060	0.119
0.080	0.070
0.100	0.044
0.130	0.027
0.165	0.018
0.200	0.013
0.300	0.006

Table 39. K X-ray escape probability of a 2"ϕ spherical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.232
0.050	0.184
0.060	0.148
0.080	0.094
0.100	0.062
0.130	0.036
0.165	0.024
0.200	0.016
0.300	0.011

Table 40. K X-ray escape probability of a 3"ϕ spherical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.229
0.050	0.184
0.060	0.145
0.080	0.092
0.100	0.061
0.130	0.036
0.165	0.022
0.200	0.015
0.300	0.008

Table 41. K X-ray escape probability of a 5"ϕ spherical NaI (Tl) detector for parallel gamma rays.

GAMMA ENERGY (MeV)	ESCAPE PROBABILITY
0.040	0.230
0.050	0.184
0.060	0.145
0.080	0.092
0.100	0.060
0.130	0.036
0.165	0.022
0.200	0.014
0.300	0.006

Table 42. Escape probability of 0.511 MeV annihilation gamma rays.

CRYSTAL	ESCAPE PROBABILITY	
	SINGLE ESCAPE	DOUBLE ESCAPE
1"×1"	0.22	0.75
2"×2"	0.41	0.53
3"×3"	0.51	0.37
4"×4"	0.55	0.26
5"×4"	0.56	0.21
2"	0.38	0.57
3"	0.50	0.40
5"	0.57	0.21

Table 43. Intrinsic broadening widths of total absorbed peaks.

ENERGY (MeV)	INTRINSIC WIDTH (%)							
	1"×1"	2"×2"	3"×3"	4"×4"	5"×4"	2"ϕ	3"ϕ	5"ϕ
0.060	2.9	2.9	2.9	3.0	3.0	2.9	2.9	2.9
0.165	3.5	3.6	3.6	3.7	3.6	3.6	3.6	3.6
0.514	4.9	5.1	5.2	5.2	5.2	5.1	5.2	5.2
0.662	4.2	4.4	4.5	4.6	4.6	4.4	4.5	4.6
0.835	3.4	3.6	3.7	3.8	3.8	3.5	3.7	3.8
1.293	2.3	2.4	2.5	2.6	2.7	2.4	2.5	2.7
1.836	1.7	1.9	2.0	2.1	2.2	1.9	2.0	2.1
2.754	1.3	1.5	1.6	1.7	1.8	1.5	1.6	1.7

4. まとめ

現在，日本で使用されているNaI(Tℓ)シンチレーション検出器の大部分はJIS規格に従った検出器であり，ここに表したデータは，NaI(Tℓ)シンチレーション検出器を用いてガンマ線測定を行おうとする者たちに有用な情報である．また，NaI(Tℓ)シンチレーション検出器に関するJIS規格Z−4321は，国際電気標準会議（IEC；International Electrotechnical Commission）の規格412を参考に作成されていることを考慮すれば，諸外国で使用されている検出器にたいしても，この応答関数は充分適用できるものであり，今後，広く参照されることが期待される．

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