

計算コード(AQUA)による  
核燃料施設内気流解析結果

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動力炉・核燃料開発事業団 (Power Reactor and Nuclear Fuel Development Corporation)

## 計算コード (AQUA) による核燃料施設内気流解析結果

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## 要 旨

単相多次元熱流動解析コードAQUAの放射線物質漏洩事故発生時の当核物質輸送評価に関する適用性を確認するため、(1)東海事業所・プルトニウム燃料第3開発室・工程室内気流解析および(2)東海事業所・プルトニウム燃料第3開発室・粉末調製室内での放射線物質漏洩事故解析を行い、測定結果と比較を行った。得られた主な結論は次の通りである。

- (1) プルトニウム燃料第3開発室・工程室内の解析については、メッシュ分割幅を0.5m以下に規定すれば、当該室内での空気の流動状況を測定結果と良好に一致させることができる。
  - (2) プルトニウム燃料第3開発室・粉末調製室内放射性物質漏洩事故解析につき、放射性物質が漏洩した場合の一般的な対流輸送形態は、各破損箇所から放出された放射性物質は、対面するコンクリート壁あるいはグローブボックスに到達した当該間隙を満たす様に拡散し、この後室内全体に輸送される。また、室内全体が乱流場にあることから、局所的な淀み域等の存在に起因した軸方向の濃度分布およびホットスポット領域等は認められなかった。
  - (3) アルファ線モニターおよびサンプリングノズル近傍における放射性物質濃度の時間応答特性は、グローブボックス破損位置が軸方向に変化した場合も変化しない。
- なお、核燃料取扱い施設内における放射性物質輸送挙動の定量評価にAQUAコードを用いてゆくためには、以下の作業を今後行う必要がある。
- (1) 放射性物質の対流輸送挙動に関し、今回の解析モデルでは考慮されなかった重力沈降挙動および壁面付着挙動の的確な取扱い。
  - (2) 差分近似精度を向上させるための高次差分法および物理現象を忠実に再現するための乱流モデルを使用した場合の精度向上に関する効果の確認。
  - (3) AQUAコードによる解析結果の妥当性を担保する意味から、数多くの詳細実験の実施とこれを用いたAQUAコードの検証実績の積重ね。

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Calculated Results of Air Flows in Nuclear Fuel Handling Facilities  
with the AQUA Code

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Abstract

For the purpose of the establishment of evaluation methods for mass transport phenomenon of nuclear fuel materials, the applicability of the mass transport model implemented in the AQUA code to the phenomenon have been assessed through the analysis of the 3rd Plutonium Fuel Development Facility Tokai works, PNC.

From the analysis, the following results have been obtained.

- (1) For air flow analysis in the 3rd Plutonium Fuel Development Facility, numerical error caused by mesh effects can be neglected efficiently by the use of mesh width 0.5m.
- (2) For the transport analysis of activated fuel materials released from glove boxes, existence of higher concentration regions of the materials was not confirmed.
- (3) An output response of  $\alpha$ -ray monitor does not change with the release location of the materials very much.

For the quantitative evaluation of the concentration using the AQUA code, following investigation are necessary.

- (1) Modeling for sedimentation by the gravity and for adhesion to surfaces of the materials.
- (2) Confirmation of effects for higher order accurate schemes and turbulence models.
- (3) Verification of the AQUA code using detailed model experiments.

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## 第1章 緒 言

東海事業所・安全管理部放射線管理第1課では、安全研究年次計画に基づき核燃料施設の事故時における放射性物質挙動、公衆への被爆影響評価に係わる研究が行われている。具体的には、プルトニウム燃料取扱い施設内等を対象として、空気中における放射性物質の挙動を精度良く評価できるシステムを整備し、空気汚染発生時の放射線モニタリングの最適手法や新增設施設における放射線管理設備の設計に反映、放射線安全評価の向上に資することを目的として研究が実施されている。

一般的に、空気汚染時等の放射性物質の対流拡散挙動を解析的に評価するためには、まず第1に多次元解析等により対象空間内の空気の流動特性を把握することが求められ、次いで求められた気流によって輸送される放射性物質の空間濃度分布の時間的変化を把握する必要がある。ここで要求される解析機能の全て含む熱流動解析コードとしては、動燃事業団内で積極的に使用されている単相多次元熱流動解析コードAQUAがある。同コードには、燃料ピン破損事故時の遅発中性子(DN)先行核濃度輸送あるいは原子炉上部カバーガス空間でのナトリウム・ミスト輸送等の解析評価が行えるよう、拡散溶質の濃度が重力の影響が無視できる程度に希薄であり、その密度は溶媒物質のそれと等しいとの仮定に基づき、任意溶融物質(PPあるいはナトリウム・ミスト等の希薄物質)のナトリウムあるいはガスによる輸送現象を取扱うことのできる物質輸送モデルが組み込まれている。

本報は、東海事業所発信業連(3(東安)37、「計算コードAQUAの使用に伴う協力依頼について」、平成3年6月18日付)記載の解析依頼に対し、大洗工学センター・安全工学部原子炉工学室が所有する単相多次元熱流動解析コードAQUAを用いて行った解析結果および検討結果をまとめたものである。具体的には、(1)プルトニウム燃料第3開発室・工程室内気流解析および(2)プルトニウム燃料第3開発室・粉末調製室内放射性物質漏洩事故解析を行い、測定結果等との比較検討を行うことにより、当該事象解析に対するAQUAコードの適用性確認および今後のコード改良指針規定を行う。



## 第2章 プルトニウム燃料第3開発室・工程室内気流解析

### 2.1 工程室概要

解析の対象となるプルトニウム燃料第3開発室工程室（以下、工程室と呼ぶ）は、高速炉燃料製造作業過程の前処理作業を行う室として位置づけられ、図2.1に示す形状を有する（現在建設段階にあり、グローブボックス等の作業関連機器は設置されていない）。工程室内の給排気は、同図中に示された丸囲み数字（①-⑧）の位置においてトランスファを介して行われ、その給排気は次の関係にある。

給気流量：⑤ $\approx$ 0 m<sup>3</sup>/h, ⑥+⑦+⑧=1250m<sup>3</sup>/h

排気流量：①+②+③+④=11840m<sup>3</sup>/h

### 2.2 解析モデルおよび解析条件

ここで行う解析の目的は、作動流体を空気とした場合の単相多次元熱流動解析コードAQUAの適用性を確認すること、およびメッシュ分割幅が解析結果に及ぼす影響（メッシュ効果）を把握することの2点である。以上の観点より、ここで用いる解析モデルは、大洗工学センターが所有する大型計算機（FACOM VP-100）の最大記憶容量を使用する大型解析1ケースとこの半分程度の記憶容量を使用する中型解析1ケースの2種類とする。

図2.2に、大型解析に用いたメッシュ分割図を示す。解析モデルでは、3箇所のトランスファ（⑥, ⑦, ⑧）での給気流量は均等であると仮定し、各トランスファに416.7m<sup>3</sup>/hの値を与えた。なお、実験により3箇所のトランスファにおける流向・流速の分布が図2.3に示す様に得られていることから、これに基づき流向も合わせて与えた。一方、解析体系出口に相当する4箇所のトランスファ（①, ②, ③, ④）については、流体の圧縮性を考慮しない仮定を用いた自由流出条件とし、排気流量は与えていない。上記境界条件は、中型解析においても共通に使用した。両解析モデルについての入力データを、図2.4（大型解析用）および図2.5（中型解析用）に示す。また、以下に数値計算条件を示す。

	大型解析	中型解析
座標系	: x-y-z, 3次元直交座標	同左
メッシュ分割	: 45 <sup>i</sup> ×44 <sup>i</sup> ×10 <sup>t</sup>	26 <sup>i</sup> ×31 <sup>i</sup> ×8 <sup>t</sup>
総メッシュ数	: 18200 セル	6000 セル
時間積分法	: 完全陰解法	同左

対流項差分法：1次風上差分法	同左
乱流モデル：層流モデル	同左
作動流体：空気（20℃等温）	同左
物性値	$\rho$ (kg/m <sup>3</sup> ) = 1.234 - 2.916 × 10 <sup>-3</sup> T + 3.219 × 10 <sup>-6</sup> T <sup>2</sup> - 1.242 × 10 <sup>-9</sup> T <sup>3</sup> $\mu$ (Pa s) = 1.742 × 10 <sup>-5</sup> + 4.716 × 10 <sup>-8</sup> T - 2.136 × 10 <sup>-11</sup> T <sup>2</sup> + 7.098 × 10 <sup>-14</sup> T <sup>3</sup> $C_p$ (J/kg) = 2.745 × 10 <sup>5</sup> + 9.761 × 10 <sup>2</sup> T + 1.333 × 10 <sup>-1</sup> T <sup>2</sup> - 1.896 × 10 <sup>-5</sup> T <sup>3</sup> $\lambda$ (W/m C) = 2.410 × 10 <sup>-2</sup> + 7.274 × 10 <sup>-6</sup> T - 2.017 × 10 <sup>-8</sup> T <sup>2</sup> + 2.151 × 10 <sup>-12</sup> T <sup>3</sup>

### 2.3 解析結果

図2.6に軸方向3位置（床面より0.5m, 1.5m, 2.5m）における水平断面流速分布を測定値と比較する。まず、床面より0.5m位置における測定結果では、トランスファ⑥, ⑦からの噴流が主流となり、床面に沿って対面壁にまで到達する。大型解析モデルによる解析結果（床面より0.3.125m位置）では、トランスファからの噴流が対面壁に到達する流況が得られており、測定結果を良好に再現している。一方、中型解析モデルを用いた結果（床面より0.3.125m位置）では、トランスファからの噴流が対面壁に到達する様子は比較的良く再現されているものの、排気用トランスファ③, ④近傍の流動状況に差が生じている。すなわち測定結果では、排気用トランスファ③, ④近傍では、トランスファ側に向かう流れが主流となっているのに対して、中型解析モデルによる結果でのそれは反対方向となっている。

床面より1.5m位置における測定結果では、トランスファ⑥, ⑦からの噴流影響によって、全体的な傾向はこの主流にほぼ従う流れ場を形成しているものの、主流中心より外れることに起因して極めて複雑な流動状況を示している。大型解析モデルを用いた結果（床面より0.1563m）では、トランスファ⑥, ⑦からの噴流の影響による対面壁に向かう流動状況と極めて複雑な流動状況とを再現している。中型解析モデルを用いた結果（床面より0.1563m）においても、同様な傾向が再現されている。

床面より2.5m位置における測定結果では、明確な主流は存在せず、断面全体について極めて複雑な流動状況を示している。大型解析モデルを用いた結果（床面より2.9m）では、測定軸方向位置との若干の違いに起因してトランスファ⑥, ⑦近傍での流動状況に差が現れているものの、トランスファ⑧より右側領域に発生している反時計回りの局所循環渦は良好に再現されている。この傾向は、中型解析モデルを用いた結果においても同様である。

### 2.4 考察

前節において示した様に、軸方向3位置における水平断面流速分布の測定結果は、今回用

いた大型解析モデルにより再現することができる。この大型解析モデルにおける平均的メッシュは、0.5mである。一方、中型解析モデルにおけるそれは、約0.75mである。以上より、今回の解析対象である工程室の気流を精度良く評価する上では、使用するメッシュ幅として0.5m以下のものを用いることが必要であると言える。なお、この様な作動流体として空気を使用した場合の単相多次元熱流動解析コードAQUAの適用性に関しては、矩形容器内3次元空気乱流解析（原子炉における熱流動解析技術の高度化, 第5.4節, 日本原子力学会編, 1990年3月）と実験結果との良好な比較結果からも裏付けられる。以上より、次節以降で解析の対象となるプルトニウム燃料第3開発室・粉末調製室内での気流を精度良く評価するためには、上記メッシュ幅以下のもの（ $<0.5\text{m}$ ）、および適切な境界条件と数値計算法を使用することにより高い精度をもった評価が実現可能であると考えられる。

## 第3章 プルトニウム燃料第3開発室・粉末調製室内気流解析

### 3.1 粉末調製室概要

解析の対象となるプルトニウム燃料第3開発室・粉末調製室（以下、粉調室と呼ぶ）は図3.1に示す様に、床面より5.2m位置に4箇所の給気口と粉末保管庫側壁面（奥行き側壁面）に2箇所の排気口を持つ横方向22m、奥行き方向11m、高さ方向7.7mの大きさを有する核燃物質取扱い施設（換気量3000m<sup>3</sup>/h）である。また、同室には、図3.2に示す大きさのグローブボックスが、奥行き方向に6列配置されている。なお、一つのグローブボックスは、12個のグローブを有する2つのユニットから構成され、同図中のハッチ領域は極めて頻繁に使用される位置に相当するグローブである。

### 3.2 物質輸送モデル

ここで使用する単相多次元熱流動解析コードAQUAには、燃料ピン破損事故時の遅発中性子（DN）先行核濃度輸送あるいは原子炉上部カバーガス空間でのナトリウム・ミスト輸送等の解析評価が行えるよう、任意溶融物質（FPあるいはナトリウム・ミスト等の希薄物質）のナトリウムあるいはガスによる輸送現象を取扱うことのできる物質輸送モデルが組み込まれている。モデルでは、拡散溶質の濃度が重力の影響が無視できる程度に希薄であり、その密度は溶媒物質のそれと等しいと仮定し、以下の対流拡散輸送方程式が定式化されている。

$$\frac{\partial}{\partial t} (\rho \phi) + \text{div}(\rho u \phi) = \text{div}(D \text{grad} \phi) \dots\dots\dots (3.1)$$

ここで、

- φ：拡散溶質濃度
- ρ：溶媒密度
- u：溶媒流速
- D：相互拡散係数、シュミット数
- t：時間

である。

### 3.3 解析モデル

解析に使用したメッシュ分割図を図3.3に示す。メッシュ分割に当たっては、前節での解析で得られた様に、メッシュ効果による数値誤差を可能な限り回避するために平均的なメッ

シュ幅を0.5m内とした。以下に、主要な数値計算条件を列記する。

座 標 系 : x-y-z, 3次元直交座標

メッシュ分割 :  $45^1 \times 24^1 \times 31^1$

総メッシュ数 : 29430セル

時間積分法 : 完全陰解法

乱流項差分法 : 1次風上差分法

乱流モデル : 層流モデル

作動流体 : 空気 (20°C等温)

動 性 値 :  $\rho$  (kg/m<sup>3</sup>) =  $1.234 - 2.916 \times 10^{-3}T + 3.219 \times 10^{-6}T^2 - 1.242 \times 10^{-9}T^3$

:  $\mu$  (Pas) =  $1.742 \times 10^{-5} + 4.716 \times 10^{-8}T - 2.136 \times 10^{-11}T^2 + 7.098$   
 $\times 10^{-15}T^3$

:  $C_p$  (J/kg) =  $2.745 \times 10^5 + 9.761 \times 10^2T + 1.333 \times 10^{-1}T^2 - 1.896 \times 10^{-5}T^3$

### 3.4 解析条件

ここでの解析は、放射線物質を輸送する気流の定常的流動状況を求める定常解析と図3.4に示した放射性物質漏洩箇所（軸方向4段のグローブの内、下から2段目のグローブを破損箇所と仮定する）をパラメータ (PI-P18) として濃度過度解析の2種類である。過度解析における各グローブボックスからの放射性物質の放出形態に関しては、漏洩発生位置から1000ppm濃度の放射性物質が1秒間放出する場合を仮定した。なお、濃度過度解析におけるシミュレーション時間は、同図に示したアルファ線モニター (R<sub>1</sub>) の値に関し、ピークが現れた場合には600秒まで、現れない場合には1000秒まで行うこととした。図中における記号 (SI-48, SI-49, SI-50, SI-51, SI-52, SI-53) は、室内空気のサンプリングノズル設置位置を示す。

図3.5および図3.6に解析における入力データを示す。

### 3.5 解析結果

#### 3.5.1 定常風速分布

図3.7および図3.8に、X-Z平面およびX-Y平面における流速分布の測定結果（図中の丸印は乱流強度を表す）との比較を示す。まず、図3.7に示したX-Z面での比較の内、Y=4面での結果では、床面に沿って流れる空気の向きが良好に再現されている。また、Y=28での比較結果では、解析により得られた流速分布の内、流速強度が大きい領域で乱流強度（測定結果）が大きくなる様な良好な一致傾向が見られる。一方、X-Y平面での比較結果（図3.8）の内、床面より0.5m位置での結果では、解析による流れ方向および流速強度共に測定結果を良好に再現できていることが分かる。この様な一致傾向は、床面より1.5mおよび2.5m位置における比

較結果からも見る事ができ、解析で採用したメッシュ分割幅および数値計算法が適切なものであったことが裏付けられる。

### 3.5.2 放射性物室漏洩解析

図3.9－図3.26に、放射線物質漏洩位置をパラメータとした場合の放射性物質濃度輸送の時間的推移を示す。なお、当該結果は、アルファ線モニターが設置されている粉末保管庫側壁面相当位置 (J=23) および床面より1.5m相当位置 (K=7)に着目したものである。

なお、図中の数値は、入力条件として与えた漏洩放出濃度 1000ppmを用いて規格化し、且つ $10^6$ 倍した値 (%)である。また、図中下部に表示されている各種数値は、TMAX：粉製室内濃度最大値、TMIN：同最小値、DELT：等濃度線間隔の意味である。従って、図中の値から実際の濃度(ppm表示)に換算するためには、フロント濃度の値(TMIN)に任意指定点までの濃度間隔(DELT)を加え合わせ、この値を $10^6$ ( $10^3\text{ppm}/10^2\%10^6$ )で除すことになる。床面より1.5m相当位置(K=7)における結果より分かる通り、各破損箇所から放出した放射性物質の一般的な輸送形態は、次の通りである。すなわち、各破損箇所から放出した放射性物質は、これに対面するコンクリート壁あるいはグローブボックスに到達してこの間隙を満たす様に対流拡散し、この後は、粉製室全体に輸送される。一方、粉末保管庫側壁面相当位置(J=23)での結果より分かる通り、当該壁面に沿って輸送される放射性物質は、軸方向に大きな濃度勾配を持っていない点が特徴的である。これは、粉製室全体が $3000\text{m}^3/\text{h}$ の給換気により乱流状態となっており、局所的な淀み域等が存在していないことを裏付けている。

## 3.6 評価

### 3.6.1 モニター応答挙動

図3.27－図3.35に、アルファ線モニター設置位置およびサンプリングノズル設置位置各点における放射性物質濃度の時間応答挙動を示す。なお、放射性物質漏洩箇所P1, P3, P7, P11およびP17に関しては、破損軸方向位置による各モニター値への影響を確認するため、床面より1段目を破損箇所とした解析結果も合わせて示した。

まず、床面より2段目のグローブを破損箇所として解析結果の一般的傾向では、モニターの応答が単純に破損箇所からの距離に依存したものになっていることが理解できる。これは、第3.5.2項において述べた様に、破損箇所からの放射性物質の輸送形態から容易に解釈できる。すなわち、その輸送形態は、各破損箇所から放出した放射性物質が、これに対面するコンクリート壁あるいはグローブボックスに到達してこの間隙を満たし、この後粉製室全体に輸送されるものである。この結果、破損箇所に近いモニターあるいはサンプリングノズル位置では、破損後短時間で高濃度領域が到達するのに対し、遠い位置に設置されているモニターあるいはサンプリングノズル位置では、輸送拡散後の極めて希薄な放射性物質が破損

長時間後に到達する。

一方、放射性物質漏洩箇所を床面より2段目のクローブから1段目のグローブに変更した条件での解析結果では、結果より分かる通り、モニターあるいはサンプリングノズル位置での時間的挙動には有意な差は生じていない。これも同様に第3.5.2項で述べた様に、粉調室全体が乱流場にあり、局所的な淀み域等が存在していない等に起因していることによるものと考えられる。

### 3.6.2 サンプリングノズルの設置最適化

前項で述べた様に、モニター設置あるいはサンプリングノズル設置位置における放射性物質の時間応答挙動は、単純に破損箇所からの距離に依存している。従って、モニターあるいはサンプリングノズルの室内設置位置に関しては、指定濃度値（例えば、限界検出濃度等）以上の領域の重なり合いに応じてその最適位置を規定することができる。

図3.36～図3.39に、指定濃度値をそれぞれ $10^{-2}$ (%)、 $10^{-3}$ (%)、 $10^{-4}$ (%)、 $10^{-5}$ (%)とした場合のその重なり合いの時間推移結果を示す。図3.36に示した指定濃度値を $10^{-2}$ (%)とした結果では、指定濃度値が高めの値に設定している等の理由から、破損発生後232秒以降ではその重なり合い領域は確認できない。一方、指定濃度値を $10^{-3}$ (%)に設定した条件での結果（図3.37）では、その重なり領域が増し、重なり時間も長くなっているものの、時間の経過と共に減少する。図3.38に示した指定濃度値を $10^{-3}$ (%)に設定した条件では、破損発生後232秒後以降において、今回の解析で考慮した全ての破損位置からの放射性物質が到達する領域（斜線部）が現れ始める。また、指定濃度値を $10^{-3}$ (%)に設定した条件（図3.39）では、破損後132秒から全ての破損位置からの放射性物質が到達する領域が現れ始める。従って、斜線領域にアルファ線モニターあるいはサンプリングノズルを1箇所以上設置すれば、今回考慮した破損位置からの放射性物質を検出できることになる。

図3.40に各指定濃度値と重なり合い領域との関係を示す。結果より分かる通り、指定同濃度値を $10^{-3}$ (%)とした場合には、粉末保管庫(J=24)側と廊下(J=1)側それぞれに3箇所ずつのアルファ線モニターあるいはサンプリングノズルを斜線領域内に設置（合計6箇所）すれば、今回対象とした破損位置からの放射性物質を漏洩後52秒で検出できることが分かる。

一方、指定濃度値を $10^{-4}$ (%)および $10^{-5}$ (%)とした場合には、粉末保管庫(J=24)側にそれぞれ2箇所および3箇所のアルファ線モニターあるいはサンプリングノズルを斜線領域内に設置することにより、放射性物質漏洩後52秒で当該事象を検出することができる。仮に、現在使用を予定しているアルファ線モニターあるいはサンプリングノズルによる検出感度が邦主多雨濃度に対して $10^{-4}$ (%)であると仮定すると、必要検出器数は予定(合計7個)の半分以下(3個)で済むことになる。

### 3.6.3 今後の課題

今回行った解析と測定結果との比較により、大洗工学センター・安全工学部原子炉工学室が所有する单相多次元熱流動解析コードAQUAによって、核燃料取扱い施設内における気流解

析評価および放射性物質漏洩事故時の当該物質輸送評価が基本的に行え得ることが示された。ただし、本解析評価手法を、放射性管理設備設計あるいは放射性安全評価等の定量的評価手法として今後用いてゆくためには、以下に示す項目の定量評価、あるいはこれに基づくコード改良を行う必要がある。

- (1) 重力による拡散溶質の沈降挙動による影響
- (2) 拡散溶質の壁面付着挙動による影響
- (3) 数値計算法の違いによる影響
- (4) 乱流モデル化手法による影響
- (5) 検証実績の更なる蓄積

(1)は、放射性物質粒子が重力の影響によって沈降する効果の定量化である。すなわち、ここでは対象とするプルトニウム等の拡散溶質は、重力の影響によって沈降挙動を示すことが予想され、AQUAコード内物質輸送モデルの定式化上の仮定（拡散溶質の濃度が重力の影響が無視できる程度に希薄であり、その密度は溶媒物質のそれと等しい）が成り立たなくなると考えられる。従って、今後AQUAコードを用いた解析手法を、放射線安全評価等における定量的評価手法として用いてゆくためには、モデル実験装置等による同効果の定量化および必要に応じた解析モデルの改良が必要となる。

(2)は、壁面に沿って流れる放射性物質の付着挙動に関する効果の定量化である。放射性物質取扱い施設等の壁面は、除染作業を効果的に行えるようにするため、凹凸が少なく滑らかとなるよう仕上げられているものの、粉体レベルのスケールではその凹凸は無視し得ない。仮に、放射性物質がこの凹凸にトラップされた場合には、下流側に対流輸送される放射性物質濃度は低下することとなる。従って、AQUAコードによる放射性物質濃度の定量評価を行う場合には、このような効果をモデル実験等によって定量的に把握あるいはコード内モデルを改良する必要がある。

(3)は、差分近似過程において発生する数値計算誤差に関するものである。AQUAコードでは、本来連続体である熱流動場を有限差分法によって離散化して得られた方程式を解く。この離散化過程では、さまざまな数値計算上の誤差を発生させるが、その代表的誤差の一つに数値拡散効果がある。この効果は、輸送方程式中の対流項の離散化手法として最も一般的で広く使用されている1次風上差分法を使用した場合、数値粘性の影響によって物理的に意味のある粘性効果（分子粘性および乱流粘性）を覆い隠すように働く。この効果による数値計算誤差を低減させるためには、メッシュ数を増加させるか、あるいは高次差分法を適用するかを行う必要がある。今回の解析では、この1次風上差分法を用いたものの、メッシュ効果による誤差の影響を取り除いたことから、測定結果を良好に再現する解析結果をえることができた。しかし今後、放射性物質取扱い施設内等の現場において、今回の様な放射性物質輸送評価が求められる場合を勘案すると、メッシュ数を減らすことにより短時間で評価が行え



るような解析モデルが望まれる。この場合にあつては、メッシュ数の減少による数値計算誤差の増大を、高次差分法の適用によって回避する必要が生じる。従つて、1次風上差分法を用いた今回の解析結果と今後行う比較的粗いメッシュ分割と高次差分法を併用した場合の解析結果との関係付けを定量的に行つておく必要がある。

(4)は、乱流挙動によつて生じる拡散効果に関するものである。今回の解析では、給気口においてレイノルズ数 $Re$ を定義すると約25000となり、十分に乱流域に含まれる。従つて、今回の解析では何等かの乱流モデルを使用すべきであつたが、計算時間等の適性化からこの効果を考慮せず層流モデルを使用した。今後、AQUAコードによる放射性物質濃度の定量評価を行う場合には、この様な効果をモデル実験等によつて定量的に把握すると共にコード内に定式化されている乱流モデルを使用する必要がある。

(5)の検証実績の更なる蓄積は、AQUAコードによる解析結果の妥当性および信頼性を可能な限り高める上から極めて重要な項目である。今回の解析で使用した測定結果は、 $22\text{m} \times 11\text{m} \times 7.7\text{m}$ という極めて広い室内に対し、2-3断面の比較的粗い空間断面でのものしか存在していない。今後、AQUAコードを用いた放射性物質濃度の定量評価を行う場合を考えた場合、AQUAコードによる解析結果の妥当性を担保するために、少なくとも50cm矩形単位を基本とした空間状態量分布を測定によつて把握しておく必要があると考えられる。

## 第4章 結 言

東海事業所発信業連(3(東安)37,「計算コードAQUAの使用に伴う協力依頼について」,平成3年6月18日付)記載の解析依頼に対し,大洗工学センター・安全工学部原子炉工学室が所有する单相多次元熱流動解析コードAQUAを用いて,(1)プルトニウム燃料第3開発室・工程室における気流解析および(2)プルトニウム燃料第3開発室・粉末調製室における放射性物質漏洩事故解析を行うと共に今後の作業指針について検討を行った。得られた主な結論は次の通りである。

### [プルトニウム燃料第3開発室・工程室内気流解析]

- (1) 今回の解析体系については,メッシュ分割幅を0.5m以下に規定すれば,当該室内での空気の流動状況を測定結果と良好に一致させることができる。
- (2) 单相多次元熱流動解析コードAQUAは,作動流体として空気を用いた場合においても,適切な境界条件と適切な数値計算条件を用いることにより高精度な解析評価を行うことができる。

### [プルトニウム燃料第3開発室・粉末調製室内放射性物質漏洩事故解析]

- (1) 使用する平均メッシュ分割幅を0.5m以下とすることにより,室内流動状況を適切に模擬することができる。
- (2) 放射性物質が漏洩した場合の一般的な対流輸送形態は,各破損箇所から放出された放射性物質は,対面するコンクリート壁あるいはグローブボックスに到達した当該間隙を満たす様に拡散し,この後室内全体に輸送される。また,室内全体が乱流場にあることから,局所的な淀み域等の存在に起因した軸方向の濃度分布およびホットスポット領域等は認められない。
- (3) アルファ線モニターおよびサンプリングノズル近傍における放射性物質濃度の時間応答性は,グローブボックス破損位置が軸方向に変化した場合も変化しない。
- (4) 現在使用を予定しているアルファ線モニターあるいはサンプリングノズルによる検出限界が放出濃度に対して $10^{-4}$ (%)である仮定すると,必要検出器数は予定(合計7個)の半分以下(合計3個)で済む見通しが得られた。

### [今後の作業指針]

- (1) 放射性物質の対流輸送挙動に関し,今回の解析モデルでは考慮されなかった重力沈降挙

動および壁面付着挙動を的確に取扱う必要がある。

- (2) 差分近似精度を向上させるための高次差分法および物理現象を忠実に再現するための乱流モデルを使用した場合の精度向上に関する効果を確認する必要がある。
- (3) AQUAコードによる解析結果の妥当性を担保する意味から、数多くの詳細実験の実施とこれを用いたAQUAコードの検証実績の積重ねが必要である。

単位：mm

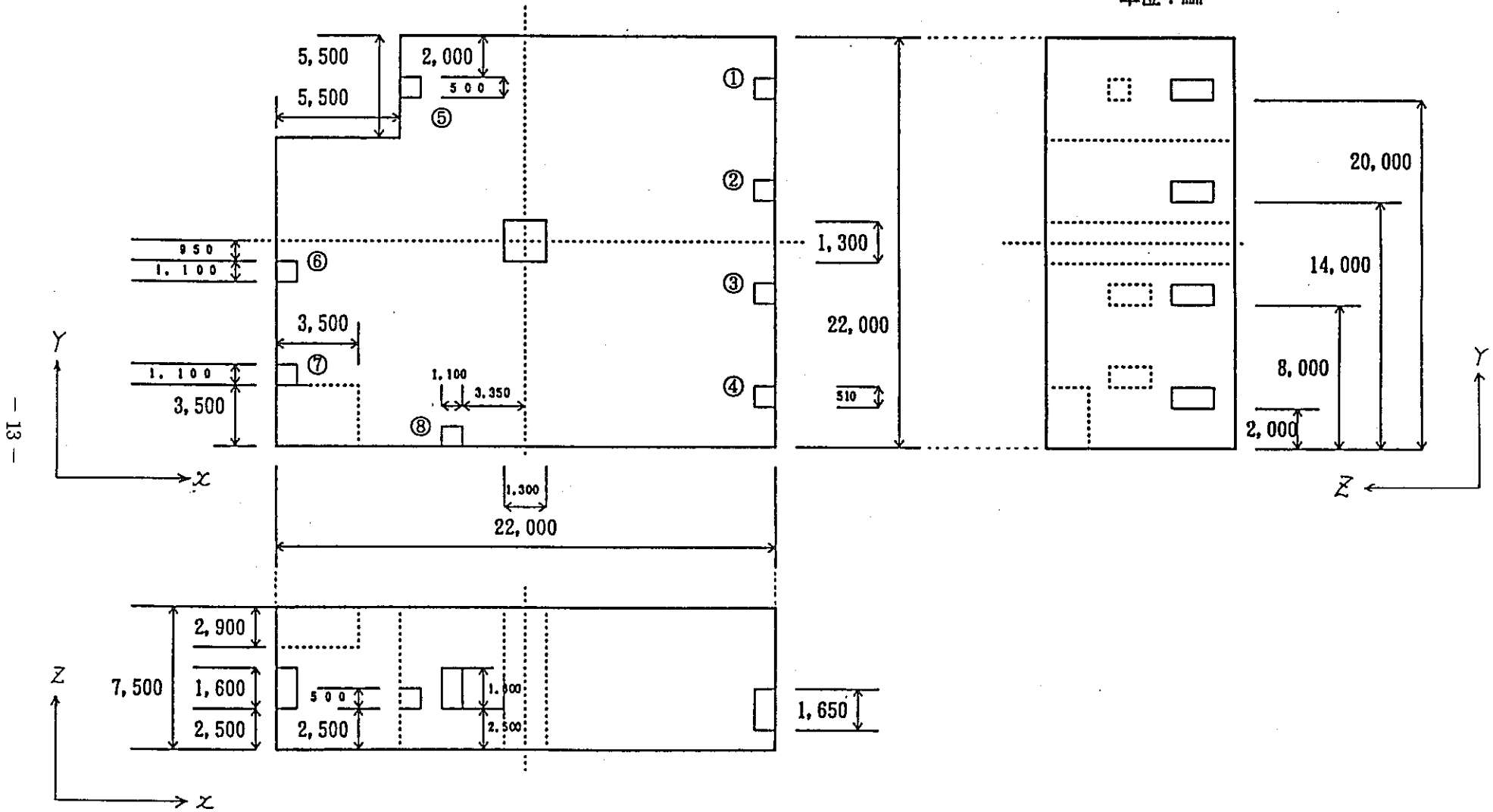


図2.1 プルトニウム燃料第3開発室・工程室概要

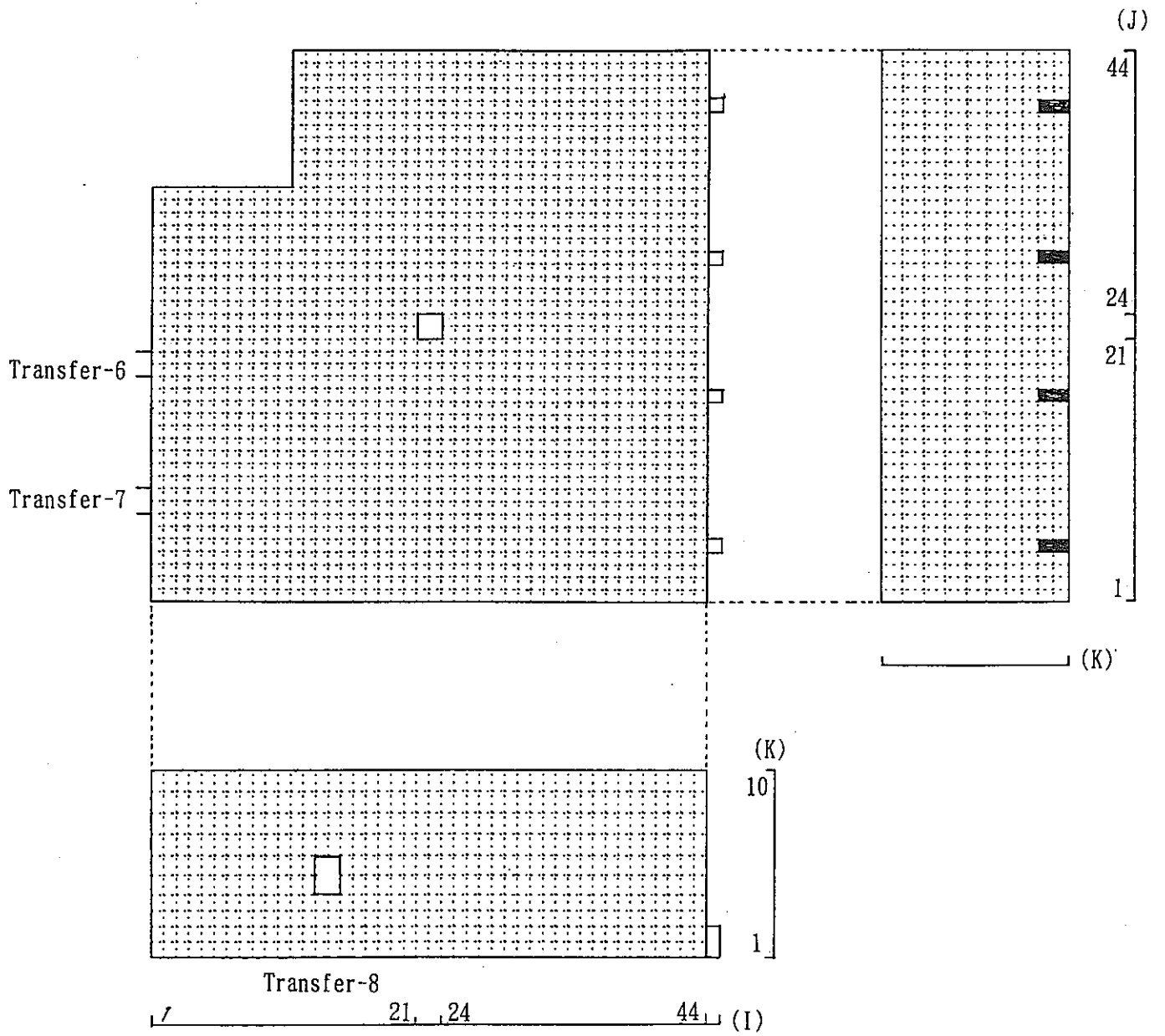
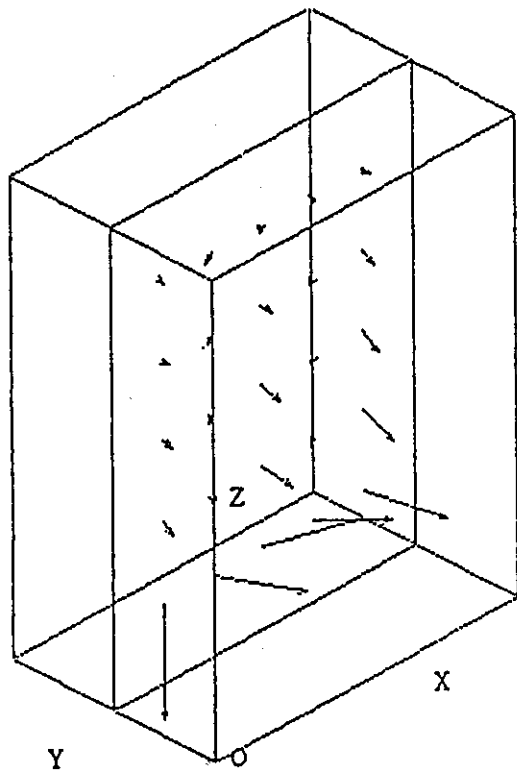
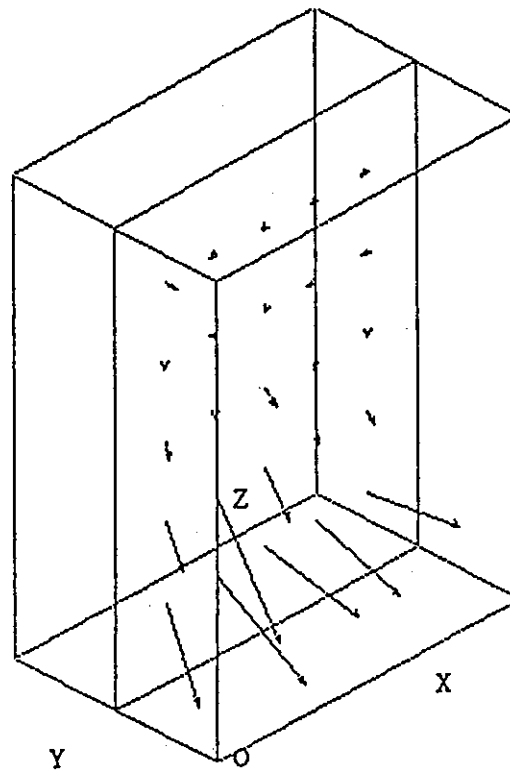


図2.2 プルトニウム燃料第3開発室・工程室用メッシュ分割

トランスファ (1)



トランスファ (2)



トランスファ (3)

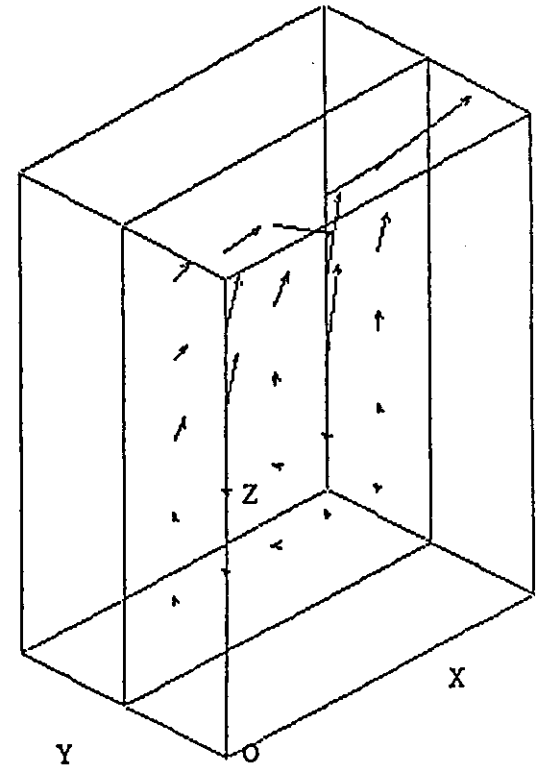


図2.3 トランスファ出口流速分布 (測定値)

```

*****
*
* ANALYSIS OF AIR FLOW DISTRIBUTION IN THE 3RD PU-FUEL DESIGN OFFICE *
*
*
*                               DATE : JUL. 9,'91
*                               L.H. : AZ511.AQUA.ASH.LOAD
*                               (S80E5)
*
*****
&GDOM  IGEOH= 0, NL1=6000,NM1=18200,ISYMCH=3,IFITEN=3,
        IFRES=1, IMAX=45, JMAX=44, KMAX=10, NSURF=17,
        DX=45*0.50,
        DY=44*0.50,
        DZ=4*0.625,2*0.80,4*0.85,
        XNORHL= 1., 1., 0., 1., 1., 0., 0., 0., 0., 1.,
                -1.,-1., 0., 0., 0., 0., 0.,
        YNORHL= 0., 0., 0., 0., 0., 0., 1., 1., 0., 0.,
                0., 0., 1.,-1., 0., 0., 1.,
        ZNORHL= 0., 0.,-1., 0., 0.,-1., 0., 0., 1., 0.,
                0., 0., 0., 0., 1.,-1., 0.,
        ITURKE=20,IFPCG=5,

&END
REG    -1.0  1  1  8  9  5  5  1 INLET-1 (+X)
REG    -1.0  2  2  8  9  6  6  2 INLET-1 (+X)
REG    -1.0  1  1  8  9  5  5  3 INLET-1 (-Z)
REG    -1.0  1  1  20 20 5  5  4 INLET-2 (+X)*****
REG    -1.0  2  2  19 20 6  6  5 INLET-2 (+X)***
REG    -1.0  1  1  20 20 5  5  6 INLET-2 (-Z)*****
REG    -1.0  14 15  1  1  6  6  7 INLET-3 (+Y)
REG    -1.0  14 15  2  2  5  5  8 INLET-3 (+Y)
REG    -1.0  14 15  1  1  6  6  9 INLET-3 (+Z)
REG    -1.0  1  1  1  33  1  4  10 WALL (+X)
REG    -1.0  1  1  1  7  5  6  10 WALL (+X)
REG    -1.0  1  1  10 18  5  6  10 WALL (+X)
REG    -1.0  1  1  19 19  4  4  10 INLET (+X)*****
REG    -1.0  2  2  19 19  5  5  10 INLET (+X)*****
REG    -1.0  1  1  21 33  5  6  10 WALL (+X)
REG    -1.0  1  1  1  33  7  9  10 WALL (+X)B
REG    -1.0  12 12 34 44  1  9  10 WALL (+X)B
REG    -1.0  24 24 22 22  1  9  10 OBSTACLE (+X)B
REG    -1.0  24 24 23 23  1  10 10 OBSTACLE (+X)B
REG    -1.0  16 16  1  1  5  5  10 INLET (+X)
REG    -1.0  1  1  1  10 10 10 10 WALL (+X)B
REG    -1.0  1  1  12 21 10 10 10 WALL (+X)B
REG    -1.0  1  1  23 33 10 10 10 WALL (+X)B
REG    -1.0  12 12  1  10 10 10 10 WALL (+X)B
REG    -1.0  12 12 12 21 10 10 10 WALL (+X)B
REG    -1.0  12 12 23 33 10 10 10 WALL (+X)B
REG    -1.0  12 12 35 44 10 10 10 WALL (+X)B
REG    -1.0  23 23  1  10 10 10 10 WALL (+X)B
REG    -1.0  23 23 12 21 10 10 10 WALL (+X)B
REG    -1.0  23 23 24 33 10 10 10 WALL (+X)B
REG    -1.0  23 23 35 44 10 10 10 WALL (+X)B
REG    -1.0  35 35  1  10 10 10 10 WALL (+X)B
REG    -1.0  35 35 12 21 10 10 10 WALL (+X)B
REG    -1.0  35 35 23 33 10 10 10 WALL (+X)B
REG    -1.0  35 35 35 44 10 10 10 WALL (+X)B
REG    -1.0  44 44  1  4  1  2  11 WALL (-X)
REG    -1.0  44 44  6 16  1  2  11 WALL (-X)
REG    -1.0  44 44 18 27  1  2  11 WALL (-X)
REG    -1.0  44 44 29 39  1  2  11 WALL (-X)
REG    -1.0  44 44 41 44  1  2  11 WALL (-X)
REG    -1.0  44 44  1  44  3  9  11 WALL (-X)B
REG    -1.0  21 21 22 23  1  9  11 OBSTACLE (-X)B
REG    -1.0  13 13  1  1  5  5  11 INLET (-X)
REG    -1.0  10 10  1  10 10 10 11 WALL (-X)B
REG    -1.0  10 10 12 21 10 10 11 WALL (-X)B
REG    -1.0  10 10 23 33 10 10 11 WALL (-X)B
REG    -1.0  21 21  1  10 10 10 11 WALL (-X)B
REG    -1.0  21 21 12 21 10 10 11 WALL (-X)B
REG    -1.0  21 21 23 33 10 10 11 WALL (-X)B
REG    -1.0  21 21 35 44 10 10 11 WALL (-X)B
REG    -1.0  33 33  1  10 10 10 11 WALL (-X)B
REG    -1.0  33 33 12 21 10 10 11 WALL (-X)B
REG    -1.0  33 33 23 33 10 10 11 WALL (-X)B
REG    -1.0  33 33 35 44 10 10 11 WALL (-X)B
REG    -1.0  44 44  1  10 10 10 11 WALL (-X)B
REG    -1.0  44 44 12 21 10 10 11 WALL (-X)B
REG    -1.0  44 44 23 33 10 10 11 WALL (-X)B

```

図2.4 大型解析モデル用入力データ

冊

```

REG -1.0 44 44 35 44 10 10 11 WALL (-X)B
REG -1.0 45 45 5 5 1 2 12 OUTLET (-X)**
REG -1.0 45 45 17 17 1 2 12 OUTLET (-X)**
REG -1.0 45 45 28 28 1 2 12 OUTLET (-X)**
REG -1.0 45 45 40 40 1 2 12 OUTLET (-X)**
REG -1.0 1 44 1 1 1 4 13 WALL (+Y)
REG -1.0 1 13 1 1 5 6 13 WALL (+Y)
REG -1.0 16 44 1 1 5 6 13 WALL (+Y)
REG -1.0 1 44 1 1 7 9 13 WALL (+Y)B
REG -1.0 22 22 24 24 1 9 13 OBSTACLE (+Y)B
REG -1.0 23 23 24 24 1 10 13 OBSTACLE (+Y)B
REG -1.0 1 1 10 10 6 6 13 INLET (+Y)
REG -1.0 1 1 21 21 6 6 13 INLET (+Y)
REG -1.0 45 45 5 5 1 2 13 OUTLET WALL(+Y)**
REG -1.0 45 45 17 17 1 2 13 OUTLET WALL(+Y)**
REG -1.0 45 45 28 28 1 2 13 OUTLET WALL(+Y)**
REG -1.0 45 45 40 40 1 2 13 OUTLET WALL(+Y)**
REG -1.0 1 10 1 1 10 10 13 WALL (+Y)B
REG -1.0 1 10 12 12 10 10 13 WALL (+Y)B
REG -1.0 1 10 23 23 10 10 13 WALL (+Y)B
REG -1.0 12 21 1 1 10 10 13 WALL (+Y)B
REG -1.0 12 21 12 12 10 10 13 WALL (+Y)B
REG -1.0 12 21 23 23 10 10 13 WALL (+Y)B
REG -1.0 12 21 35 35 10 10 13 WALL (+Y)B
REG -1.0 23 33 1 1 10 10 13 WALL (+Y)B
REG -1.0 23 33 12 12 10 10 13 WALL (+Y)B
REG -1.0 24 33 23 23 10 10 13 WALL (+Y)B
REG -1.0 23 33 35 35 10 10 13 WALL (+Y)B
REG -1.0 35 44 1 1 10 10 13 WALL (+Y)B
REG -1.0 35 44 12 12 10 10 13 WALL (+Y)B
REG -1.0 35 44 23 23 10 10 13 WALL (+Y)B
REG -1.0 35 44 35 35 10 10 13 WALL (+Y)B
REG -1.0 1 11 33 33 1 9 14 WALL (-Y)B
REG -1.0 12 44 44 44 1 9 14 WALL (-Y)B
REG -1.0 22 23 21 21 1 9 14 OBSTACLE (-Y)
REG -1.0 1 1 7 7 6 6 14 INLET (-Y)
REG -1.0 1 1 18 18 5 5 14 INLET (-Y)*****
REG -1.0 1 1 18 18 6 6 14 INLET (-Y)*****
REG -1.0 45 45 5 5 1 2 14 OUTLET WALL(-Y)**
REG -1.0 45 45 17 17 1 2 14 OUTLET WALL(-Y)**
REG -1.0 45 45 28 28 1 2 14 OUTLET WALL(-Y)**
REG -1.0 45 45 40 40 1 2 14 OUTLET WALL(-Y)**
REG -1.0 1 10 10 10 10 14 WALL (-Y)B
REG -1.0 1 10 21 21 10 10 14 WALL (-Y)B
REG -1.0 1 10 33 33 10 10 14 WALL (-Y)B
REG -1.0 12 21 10 10 10 10 14 WALL (-Y)B
REG -1.0 12 21 21 21 10 10 14 WALL (-Y)B
REG -1.0 12 21 33 33 10 10 14 WALL (-Y)B
REG -1.0 12 21 44 44 10 10 14 WALL (-Y)B
REG -1.0 23 33 10 10 10 10 14 WALL (-Y)B
REG -1.0 23 33 21 21 10 10 14 WALL (-Y)B
REG -1.0 23 33 33 33 10 10 14 WALL (-Y)B
REG -1.0 23 33 44 44 10 10 14 WALL (-Y)B
REG -1.0 35 44 10 10 10 10 14 WALL (-Y)B
REG -1.0 35 44 21 21 10 10 14 WALL (-Y)B
REG -1.0 35 44 33 33 10 10 14 WALL (-Y)B
REG -1.0 35 44 44 44 10 10 14 WALL (-Y)B
REG -1.0 1 44 1 21 1 1 15 BOTTOM (+Z)
REG -1.0 1 21 22 23 1 1 15 BOTTOM (+Z)
REG -1.0 24 44 22 23 1 1 15 BOTTOM (+Z)
REG -1.0 1 44 24 33 1 1 15 BOTTOM (+Z)
REG -1.0 12 44 34 44 1 1 15 BOTTOM (+Z)
REG -1.0 1 1 8 9 7 7 15 INLET (+Z)
REG -1.0 1 1 19 20 7 7 15 INLET (+Z)
REG -1.0 45 45 5 5 1 1 15 OUTLET WALL(+Z)**
REG -1.0 45 45 17 17 1 1 15 OUTLET WALL(+Z)**
REG -1.0 45 45 28 28 1 1 15 OUTLET WALL(+Z)**
REG -1.0 45 45 40 40 1 1 15 OUTLET WALL(+Z)**
REG -1.0 1 1 19 19 4 4 16 INLET (-Z)*****
REG -1.0 14 15 1 1 4 4 16 INLET (-Z)
REG -1.0 45 45 5 5 2 2 16 OUTLET WALL(-Z)**
REG -1.0 45 45 17 17 2 2 16 OUTLET WALL(-Z)**
REG -1.0 45 45 28 28 2 2 16 OUTLET WALL(-Z)**
REG -1.0 45 45 40 40 2 2 16 OUTLET WALL(-Z)**
REG -1.0 1 10 1 10 10 10 16 WALL(-Z)B
REG -1.0 1 10 12 21 10 10 16 WALL(-Z)B
REG -1.0 1 10 23 33 10 10 16 WALL(-Z)B
REG -1.0 12 21 1 10 10 10 16 WALL(-Z)B
REG -1.0 12 21 12 21 10 10 16 WALL(-Z)B
REG -1.0 12 21 23 33 10 10 16 WALL(-Z)B

```

図2.4 大型解析モデル用入力データ



```

REG      -1.0 12 21 35 44 10 10 16 WALL(-2)B
REG      -1.0 23 33 1 10 10 10 16 WALL(-2)B
REG      -1.0 23 33 12 21 10 10 16 WALL(-2)B
REG      -1.0 23 33 24 33 10 10 16 WALL(-2)B
REG      -1.0 23 33 35 44 10 10 16 WALL(-2)B
REG      -1.0 24 33 23 23 10 10 16 WALL(-2)B
REG      -1.0 35 44 1 10 10 10 16 WALL(-2)B
REG      -1.0 35 44 12 21 10 10 16 WALL(-2)B
REG      -1.0 35 44 23 33 10 10 16 WALL(-2)B
REG      -1.0 35 44 35 44 10 10 16 WALL(-2)B
REG      -1.0 11 11 1 33 9 9 16 WALL(-2)B
REG      -1.0 22 22 1 21 9 9 16 WALL(-2)B
REG      -1.0 22 22 24 44 9 9 16 WALL(-2)B
REG      -1.0 34 34 1 44 9 9 16 WALL(-2)B
REG      -1.0 1 10 11 11 9 9 16 WALL(-2)B
REG      -1.0 1 10 22 22 9 9 16 WALL(-2)B
REG      -1.0 12 21 11 11 9 9 16 WALL(-2)B
REG      -1.0 12 21 22 22 9 9 16 WALL(-2)B
REG      -1.0 12 21 34 34 9 9 16 WALL(-2)B
REG      -1.0 23 33 11 11 9 9 16 WALL(-2)B
REG      -1.0 24 33 22 22 9 9 16 WALL(-2)B
REG      -1.0 23 33 34 34 9 9 16 WALL(-2)B
REG      -1.0 35 44 11 11 9 9 16 WALL(-2)B
REG      -1.0 35 44 22 22 9 9 16 WALL(-2)B
REG      -1.0 35 44 34 34 9 9 16 WALL(-2)B
REG      -1.0 1 1 20 20 5 5 17 INLET-2 (+Y)*****
END
&DATA IFENER=0, NTHCON=-1, NTHMAX=99999, IT=1,
      IDTIME=0, ROTIME=0.3, TREST=120.0,

      IFPROP=1,
      FCON=0.27697E+6,
      FC1H=1014.,
      FCORO=1.166,
      FC1RO=-0.00248,
      FCOK=0.07627,
      FC1K=0.0,
      FCOMU=1.819E-5,
      FC1MU=0.0,

      IDISP=0, NTSHRV= 10.,
      DT(1)=1.0000,
      KFLOW= 9*1, 1, 1, -5, 1, 1, 1, 1, 1,
      KTEMP=17*400,
      TEMPO= 20.,
      VELOC( 1)=1.6263,
      VELOC( 2)=0.001,
      VELOC( 3)=1.6263,
      VELOC( 4)=0.80829,
      VELOC( 5)=0.001,
      VELOC( 6)=0.80829,
      VELOC( 7)=1.4142,
      VELOC( 8)=0.001,
      VELOC( 9)=1.4142,
      VELOC(17)=0.80829,
      NTPRNT=-9999,
      NTPLOT=-9999,
      NTHPR =013003, 023003, 033003,
&END
&TURB
      CINK1=0.000021, CINK2=0.000021,
      CINE1=0.000004, CINE2=0.000004,
      HYDIN=1.0E10,
      KEITER=1, ITKBUG=0,
&END
END
END

```

図2.4 大型解析モデル用入力データ

```

*****
*
* ANALYSIS OF AIR FLOW DISTRIBUTION IN THE 3RD PU-FUEL DESIGN OFFICE *
*
*
*                                     DATE : JUL. 9,'91
*                                     L.M. : AZ511.AQUA.ASM.LOAD
*                                     (S80E5)
*
*****
&GEOM  IGEOM= 0, NL1=3000, NM1=6000, ISYMCH=3, IFITEN=3,
        IFRES=1, IHAX=26, JHAX=31, KMAX=8, NSURF=17,
        DX=0.50, 4*1.0, 2*0.5, 5*1.0, 2*0.5, 5*1.0, 0.5, 5*1.0, 0.5,
        DY=0.50, 1.0, 2*0.5, 2*1.0, 3*0.5, 2*1.0, 7*0.5, 2*1.0, 0.5, 2*1.0,
           2*0.5, 2*1.0, 2*0.5, 2*1.0,
        DZ=2*0.625, 1.25, 2*0.80, 1.7, 2*0.85,
        XNORML= 1., 1., 0., 1., 1., 0., 0., 0., 0., 1.,
               -1., -1., 0., 0., 0., 0., 0.,
        YNORML= 0., 0., 0., 0., 0., 0., 1., 1., 0., 0.,
               0., 0., 1., -1., 0., 0., 1.,
        ZNORML= 0., 0., -1., 0., 0., -1., 0., 0., 1., 0.,
               0., 0., 0., 0., 1., -1., 0.,
        ITURKE=20, IFPCG=5,
&END
REG    -1.0  1  1  6  6  4  4  1 INLET-1 (+X)
REG    -1.0  2  2  6  6  5  5  2 INLET-1 (+X)
REG    -1.0  1  1  6  6  4  4  3 INLET-1 (-Z)
REG    -1.0  1  1  15 15  4  4  4 INLET-2 (+X)*****
REG    -1.0  2  2  14 15  5  5  5 INLET-2 (+X)***
REG    -1.0  1  1  15 15  4  4  6 INLET-2 (-Z)*****
REG    -1.0  9  9  1  1  5  5  7 INLET-3 (+Y)
REG    -1.0  9  9  2  2  4  4  8 INLET-3 (+Y)
REG    -1.0  9  9  1  1  5  5  9 INLET-3 (+Z)
REG    -1.0  1  1  1  24  1  3 10 WALL (+X)
REG    -1.0  1  1  1  5  4  5 10 WALL (+X)
REG    -1.0  1  1  7  13  4  5 10 WALL (+X)
REG    -1.0  1  1  14 14  3  3 10 INLET (+X)*****
REG    -1.0  2  2  14 14  4  4 10 INLET (+X)*****
REG    -1.0  1  1  16 24  4  5 10 WALL (+X)
REG    -1.0  1  1  1  24  6  7 10 WALL (+X)B
REG    -1.0  8  8  25 31  1  7 10 WALL (+X)B
REG    -1.0  15 15 17 17  1  7 10 OBSTACLE (+X)B
REG    -1.0  15 15 18 18  1  8 10 OBSTACLE (+X)B
REG    -1.0  10 10  1  1  4  4 10 INLET (+X)
REG    -1.0  1  1  1  7  8  8 10 WALL (+X)B
REG    -1.0  1  1  9  16  8  8 10 WALL (+X)B
REG    -1.0  1  1  18 24  8  8 10 WALL (+X)B
REG    -1.0  8  8  1  7  8  8 10 WALL (+X)B
REG    -1.0  8  8  9  16  8  8 10 WALL (+X)B
REG    -1.0  8  8  18 24  8  8 10 WALL (+X)B
REG    -1.0  8  8  26 31  8  8 10 WALL (+X)B
REG    -1.0  14 14  1  7  8  8 10 WALL (+X)B
REG    -1.0  14 14  9  16  8  8 10 WALL (+X)B
REG    -1.0  14 14  19 24  8  8 10 WALL (+X)B
REG    -1.0  14 14  26 31  8  8 10 WALL (+X)B
REG    -1.0  21 21  1  7  8  8 10 WALL (+X)B
REG    -1.0  21 21  9  16  8  8 10 WALL (+X)B
REG    -1.0  21 21  18 24  8  8 10 WALL (+X)B
REG    -1.0  21 21  26 31  8  8 10 WALL (+X)B
REG    -1.0  25 25  1  3  1  2 11 WALL (-X)
REG    -1.0  25 25  5 11  1  2 11 WALL (-X)
REG    -1.0  25 25  13 20  1  2 11 WALL (-X)
REG    -1.0  25 25  22 28  1  2 11 WALL (-X)
REG    -1.0  25 25  30 31  1  2 11 WALL (-X)
REG    -1.0  25 25  1  31  3  7 11 WALL (-X)B
REG    -1.0  12 12  17 18  1  7 11 OBSTACLE (-X)B
REG    -1.0  8  8  1  1  4  4 11 INLET (-X)
REG    -1.0  6  6  1  7  8  8 11 WALL (-X)B
REG    -1.0  6  6  9  16  8  8 11 WALL (-X)B
REG    -1.0  6  6  18 24  8  8 11 WALL (-X)B
REG    -1.0  12 12  1  7  8  8 11 WALL (-X)B
REG    -1.0  12 12  9  16  8  8 11 WALL (-X)B
REG    -1.0  12 12  18 24  8  8 11 WALL (-X)B
REG    -1.0  12 12  26 31  8  8 11 WALL (-X)B
REG    -1.0  19 19  1  7  8  8 11 WALL (-X)B
REG    -1.0  19 19  9  16  8  8 11 WALL (-X)B
REG    -1.0  19 19  18 24  8  8 11 WALL (-X)B
REG    -1.0  19 19  26 31  8  8 11 WALL (-X)B
REG    -1.0  25 25  1  7  8  8 11 WALL (-X)B
REG    -1.0  25 25  9  16  8  8 11 WALL (-X)B

```

図2.5 中型解析モデル用入力データ

REG

```

REG -1.0 25 25 18 24 8 8 11 WALL (-X)B
REG -1.0 25 25 26 31 8 8 11 WALL (-X)B
REG -1.0 26 26 4 4 1 2 12 OUTLET (-X)**
REG -1.0 26 26 12 12 1 2 12 OUTLET (-X)**
REG -1.0 26 26 21 21 1 2 12 OUTLET (-X)**
REG -1.0 26 26 29 29 1 2 12 OUTLET (-X)**
REG -1.0 1 25 1 1 1 3 13 WALL (+Y)
REG -1.0 1 8 1 1 4 5 13 WALL (+Y)
REG -1.0 10 25 1 1 4 5 13 WALL (+Y)
REG -1.0 1 25 1 1 6 7 13 WALL (+Y)B
REG -1.0 13 13 19 19 1 7 13 OBSTACLE (+Y)B
REG -1.0 14 14 19 19 1 8 13 OBSTACLE (+Y)B
REG -1.0 1 1 7 7 5 5 13 INLET (+Y)
REG -1.0 1 1 16 16 5 5 13 INLET (+Y)
REG -1.0 26 26 4 4 1 2 13 OUTLET WALL(+Y)**
REG -1.0 26 26 12 12 1 2 13 OUTLET WALL(+Y)**
REG -1.0 26 26 21 21 1 2 13 OUTLET WALL(+Y)**
REG -1.0 26 26 29 29 1 2 13 OUTLET WALL(+Y)**
REG -1.0 1 6 1 1 8 8 13 WALL (+Y)B
REG -1.0 1 6 9 9 8 8 13 WALL (+Y)B
REG -1.0 1 6 18 18 8 8 13 WALL (+Y)B
REG -1.0 8 12 1 1 8 8 13 WALL (+Y)B
REG -1.0 8 12 9 9 8 8 13 WALL (+Y)B
REG -1.0 8 12 18 18 8 8 13 WALL (+Y)B
REG -1.0 8 12 26 26 8 8 13 WALL (+Y)B
REG -1.0 14 19 1 1 8 8 13 WALL (+Y)B
REG -1.0 14 19 9 9 8 8 13 WALL (+Y)B
REG -1.0 15 19 18 18 8 8 13 WALL (+Y)B
REG -1.0 14 19 26 26 8 8 13 WALL (+Y)B
REG -1.0 21 25 1 1 8 8 13 WALL (+Y)B
REG -1.0 21 25 9 9 8 8 13 WALL (+Y)B
REG -1.0 21 25 18 18 8 8 13 WALL (+Y)B
REG -1.0 21 25 26 26 8 8 13 WALL (+Y)B
REG -1.0 1 7 24 24 1 7 14 WALL (-Y)B
REG -1.0 8 25 31 31 1 7 14 WALL (-Y)B
REG -1.0 13 14 16 16 1 7 14 OBSTACLE (-Y)
REG -1.0 1 1 5 5 5 5 14 INLET (-Y)
REG -1.0 1 1 13 13 4 4 14 INLET (-Y)*****
REG -1.0 1 1 13 13 5 5 14 INLET (-Y)*****
REG -1.0 26 26 4 4 1 2 14 OUTLET WALL(-Y)**
REG -1.0 26 26 12 12 1 2 14 OUTLET WALL(-Y)**
REG -1.0 26 26 21 21 1 2 14 OUTLET WALL(-Y)**
REG -1.0 26 26 29 29 1 2 14 OUTLET WALL(-Y)**
REG -1.0 1 6 7 7 8 8 14 WALL (-Y)B
REG -1.0 1 6 16 16 8 8 14 WALL (-Y)B
REG -1.0 1 6 24 24 8 8 14 WALL (-Y)B
REG -1.0 8 12 7 7 8 8 14 WALL (-Y)B
REG -1.0 8 12 16 16 8 8 14 WALL (-Y)B
REG -1.0 8 12 24 24 8 8 14 WALL (-Y)B
REG -1.0 8 12 31 31 8 8 14 WALL (-Y)B
REG -1.0 14 19 7 7 8 8 14 WALL (-Y)B
REG -1.0 14 19 16 16 8 8 14 WALL (-Y)B
REG -1.0 14 19 24 24 8 8 14 WALL (-Y)B
REG -1.0 14 19 31 31 8 8 14 WALL (-Y)B
REG -1.0 21 25 7 7 8 8 14 WALL (-Y)B
REG -1.0 21 25 16 16 8 8 14 WALL (-Y)B
REG -1.0 21 25 24 24 8 8 14 WALL (-Y)B
REG -1.0 21 25 31 31 8 8 14 WALL (-Y)B
REG -1.0 1 25 1 16 1 1 15 BOTTOM (+Z)
REG -1.0 1 12 17 18 1 1 15 BOTTOM (+Z)
REG -1.0 15 25 17 18 1 1 15 BOTTOM (+Z)
REG -1.0 1 25 19 24 1 1 15 BOTTOM (+Z)
REG -1.0 8 25 25 31 1 1 15 BOTTOM (+Z)
REG -1.0 1 1 6 6 6 6 15 INLET (+Z)
REG -1.0 1 1 14 15 6 6 15 INLET (+Z)
REG -1.0 26 26 4 4 1 1 15 OUTLET WALL(+Z)**
REG -1.0 26 26 12 12 1 1 15 OUTLET WALL(+Z)**
REG -1.0 26 26 21 21 1 1 15 OUTLET WALL(+Z)**
REG -1.0 26 26 29 29 1 1 15 OUTLET WALL(+Z)**
REG -1.0 1 1 14 14 3 3 16 INLET (-Z)*****
REG -1.0 9 9 1 1 3 3 16 INLET (-Z)
REG -1.0 26 26 4 4 2 2 16 OUTLET WALL(-Z)**
REG -1.0 26 26 12 12 2 2 16 OUTLET WALL(-Z)**
REG -1.0 26 26 21 21 2 2 16 OUTLET WALL(-Z)**
REG -1.0 26 26 29 29 2 2 16 OUTLET WALL(-Z)**
REG -1.0 1 6 1 7 8 8 16 WALL(-Z)B
REG -1.0 1 6 9 16 8 8 16 WALL(-Z)B
REG -1.0 1 6 18 24 8 8 16 WALL(-Z)B
REG -1.0 8 12 1 7 8 8 16 WALL(-Z)B
REG -1.0 8 12 9 16 8 8 16 WALL(-Z)B

```

図2.5 中型解析モデル用入力データ

```

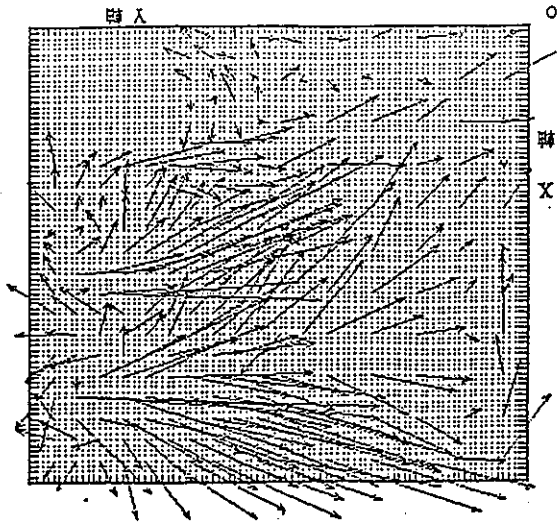
REG      -1.0  8 12 18 24  8  8 16 WALL(-Z)B
REG      -1.0  8 12 26 31  8  8 16 WALL(-Z)B
REG      -1.0 14 19  1  7  8  8 16 WALL(-Z)B
REG      -1.0 14 19  9 16  8  8 16 WALL(-Z)B
REG      -1.0 14 19 19 24  8  8 16 WALL(-Z)B
REG      -1.0 14 19 26 31  8  8 16 WALL(-Z)B
REG      -1.0 15 19 18 18  8  8 16 WALL(-Z)B
REG      -1.0 21 25  1  7  8  8 16 WALL(-Z)B
REG      -1.0 21 25  9 16  8  8 16 WALL(-Z)B
REG      -1.0 21 25 18 24  8  8 16 WALL(-Z)B
REG      -1.0 21 25 26 31  8  8 16 WALL(-Z)B
REG      -1.0  7  7  1 24  7  7 16 WALL(-Z)B
REG      -1.0 13 13  1 16  7  7 16 WALL(-Z)B
REG      -1.0 13 13 19 31  7  7 16 WALL(-Z)B
REG      -1.0 20 20  1 31  7  7 16 WALL(-Z)B
REG      -1.0  1  6  8  8  7  7 16 WALL(-Z)B
REG      -1.0  1  6 17 17  7  7 16 WALL(-Z)B
REG      -1.0  8 12  8  8  7  7 16 WALL(-Z)B
REG      -1.0  8 12 17 17  7  7 16 WALL(-Z)B
REG      -1.0  8 12 25 25  7  7 16 WALL(-Z)B
REG      -1.0 14 19  8  8  7  7 16 WALL(-Z)B
REG      -1.0 15 19 17 17  7  7 16 WALL(-Z)B
REG      -1.0 14 19 25 25  7  7 16 WALL(-Z)B
REG      -1.0 21 25  8  8  7  7 16 WALL(-Z)B
REG      -1.0 21 25 17 17  7  7 16 WALL(-Z)B
REG      -1.0 21 25 25 25  7  7 16 WALL(-Z)B
REG      -1.0  1  1 15 15  4  4 17 INLET-2 (+Y)*****
END
&DATA  IFENER=0, NTHCON=-1,NTMAX=99999,IT=1,
        IDTIME=0,RDTIME=0.3,TREST=120.0,

        IFPROP=1,
        FCOH=0.27697E+6,
        FC1H=1014.,
        FCORO=1.166,
        FC1RO=-0.00248,
        FCOK=0.07627,
        FC1K=0.0,
        FCOMU=1.819E-5,
        FC1HU=0.0,

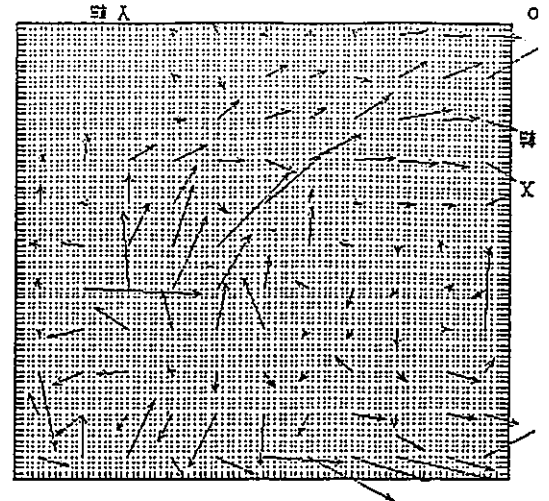
        IDISP=0,NTSMRY= 10,
        DT(1)=1.0000,
        KFLOW= 9*1, 1, 1,-5, 1, 1, 1, 1, 1,
        KTEMP=17*400,
        TEMPO= 20.,
        VELOC( 1)=1.6263,
        VELOC( 2)=0.001,
        VELOC( 3)=1.6263,
        VELOC( 4)=0.80829,
        VELOC( 5)=0.001,
        VELOC( 6)=0.80829,
        VELOC( 7)=1.4142,
        VELOC( 8)=0.001,
        VELOC( 9)=1.4142,
        VELOC(17)=0.80829,
        NTPRNT=-9999,
        NTPLOT=-9999,
        NTHPR =013003, 023003, 033003,
&END
&TURB
        CINK1=0.000021,CINK2=0.000021,
        CINE1=0.000004,CINE2=0.000004,
        HYDIN=1.0E10,
        KEITER=1,ITKBUG=0,
&END
END
END

```

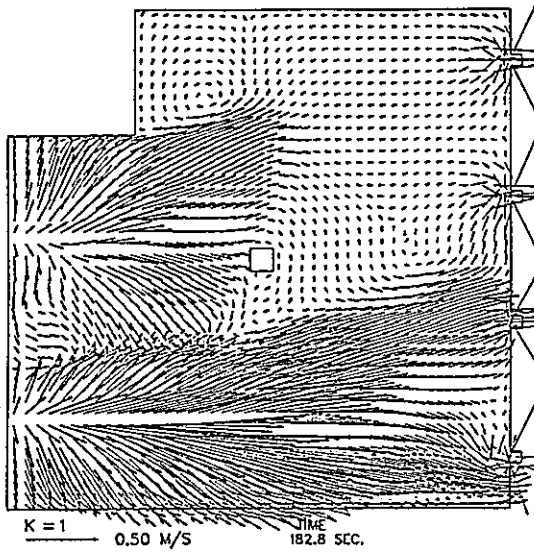
図2.5 中型解析モデル用入力データ



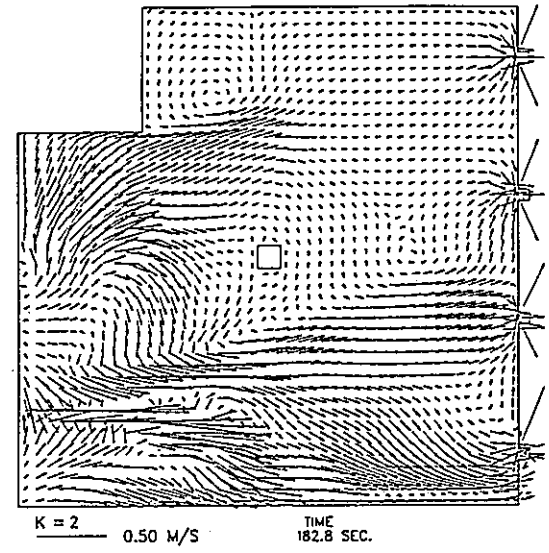
[測定]



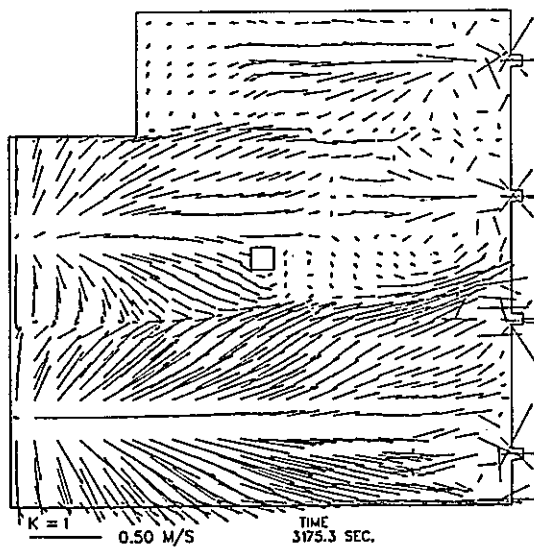
[測定]



[細メッシュ解]

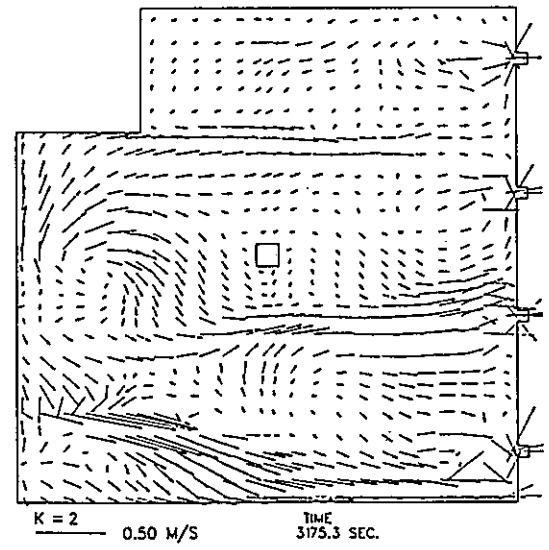


[細メッシュ解]



[粗メッシュ解]

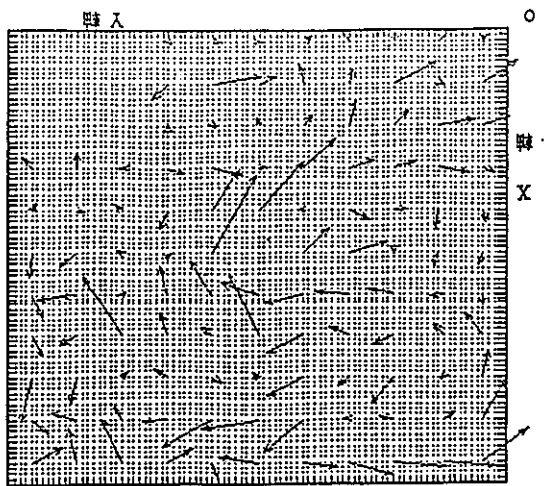
(床面より0.5m位置)



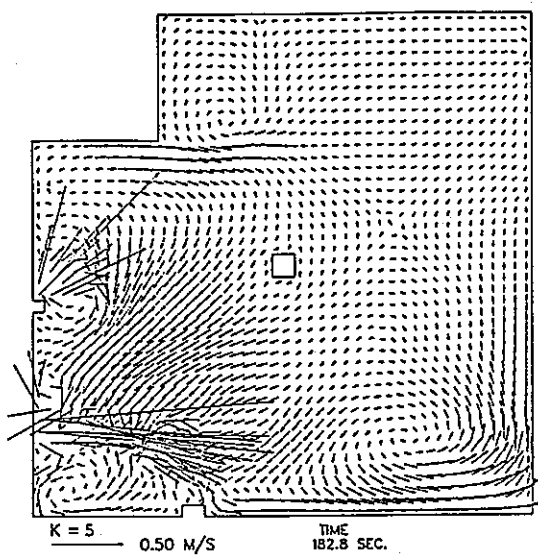
[粗メッシュ解]

(床面より2.5m位置)

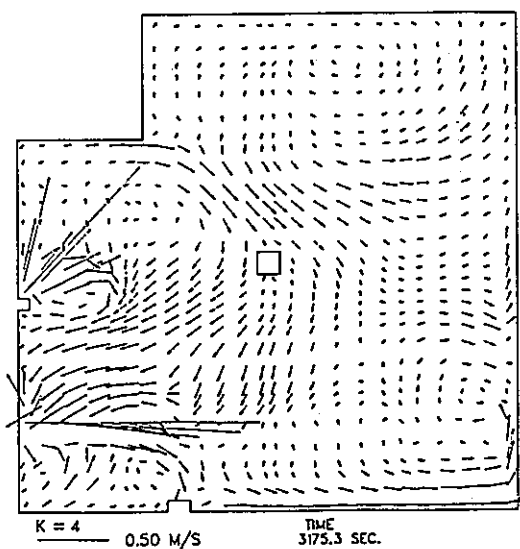
図2.6 工程室内流速分布の比較



〔測定〕



〔細メッシュ解〕



〔粗メッシュ解〕

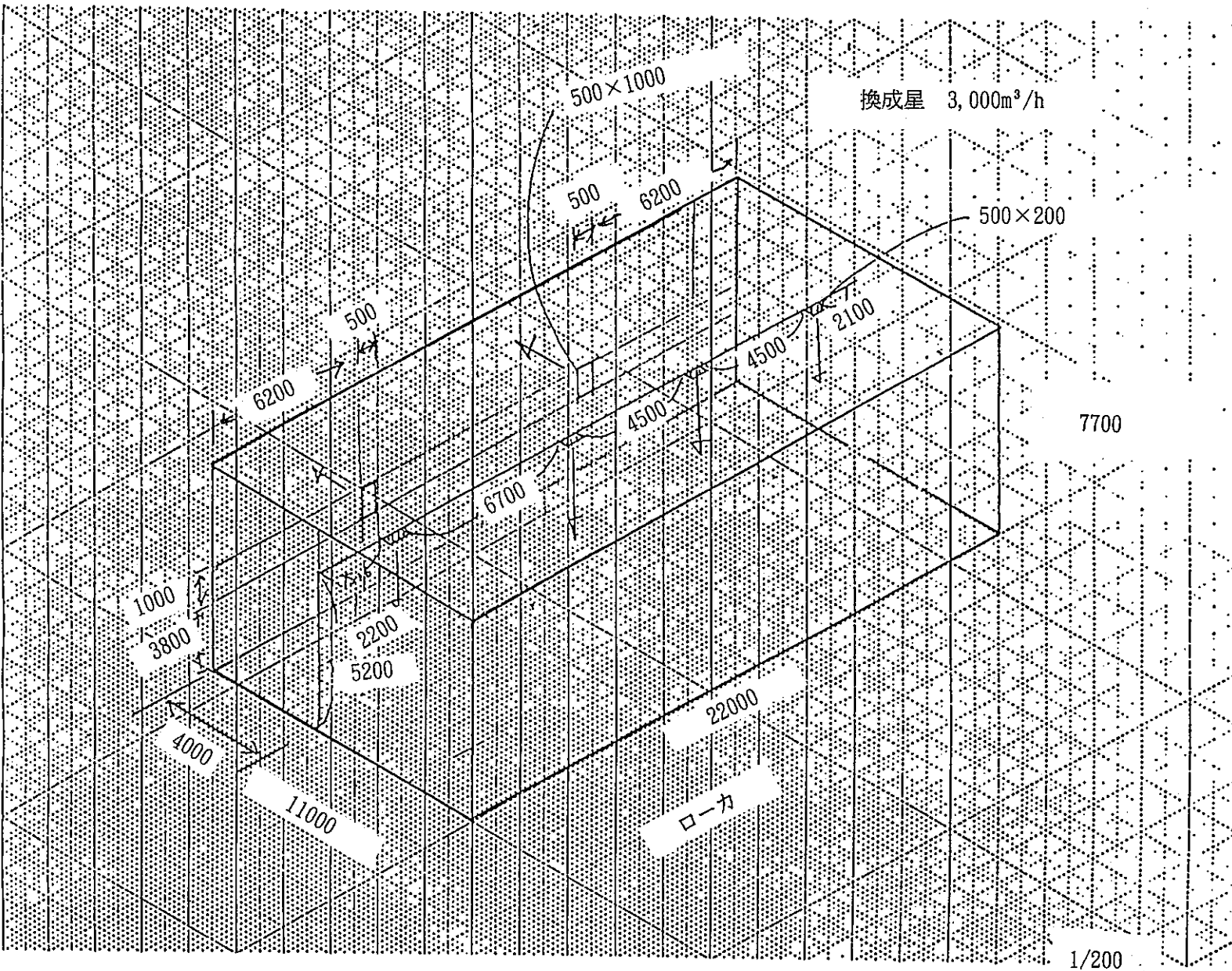
(床面より1.5m位置)

図2.6 工程室内流速分布の比較

粉(1)

0.1m<sup>2</sup>/in

換成星 3,000m<sup>3</sup>/h



立体三角1/2m<sup>2</sup>ガラス用紙

Tochimani

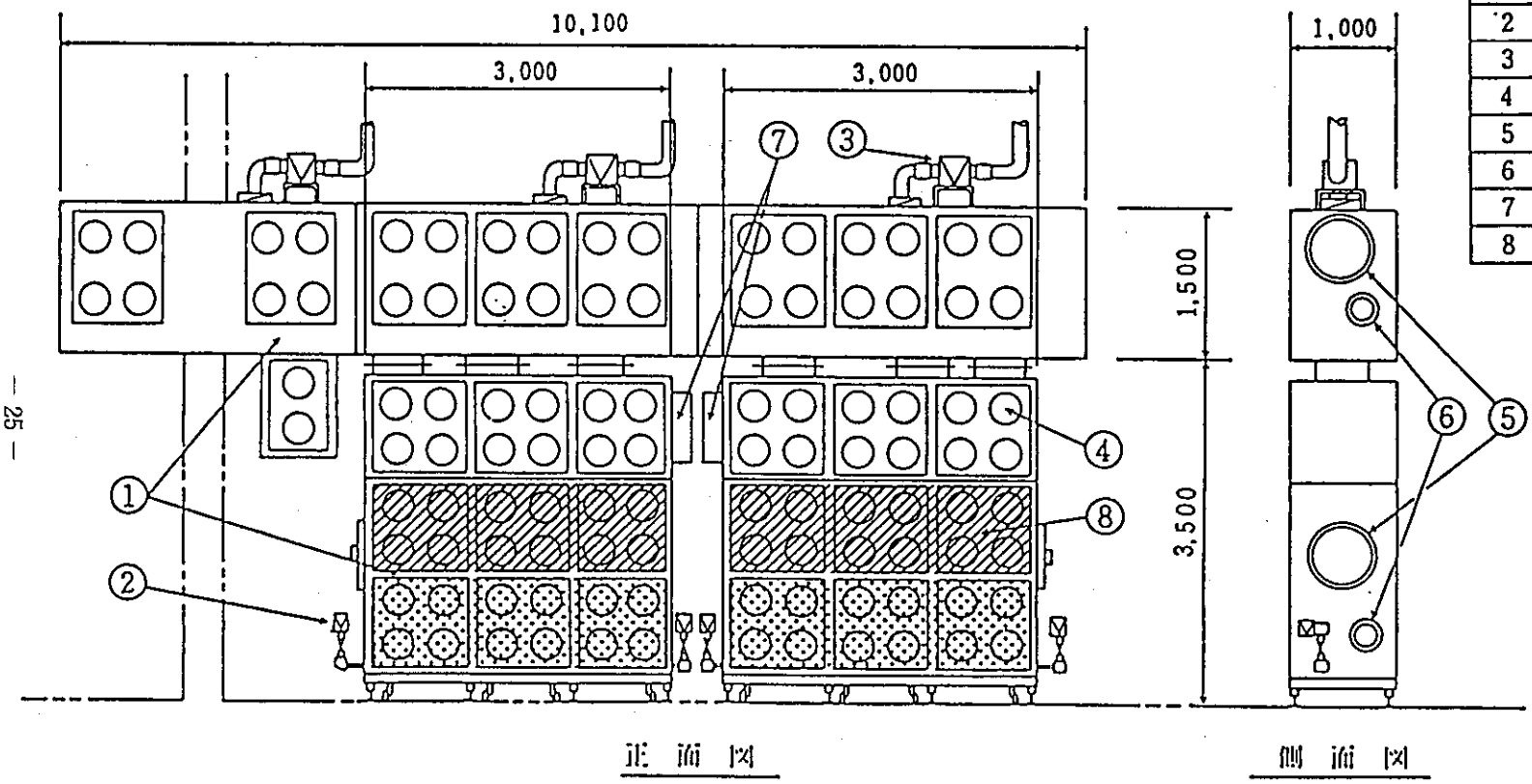
上質紙 A判 44.5kg / B判 70kg

トレーシングペーパー / 50g / m<sup>2</sup>

ローカ

1/200

図3.1 プルトニウム燃料第3開発室・粉末調製室概要



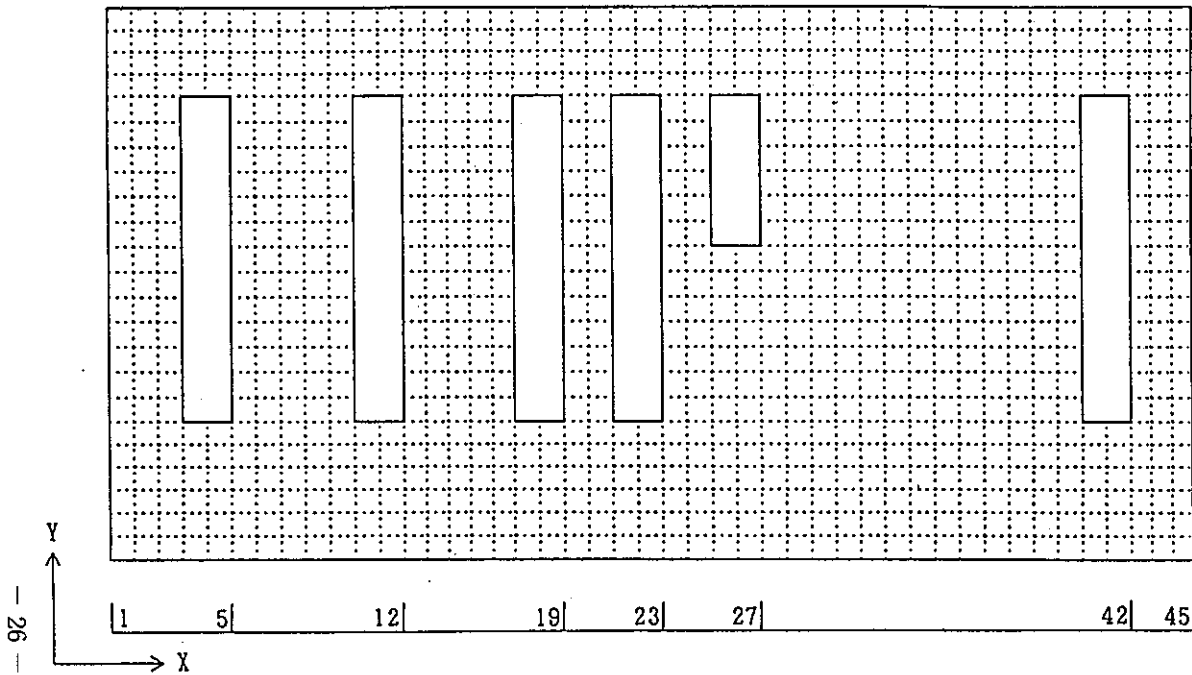
No.	名称
1	本体
2	捨気高性能エアフィルタ
3	排気高性能エアフィルタ
4	グローブポート
5	バッグポート (大)
6	バッグポート (小)
7	端子箱
8	窓板

(概略寸法 単位: mm)

図3.2 ペレット製造工程グローブボックス概要

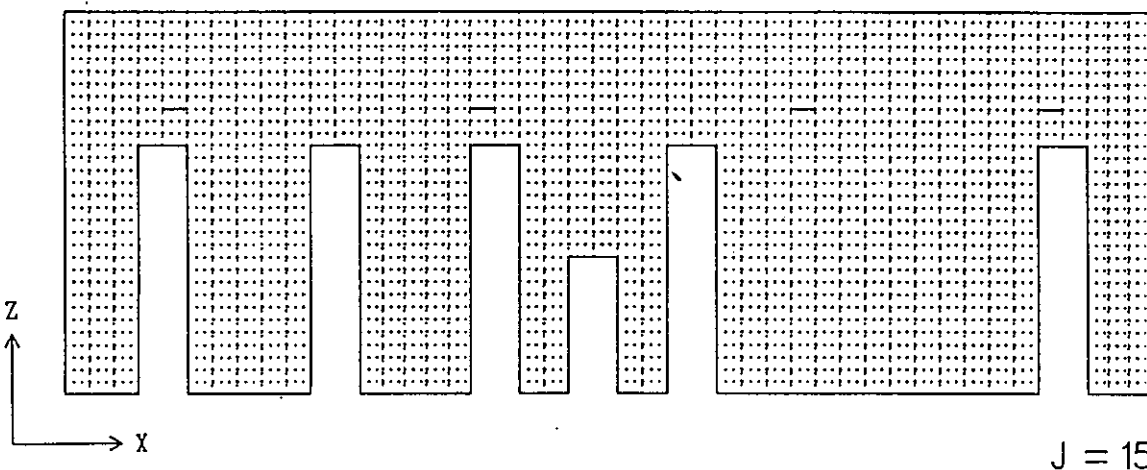
(標準型)



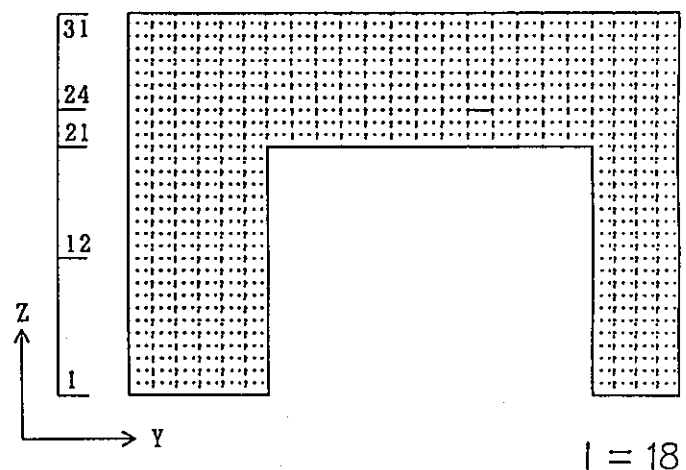


$K = 7$

1 | 7 | 15 | 20 23



$J = 15$



$I = 18$

図3.3 プルトニウム燃料第3開発室・粉末調製室用メッシュ分割

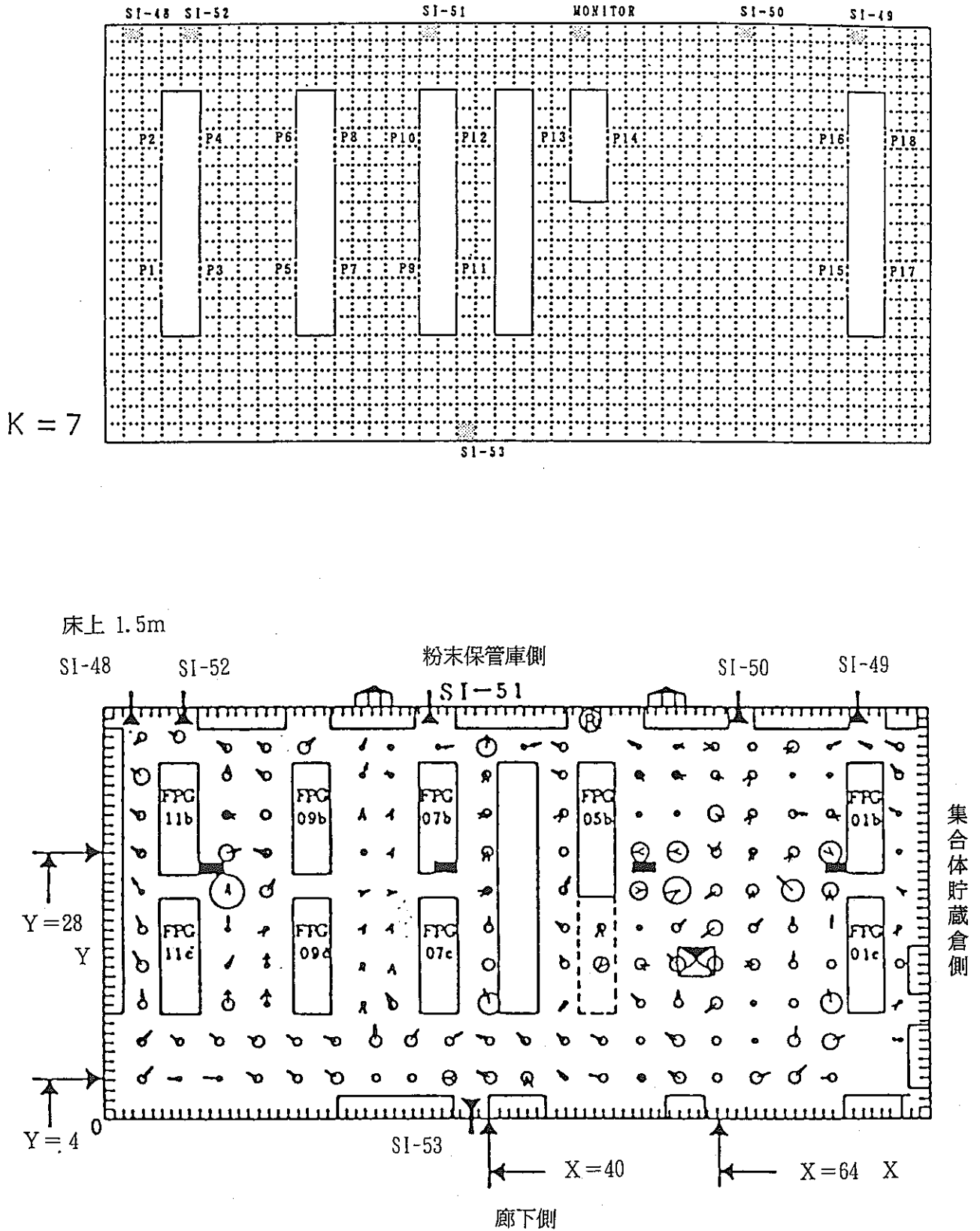


図3.4 放射性物質漏洩箇所の規定

```

*****
*
* ACCIDENT ANALYSIS IN GLOVE BOX HANDLING FBR FUEL PELLET
*
*
* DATE : AUG. 3, '91
* L.H. : AZ511.AQUA.ASM.LOAD
* (S63E5MT)
*
*****
&GEOM  IGEOH= 0, NL1=10500, NM1=29430, ISYHCH=3, IFITEN=3,
        IFRES=1, IMAX=45, JMAX=24, KMAX=31, NSURF=239,
        DX=12*0.5, 5*0.45, 25*0.5, 3*0.41667,
        DY=6*0.45833, 13*0.5, 5*0.4375,
        DZ=30*0.25, 0.20,
        XNORML= 0., 0., 0., 0., 0., 1., -1., 0., 0., 0., 0.,
                24*-1., 24* 1.,
                24*-1., 24* 1.,
                24*-1., 24* 1.,
                18*-1., 18* 1.,
                24*-1., 24* 1.,
        YNORML= 0., 0., 0., 0., -1., 0., 0., 1., -1., 0., 0.,
                228*0.,
        ZNORML=-1., -1., -1., -1., 0., 0., 0., 0., 0., 1., -1.,
                228*0.,
        ITURKE= 0, IFPCG=0, ICONCE=2,
&END
REG      0.1  5  5  15  15  23  23  1 INLET-1 (-Z)
REG      0.1  18 18  15  15  23  23  2 INLET-2 (-Z)
REG      0.1  31 31  15  15  23  23  3 INLET-3 (-Z)
REG      0.1  41 41  15  15  23  23  4 INLET-4 (-Z)
REG     -1.0  13 13  24  24  15  18  5 OUTLET (-Y)
REG     -1.0  32 32  24  24  15  18  5 OUTLET (-Y)
REG     -1.0  1  1  1  23  1  31  6 ROOM WALL (+X)
REG     -1.0  6  6  13  13  1  20  6 GB-1 WALL (+X)
REG     -1.0  13 13  13  13  1  20  6 GB-2 WALL (+X)
REG     -1.0  20 20  13  13  1  20  6 GB-3 WALL (+X)
REG     -1.0  24 24  7  19  1  11  6 DB WALL (+X)
REG     -1.0  28 28  13  13  11  20  6 GB-4 WALL (+X)
REG     -1.0  43 43  13  13  1  20  6 GB-5 WALL (+X)
REG     -1.0  13 13  24  24  15  18  6 OUTLET DUCT WALL (+X)
REG     -1.0  32 32  24  24  15  18  6 OUTLET DUCT WALL (+X)
REG     -1.0  3  3  13  13  1  20  7 GB-1 WALL (-X)
REG     -1.0  10 10  13  13  1  20  7 GB-2 WALL (-X)
REG     -1.0  17 17  13  13  1  20  7 GB-3 WALL (-X)
REG     -1.0  21 21  7  19  1  11  7 DB WALL (-X)
REG     -1.0  25 25  13  13  11  20  7 GB-4 WALL (-X)
REG     -1.0  40 40  13  13  1  20  7 GB-5 WALL (-X)
REG     -1.0  45 45  1  23  1  31  7 ROOM WALL (-X)
REG     -1.0  13 13  24  24  15  18  7 OUTLET DUCT WALL (-X)
REG     -1.0  32 32  24  24  15  18  7 OUTLET DUCT WALL (-X)
REG     -1.0  1  45  1  1  1  31  8 ROOM WALL (+Y)
REG     -1.0  4  5  20  20  1  20  8 GB-1 WALL (+Y)
REG     -1.0  11 12  20  20  1  20  8 GB-2 WALL (+Y)
REG     -1.0  18 19  20  20  1  20  8 GB-3 WALL (+Y)
REG     -1.0  22 23  20  20  1  11  8 DB WALL (+Y)
REG     -1.0  26 27  20  20  1  20  8 GB-4 WALL (+Y)
REG     -1.0  41 42  20  20  1  20  8 GB-5 WALL (+Y)
REG     -1.0  4  5  6  6  1  20  9 GB-1 WALL (-Y)
REG     -1.0  11 12  6  6  1  20  9 GB-2 WALL (-Y)
REG     -1.0  18 19  6  6  1  20  9 GB-3 WALL (-Y)
REG     -1.0  22 23  6  6  1  11  9 DB WALL (-Y)
REG     -1.0  26 27  13  13  1  10  9 GB-4 WALL (-Y)
REG     -1.0  26 27  6  6  11  20  9 GB-4 WALL (-Y)
REG     -1.0  41 42  6  6  1  20  9 GB-5 WALL (-Y)
REG     -1.0  1  45  23  23  1  14  9 ROOM WALL (-Y)
REG     -1.0  1  12  23  23  15  18  9 ROOM WALL (-Y)
REG     -1.0  14 31  23  23  15  18  9 ROOM WALL (-Y)
REG     -1.0  33 45  23  23  15  18  9 ROOM WALL (-Y)
REG     -1.0  1  45  23  23  19  31  9 ROOM WALL (-Y)
REG     -1.0  1  45  1  6  1  1  10 BOTTON (+Z)
REG     -1.0  1  3  7  19  1  1  10 BOTTON (+Z)
REG     -1.0  6  10  7  19  1  1  10 BOTTON (+Z)
REG     -1.0  13 17  7  19  1  1  10 BOTTON (+Z)
REG     -1.0  20 21  7  19  1  1  10 BOTTON (+Z)
REG     -1.0  24 40  7  13  1  1  10 BOTTON (+Z)
REG     -1.0  24 25  14  19  1  1  10 BOTTON (+Z)
REG     -1.0  28 40  14  19  1  1  10 BOTTON (+Z)
REG     -1.0  43 45  7  19  1  1  10 BOTTON (+Z)
REG     -1.0  1  45  20  23  1  1  10 BOTTON (+Z)

```

図3.5 プルトニウム燃料第3開発室・粉末調製室用定常解析入力データ

量

REG	-1.0	4	5	7	19	21	21	10	GB-1 WALL (+Z)
REG	-1.0	11	12	7	19	21	21	10	GB-2 WALL (+Z)
REG	-1.0	18	19	7	19	21	21	10	GB-3 WALL (+Z)
REG	-1.0	22	23	7	19	12	12	10	DB WALL (+Z)
REG	-1.0	26	27	7	19	21	21	10	GB-4 WALL (+Z)
REG	-1.0	41	42	7	19	21	21	10	GB-5 WALL (+Z)
REG	-1.0	13	13	24	24	15	15	10	OUTLET DUCT WALL (+Z)
REG	-1.0	32	32	24	24	15	15	10	OUTLET DUCT WALL (+Z)
REG	-1.0	5	5	15	15	24	24	10	INLET-1 PLATE (+Z)
REG	-1.0	18	18	15	15	24	24	10	INLET-2 PLATE (+Z)
REG	-1.0	31	31	15	15	24	24	10	INLET-3 PLATE (+Z)
REG	-1.0	41	41	15	15	24	24	10	INLET-4 PLATE (+Z)
REG	-1.0	1	45	1	23	31	31	11	TOP (-Z)
REG	-1.0	26	27	7	13	10	10	11	GB-4 WALL (-Z)
REG	-1.0	13	13	24	24	18	18	11	OUTLET DUCT WALL (-Z)
REG	-1.0	32	32	24	24	18	18	11	OUTLET DUCT WALL (-Z)
REG	-1.0	3	3	7	8	1	5	12	GB-1,1-1 (-X)
REG	-1.0	3	3	9	10	1	5	13	GB-1,1-2 (-X)
REG	-1.0	3	3	11	12	1	5	14	GB-1,1-3 (-X)
REG	-1.0	3	3	14	15	1	5	15	GB-1,1-4 (-X)
REG	-1.0	3	3	16	17	1	5	16	GB-1,1-5 (-X)
REG	-1.0	3	3	18	19	1	5	17	GB-1,1-6 (-X)
REG	-1.0	3	3	7	8	6	10	18	GB-1,2-1 (-X)
REG	-1.0	3	3	9	10	6	10	19	GB-1,2-2 (-X)
REG	-1.0	3	3	11	12	6	10	20	GB-1,2-3 (-X)
REG	-1.0	3	3	14	15	6	10	21	GB-1,2-4 (-X)
REG	-1.0	3	3	16	17	6	10	22	GB-1,2-5 (-X)
REG	-1.0	3	3	18	19	6	10	23	GB-1,2-6 (-X)
REG	-1.0	3	3	7	8	11	15	24	GB-1,3-1 (-X)
REG	-1.0	3	3	9	10	11	15	25	GB-1,3-2 (-X)
REG	-1.0	3	3	11	12	11	15	26	GB-1,3-3 (-X)
REG	-1.0	3	3	14	15	11	15	27	GB-1,3-4 (-X)
REG	-1.0	3	3	16	17	11	15	28	GB-1,3-5 (-X)
REG	-1.0	3	3	18	19	11	15	29	GB-1,3-6 (-X)
REG	-1.0	3	3	7	8	16	20	30	GB-1,4-1 (-X)
REG	-1.0	3	3	9	10	16	20	31	GB-1,4-2 (-X)
REG	-1.0	3	3	11	12	16	20	32	GB-1,4-3 (-X)
REG	-1.0	3	3	14	15	16	20	33	GB-1,4-4 (-X)
REG	-1.0	3	3	16	17	16	20	34	GB-1,4-5 (-X)
REG	-1.0	3	3	18	19	16	20	35	GB-1,4-6 (-X)
REG	-1.0	6	6	7	8	1	5	36	GB-1,1-1 (+X)
REG	-1.0	6	6	9	10	1	5	37	GB-1,1-2 (+X)
REG	-1.0	6	6	11	12	1	5	38	GB-1,1-3 (+X)
REG	-1.0	6	6	14	15	1	5	39	GB-1,1-4 (+X)
REG	-1.0	6	6	16	17	1	5	40	GB-1,1-5 (+X)
REG	-1.0	6	6	18	19	1	5	41	GB-1,1-6 (+X)
REG	-1.0	6	6	7	8	6	10	42	GB-1,2-1 (+X)
REG	-1.0	6	6	9	10	6	10	43	GB-1,2-2 (+X)
REG	-1.0	6	6	11	12	6	10	44	GB-1,2-3 (+X)
REG	-1.0	6	6	14	15	6	10	45	GB-1,2-4 (+X)
REG	-1.0	6	6	16	17	6	10	46	GB-1,2-5 (+X)
REG	-1.0	6	6	18	19	6	10	47	GB-1,2-6 (+X)
REG	-1.0	6	6	7	8	11	15	48	GB-1,3-1 (+X)
REG	-1.0	6	6	9	10	11	15	49	GB-1,3-2 (+X)
REG	-1.0	6	6	11	12	11	15	50	GB-1,3-3 (+X)
REG	-1.0	6	6	14	15	11	15	51	GB-1,3-4 (+X)
REG	-1.0	6	6	16	17	11	15	52	GB-1,3-5 (+X)
REG	-1.0	6	6	18	19	11	15	53	GB-1,3-6 (+X)
REG	-1.0	6	6	7	8	16	20	54	GB-1,4-1 (+X)
REG	-1.0	6	6	9	10	16	20	55	GB-1,4-2 (+X)
REG	-1.0	6	6	11	12	16	20	56	GB-1,4-3 (+X)
REG	-1.0	6	6	14	15	16	20	57	GB-1,4-4 (+X)
REG	-1.0	6	6	16	17	16	20	58	GB-1,4-5 (+X)
REG	-1.0	6	6	18	19	16	20	59	GB-1,4-6 (+X)
REG	-1.0	10	10	7	8	1	5	60	GB-2,1-1 (-X)
REG	-1.0	10	10	9	10	1	5	61	GB-2,1-2 (-X)
REG	-1.0	10	10	11	12	1	5	62	GB-2,1-3 (-X)
REG	-1.0	10	10	14	15	1	5	63	GB-2,1-4 (-X)
REG	-1.0	10	10	16	17	1	5	64	GB-2,1-5 (-X)
REG	-1.0	10	10	18	19	1	5	65	GB-2,1-6 (-X)
REG	-1.0	10	10	7	8	6	10	66	GB-2,2-1 (-X)
REG	-1.0	10	10	9	10	6	10	67	GB-2,2-2 (-X)
REG	-1.0	10	10	11	12	6	10	68	GB-2,2-3 (-X)
REG	-1.0	10	10	14	15	6	10	69	GB-2,2-4 (-X)
REG	-1.0	10	10	16	17	6	10	70	GB-2,2-5 (-X)
REG	-1.0	10	10	18	19	6	10	71	GB-2,2-6 (-X)
REG	-1.0	10	10	7	8	11	15	72	GB-2,3-1 (-X)
REG	-1.0	10	10	9	10	11	15	73	GB-2,3-2 (-X)
REG	-1.0	10	10	11	12	11	15	74	GB-2,3-3 (-X)
REG	-1.0	10	10	14	15	11	15	75	GB-2,3-4 (-X)

図3.5 プルトニウム燃料第3開発室・粉末調製室用定常解析入力データ

REG	-1.0	10	10	16	17	11	15	76	GB-2,3-5	(-X)
REG	-1.0	10	10	18	19	11	15	77	GB-2,3-6	(-X)
REG	-1.0	10	10	7	8	16	20	78	GB-2,4-1	(-X)
REG	-1.0	10	10	9	10	16	20	79	GB-2,4-2	(-X)
REG	-1.0	10	10	11	12	16	20	80	GB-2,4-3	(-X)
REG	-1.0	10	10	14	15	16	20	81	GB-2,4-4	(-X)
REG	-1.0	10	10	16	17	16	20	82	GB-2,4-5	(-X)
REG	-1.0	10	10	18	19	16	20	83	GB-2,4-6	(-X)
REG	-1.0	13	13	7	8	1	5	84	GB-2,1-1	(+X)
REG	-1.0	13	13	9	10	1	5	85	GB-2,1-2	(+X)
REG	-1.0	13	13	11	12	1	5	86	GB-2,1-3	(+X)
REG	-1.0	13	13	14	15	1	5	87	GB-2,1-4	(+X)
REG	-1.0	13	13	16	17	1	5	88	GB-2,1-5	(+X)
REG	-1.0	13	13	18	19	1	5	89	GB-2,1-6	(+X)
REG	-1.0	13	13	7	8	6	10	90	GB-2,2-1	(+X)
REG	-1.0	13	13	9	10	6	10	91	GB-2,2-2	(+X)
REG	-1.0	13	13	11	12	6	10	92	GB-2,2-3	(+X)
REG	-1.0	13	13	14	15	6	10	93	GB-2,2-4	(+X)
REG	-1.0	13	13	16	17	6	10	94	GB-2,2-5	(+X)
REG	-1.0	13	13	18	19	6	10	95	GB-2,2-6	(+X)
REG	-1.0	13	13	7	8	11	15	96	GB-2,3-1	(+X)
REG	-1.0	13	13	9	10	11	15	97	GB-2,3-2	(+X)
REG	-1.0	13	13	11	12	11	15	98	GB-2,3-3	(+X)
REG	-1.0	13	13	14	15	11	15	99	GB-2,3-4	(+X)
REG	-1.0	13	13	16	17	11	15	100	GB-2,3-5	(+X)
REG	-1.0	13	13	18	19	11	15	101	GB-2,3-6	(+X)
REG	-1.0	13	13	7	8	16	20	102	GB-2,4-1	(+X)
REG	-1.0	13	13	9	10	16	20	103	GB-2,4-2	(+X)
REG	-1.0	13	13	11	12	16	20	104	GB-2,4-3	(+X)
REG	-1.0	13	13	14	15	16	20	105	GB-2,4-4	(+X)
REG	-1.0	13	13	16	17	16	20	106	GB-2,4-5	(+X)
REG	-1.0	13	13	18	19	16	20	107	GB-2,4-6	(+X)
REG	-1.0	17	17	7	8	1	5	108	GB-3,1-1	(-X)
REG	-1.0	17	17	9	10	1	5	109	GB-3,1-2	(-X)
REG	-1.0	17	17	11	12	1	5	110	GB-3,1-3	(-X)
REG	-1.0	17	17	14	15	1	5	111	GB-3,1-4	(-X)
REG	-1.0	17	17	16	17	1	5	112	GB-3,1-5	(-X)
REG	-1.0	17	17	18	19	1	5	113	GB-3,1-6	(-X)
REG	-1.0	17	17	7	8	6	10	114	GB-3,2-1	(-X)
REG	-1.0	17	17	9	10	6	10	115	GB-3,2-2	(-X)
REG	-1.0	17	17	11	12	6	10	116	GB-3,2-3	(-X)
REG	-1.0	17	17	14	15	6	10	117	GB-3,2-4	(-X)
REG	-1.0	17	17	16	17	6	10	118	GB-3,2-5	(-X)
REG	-1.0	17	17	18	19	6	10	119	GB-3,2-6	(-X)
REG	-1.0	17	17	7	8	11	15	120	GB-3,3-1	(-X)
REG	-1.0	17	17	9	10	11	15	121	GB-3,3-2	(-X)
REG	-1.0	17	17	11	12	11	15	122	GB-3,3-3	(-X)
REG	-1.0	17	17	14	15	11	15	123	GB-3,3-4	(-X)
REG	-1.0	17	17	16	17	11	15	124	GB-3,3-5	(-X)
REG	-1.0	17	17	18	19	11	15	125	GB-3,3-6	(-X)
REG	-1.0	17	17	7	8	16	20	126	GB-3,4-1	(-X)
REG	-1.0	17	17	9	10	16	20	127	GB-3,4-2	(-X)
REG	-1.0	17	17	11	12	16	20	128	GB-3,4-3	(-X)
REG	-1.0	17	17	14	15	16	20	129	GB-3,4-4	(-X)
REG	-1.0	17	17	16	17	16	20	130	GB-3,4-5	(-X)
REG	-1.0	17	17	18	19	16	20	131	GB-3,4-6	(-X)
REG	-1.0	20	20	7	8	1	5	132	GB-3,1-1	(+X)
REG	-1.0	20	20	9	10	1	5	133	GB-3,1-2	(+X)
REG	-1.0	20	20	11	12	1	5	134	GB-3,1-3	(+X)
REG	-1.0	20	20	14	15	1	5	135	GB-3,1-4	(+X)
REG	-1.0	20	20	16	17	1	5	136	GB-3,1-5	(+X)
REG	-1.0	20	20	18	19	1	5	137	GB-3,1-6	(+X)
REG	-1.0	20	20	7	8	6	10	138	GB-3,2-1	(+X)
REG	-1.0	20	20	9	10	6	10	139	GB-3,2-2	(+X)
REG	-1.0	20	20	11	12	6	10	140	GB-3,2-3	(+X)
REG	-1.0	20	20	14	15	6	10	141	GB-3,2-4	(+X)
REG	-1.0	20	20	16	17	6	10	142	GB-3,2-5	(+X)
REG	-1.0	20	20	18	19	6	10	143	GB-3,2-6	(+X)
REG	-1.0	20	20	7	8	11	15	144	GB-3,3-1	(+X)
REG	-1.0	20	20	9	10	11	15	145	GB-3,3-2	(+X)
REG	-1.0	20	20	11	12	11	15	146	GB-3,3-3	(+X)
REG	-1.0	20	20	14	15	11	15	147	GB-3,3-4	(+X)
REG	-1.0	20	20	16	17	11	15	148	GB-3,3-5	(+X)
REG	-1.0	20	20	18	19	11	15	149	GB-3,3-6	(+X)
REG	-1.0	20	20	7	8	16	20	150	GB-3,4-1	(+X)
REG	-1.0	20	20	9	10	16	20	151	GB-3,4-2	(+X)
REG	-1.0	20	20	11	12	16	20	152	GB-3,4-3	(+X)
REG	-1.0	20	20	14	15	16	20	153	GB-3,4-4	(+X)
REG	-1.0	20	20	16	17	16	20	154	GB-3,4-5	(+X)
REG	-1.0	20	20	18	19	16	20	155	GB-3,4-6	(+X)

図3.5 プルトニウム燃料第3開発室・粉末調製室用定常解析入力データ

量

REG	-1.0	25	25	14	15	1	5	156	GB-4,1-4	(-X)
REG	-1.0	25	25	16	17	1	5	157	GB-4,1-5	(-X)
REG	-1.0	25	25	18	19	1	5	158	GB-4,1-6	(-X)
REG	-1.0	25	25	14	15	6	10	159	GB-4,2-4	(-X)
REG	-1.0	25	25	16	17	6	10	160	GB-4,2-5	(-X)
REG	-1.0	25	25	18	19	6	10	161	GB-4,2-6	(-X)
REG	-1.0	25	25	7	8	11	15	162	GB-4,3-1	(-X)
REG	-1.0	25	25	9	10	11	15	163	GB-4,3-2	(-X)
REG	-1.0	25	25	11	12	11	15	164	GB-4,3-3	(-X)
REG	-1.0	25	25	14	15	11	15	165	GB-4,3-4	(-X)
REG	-1.0	25	25	16	17	11	15	166	GB-4,3-5	(-X)
REG	-1.0	25	25	18	19	11	15	167	GB-4,3-6	(-X)
REG	-1.0	25	25	7	8	16	20	168	GB-4,4-1	(-X)
REG	-1.0	25	25	9	10	16	20	169	GB-4,4-2	(-X)
REG	-1.0	25	25	11	12	16	20	170	GB-4,4-3	(-X)
REG	-1.0	25	25	14	15	16	20	171	GB-4,4-4	(-X)
REG	-1.0	25	25	16	17	16	20	172	GB-4,4-5	(-X)
REG	-1.0	25	25	18	19	16	20	173	GB-4,4-6	(-X)
REG	-1.0	28	28	14	15	1	5	174	GB-4,1-4	(+X)
REG	-1.0	28	28	16	17	1	5	175	GB-4,1-5	(+X)
REG	-1.0	28	28	18	19	1	5	176	GB-4,1-6	(+X)
REG	-1.0	28	28	14	15	6	10	177	GB-4,2-4	(+X)
REG	-1.0	28	28	16	17	6	10	178	GB-4,2-5	(+X)
REG	-1.0	28	28	18	19	6	10	179	GB-4,2-6	(+X)
REG	-1.0	28	28	7	8	11	15	180	GB-4,3-1	(+X)
REG	-1.0	28	28	9	10	11	15	181	GB-4,3-2	(+X)
REG	-1.0	28	28	11	12	11	15	182	GB-4,3-3	(+X)
REG	-1.0	28	28	14	15	11	15	183	GB-4,3-4	(+X)
REG	-1.0	28	28	16	17	11	15	184	GB-4,3-5	(+X)
REG	-1.0	28	28	18	19	11	15	185	GB-4,3-6	(+X)
REG	-1.0	28	28	7	8	16	20	186	GB-4,4-1	(+X)
REG	-1.0	28	28	9	10	16	20	187	GB-4,4-2	(+X)
REG	-1.0	28	28	11	12	16	20	188	GB-4,4-3	(+X)
REG	-1.0	28	28	14	15	16	20	189	GB-4,4-4	(+X)
REG	-1.0	28	28	16	17	16	20	190	GB-4,4-5	(+X)
REG	-1.0	28	28	18	19	16	20	191	GB-4,4-6	(+X)
REG	-1.0	40	40	7	8	1	5	192	GB-5,1-1	(-X)
REG	-1.0	40	40	9	10	1	5	193	GB-5,1-2	(-X)
REG	-1.0	40	40	11	12	1	5	194	GB-5,1-3	(-X)
REG	-1.0	40	40	14	15	1	5	195	GB-5,1-4	(-X)
REG	-1.0	40	40	16	17	1	5	196	GB-5,1-5	(-X)
REG	-1.0	40	40	18	19	1	5	197	GB-5,1-6	(-X)
REG	-1.0	40	40	7	8	6	10	198	GB-5,2-1	(-X)
REG	-1.0	40	40	9	10	6	10	199	GB-5,2-2	(-X)
REG	-1.0	40	40	11	12	6	10	200	GB-5,2-3	(-X)
REG	-1.0	40	40	14	15	6	10	201	GB-5,2-4	(-X)
REG	-1.0	40	40	16	17	6	10	202	GB-5,2-5	(-X)
REG	-1.0	40	40	18	19	6	10	203	GB-5,2-6	(-X)
REG	-1.0	40	40	7	8	11	15	204	GB-5,3-1	(-X)
REG	-1.0	40	40	9	10	11	15	205	GB-5,3-2	(-X)
REG	-1.0	40	40	11	12	11	15	206	GB-5,3-3	(-X)
REG	-1.0	40	40	14	15	11	15	207	GB-5,3-4	(-X)
REG	-1.0	40	40	16	17	11	15	208	GB-5,3-5	(-X)
REG	-1.0	40	40	18	19	11	15	209	GB-5,3-6	(-X)
REG	-1.0	40	40	7	8	16	20	210	GB-5,4-1	(-X)
REG	-1.0	40	40	9	10	16	20	211	GB-5,4-2	(-X)
REG	-1.0	40	40	11	12	16	20	212	GB-5,4-3	(-X)
REG	-1.0	40	40	14	15	16	20	213	GB-5,4-4	(-X)
REG	-1.0	40	40	16	17	16	20	214	GB-5,4-5	(-X)
REG	-1.0	40	40	18	19	16	20	215	GB-5,4-6	(-X)
REG	-1.0	43	43	7	8	1	5	216	GB-5,1-1	(+X)
REG	-1.0	43	43	9	10	1	5	217	GB-5,1-2	(+X)
REG	-1.0	43	43	11	12	1	5	218	GB-5,1-3	(+X)
REG	-1.0	43	43	14	15	1	5	219	GB-5,1-4	(+X)
REG	-1.0	43	43	16	17	1	5	220	GB-5,1-5	(+X)
REG	-1.0	43	43	18	19	1	5	221	GB-5,1-6	(+X)
REG	-1.0	43	43	7	8	6	10	222	GB-5,2-1	(+X)
REG	-1.0	43	43	9	10	6	10	223	GB-5,2-2	(+X)
REG	-1.0	43	43	11	12	6	10	224	GB-5,2-3	(+X)
REG	-1.0	43	43	14	15	6	10	225	GB-5,2-4	(+X)
REG	-1.0	43	43	16	17	6	10	226	GB-5,2-5	(+X)
REG	-1.0	43	43	18	19	6	10	227	GB-5,2-6	(+X)
REG	-1.0	43	43	7	8	11	15	228	GB-5,3-1	(+X)
REG	-1.0	43	43	9	10	11	15	229	GB-5,3-2	(+X)
REG	-1.0	43	43	11	12	11	15	230	GB-5,3-3	(+X)
REG	-1.0	43	43	14	15	11	15	231	GB-5,3-4	(+X)
REG	-1.0	43	43	16	17	11	15	232	GB-5,3-5	(+X)
REG	-1.0	43	43	18	19	11	15	233	GB-5,3-6	(+X)
REG	-1.0	43	43	7	8	16	20	234	GB-5,4-1	(+X)
REG	-1.0	43	43	9	10	16	20	235	GB-5,4-2	(+X)

図3.5 プルトニウム燃料第3開発室・粉末調製室用定常解析入力データ

```

REG      -1.0 43 43 11 12 16 20 236 GB-5,4-3 (+X)
REG      -1.0 43 43 14 15 16 20 237 GB-5,4-4 (+X)
REG      -1.0 43 43 16 17 16 20 238 GB-5,4-5 (+X)
REG      -1.0 43 43 18 19 16 20 239 GB-5,4-6 (+X)
END
DATA     IFENER=0, NTHCON=-1,NTHAX=99999,IT=1,
         IDTIME=0, RDTIME=0.3,
         IDISP=0, NTSHRY= 10,
         TREST=180.0,

         IFPROP=1,
         FCOH=0.27697E+6,
         FC1H=1014.,
         FCOR0=1.166,
         FC1RD=-0.00248,
         FCOK=0.07627,
         FC1K=0.0,
         FCOMU=1.819E-5,
         FC1MU=0.0,

         DT(1)=1.0000,
         KFLOW= 1, 1, 1, 1,-5,234*1,
         KTEMP= 239*400,
         KCONCE=239*0,
         KCONCE(19)=0,
         KCONCE(22)=0,
         KCONCE(43)=0,
         KCONCE(46)=0,
         KCONCE(67)=0,
         KCONCE(70)=0,
         KCONCE(91)=0,
         KCONCE(94)=0,
         KCONCE(115)=0,
         KCONCE(118)=0,
         KCONCE(139)=0,
         KCONCE(142)=0,
         KCONCE(160)=0,
         KCONCE(178)=0,
         KCONCE(199)=0,
         KCONCE(202)=0,
         KCONCE(223)=0,
         KCONCE(226)=0,
         TEMPO= 20.,
         CONCO=1.0E-6,
         VELOC( 1)=2.0833,
         VELOC( 2)=2.0833,
         VELOC( 3)=2.0833,
         VELOC( 4)=2.0833,
         CONC=239*1.0E-6,
         CONC(19)=1000.,
         CONC(22)=1000.,
         CONC(43)=1000.,
         CONC(46)=1000.,
         CONC(67)=1000.,
         CONC(70)=1000.,
         CONC(91)=1000.,
         CONC(94)=1000.,
         CONC(115)=1000.,
         CONC(118)=1000.,
         CONC(139)=1000.,
         CONC(142)=1000.,
         CONC(160)=1000.,
         CONC(178)=1000.,
         CONC(199)=1000.,
         CONC(202)=1000.,
         CONC(223)=1000.,
         CONC(226)=1000.,
         DIFFC=1.0E-10,
         NTPRNT=-9999,
         NTPLOT=-9999,
         NTHPR =013007, 023007, 033007, 233007,
&END
&TURB
&END
END
END

```

図3.5 プルトニウム燃料第3開発室・粉末調製室用定常解析入力データ

```

*****
DATE : AUG.12,'90
*****
&GEOM
IFRES=3,
ICONCE = 1,
&END
&DATA
ISTATE=2,
NTMAX = 206,
TIMAX = 1000.0,
IDTIME = 0, DT = 0.1, 1.0, LASTDT=20,
KCONCE(19) = 101,
KFLOW(19) = 102,
VELOC(19) = 0.01,

TSTART = 0.0,
NTSMRY = 10,
IT = 99, 99,
NTPLOT = -10, -9999,
NTHPR = 013007, 023007, 033007, 233007,
NTPRNT = -9999,

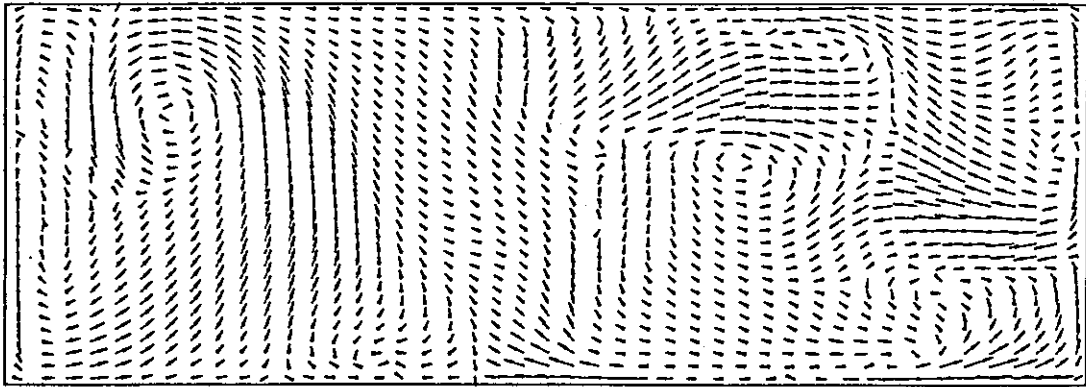
TVAL(1) = 0.0, 1.0, 1.0, 2.0, 2.0, 5.0, 5.0, 10.0, 10.0, 600.0,
          600.0,1000.0,
          0.0, 1.0, 1.0, 2.0, 2.0, 5.0, 5.0, 10.0, 10.0, 600.0,
          600.0,1000.0,
FVAL(1) = 1.0, 11*1.E-6,
          1.0, 11*1.E-6,
NEND = 12,12,

&END
&TURB
&END
END
END
ISYMCH =-1,

```

図3.6 プルトニウム燃料第3開発室・粉末調製室用過度解析入力データ





$J = 3$  → 0.25 M/S

Y = 4 の断面図

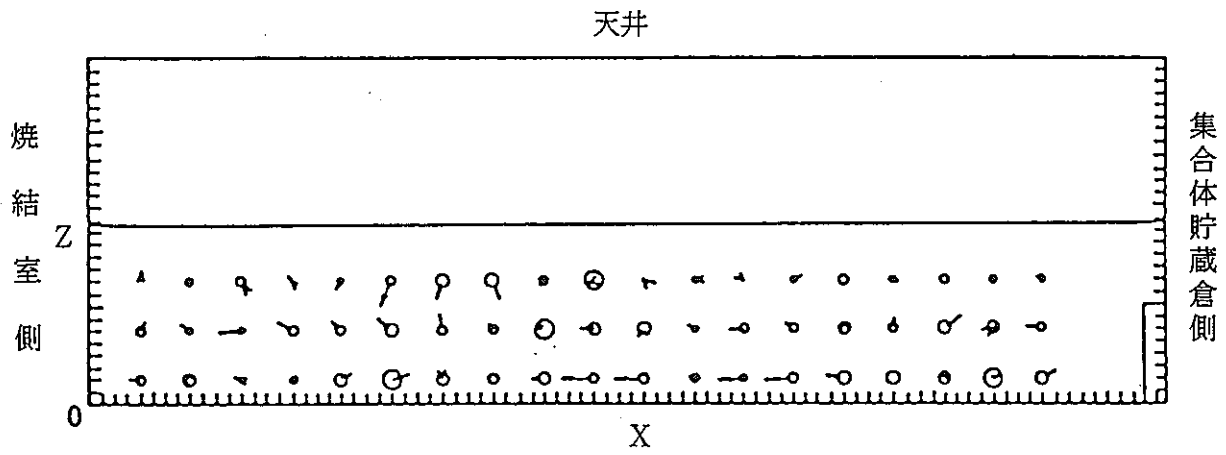
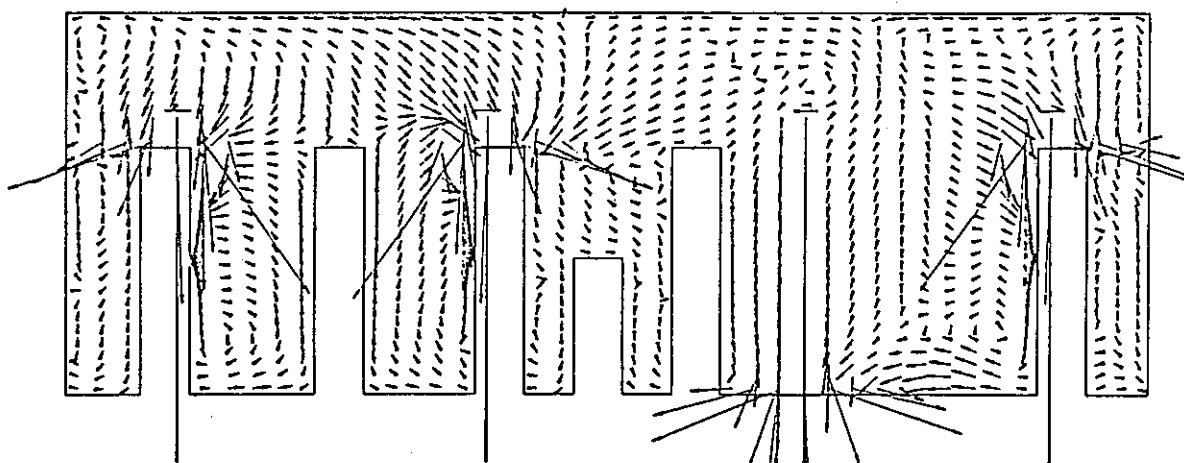


図3.7 X-Z面における流速分布の比較



$J = 15$   
 0.25 M/S

Y = 28の断面図

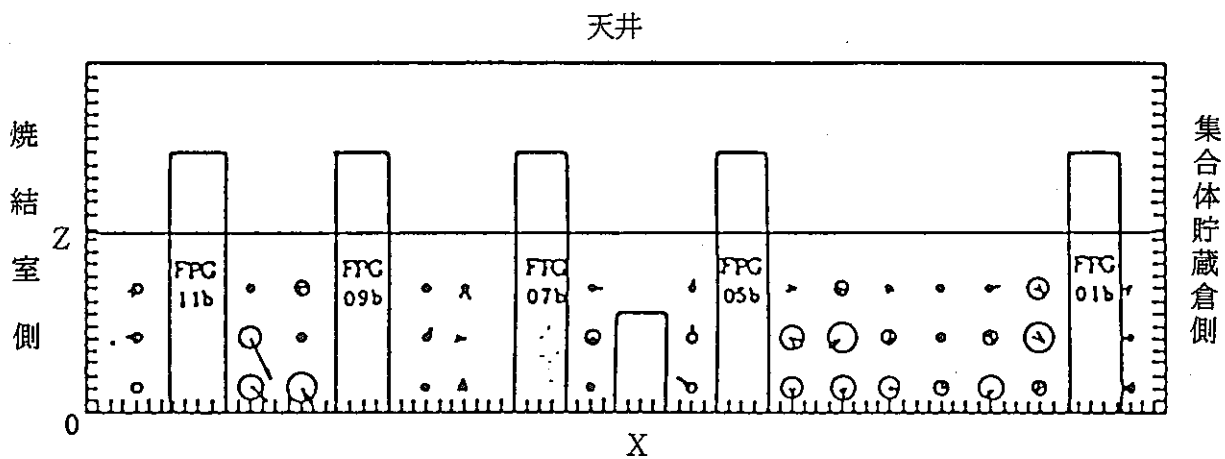
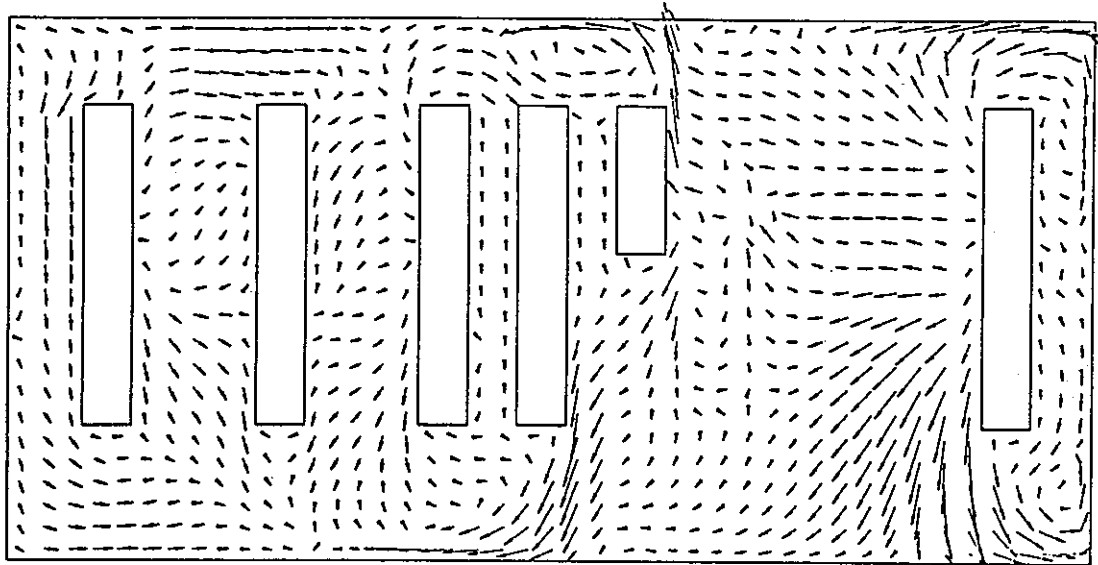


図3.7 X-Z面における流速分布の比較



$K = 3$       0.25 M/S

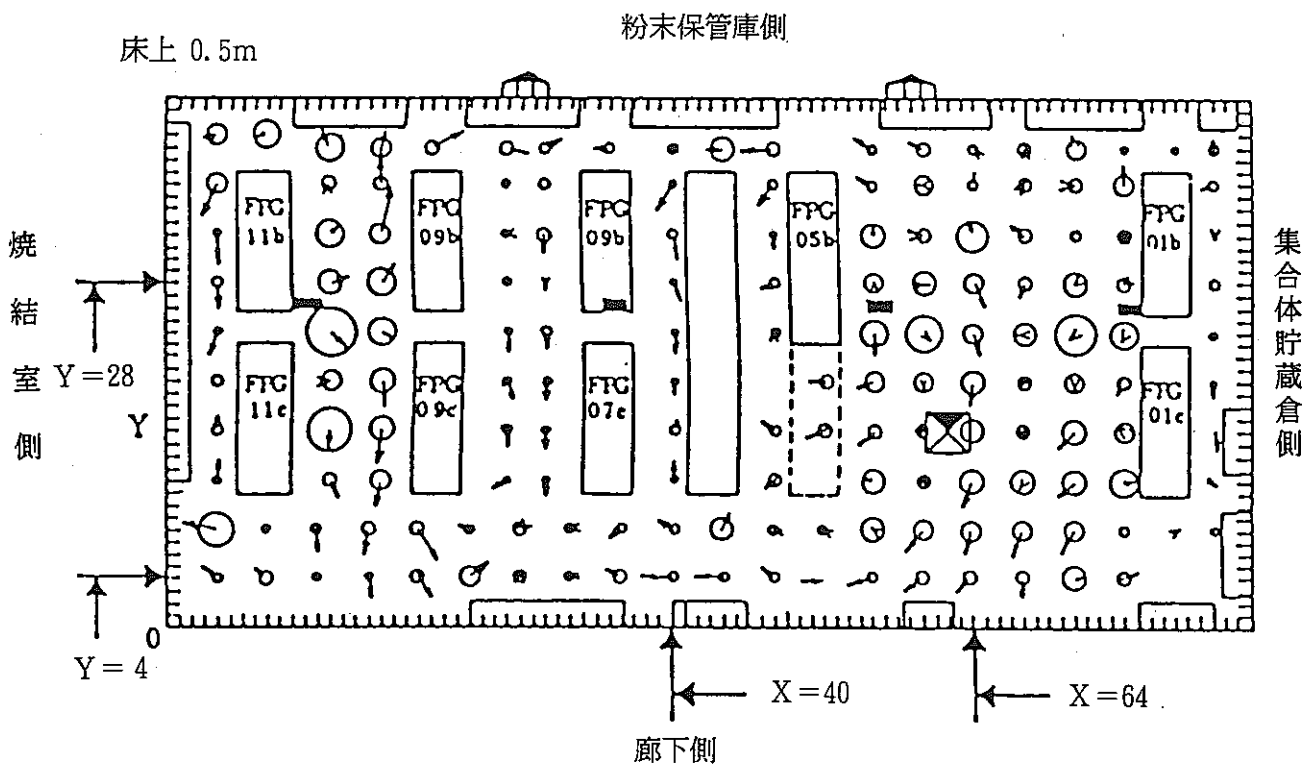
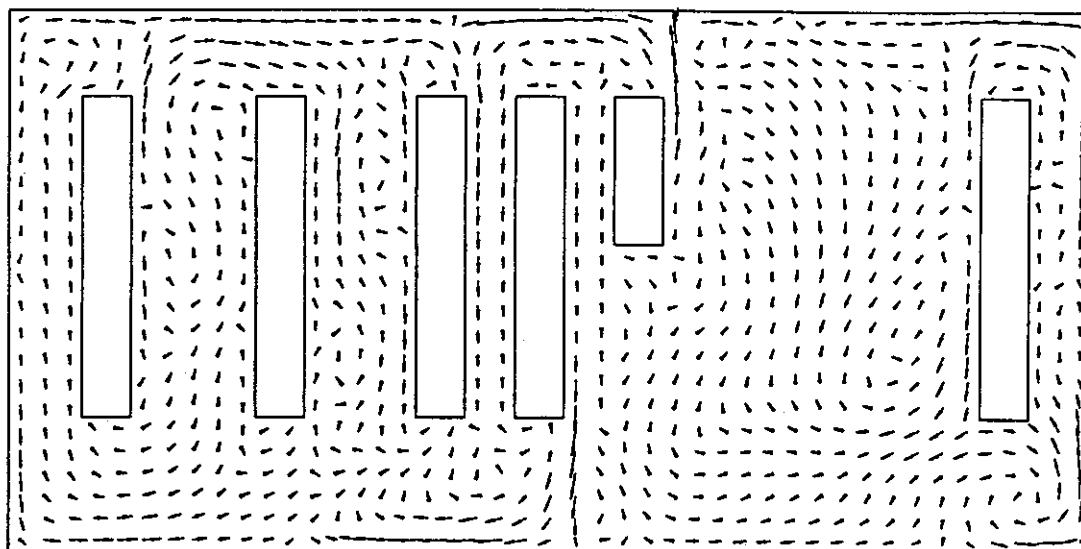


図3.8 X-Y面における流速分布の比較



$K = 7$  → 0.25 M/S

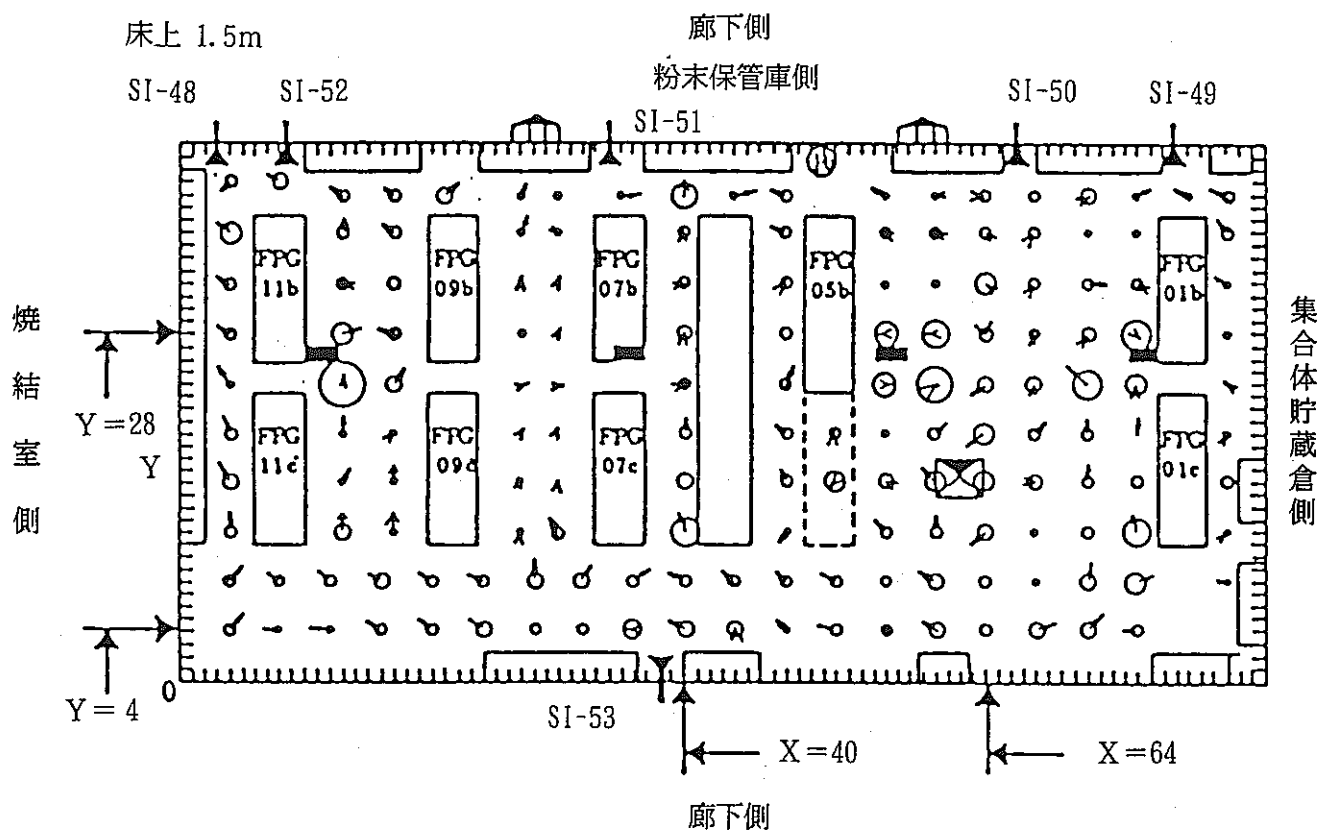
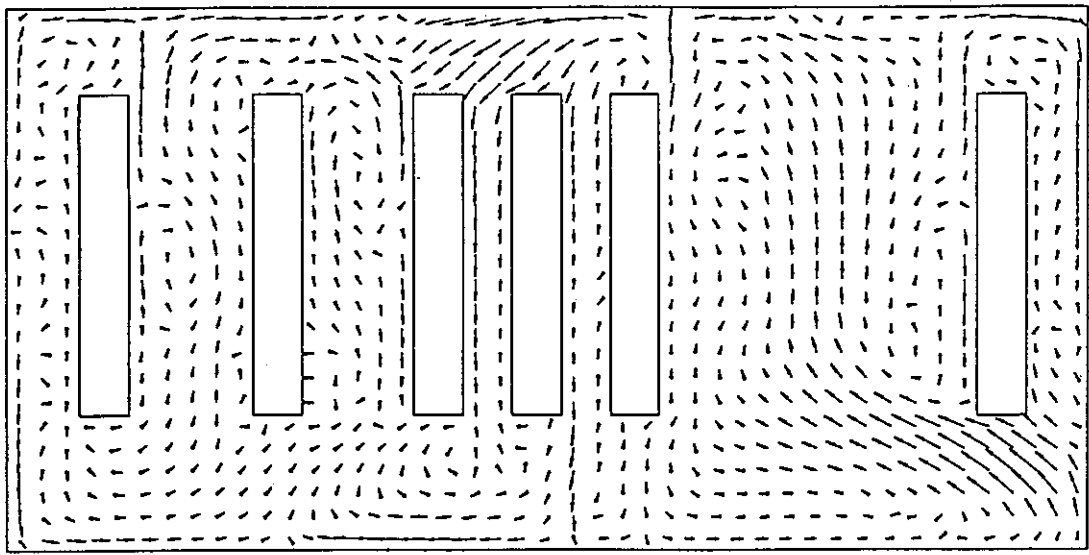


図3.8 X-Y面における流速分布の比較



$K = 11$  ——— 0.25 M/S

床上 2.5m

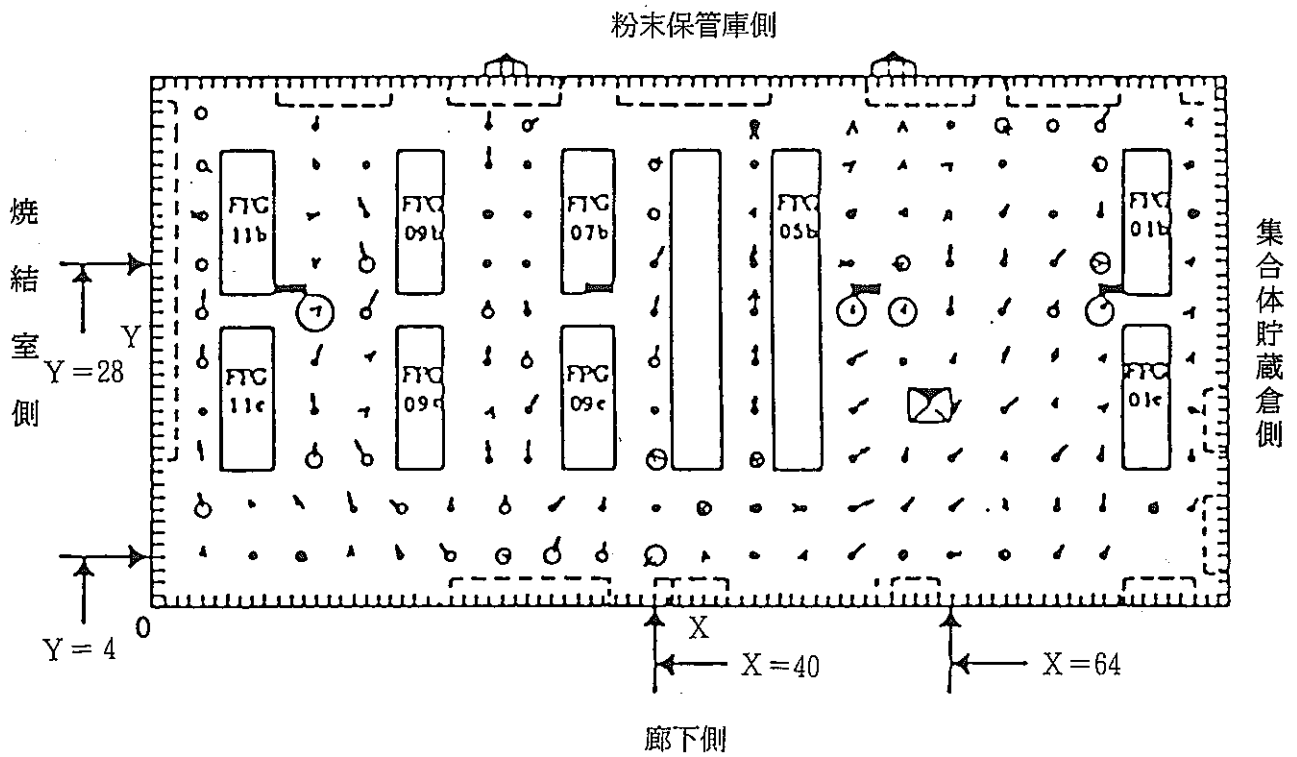
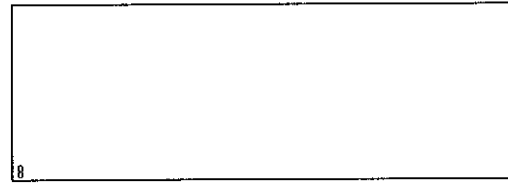
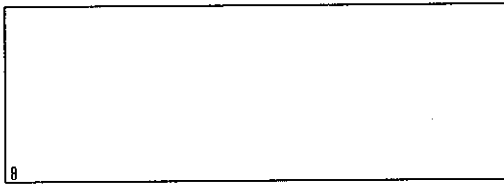


図3.8 X-Y面における流速分布の比較

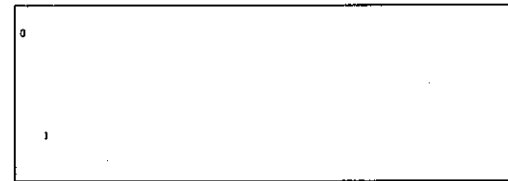
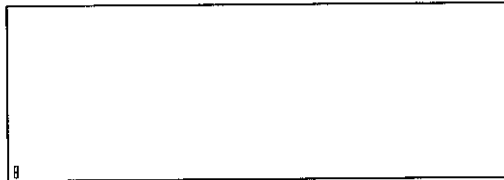
P1

P2



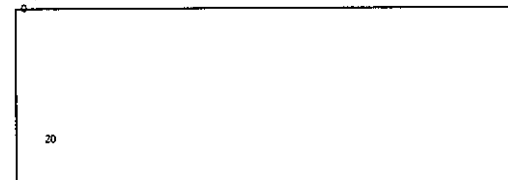
TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



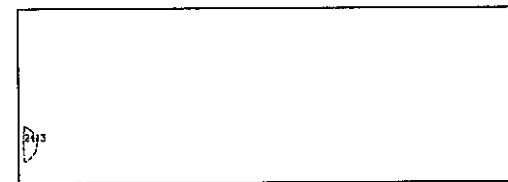
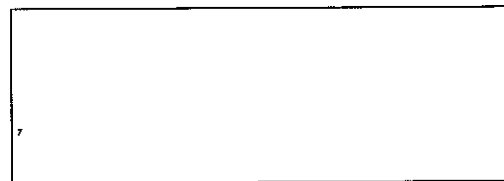
TIME: 1.0 SEC. J = 23  
TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.55\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 1.0 SEC. J = 23  
TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.55\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



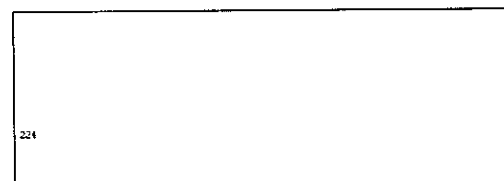
TIME: 2.0 SEC. J = 23  
TMAX= 1.7\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 1.85\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 2.0 SEC. J = 23  
TMAX= 1.7\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 1.85\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



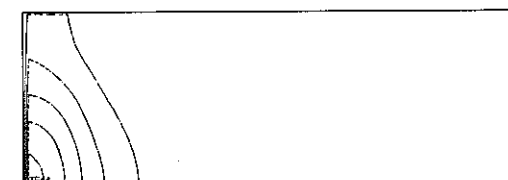
TIME: 12.0 SEC. J = 23  
TMAX= 1.9\*10<sup>-7</sup> TMIN= 7.9\*10<sup>-7</sup> DELT= 2.15\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 12.0 SEC. J = 23  
TMAX= 1.9\*10<sup>-7</sup> TMIN= 3.0\*10<sup>-7</sup> DELT= 2.15\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 32.0 SEC. J = 23  
TMAX= 8.4\*10<sup>-7</sup> TMIN= 5.9\*10<sup>-7</sup> DELT= 9.36\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 32.0 SEC. J = 23  
TMAX= 8.8\*10<sup>-7</sup> TMIN= 1.1\*10<sup>-7</sup> DELT= 9.75\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 52.0 SEC. J = 23  
TMAX= 5.3\*10<sup>-7</sup> TMIN= 9.1\*10<sup>-7</sup> DELT= 5.92\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 52.0 SEC. J = 23  
TMAX= 5.8\*10<sup>-7</sup> TMIN= 1.4\*10<sup>-7</sup> DELT= 6.61\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

图3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)

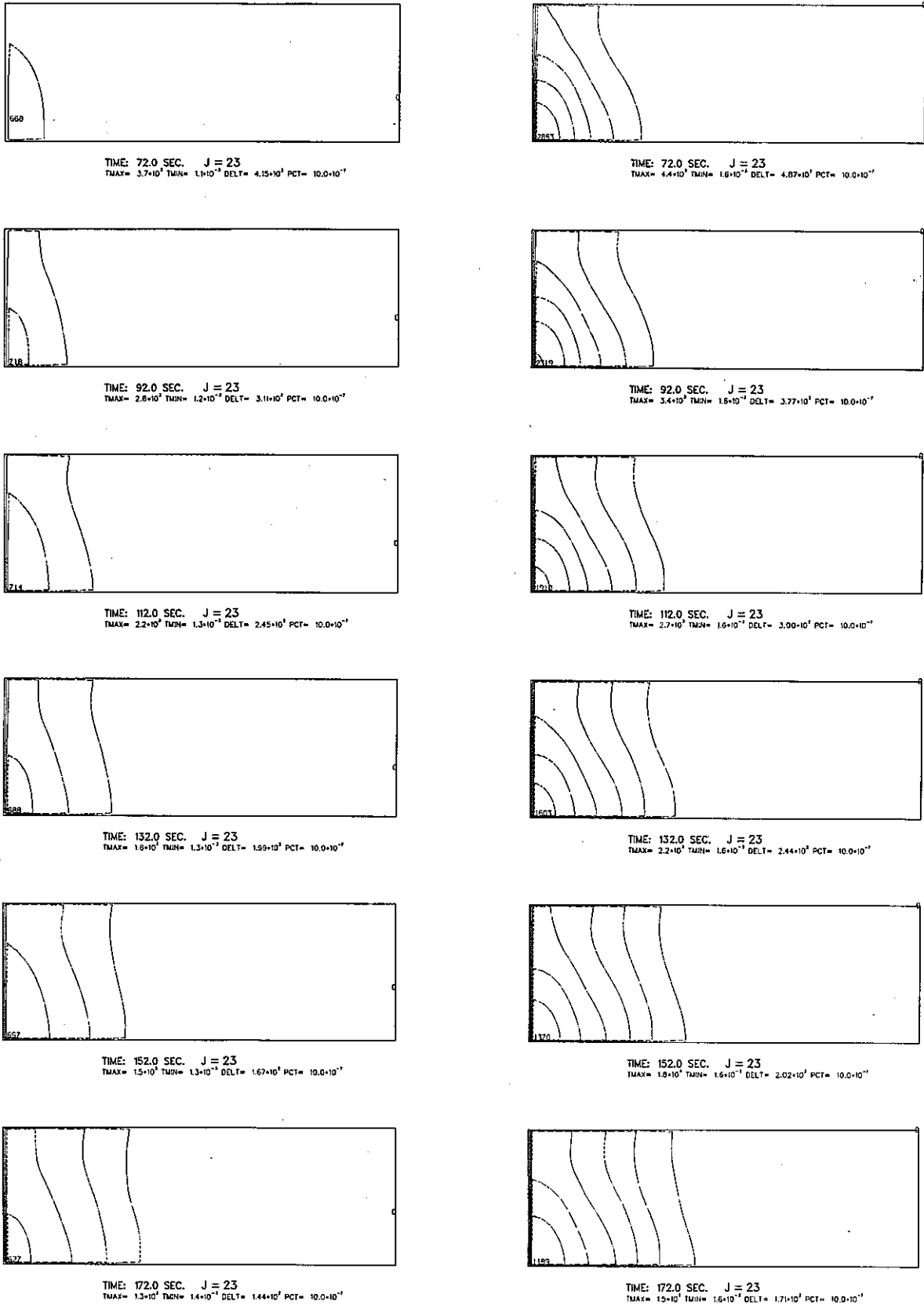


図3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)

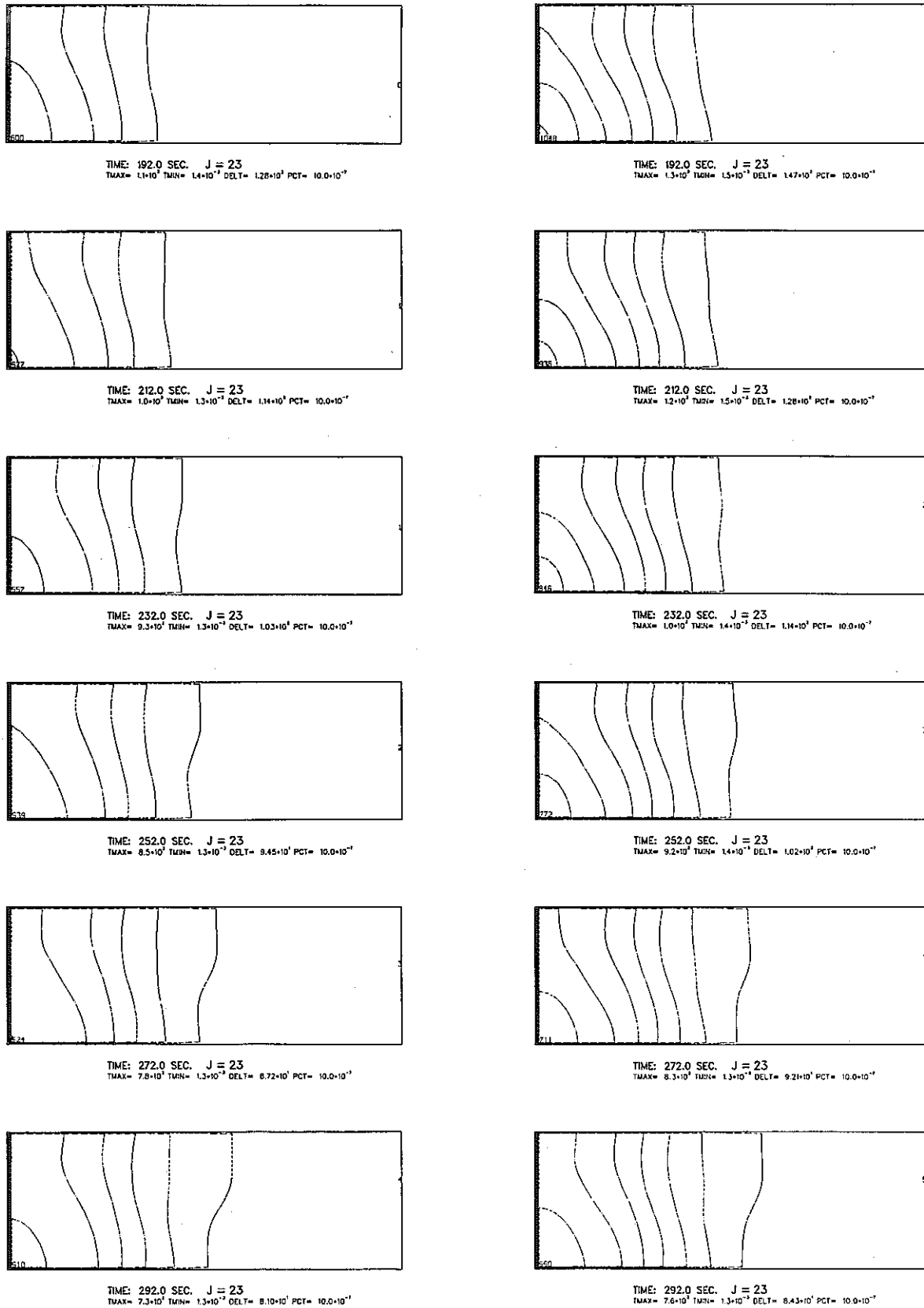
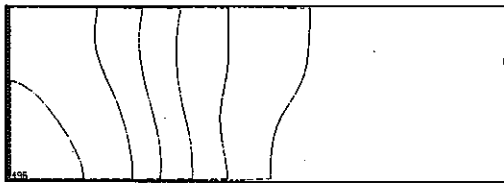
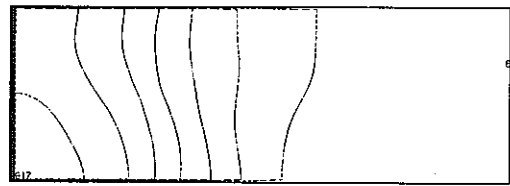


图 3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)

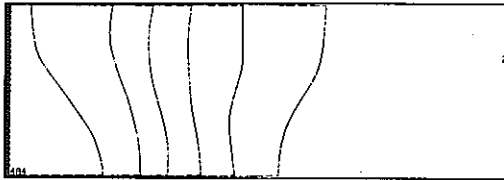




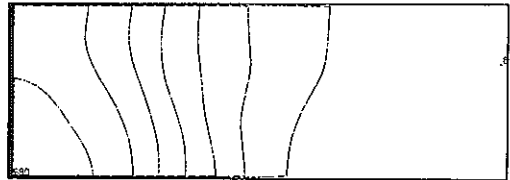
TIME: 312.0 SEC. J = 23  
 TMAX=  $6.8 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $7.58 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



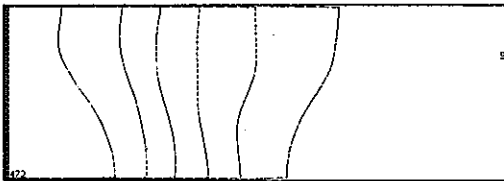
TIME: 312.0 SEC. J = 23  
 TMAX=  $7.0 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $7.79 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



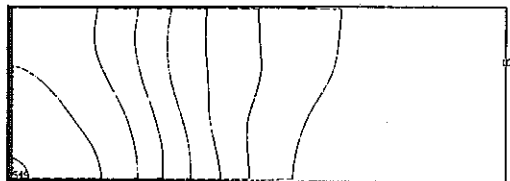
TIME: 332.0 SEC. J = 23  
 TMAX=  $6.4 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $7.13 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 332.0 SEC. J = 23  
 TMAX=  $6.5 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $7.25 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



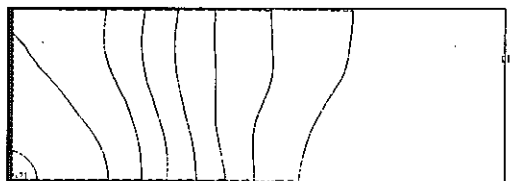
TIME: 352.0 SEC. J = 23  
 TMAX=  $6.1 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $6.74 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 352.0 SEC. J = 23  
 TMAX=  $6.1 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $6.79 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



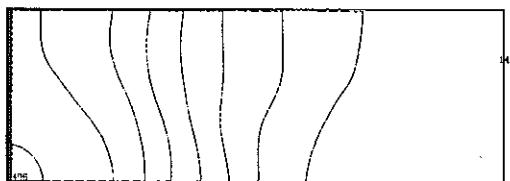
TIME: 372.0 SEC. J = 23  
 TMAX=  $5.8 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $6.40 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



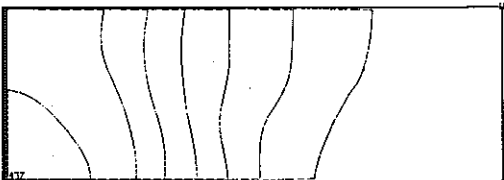
TIME: 372.0 SEC. J = 23  
 TMAX=  $5.8 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $6.39 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



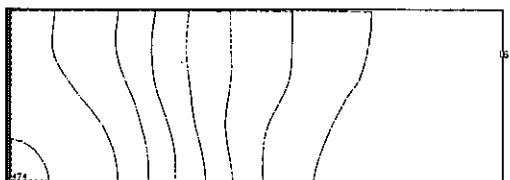
TIME: 392.0 SEC. J = 23  
 TMAX=  $5.5 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $6.09 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 392.0 SEC. J = 23  
 TMAX=  $5.4 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $6.05 \times 10^3$  PCT=  $10.0 \times 10^{-7}$

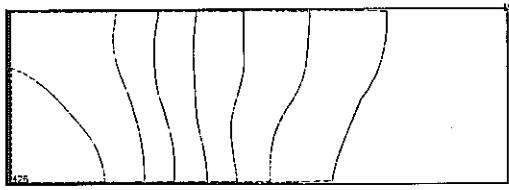


TIME: 412.0 SEC. J = 23  
 TMAX=  $5.2 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $5.83 \times 10^3$  PCT=  $10.0 \times 10^{-7}$

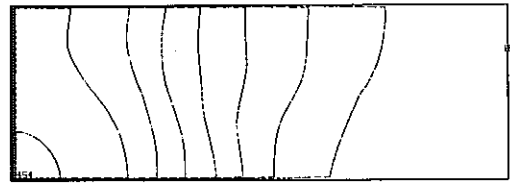


TIME: 412.0 SEC. J = 23  
 TMAX=  $5.2 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $5.75 \times 10^3$  PCT=  $10.0 \times 10^{-7}$

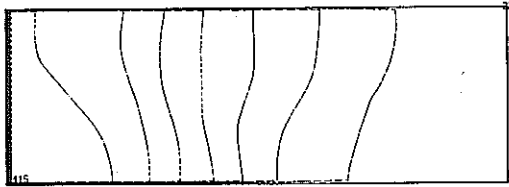
图3.9 放射性物質漏洩時濃度過度分布(破損箇所P1, P2, J=23断面)



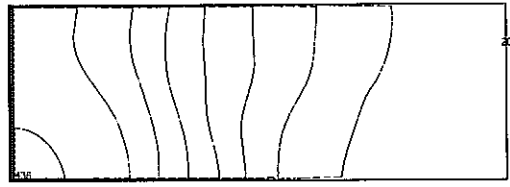
TIME: 432.0 SEC. J = 23  
 TMAX=  $5.0 \cdot 10^3$  TMIN=  $1.1 \cdot 10^{12}$  DELT=  $5.58 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



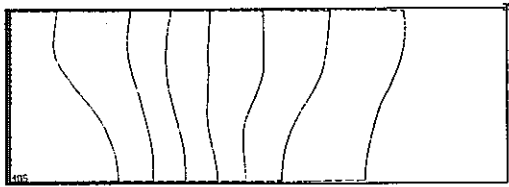
TIME: 432.0 SEC. J = 23  
 TMAX=  $4.9 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{12}$  DELT=  $5.48 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



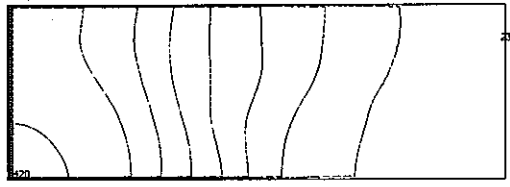
TIME: 452.0 SEC. J = 23  
 TMAX=  $4.6 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{12}$  DELT=  $5.36 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



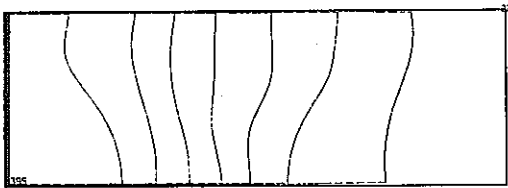
TIME: 452.0 SEC. J = 23  
 TMAX=  $4.7 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{12}$  DELT=  $5.25 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



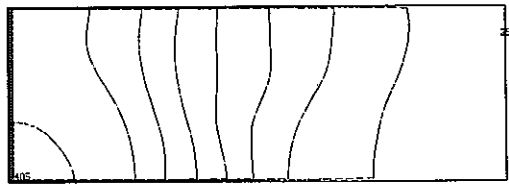
TIME: 472.0 SEC. J = 23  
 TMAX=  $4.6 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{12}$  DELT=  $5.15 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



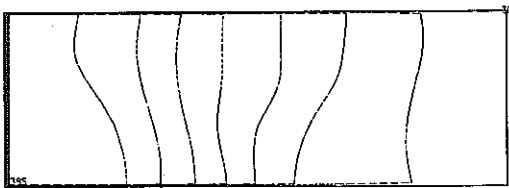
TIME: 472.0 SEC. J = 23  
 TMAX=  $4.5 \cdot 10^3$  TMIN=  $9.7 \cdot 10^{11}$  DELT=  $5.03 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



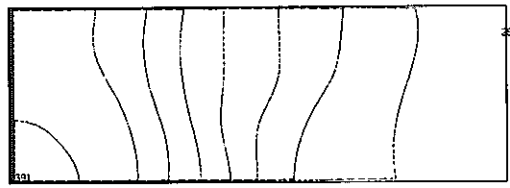
TIME: 492.0 SEC. J = 23  
 TMAX=  $4.5 \cdot 10^3$  TMIN=  $9.8 \cdot 10^{11}$  DELT=  $4.98 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



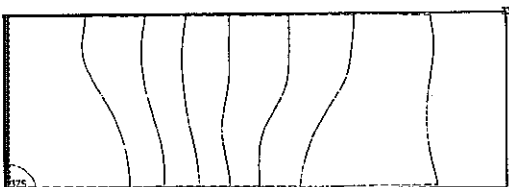
TIME: 492.0 SEC. J = 23  
 TMAX=  $4.4 \cdot 10^3$  TMIN=  $9.5 \cdot 10^{11}$  DELT=  $4.84 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



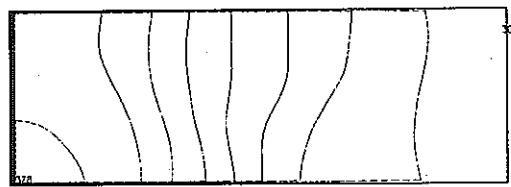
TIME: 512.0 SEC. J = 23  
 TMAX=  $4.3 \cdot 10^3$  TMIN=  $9.3 \cdot 10^{11}$  DELT=  $4.81 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 512.0 SEC. J = 23  
 TMAX=  $4.2 \cdot 10^3$  TMIN=  $9.2 \cdot 10^{11}$  DELT=  $4.66 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

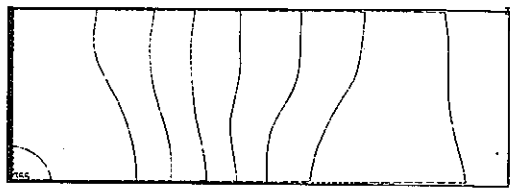


TIME: 532.0 SEC. J = 23  
 TMAX=  $4.2 \cdot 10^3$  TMIN=  $9.3 \cdot 10^{11}$  DELT=  $4.65 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

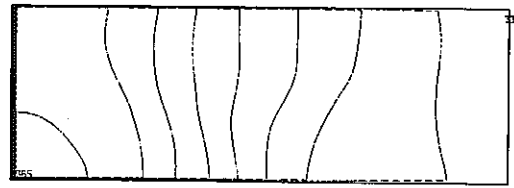


TIME: 532.0 SEC. J = 23  
 TMAX=  $4.1 \cdot 10^3$  TMIN=  $9.0 \cdot 10^{11}$  DELT=  $4.50 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

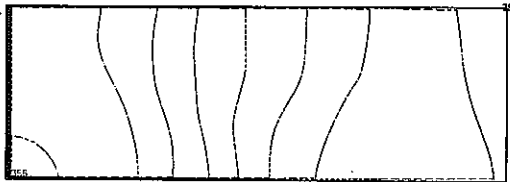
図 3. 9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)



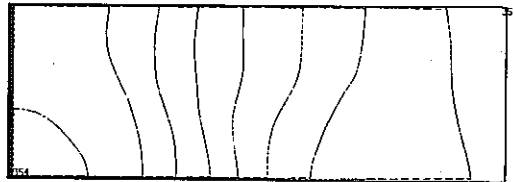
TIME: 552.0 SEC. J = 23  
 TMAX=  $4.1 \cdot 10^3$  TMIN=  $9.0 \cdot 10^2$  DELT=  $4.51 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



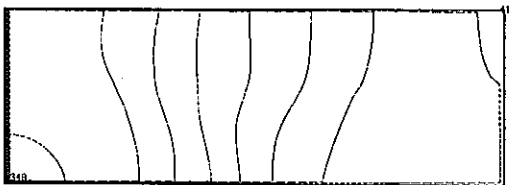
TIME: 552.0 SEC. J = 23  
 TMAX=  $3.9 \cdot 10^3$  TMIN=  $8.7 \cdot 10^2$  DELT=  $4.35 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



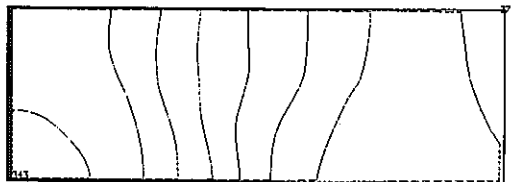
TIME: 572.0 SEC. J = 23  
 TMAX=  $3.9 \cdot 10^3$  TMIN=  $8.8 \cdot 10^2$  DELT=  $4.37 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



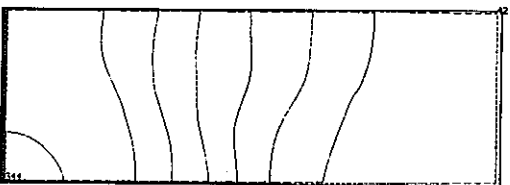
TIME: 572.0 SEC. J = 23  
 TMAX=  $3.8 \cdot 10^3$  TMIN=  $8.5 \cdot 10^2$  DELT=  $4.21 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



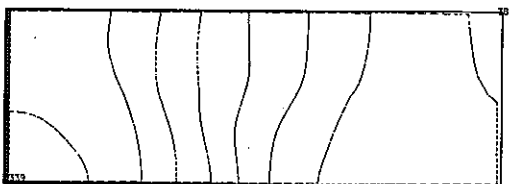
TIME: 592.0 SEC. J = 23  
 TMAX=  $3.8 \cdot 10^3$  TMIN=  $8.6 \cdot 10^2$  DELT=  $4.24 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



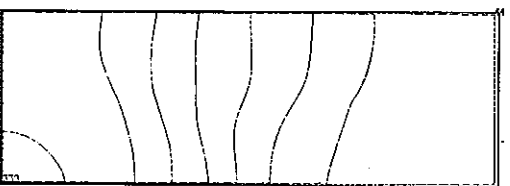
TIME: 592.0 SEC. J = 23  
 TMAX=  $3.7 \cdot 10^3$  TMIN=  $8.3 \cdot 10^2$  DELT=  $4.08 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



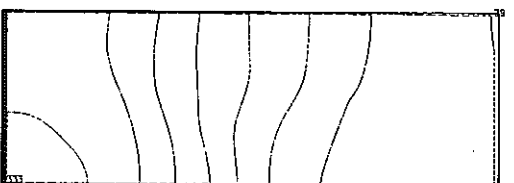
TIME: 601.0 SEC. J = 23  
 TMAX=  $3.8 \cdot 10^3$  TMIN=  $8.5 \cdot 10^2$  DELT=  $4.18 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



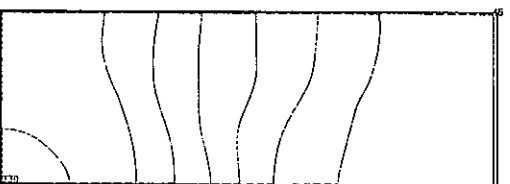
TIME: 601.0 SEC. J = 23  
 TMAX=  $3.8 \cdot 10^3$  TMIN=  $8.2 \cdot 10^2$  DELT=  $4.02 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



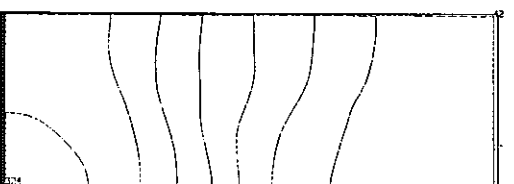
TIME: 612.0 SEC. J = 23  
 TMAX=  $3.7 \cdot 10^3$  TMIN=  $8.4 \cdot 10^2$  DELT=  $4.12 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 612.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.1 \cdot 10^2$  DELT=  $3.96 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.2 \cdot 10^2$  DELT=  $4.06 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $7.9 \cdot 10^2$  DELT=  $3.84 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-3}$

图3.9 放射性物質漏洩時濃度過度分布(破損箇所P1, P2, J=23断面)

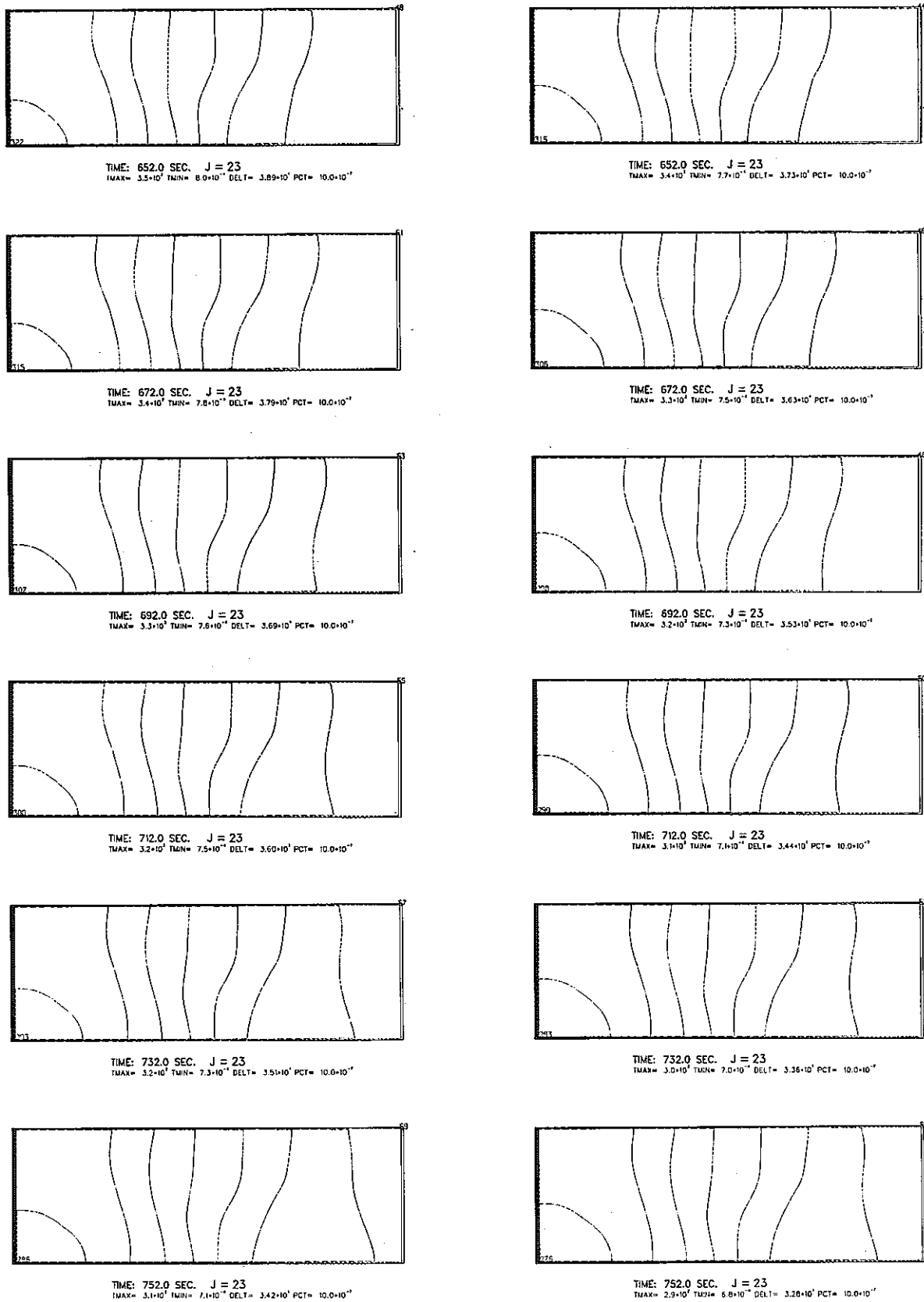
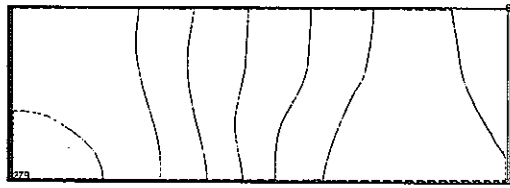
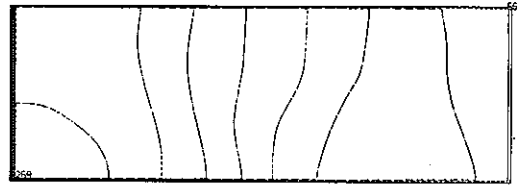


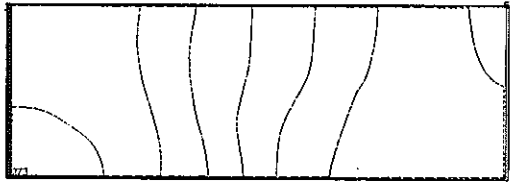
图3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)



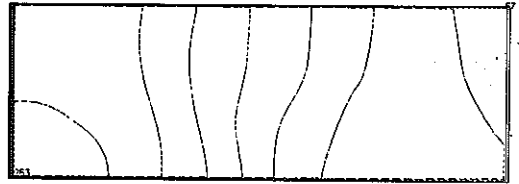
TIME: 772.0 SEC. J = 23  
 TMAX= 3.0\*10<sup>3</sup> TMIN= 7.0\*10<sup>-3</sup> DELT= 3.34\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



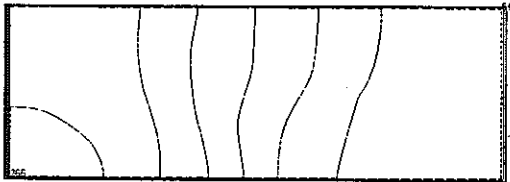
TIME: 772.0 SEC. J = 23  
 TMAX= 2.9\*10<sup>3</sup> TMIN= 6.7\*10<sup>-3</sup> DELT= 3.20\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



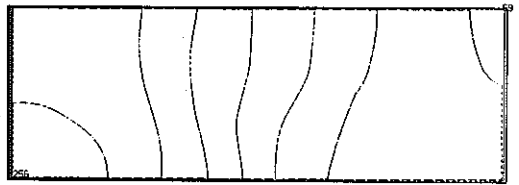
TIME: 792.0 SEC. J = 23  
 TMAX= 2.9\*10<sup>3</sup> TMIN= 6.6\*10<sup>-3</sup> DELT= 3.26\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



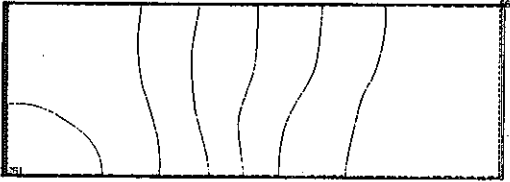
TIME: 792.0 SEC. J = 23  
 TMAX= 2.8\*10<sup>3</sup> TMIN= 6.5\*10<sup>-3</sup> DELT= 3.12\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



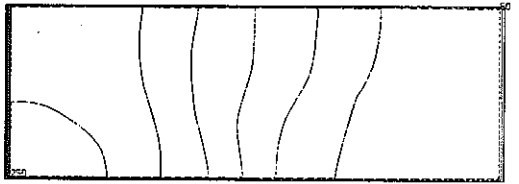
TIME: 812.0 SEC. J = 23  
 TMAX= 2.9\*10<sup>3</sup> TMIN= 6.7\*10<sup>-3</sup> DELT= 3.19\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



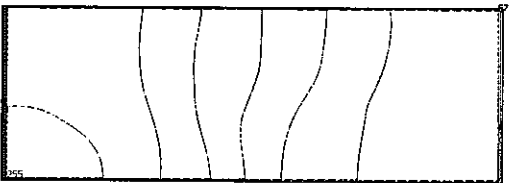
TIME: 812.0 SEC. J = 23  
 TMAX= 2.7\*10<sup>3</sup> TMIN= 6.4\*10<sup>-3</sup> DELT= 3.05\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



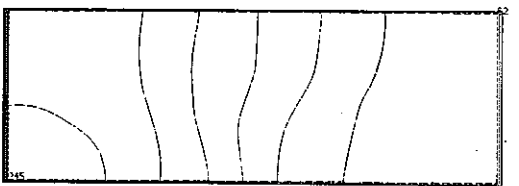
TIME: 832.0 SEC. J = 23  
 TMAX= 2.8\*10<sup>3</sup> TMIN= 6.5\*10<sup>-3</sup> DELT= 3.12\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



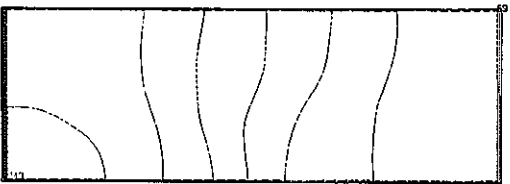
TIME: 832.0 SEC. J = 23  
 TMAX= 2.7\*10<sup>3</sup> TMIN= 6.3\*10<sup>-3</sup> DELT= 2.98\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



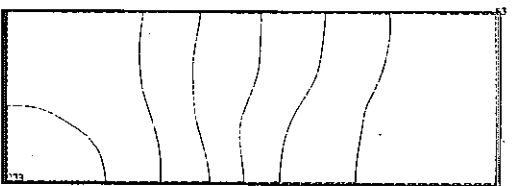
TIME: 852.0 SEC. J = 23  
 TMAX= 2.7\*10<sup>3</sup> TMIN= 6.4\*10<sup>-3</sup> DELT= 3.05\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



TIME: 852.0 SEC. J = 23  
 TMAX= 2.6\*10<sup>3</sup> TMIN= 6.1\*10<sup>-3</sup> DELT= 2.91\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



TIME: 872.0 SEC. J = 23  
 TMAX= 2.7\*10<sup>3</sup> TMIN= 6.3\*10<sup>-3</sup> DELT= 2.98\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



TIME: 872.0 SEC. J = 23  
 TMAX= 2.6\*10<sup>3</sup> TMIN= 6.0\*10<sup>-3</sup> DELT= 2.80\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>

图3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)

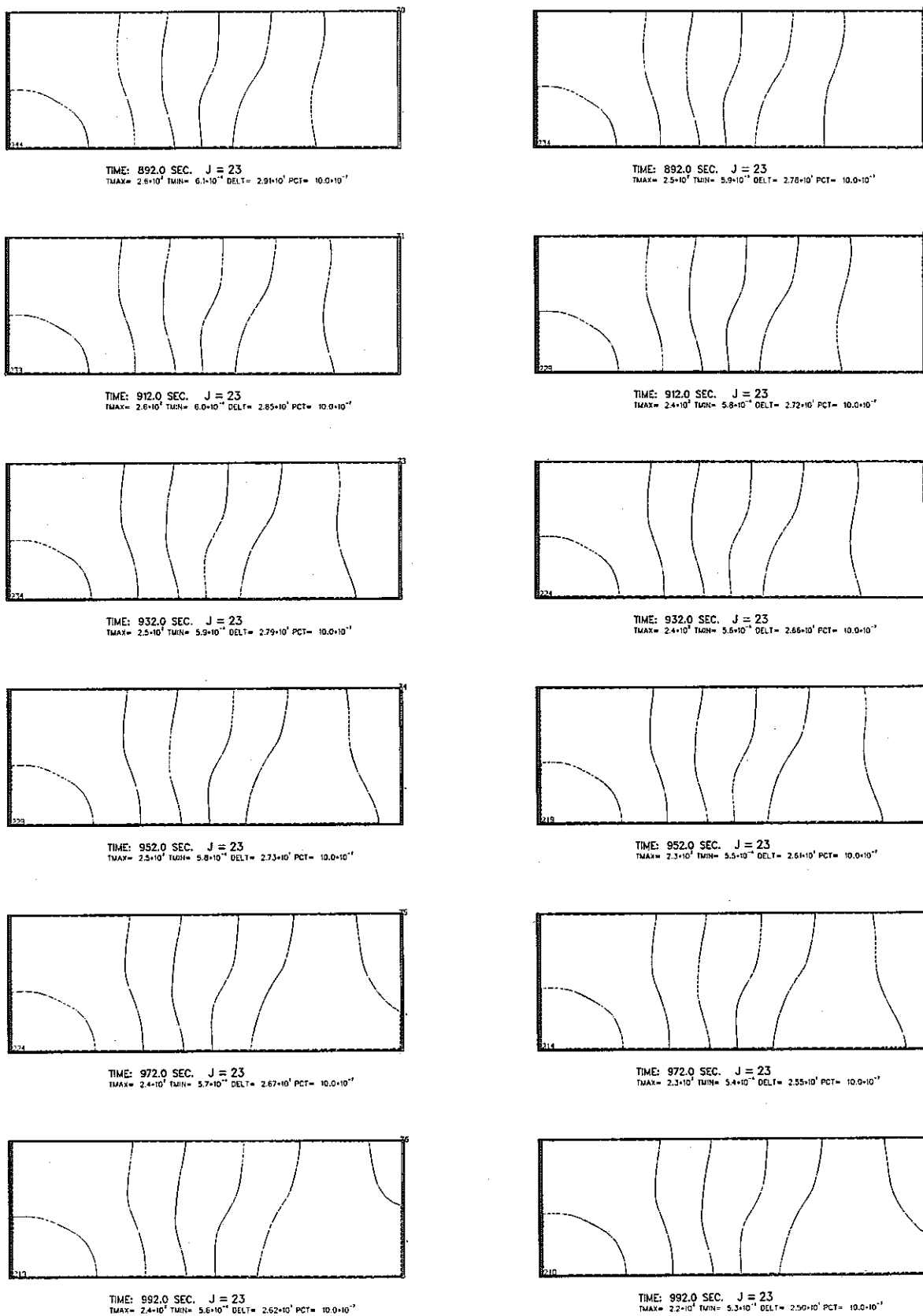


図3.9 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, J=23断面)

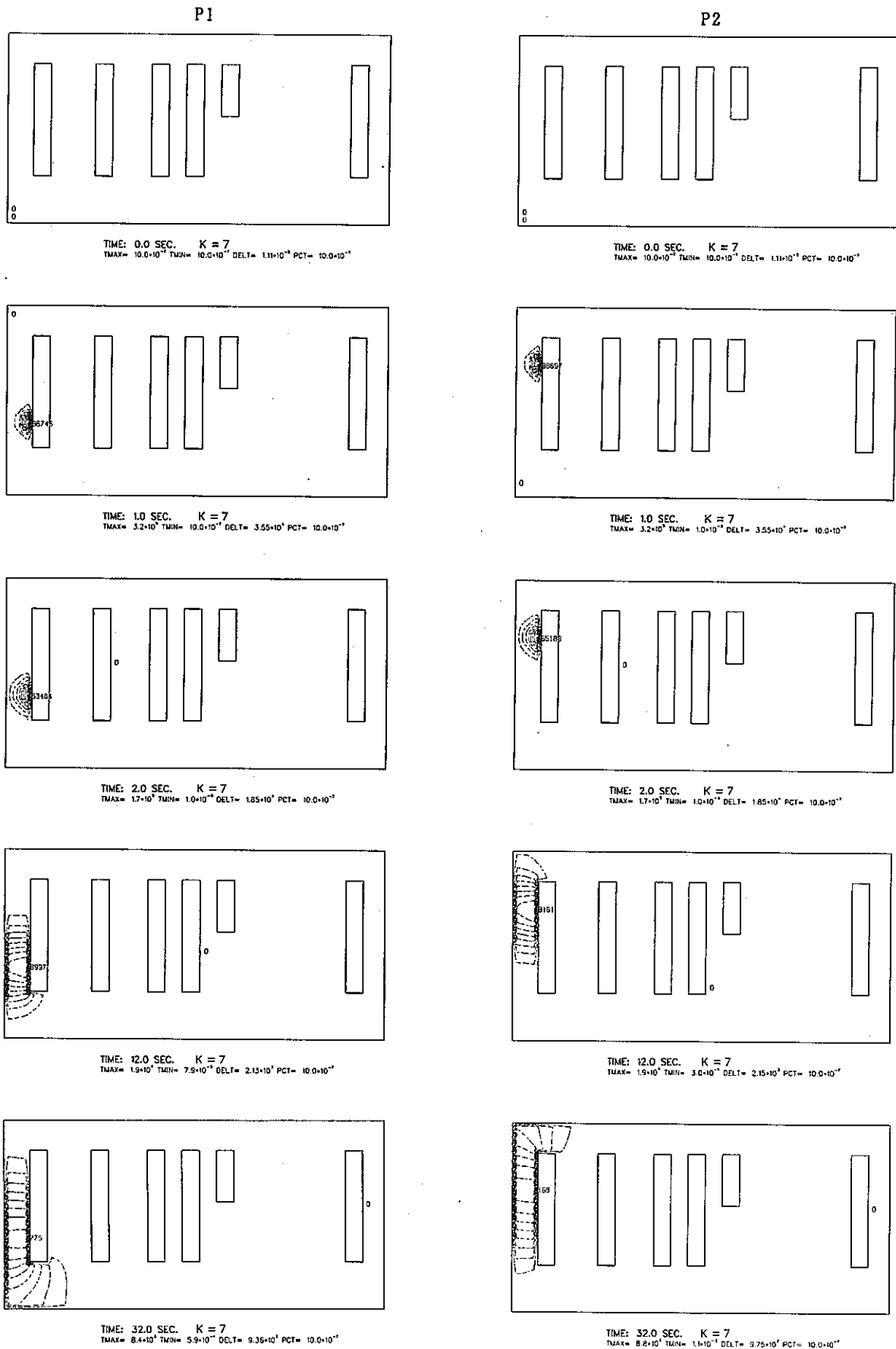
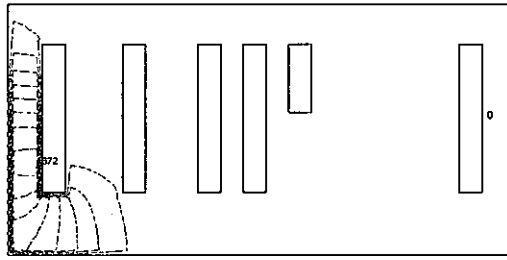
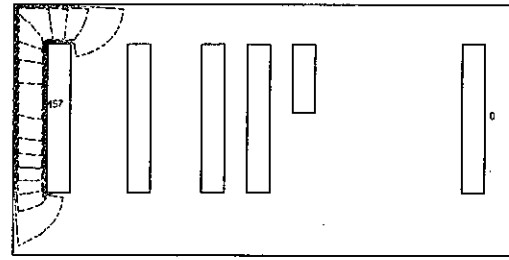


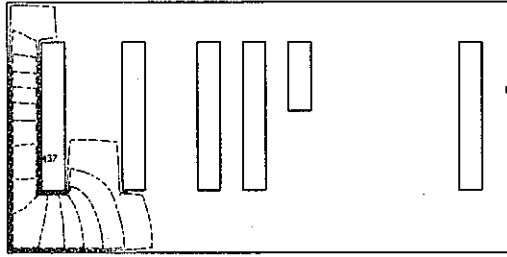
図3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



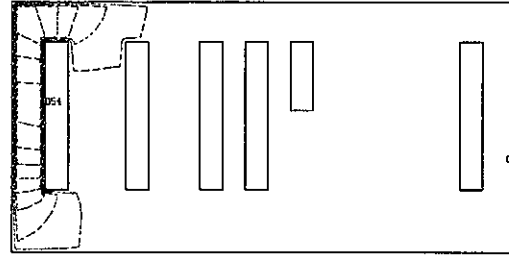
TIME: 52.0 SEC. K = 7  
 TMAX=  $5.3 \times 10^7$  TMIN=  $9.1 \times 10^{-7}$  DELT=  $5.92 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



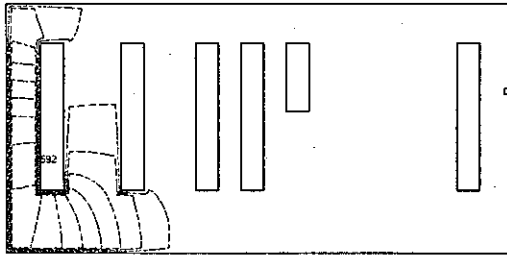
TIME: 52.0 SEC. K = 7  
 TMAX=  $5.9 \times 10^7$  TMIN=  $1.4 \times 10^{-7}$  DELT=  $6.61 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



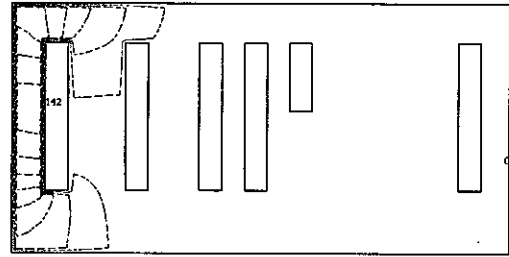
TIME: 72.0 SEC. K = 7  
 TMAX=  $3.7 \times 10^7$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $4.15 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



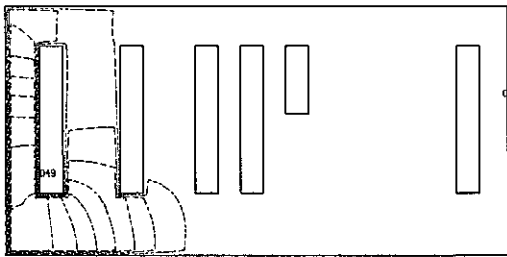
TIME: 72.0 SEC. K = 7  
 TMAX=  $4.4 \times 10^7$  TMIN=  $1.6 \times 10^{-7}$  DELT=  $4.87 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



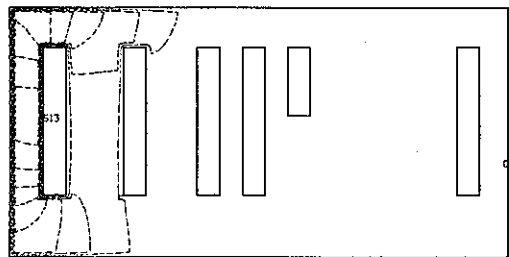
TIME: 92.0 SEC. K = 7  
 TMAX=  $2.8 \times 10^7$  TMIN=  $1.2 \times 10^{-7}$  DELT=  $3.11 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



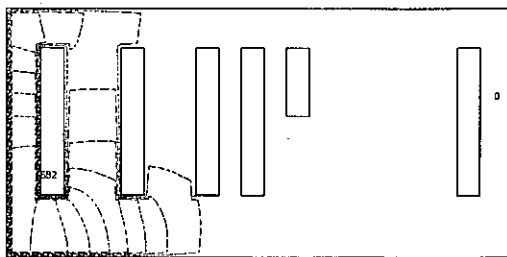
TIME: 92.0 SEC. K = 7  
 TMAX=  $3.4 \times 10^7$  TMIN=  $1.6 \times 10^{-7}$  DELT=  $3.77 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



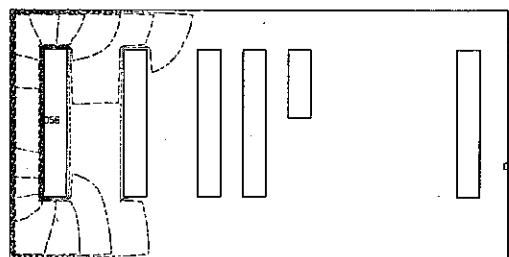
TIME: 112.0 SEC. K = 7  
 TMAX=  $2.2 \times 10^7$  TMIN=  $1.3 \times 10^{-7}$  DELT=  $2.45 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 112.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^7$  TMIN=  $1.6 \times 10^{-7}$  DELT=  $3.00 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 132.0 SEC. K = 7  
 TMAX=  $1.6 \times 10^7$  TMIN=  $1.3 \times 10^{-7}$  DELT=  $1.99 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 132.0 SEC. K = 7  
 TMAX=  $2.2 \times 10^7$  TMIN=  $1.6 \times 10^{-7}$  DELT=  $2.44 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



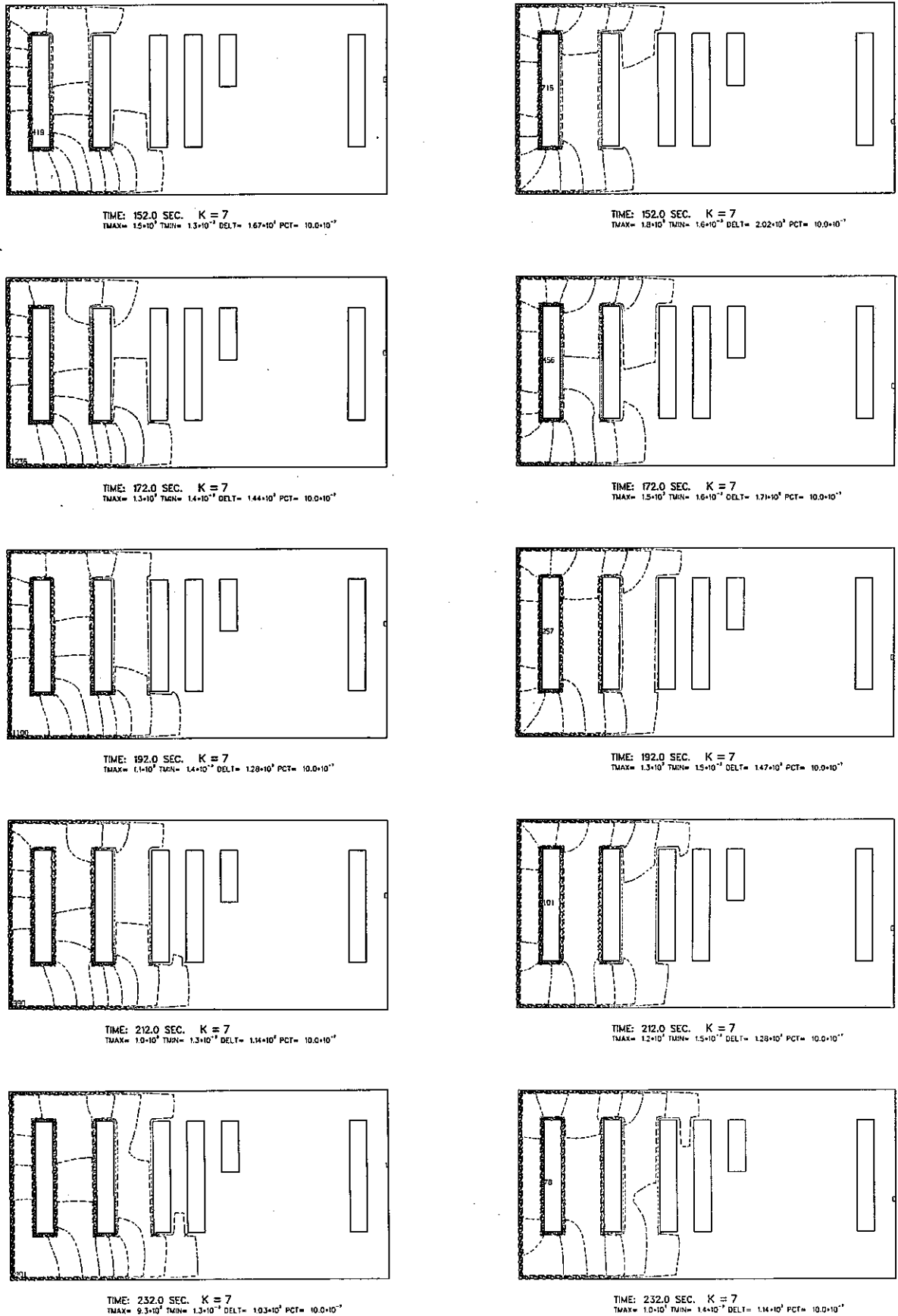
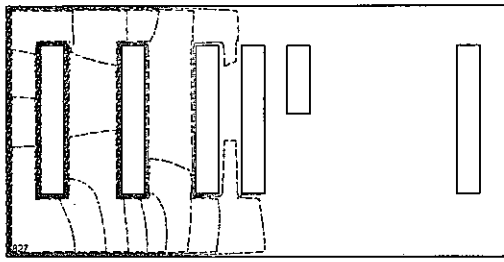
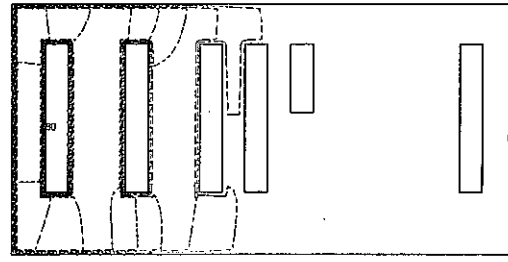


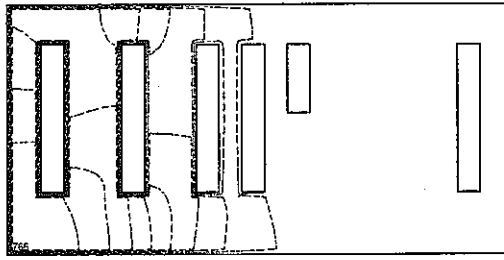
図3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



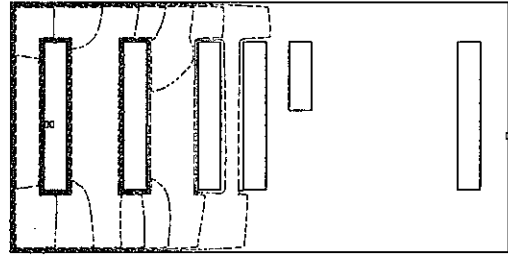
TIME: 252.0 SEC. K = 7  
 TMAX=  $8.5 \cdot 10^7$  TMIN=  $1.3 \cdot 10^{-2}$  DELT=  $9.45 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



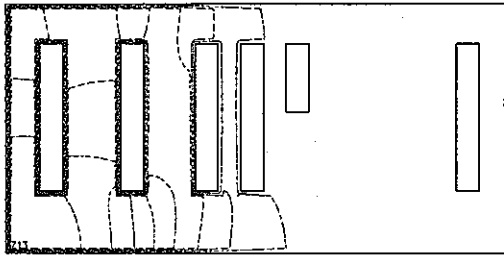
TIME: 252.0 SEC. K = 7  
 TMAX=  $9.2 \cdot 10^7$  TMIN=  $1.4 \cdot 10^{-2}$  DELT=  $1.02 \cdot 10^8$  PCT=  $10.0 \cdot 10^{-1}$



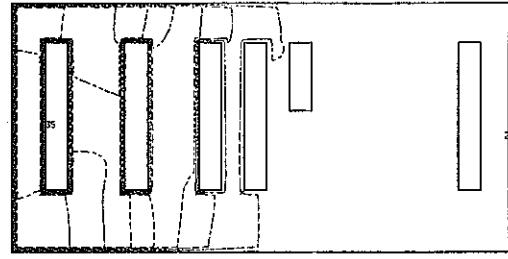
TIME: 272.0 SEC. K = 7  
 TMAX=  $7.8 \cdot 10^7$  TMIN=  $1.3 \cdot 10^{-2}$  DELT=  $8.72 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



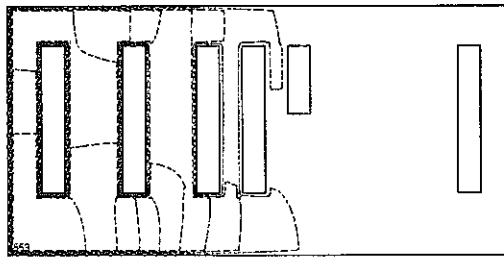
TIME: 272.0 SEC. K = 7  
 TMAX=  $8.3 \cdot 10^7$  TMIN=  $1.3 \cdot 10^{-2}$  DELT=  $9.21 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



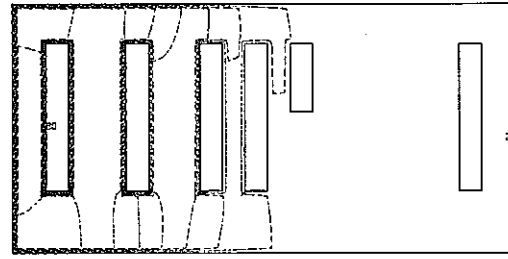
TIME: 292.0 SEC. K = 7  
 TMAX=  $7.3 \cdot 10^7$  TMIN=  $1.3 \cdot 10^{-2}$  DELT=  $8.10 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



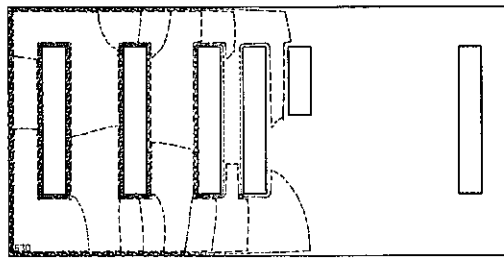
TIME: 292.0 SEC. K = 7  
 TMAX=  $7.6 \cdot 10^7$  TMIN=  $1.3 \cdot 10^{-2}$  DELT=  $8.43 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



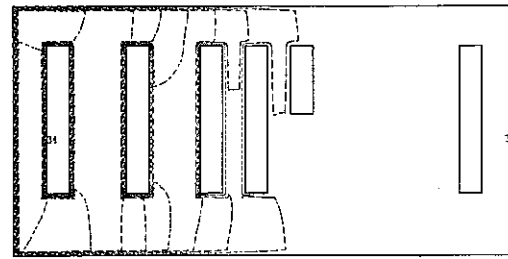
TIME: 312.0 SEC. K = 7  
 TMAX=  $6.8 \cdot 10^7$  TMIN=  $1.2 \cdot 10^{-2}$  DELT=  $7.58 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 312.0 SEC. K = 7  
 TMAX=  $7.0 \cdot 10^7$  TMIN=  $1.2 \cdot 10^{-2}$  DELT=  $7.79 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$

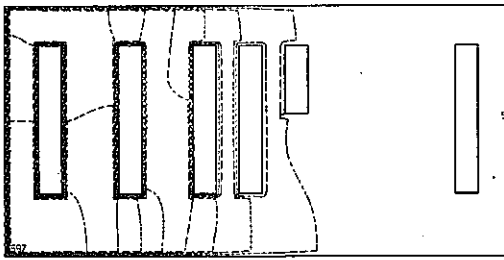


TIME: 332.0 SEC. K = 7  
 TMAX=  $6.4 \cdot 10^7$  TMIN=  $1.2 \cdot 10^{-2}$  DELT=  $7.13 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$

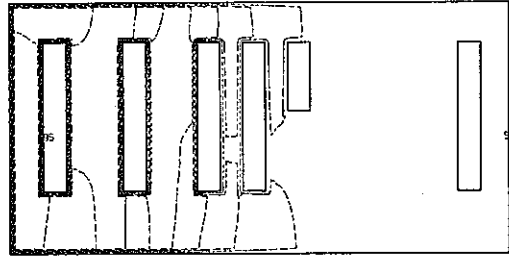


TIME: 332.0 SEC. K = 7  
 TMAX=  $6.5 \cdot 10^7$  TMIN=  $1.2 \cdot 10^{-2}$  DELT=  $7.25 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$

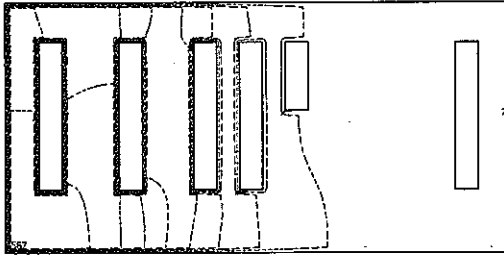
図 3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K= 7 断面)



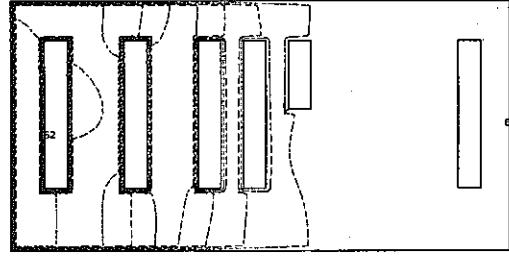
TIME: 352.0 SEC. K = 7  
 TMAX=  $6.1 \times 10^{-7}$  TMIN=  $1.2 \times 10^{-7}$  DELT=  $6.74 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



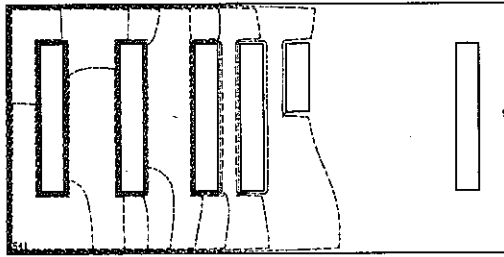
TIME: 352.0 SEC. K = 7  
 TMAX=  $6.1 \times 10^{-7}$  TMIN=  $1.2 \times 10^{-7}$  DELT=  $6.79 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



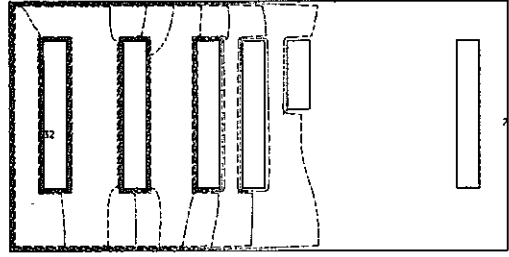
TIME: 372.0 SEC. K = 7  
 TMAX=  $5.8 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $6.40 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



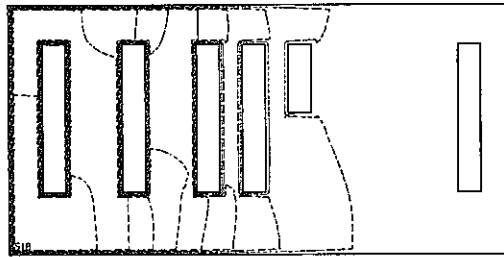
TIME: 372.0 SEC. K = 7  
 TMAX=  $5.8 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $6.39 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



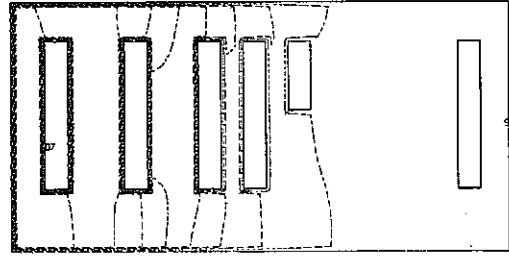
TIME: 392.0 SEC. K = 7  
 TMAX=  $5.5 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $6.09 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



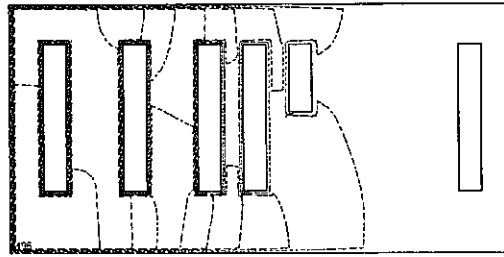
TIME: 392.0 SEC. K = 7  
 TMAX=  $5.4 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $6.05 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



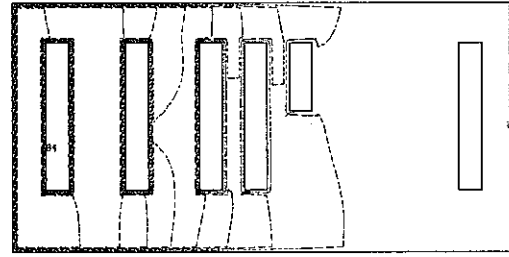
TIME: 412.0 SEC. K = 7  
 TMAX=  $5.2 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $5.83 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



TIME: 412.0 SEC. K = 7  
 TMAX=  $5.2 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $5.75 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



TIME: 432.0 SEC. K = 7  
 TMAX=  $5.0 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $5.58 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



TIME: 432.0 SEC. K = 7  
 TMAX=  $4.9 \times 10^{-7}$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $5.48 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$

图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)

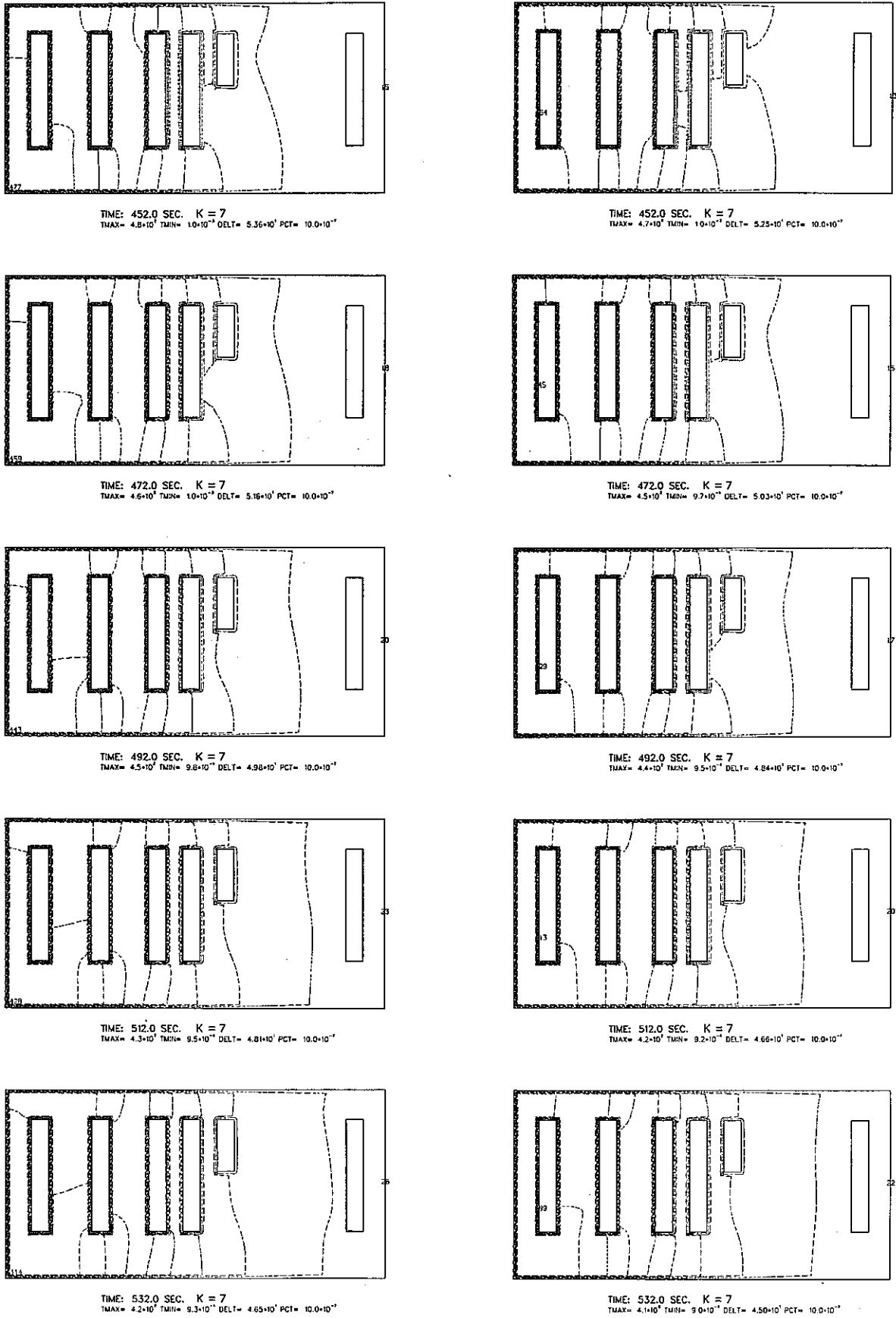


図3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)

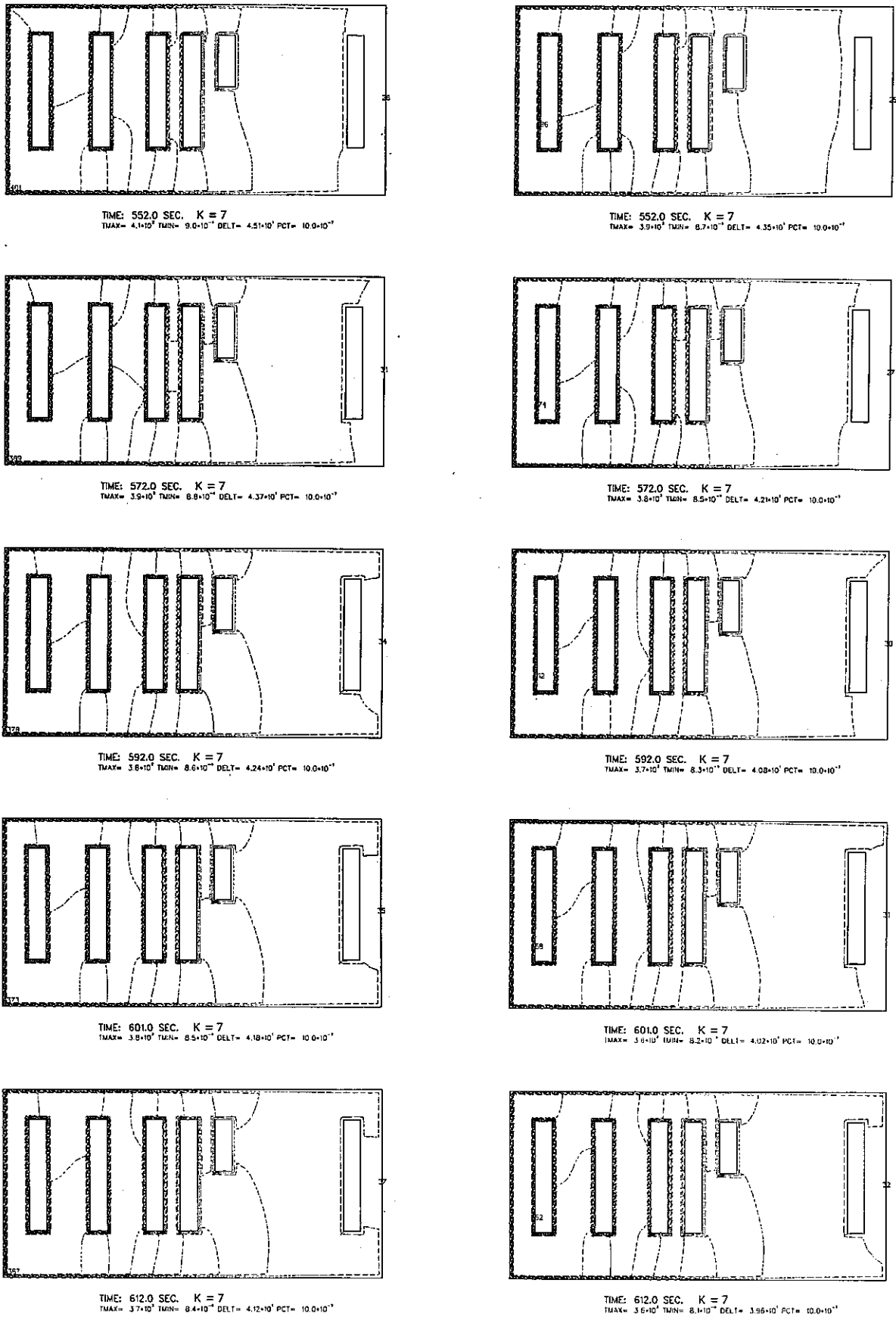
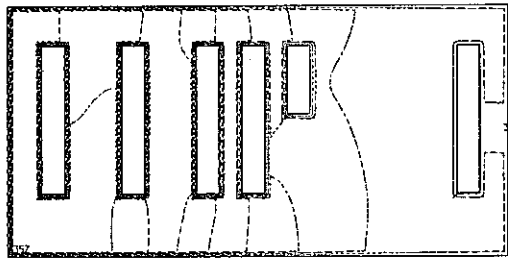
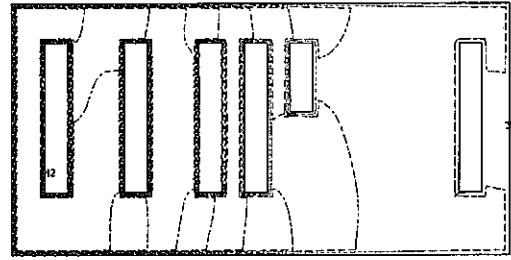


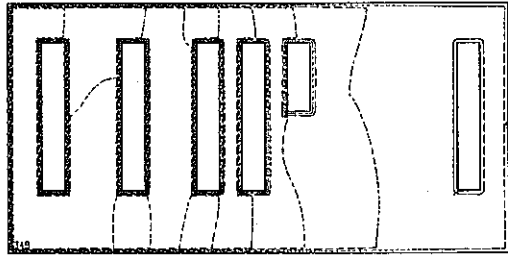
图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



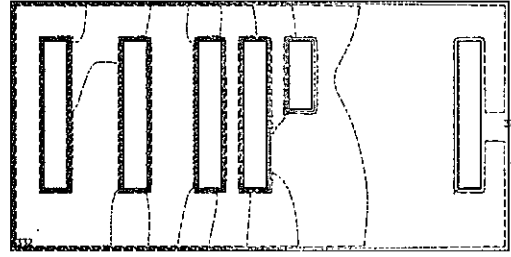
TIME: 632.0 SEC. K = 7  
 TMAX=  $3.6 \times 10^3$  TMIN=  $8.2 \times 10^{-1}$  DELT=  $4.00 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



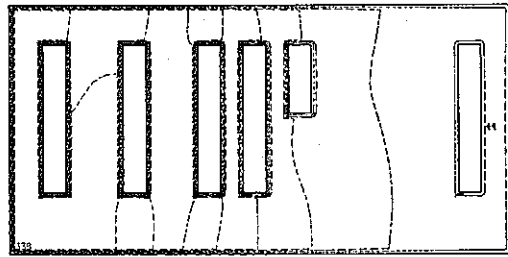
TIME: 632.0 SEC. K = 7  
 TMAX=  $3.5 \times 10^3$  TMIN=  $7.9 \times 10^{-1}$  DELT=  $3.84 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



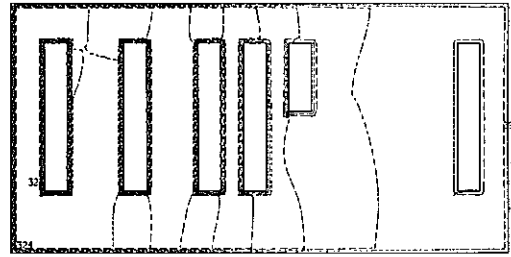
TIME: 652.0 SEC. K = 7  
 TMAX=  $3.5 \times 10^3$  TMIN=  $8.0 \times 10^{-1}$  DELT=  $3.89 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



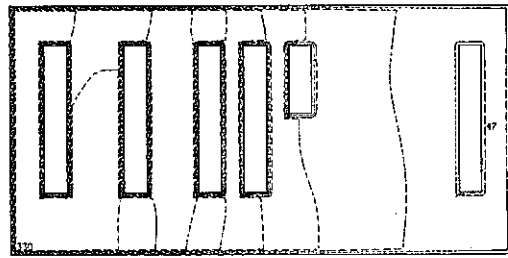
TIME: 652.0 SEC. K = 7  
 TMAX=  $3.4 \times 10^3$  TMIN=  $7.7 \times 10^{-1}$  DELT=  $3.73 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



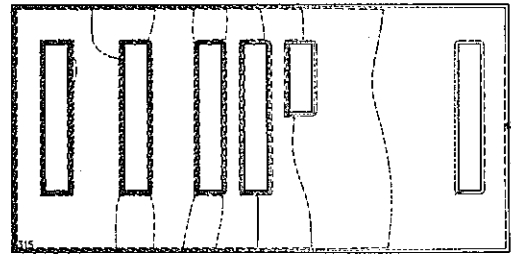
TIME: 672.0 SEC. K = 7  
 TMAX=  $3.4 \times 10^3$  TMIN=  $7.8 \times 10^{-1}$  DELT=  $3.78 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



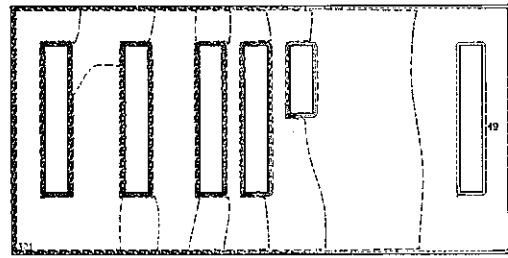
TIME: 672.0 SEC. K = 7  
 TMAX=  $3.3 \times 10^3$  TMIN=  $7.5 \times 10^{-1}$  DELT=  $3.63 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



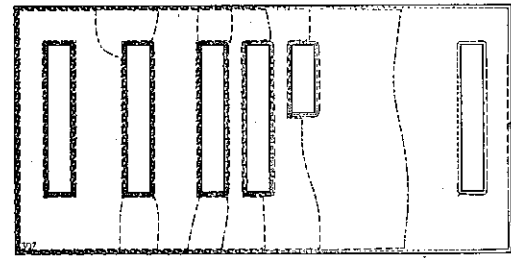
TIME: 692.0 SEC. K = 7  
 TMAX=  $3.3 \times 10^3$  TMIN=  $7.6 \times 10^{-1}$  DELT=  $3.69 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



TIME: 692.0 SEC. K = 7  
 TMAX=  $3.2 \times 10^3$  TMIN=  $7.3 \times 10^{-1}$  DELT=  $3.53 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

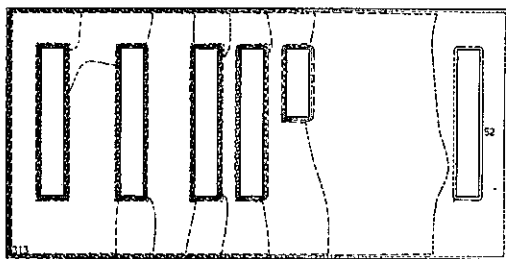


TIME: 712.0 SEC. K = 7  
 TMAX=  $3.2 \times 10^3$  TMIN=  $7.5 \times 10^{-1}$  DELT=  $3.60 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

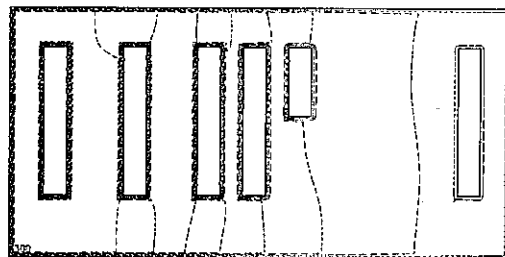


TIME: 712.0 SEC. K = 7  
 TMAX=  $3.1 \times 10^3$  TMIN=  $7.1 \times 10^{-1}$  DELT=  $3.44 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

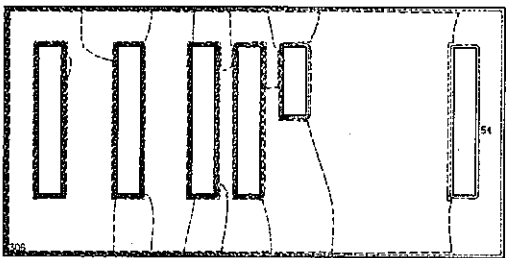
图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



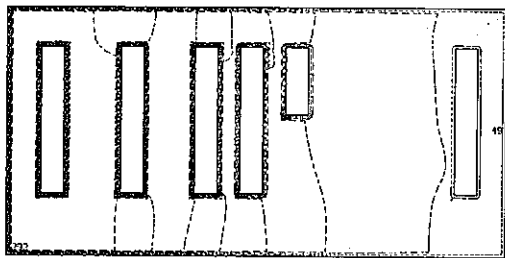
TIME: 732.0 SEC. K = 7  
 TMAX=  $3.2 \times 10^7$  TMIN=  $7.3 \times 10^{-1}$  DELT=  $3.5 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



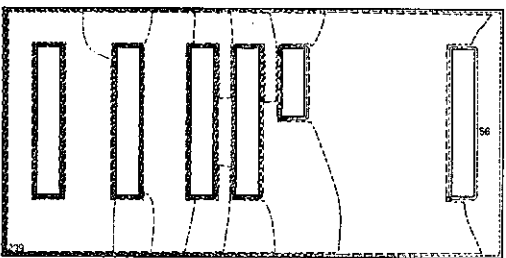
TIME: 732.0 SEC. K = 7  
 TMAX=  $3.0 \times 10^7$  TMIN=  $7.0 \times 10^{-1}$  DELT=  $3.36 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



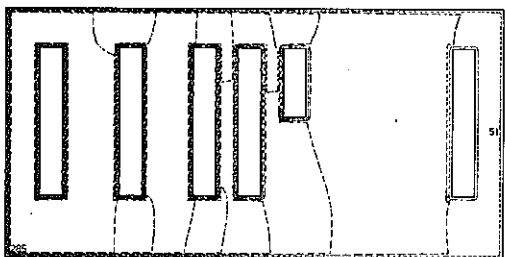
TIME: 752.0 SEC. K = 7  
 TMAX=  $3.1 \times 10^7$  TMIN=  $7.1 \times 10^{-1}$  DELT=  $3.42 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



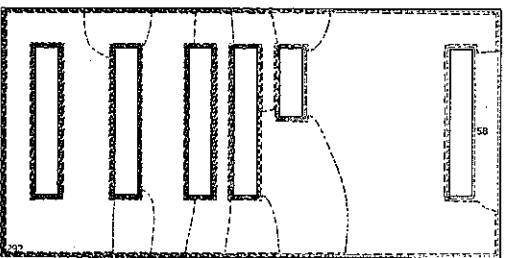
TIME: 752.0 SEC. K = 7  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.8 \times 10^{-1}$  DELT=  $3.28 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



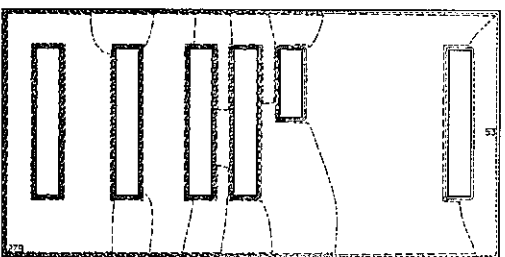
TIME: 772.0 SEC. K = 7  
 TMAX=  $3.0 \times 10^7$  TMIN=  $7.0 \times 10^{-1}$  DELT=  $3.34 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



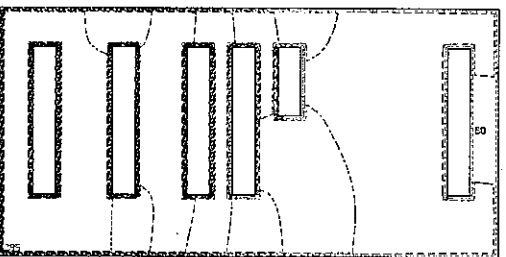
TIME: 772.0 SEC. K = 7  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.7 \times 10^{-1}$  DELT=  $3.20 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



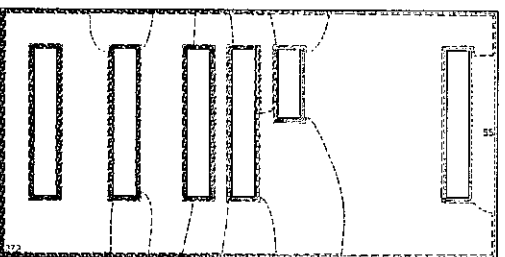
TIME: 792.0 SEC. K = 7  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.8 \times 10^{-1}$  DELT=  $3.26 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 792.0 SEC. K = 7  
 TMAX=  $2.8 \times 10^7$  TMIN=  $6.5 \times 10^{-1}$  DELT=  $3.12 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

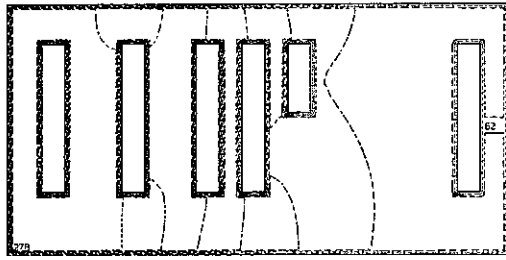


TIME: 812.0 SEC. K = 7  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.7 \times 10^{-1}$  DELT=  $3.19 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

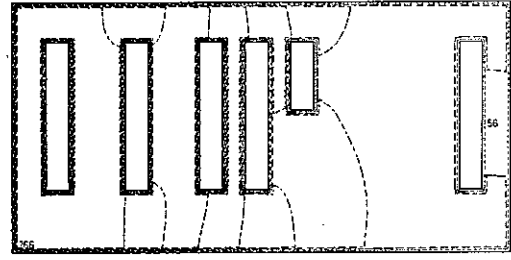


TIME: 812.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^7$  TMIN=  $6.4 \times 10^{-1}$  DELT=  $3.05 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

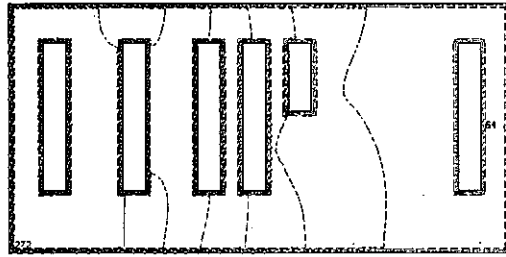
图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



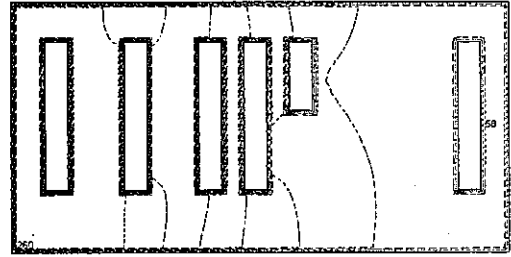
TIME: 832.0 SEC. K = 7  
 TMAX=  $2.8 \times 10^7$  TMIN=  $6.5 \times 10^{-7}$  DELT=  $3.12 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



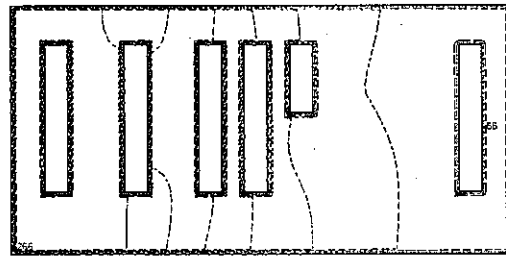
TIME: 832.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^7$  TMIN=  $6.3 \times 10^{-7}$  DELT=  $2.98 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



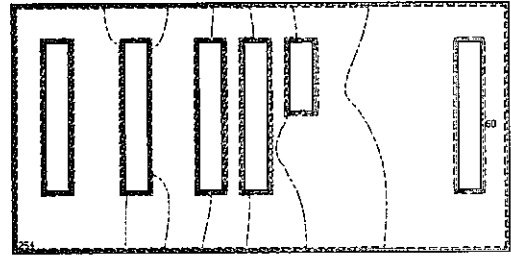
TIME: 852.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^7$  TMIN=  $6.4 \times 10^{-7}$  DELT=  $3.05 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



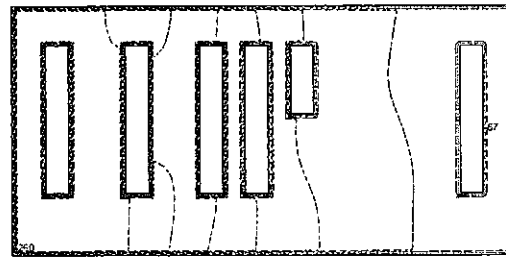
TIME: 852.0 SEC. K = 7  
 TMAX=  $2.6 \times 10^7$  TMIN=  $6.1 \times 10^{-7}$  DELT=  $2.91 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



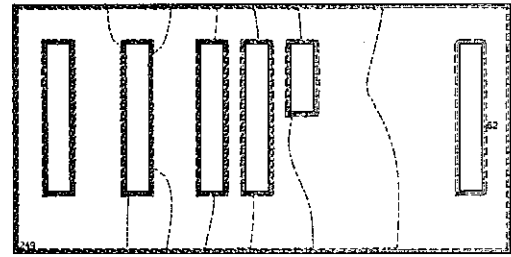
TIME: 872.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^7$  TMIN=  $6.3 \times 10^{-7}$  DELT=  $2.98 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



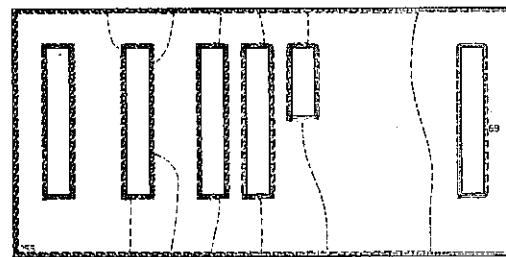
TIME: 872.0 SEC. K = 7  
 TMAX=  $2.6 \times 10^7$  TMIN=  $6.0 \times 10^{-7}$  DELT=  $2.85 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



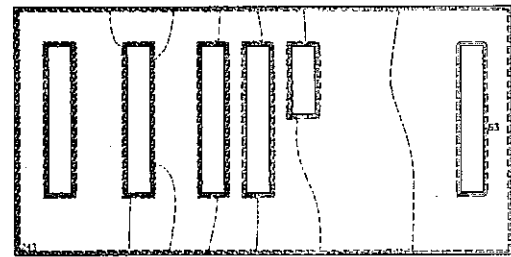
TIME: 892.0 SEC. K = 7  
 TMAX=  $2.6 \times 10^7$  TMIN=  $6.1 \times 10^{-7}$  DELT=  $2.91 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 892.0 SEC. K = 7  
 TMAX=  $2.5 \times 10^7$  TMIN=  $5.9 \times 10^{-7}$  DELT=  $2.78 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 912.0 SEC. K = 7  
 TMAX=  $2.6 \times 10^7$  TMIN=  $6.0 \times 10^{-7}$  DELT=  $2.85 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 912.0 SEC. K = 7  
 TMAX=  $2.4 \times 10^7$  TMIN=  $5.8 \times 10^{-7}$  DELT=  $2.72 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7 断面)



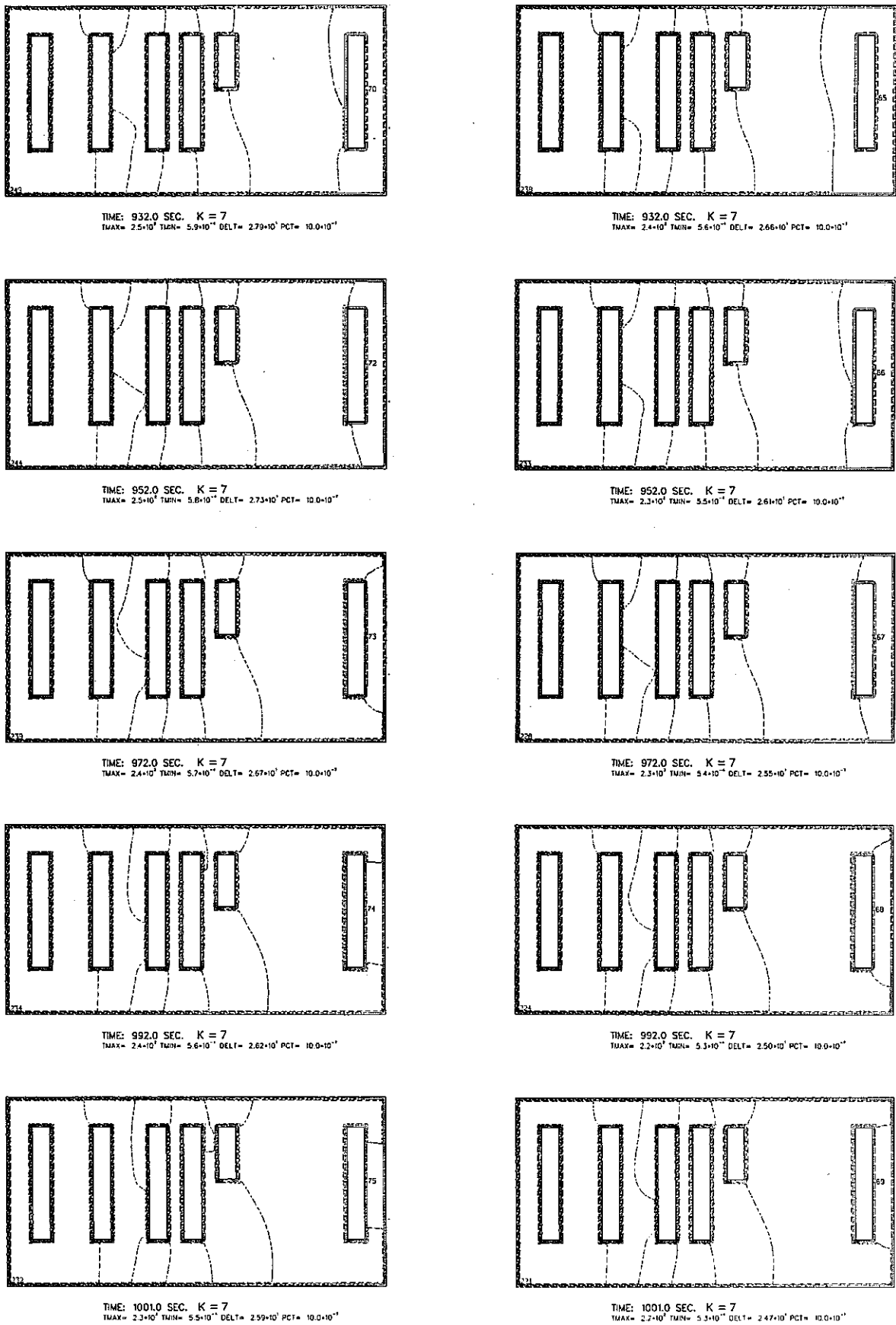
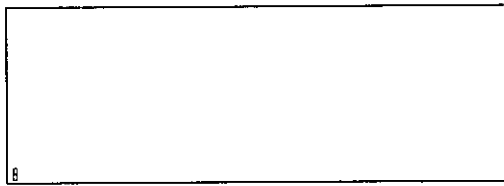


图3.10 放射性物質漏洩時濃度過度分布 (破損箇所P1, P2, K=7断面)

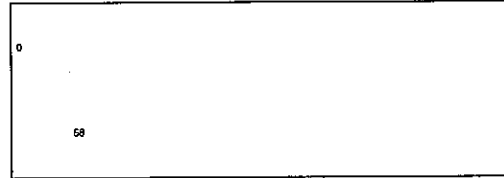
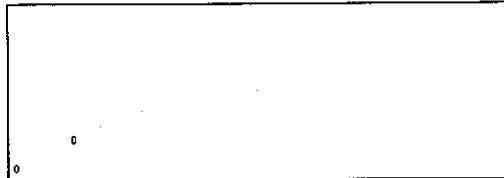
P3

P4



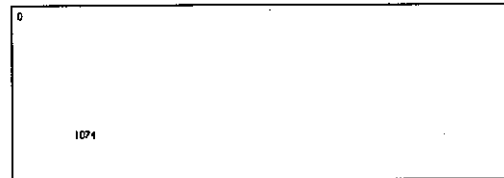
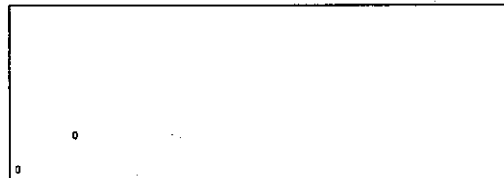
TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \cdot 10^{-7}$  TMIN=  $10.0 \cdot 10^{-7}$  DELT=  $1.1 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \cdot 10^{-7}$  TMIN=  $10.0 \cdot 10^{-7}$  DELT=  $1.1 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$



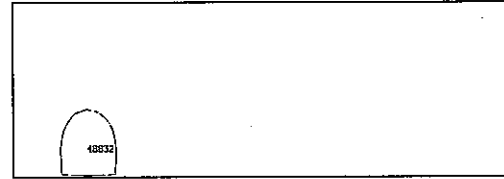
TIME: 1.0 SEC. J = 23  
 TMAX=  $8.0 \cdot 10^{-7}$  TMIN=  $1.0 \cdot 10^{-7}$  DELT=  $8.84 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 1.0 SEC. J = 23  
 TMAX=  $7.9 \cdot 10^{-7}$  TMIN=  $1.0 \cdot 10^{-7}$  DELT=  $8.75 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$



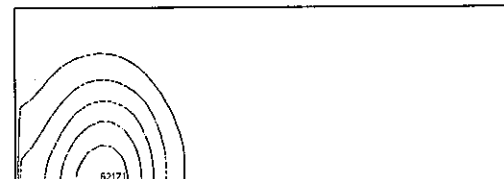
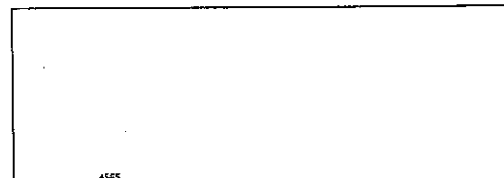
TIME: 2.0 SEC. J = 23  
 TMAX=  $3.1 \cdot 10^{-7}$  TMIN=  $1.0 \cdot 10^{-7}$  DELT=  $3.44 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 2.0 SEC. J = 23  
 TMAX=  $3.0 \cdot 10^{-7}$  TMIN=  $2.5 \cdot 10^{-7}$  DELT=  $3.36 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$



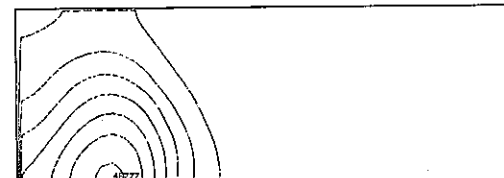
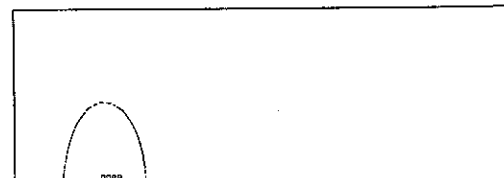
TIME: 12.0 SEC. J = 23  
 TMAX=  $2.7 \cdot 10^{-7}$  TMIN=  $1.5 \cdot 10^{-7}$  DELT=  $3.01 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 12.0 SEC. J = 23  
 TMAX=  $2.8 \cdot 10^{-7}$  TMIN=  $4.2 \cdot 10^{-7}$  DELT=  $3.05 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 32.0 SEC. J = 23  
 TMAX=  $10.0 \cdot 10^{-7}$  TMIN=  $9.8 \cdot 10^{-7}$  DELT=  $1.1 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 32.0 SEC. J = 23  
 TMAX=  $9.7 \cdot 10^{-7}$  TMIN=  $1.4 \cdot 10^{-7}$  DELT=  $1.08 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 52.0 SEC. J = 23  
 TMAX=  $5.7 \cdot 10^{-7}$  TMIN=  $1.5 \cdot 10^{-7}$  DELT=  $6.38 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

TIME: 52.0 SEC. J = 23  
 TMAX=  $5.6 \cdot 10^{-7}$  TMIN=  $1.0 \cdot 10^{-7}$  DELT=  $6.47 \cdot 10^{-3}$  PCT=  $10.0 \cdot 10^{-7}$

图3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

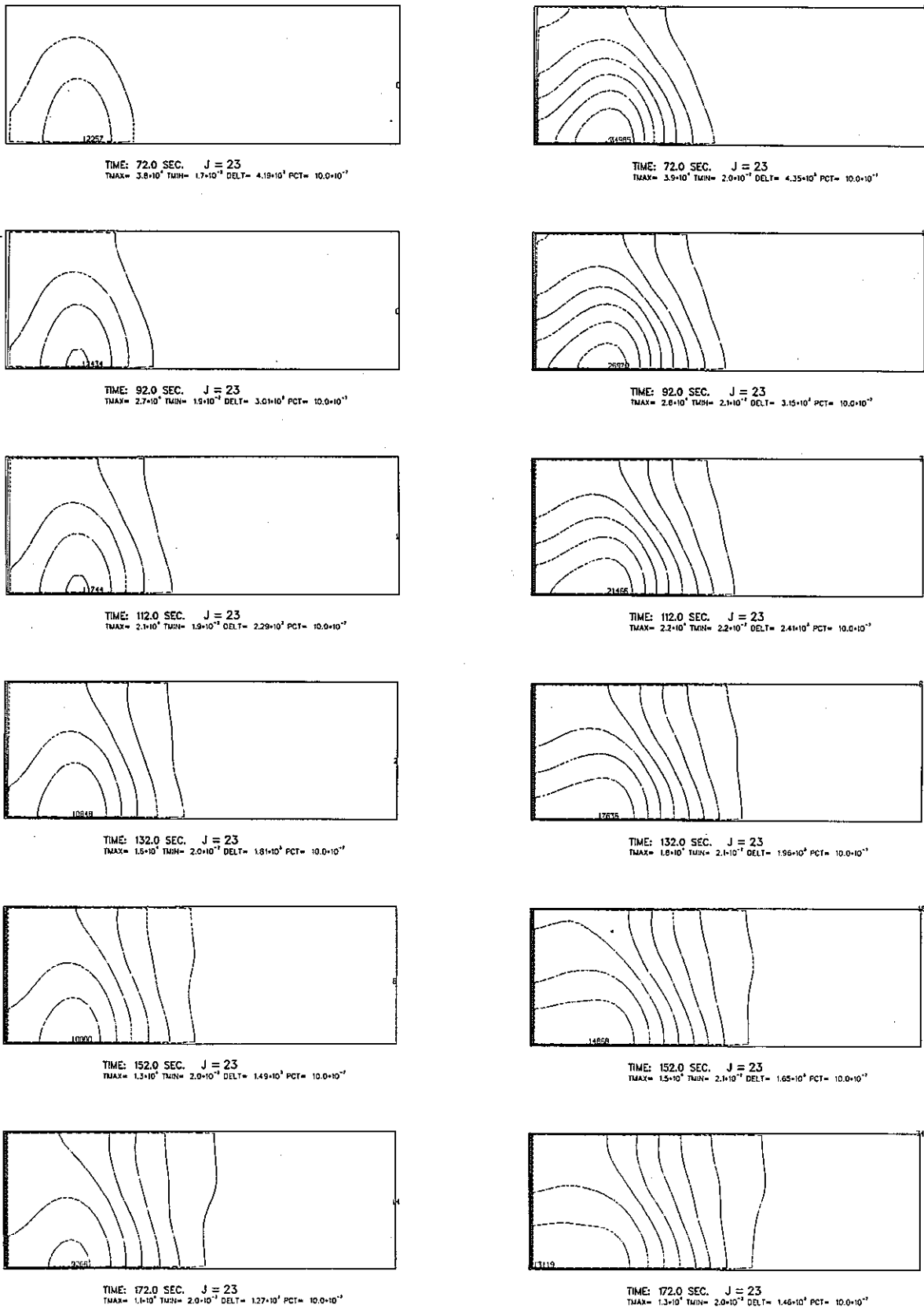


图3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

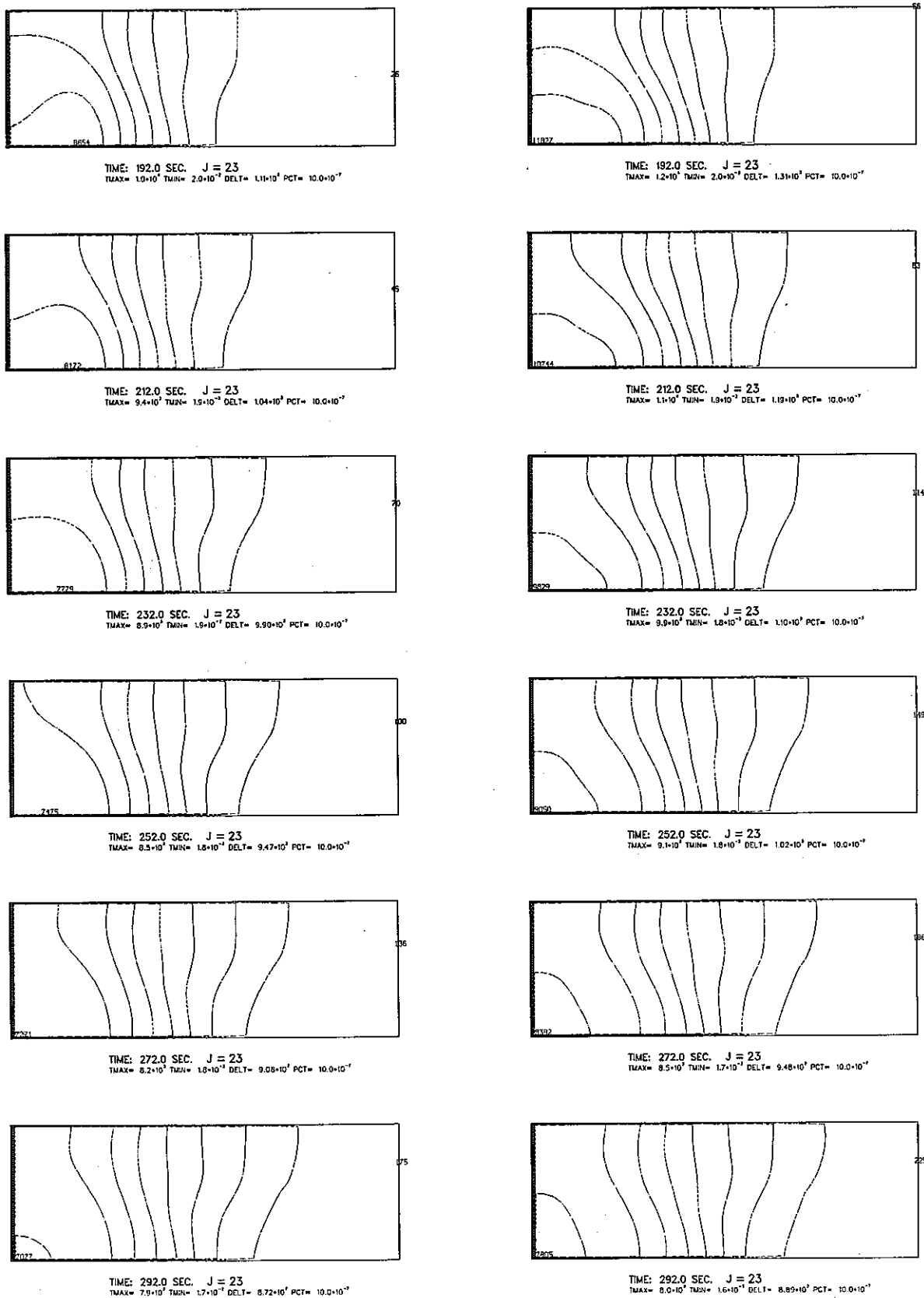
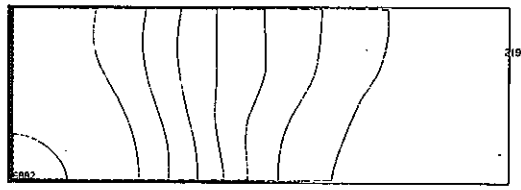
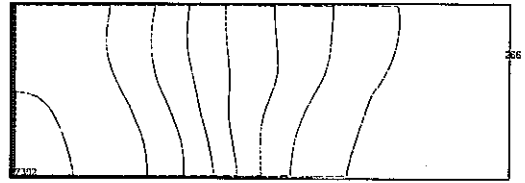


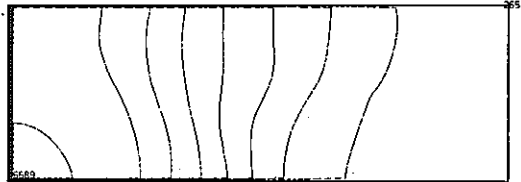
图 3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)



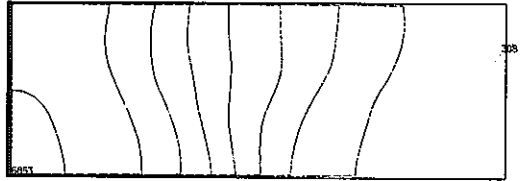
TIME: 312.0 SEC. J = 23  
 TMAX=  $7.6 \cdot 10^3$  TMIN=  $1.7 \cdot 10^3$  DELT=  $8.39 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



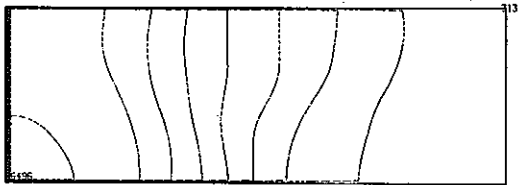
TIME: 312.0 SEC. J = 23  
 TMAX=  $7.5 \cdot 10^3$  TMIN=  $1.6 \cdot 10^3$  DELT=  $8.39 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



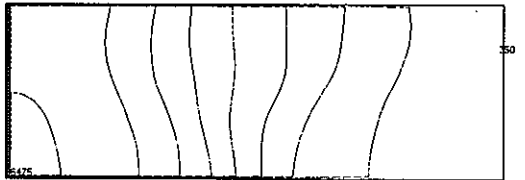
TIME: 332.0 SEC. J = 23  
 TMAX=  $7.3 \cdot 10^3$  TMIN=  $1.6 \cdot 10^3$  DELT=  $8.09 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



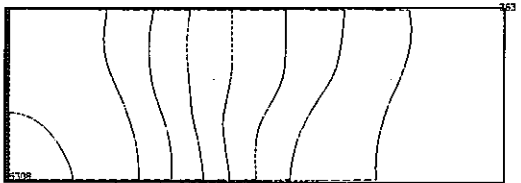
TIME: 332.0 SEC. J = 23  
 TMAX=  $7.1 \cdot 10^3$  TMIN=  $1.5 \cdot 10^3$  DELT=  $7.94 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



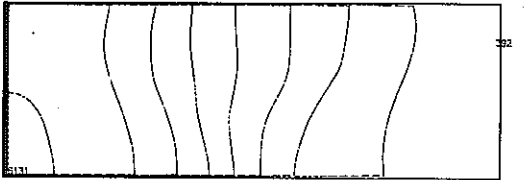
TIME: 352.0 SEC. J = 23  
 TMAX=  $7.0 \cdot 10^3$  TMIN=  $1.6 \cdot 10^3$  DELT=  $7.80 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



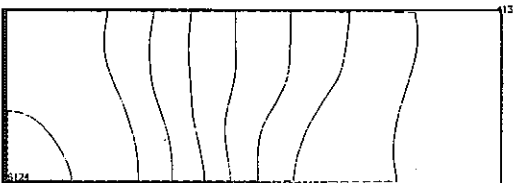
TIME: 352.0 SEC. J = 23  
 TMAX=  $6.8 \cdot 10^3$  TMIN=  $1.5 \cdot 10^3$  DELT=  $7.55 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



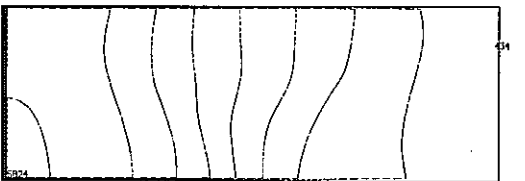
TIME: 372.0 SEC. J = 23  
 TMAX=  $6.8 \cdot 10^3$  TMIN=  $1.6 \cdot 10^3$  DELT=  $7.55 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



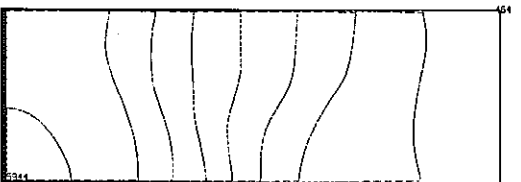
TIME: 372.0 SEC. J = 23  
 TMAX=  $6.5 \cdot 10^3$  TMIN=  $1.4 \cdot 10^3$  DELT=  $7.20 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



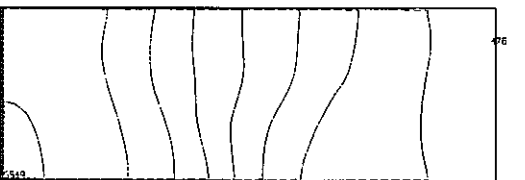
TIME: 392.0 SEC. J = 23  
 TMAX=  $6.6 \cdot 10^3$  TMIN=  $1.5 \cdot 10^3$  DELT=  $7.32 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 392.0 SEC. J = 23  
 TMAX=  $6.2 \cdot 10^3$  TMIN=  $1.4 \cdot 10^3$  DELT=  $6.89 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $6.4 \cdot 10^3$  TMIN=  $1.5 \cdot 10^3$  DELT=  $7.09 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $5.9 \cdot 10^3$  TMIN=  $1.3 \cdot 10^3$  DELT=  $6.61 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-3}$

图3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

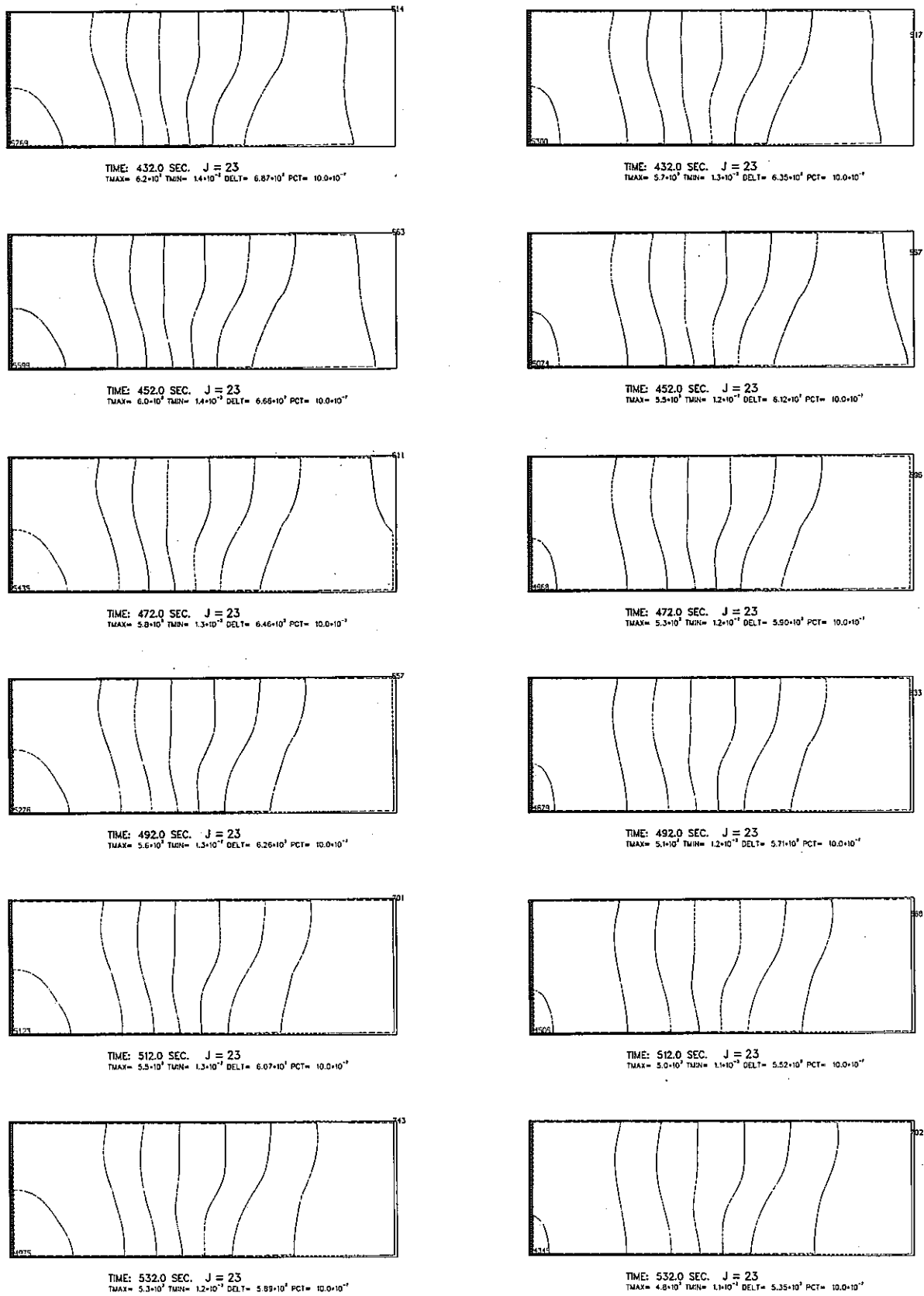


図3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

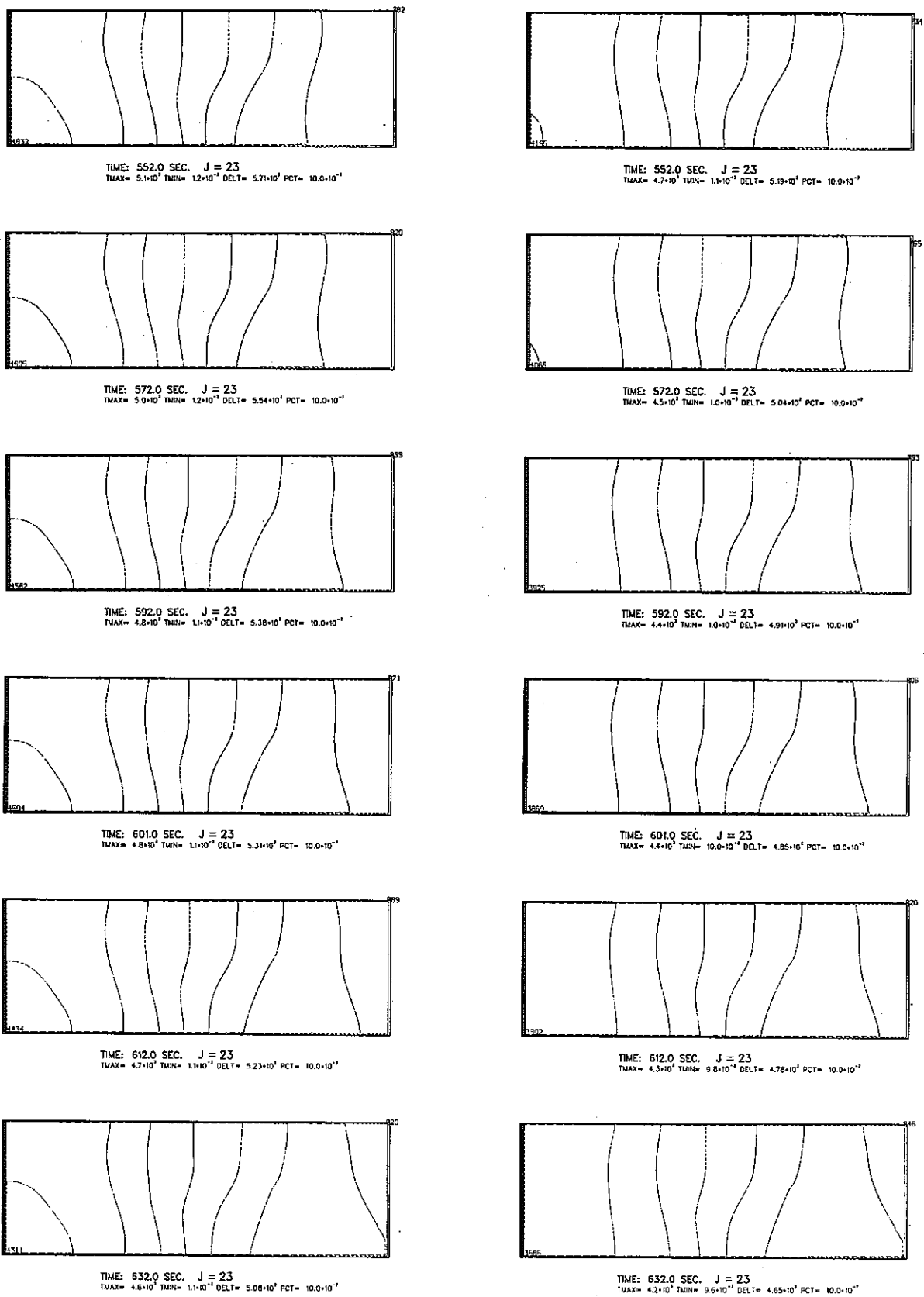


図3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

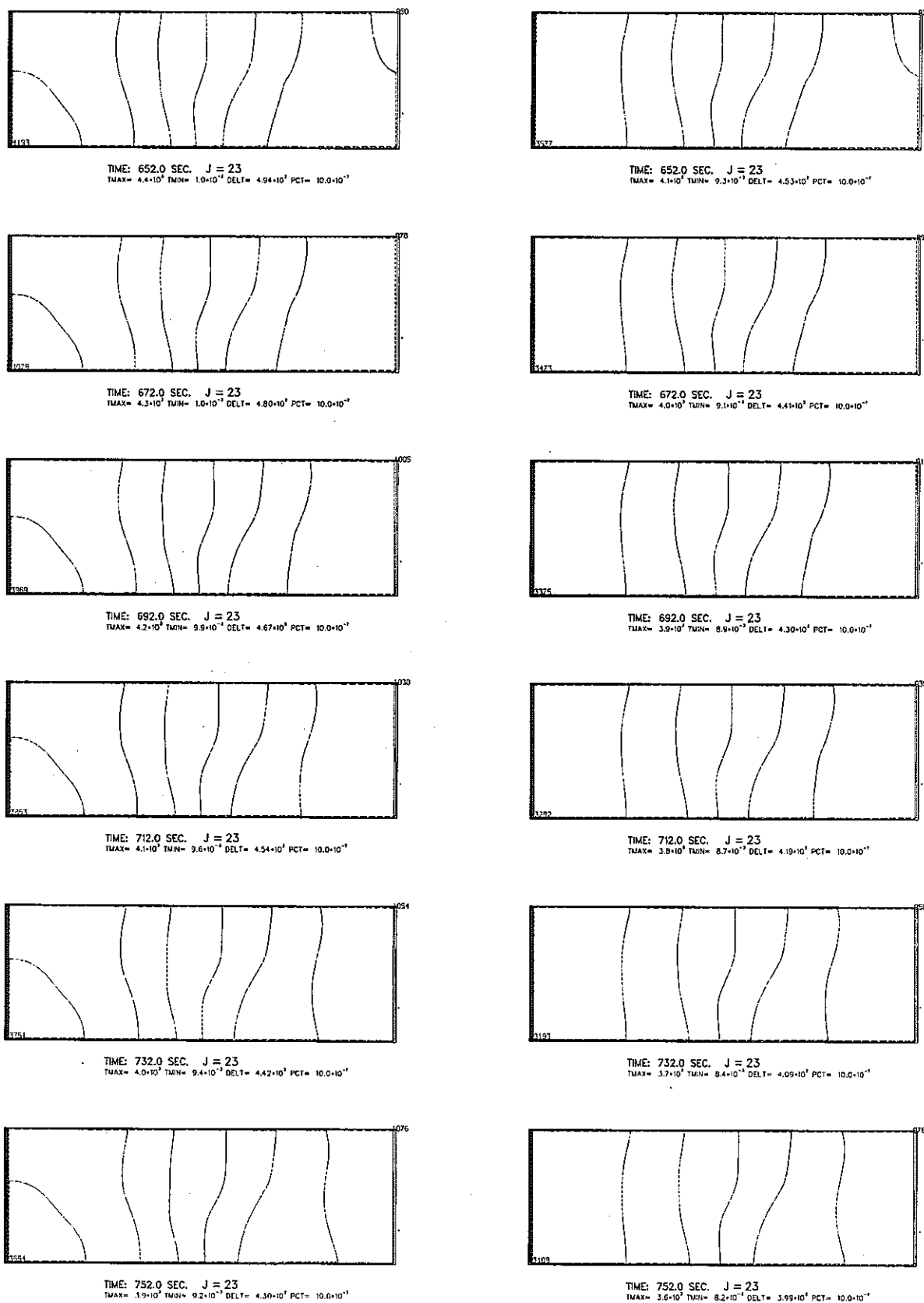
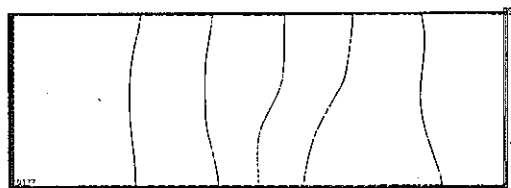


図3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

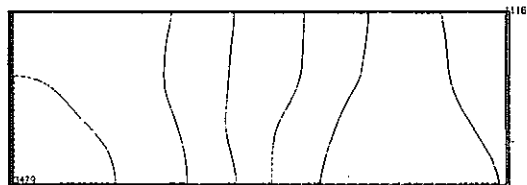




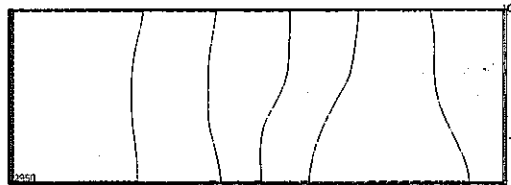
TIME: 772.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.9 \cdot 10^2$  DELT=  $4.19 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



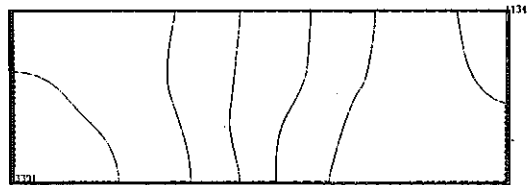
TIME: 772.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $8.1 \cdot 10^2$  DELT=  $3.89 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



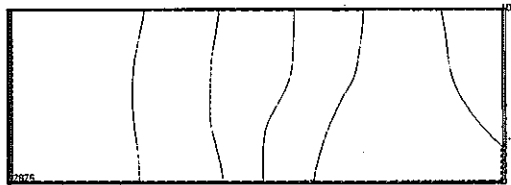
TIME: 792.0 SEC. J = 23  
 TMAX=  $3.7 \cdot 10^3$  TMIN=  $8.7 \cdot 10^2$  DELT=  $4.08 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



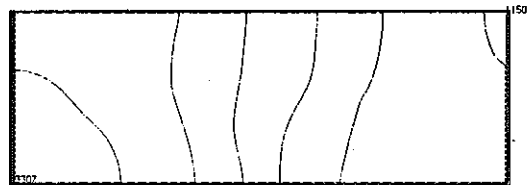
TIME: 792.0 SEC. J = 23  
 TMAX=  $3.4 \cdot 10^3$  TMIN=  $7.9 \cdot 10^2$  DELT=  $3.79 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



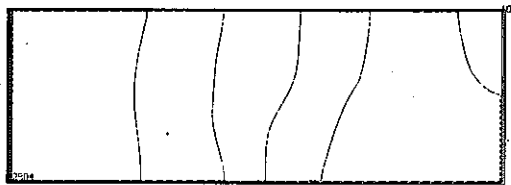
TIME: 812.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.5 \cdot 10^2$  DELT=  $3.98 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



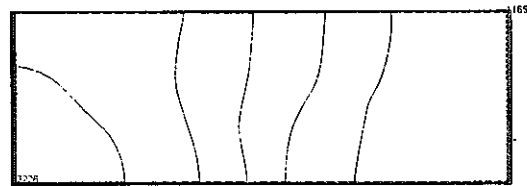
TIME: 812.0 SEC. J = 23  
 TMAX=  $3.3 \cdot 10^3$  TMIN=  $7.7 \cdot 10^2$  DELT=  $3.70 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



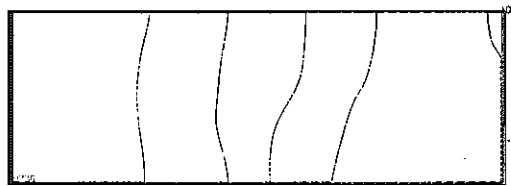
TIME: 832.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $8.3 \cdot 10^2$  DELT=  $3.88 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



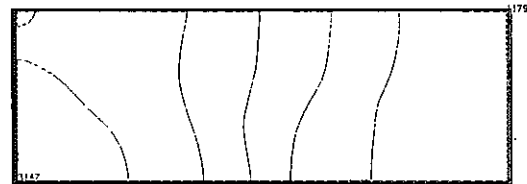
TIME: 832.0 SEC. J = 23  
 TMAX=  $3.3 \cdot 10^3$  TMIN=  $7.5 \cdot 10^2$  DELT=  $3.6 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



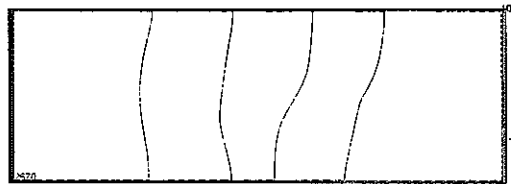
TIME: 852.0 SEC. J = 23  
 TMAX=  $3.4 \cdot 10^3$  TMIN=  $8.1 \cdot 10^2$  DELT=  $3.78 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 852.0 SEC. J = 23  
 TMAX=  $3.2 \cdot 10^3$  TMIN=  $7.3 \cdot 10^2$  DELT=  $3.53 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 872.0 SEC. J = 23  
 TMAX=  $3.3 \cdot 10^3$  TMIN=  $8.0 \cdot 10^2$  DELT=  $3.69 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 872.0 SEC. J = 23  
 TMAX=  $3.1 \cdot 10^3$  TMIN=  $7.2 \cdot 10^2$  DELT=  $3.45 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

图3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)

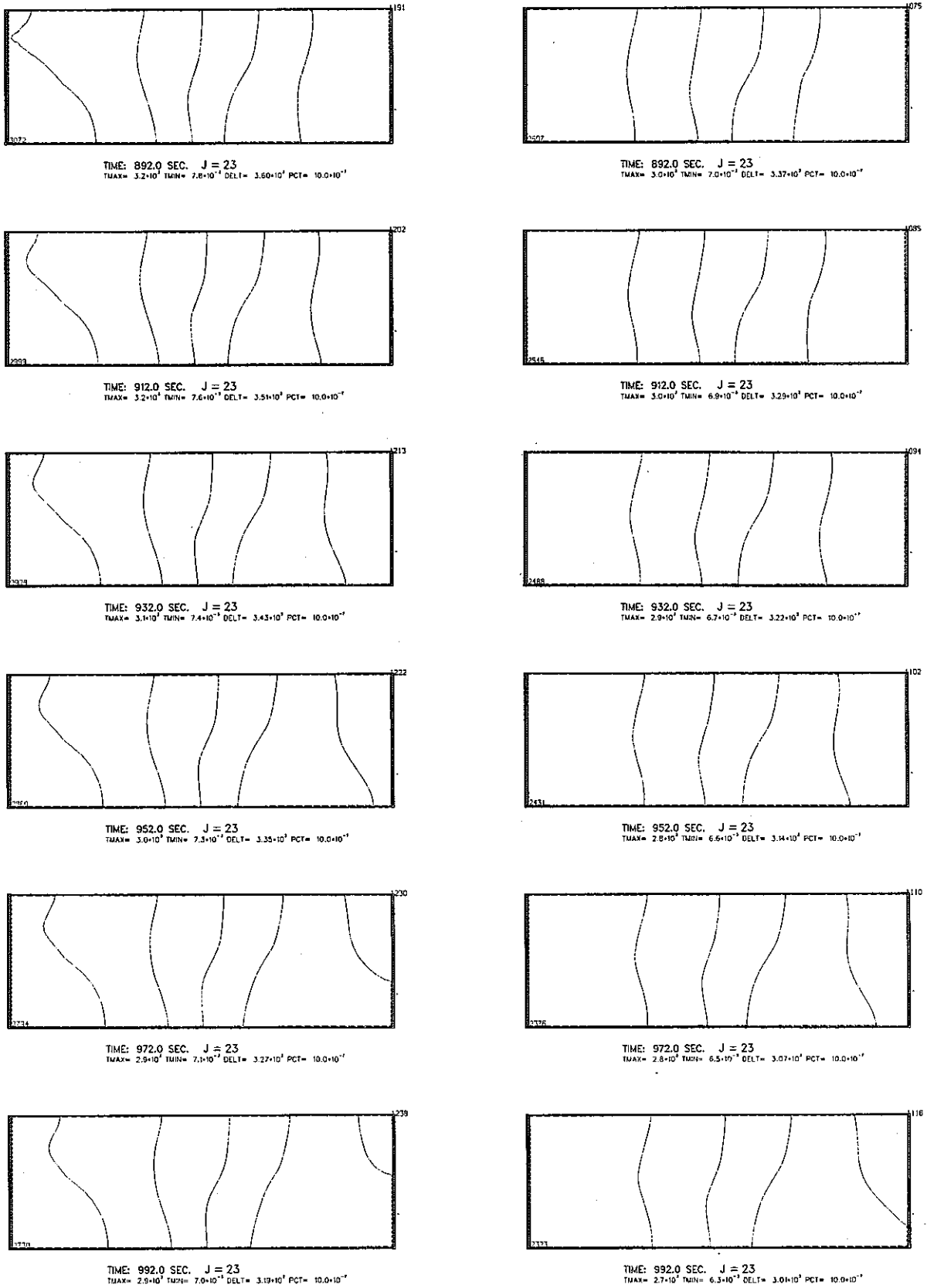
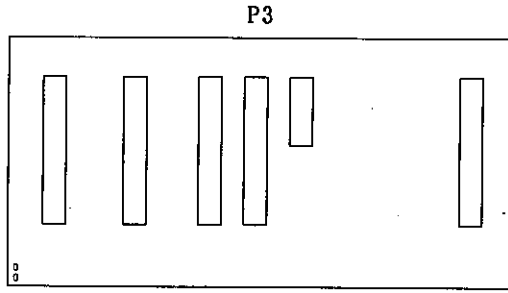
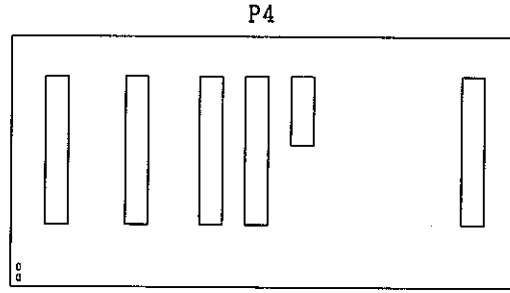


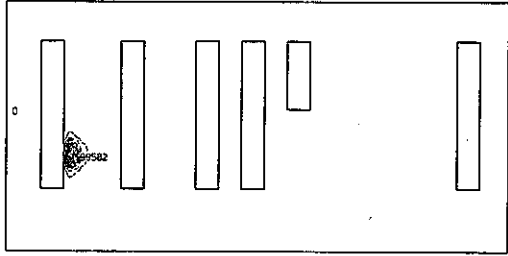
図3.11 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, J=23断面)



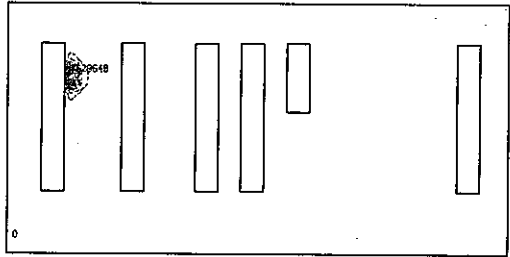
TIME: 0.0 SEC. K = 7  
 $T_{MAX} = 10.0 \cdot 10^{-7}$   $T_{MIN} = 10.0 \cdot 10^{-7}$  DELT =  $1.1 \cdot 10^{-1}$  PCT =  $10.0 \cdot 10^{-7}$



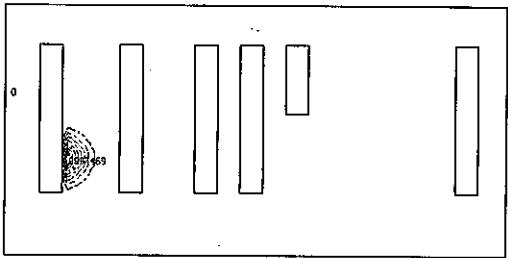
TIME: 0.0 SEC. K = 7  
 $T_{MAX} = 10.0 \cdot 10^{-7}$   $T_{MIN} = 10.0 \cdot 10^{-7}$  DELT =  $1.1 \cdot 10^{-1}$  PCT =  $10.0 \cdot 10^{-7}$



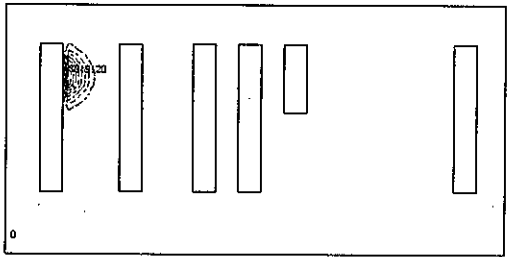
TIME: 1.0 SEC. K = 7  
 $T_{MAX} = 8.0 \cdot 10^0$   $T_{MIN} = 1.0 \cdot 10^{-2}$  DELT =  $8.84 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$



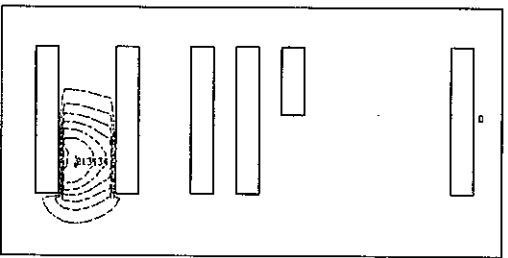
TIME: 1.0 SEC. K = 7  
 $T_{MAX} = 7.5 \cdot 10^0$   $T_{MIN} = 1.0 \cdot 10^{-2}$  DELT =  $8.75 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$



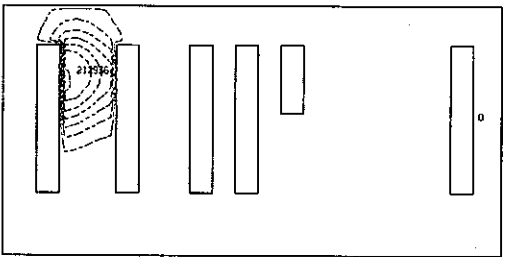
TIME: 2.0 SEC. K = 7  
 $T_{MAX} = 3.1 \cdot 10^1$   $T_{MIN} = 1.0 \cdot 10^{-2}$  DELT =  $3.44 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$



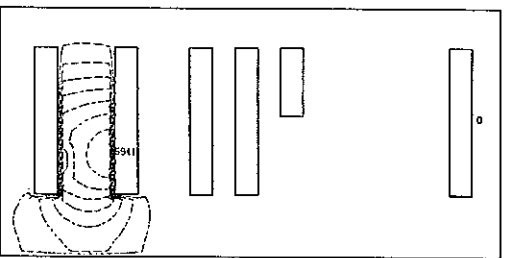
TIME: 2.0 SEC. K = 7  
 $T_{MAX} = 3.0 \cdot 10^1$   $T_{MIN} = 2.5 \cdot 10^{-2}$  DELT =  $3.35 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$



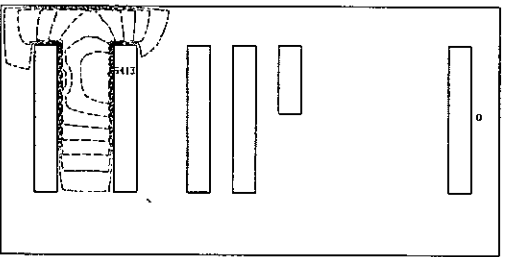
TIME: 12.0 SEC. K = 7  
 $T_{MAX} = 2.7 \cdot 10^4$   $T_{MIN} = 1.5 \cdot 10^{-2}$  DELT =  $3.0 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 12.0 SEC. K = 7  
 $T_{MAX} = 2.8 \cdot 10^4$   $T_{MIN} = 4.2 \cdot 10^{-2}$  DELT =  $3.06 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-7}$

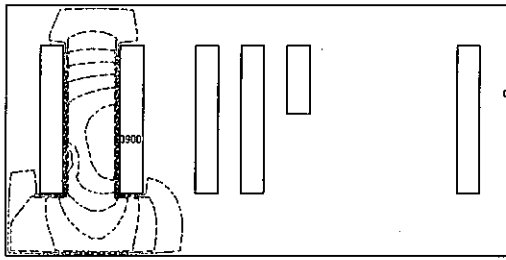


TIME: 32.0 SEC. K = 7  
 $T_{MAX} = 10.0 \cdot 10^4$   $T_{MIN} = 9.8 \cdot 10^{-2}$  DELT =  $1.1 \cdot 10^4$  PCT =  $10.0 \cdot 10^{-7}$

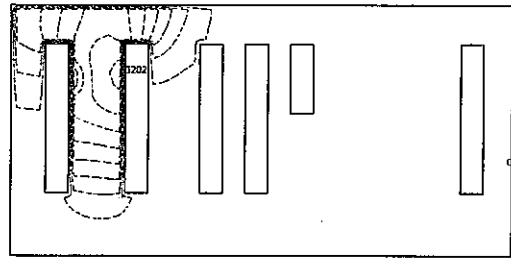


TIME: 32.0 SEC. K = 7  
 $T_{MAX} = 9.7 \cdot 10^4$   $T_{MIN} = 1.4 \cdot 10^{-2}$  DELT =  $1.08 \cdot 10^4$  PCT =  $10.0 \cdot 10^{-7}$

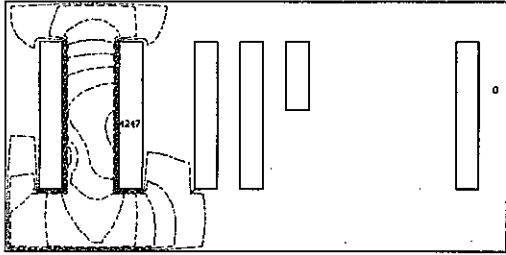
図 3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)



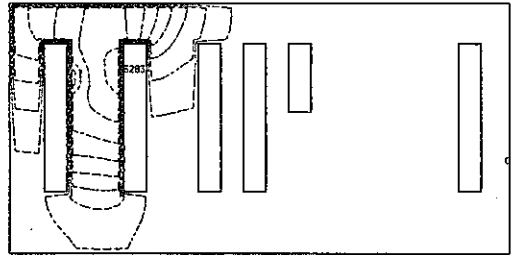
TIME: 52.0 SEC. K = 7  
 TMAX=  $5.7 \times 10^3$  TMIN=  $1.5 \times 10^{-2}$  DELT=  $6.36 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



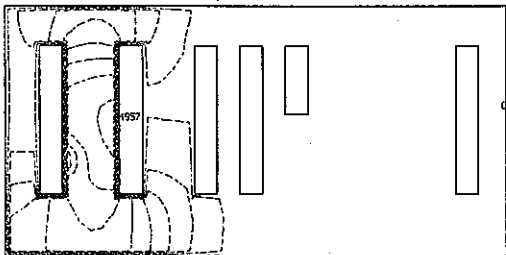
TIME: 52.0 SEC. K = 7  
 TMAX=  $5.8 \times 10^3$  TMIN=  $1.8 \times 10^{-2}$  DELT=  $6.47 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



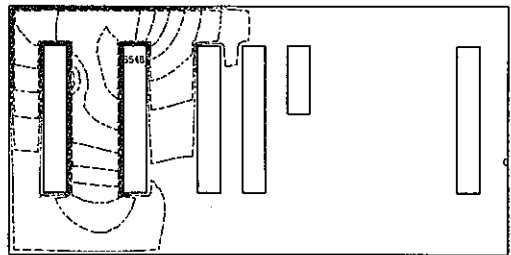
TIME: 72.0 SEC. K = 7  
 TMAX=  $3.8 \times 10^3$  TMIN=  $1.7 \times 10^{-2}$  DELT=  $4.19 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



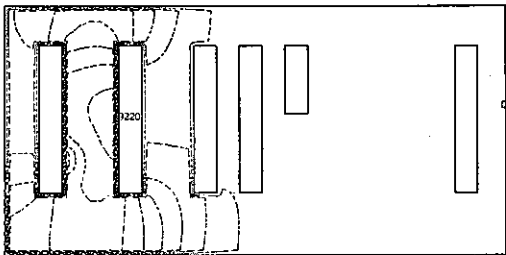
TIME: 72.0 SEC. K = 7  
 TMAX=  $3.9 \times 10^3$  TMIN=  $2.0 \times 10^{-2}$  DELT=  $4.35 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



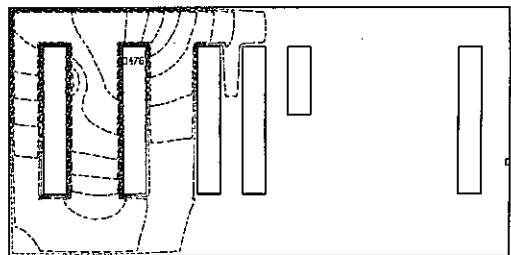
TIME: 92.0 SEC. K = 7  
 TMAX=  $2.7 \times 10^3$  TMIN=  $1.9 \times 10^{-2}$  DELT=  $3.01 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



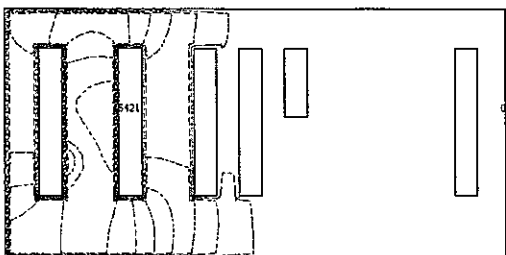
TIME: 92.0 SEC. K = 7  
 TMAX=  $2.8 \times 10^3$  TMIN=  $2.1 \times 10^{-2}$  DELT=  $3.15 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



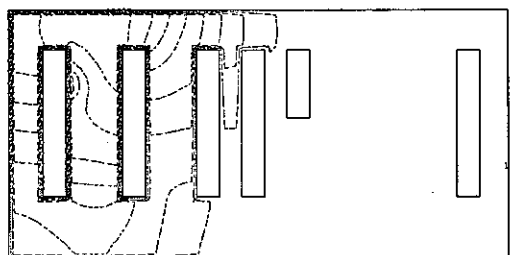
TIME: 112.0 SEC. K = 7  
 TMAX=  $2.1 \times 10^3$  TMIN=  $1.9 \times 10^{-2}$  DELT=  $2.29 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



TIME: 112.0 SEC. K = 7  
 TMAX=  $2.2 \times 10^3$  TMIN=  $2.2 \times 10^{-2}$  DELT=  $2.41 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

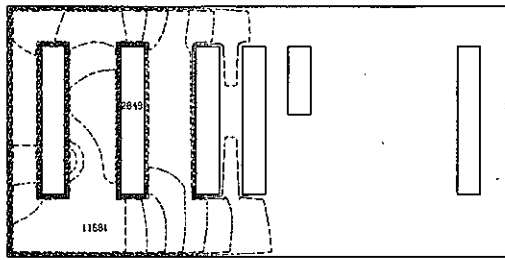


TIME: 132.0 SEC. K = 7  
 TMAX=  $1.6 \times 10^3$  TMIN=  $2.0 \times 10^{-2}$  DELT=  $1.81 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

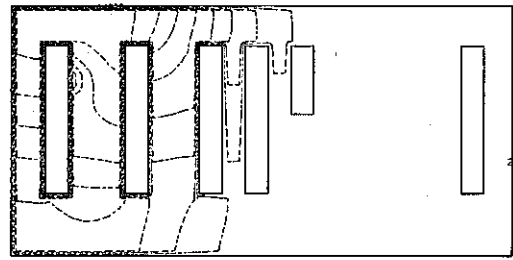


TIME: 132.0 SEC. K = 7  
 TMAX=  $1.8 \times 10^3$  TMIN=  $2.1 \times 10^{-2}$  DELT=  $1.96 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

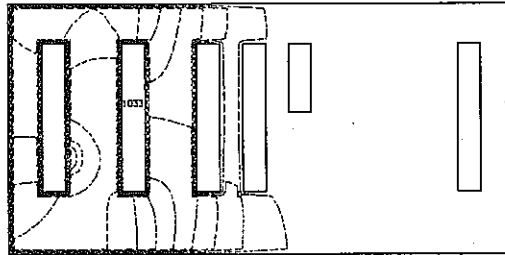
图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)



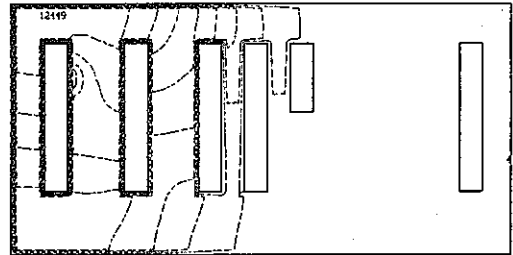
TIME: 152.0 SEC. K = 7  
 $T_{MAX} = 1.3 \cdot 10^7$   $T_{MIN} = 2.0 \cdot 10^{-3}$  DELT =  $1.49 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



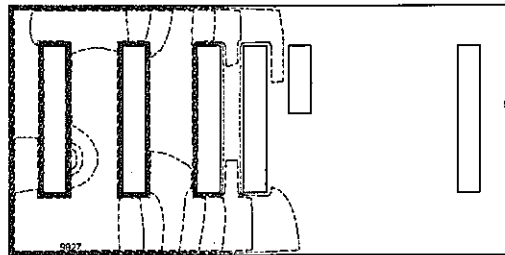
TIME: 152.0 SEC. K = 7  
 $T_{MAX} = 1.5 \cdot 10^7$   $T_{MIN} = 2.1 \cdot 10^{-3}$  DELT =  $1.63 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



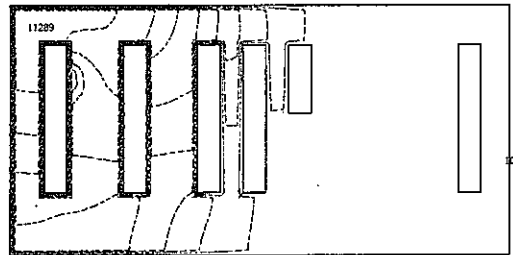
TIME: 172.0 SEC. K = 7  
 $T_{MAX} = 1.1 \cdot 10^7$   $T_{MIN} = 2.0 \cdot 10^{-3}$  DELT =  $1.27 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



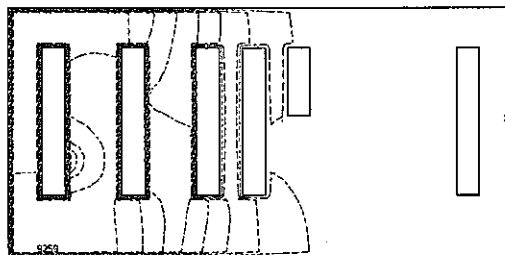
TIME: 172.0 SEC. K = 7  
 $T_{MAX} = 1.3 \cdot 10^7$   $T_{MIN} = 2.0 \cdot 10^{-3}$  DELT =  $1.46 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



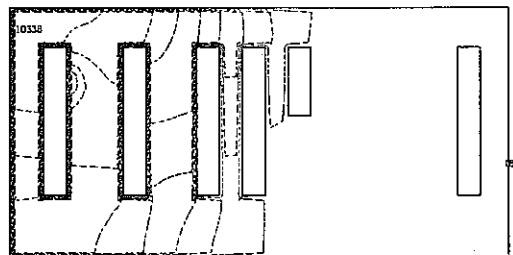
TIME: 192.0 SEC. K = 7  
 $T_{MAX} = 1.0 \cdot 10^7$   $T_{MIN} = 2.0 \cdot 10^{-3}$  DELT =  $1.11 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



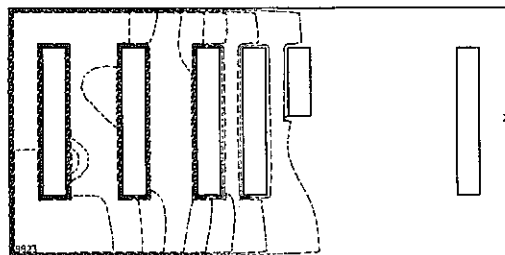
TIME: 192.0 SEC. K = 7  
 $T_{MAX} = 1.2 \cdot 10^7$   $T_{MIN} = 2.0 \cdot 10^{-3}$  DELT =  $1.31 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



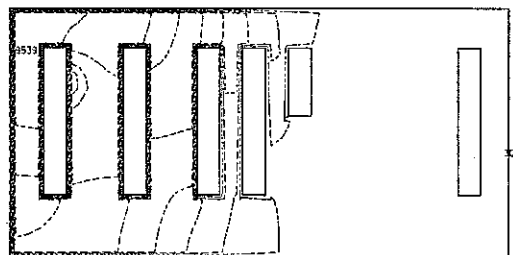
TIME: 212.0 SEC. K = 7  
 $T_{MAX} = 9.4 \cdot 10^6$   $T_{MIN} = 1.9 \cdot 10^{-3}$  DELT =  $1.04 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 212.0 SEC. K = 7  
 $T_{MAX} = 1.1 \cdot 10^7$   $T_{MIN} = 1.9 \cdot 10^{-3}$  DELT =  $1.15 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 232.0 SEC. K = 7  
 $T_{MAX} = 8.9 \cdot 10^6$   $T_{MIN} = 1.9 \cdot 10^{-3}$  DELT =  $9.90 \cdot 10^6$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 232.0 SEC. K = 7  
 $T_{MAX} = 9.3 \cdot 10^6$   $T_{MIN} = 1.8 \cdot 10^{-3}$  DELT =  $1.10 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$

图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)

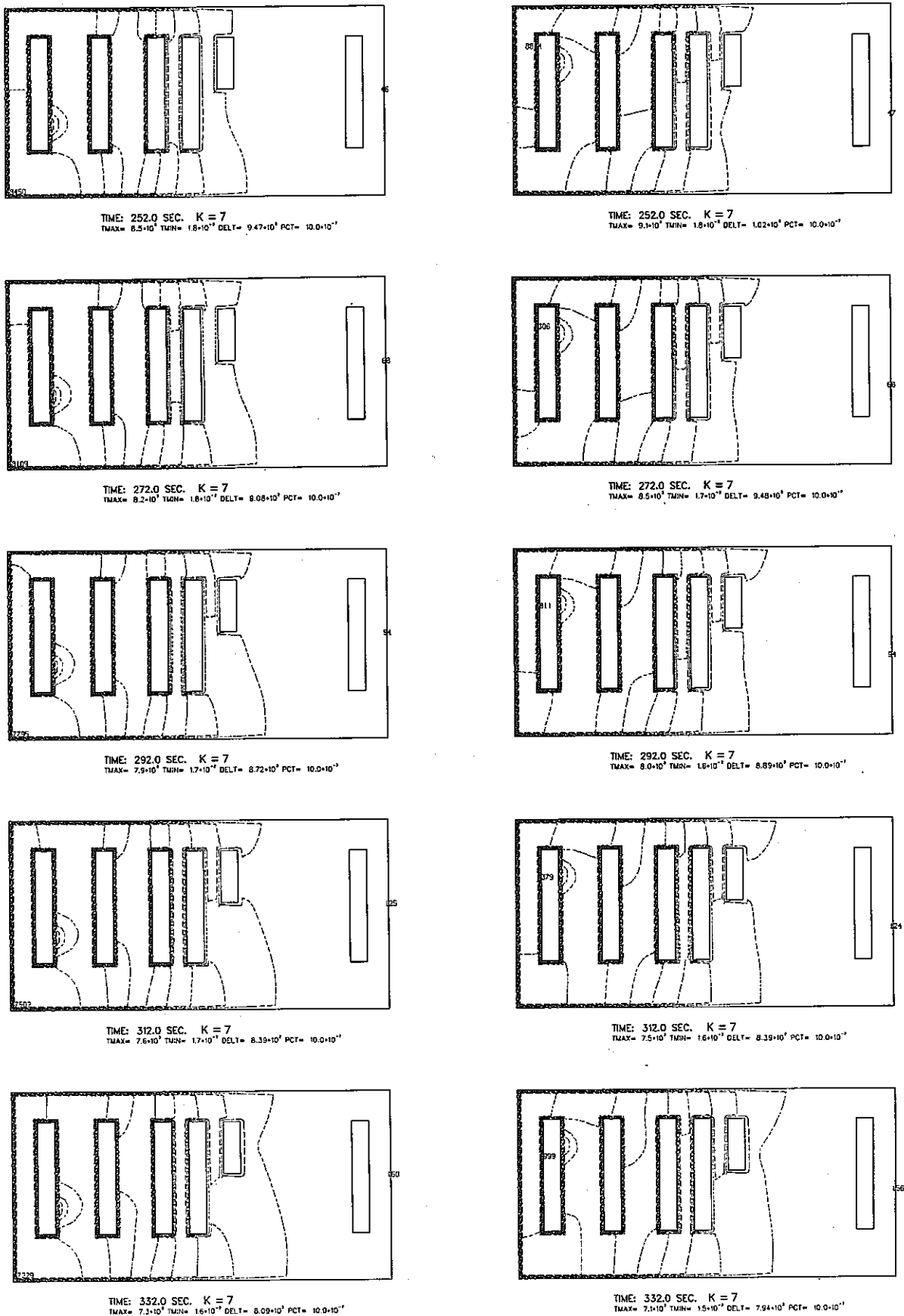


图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)

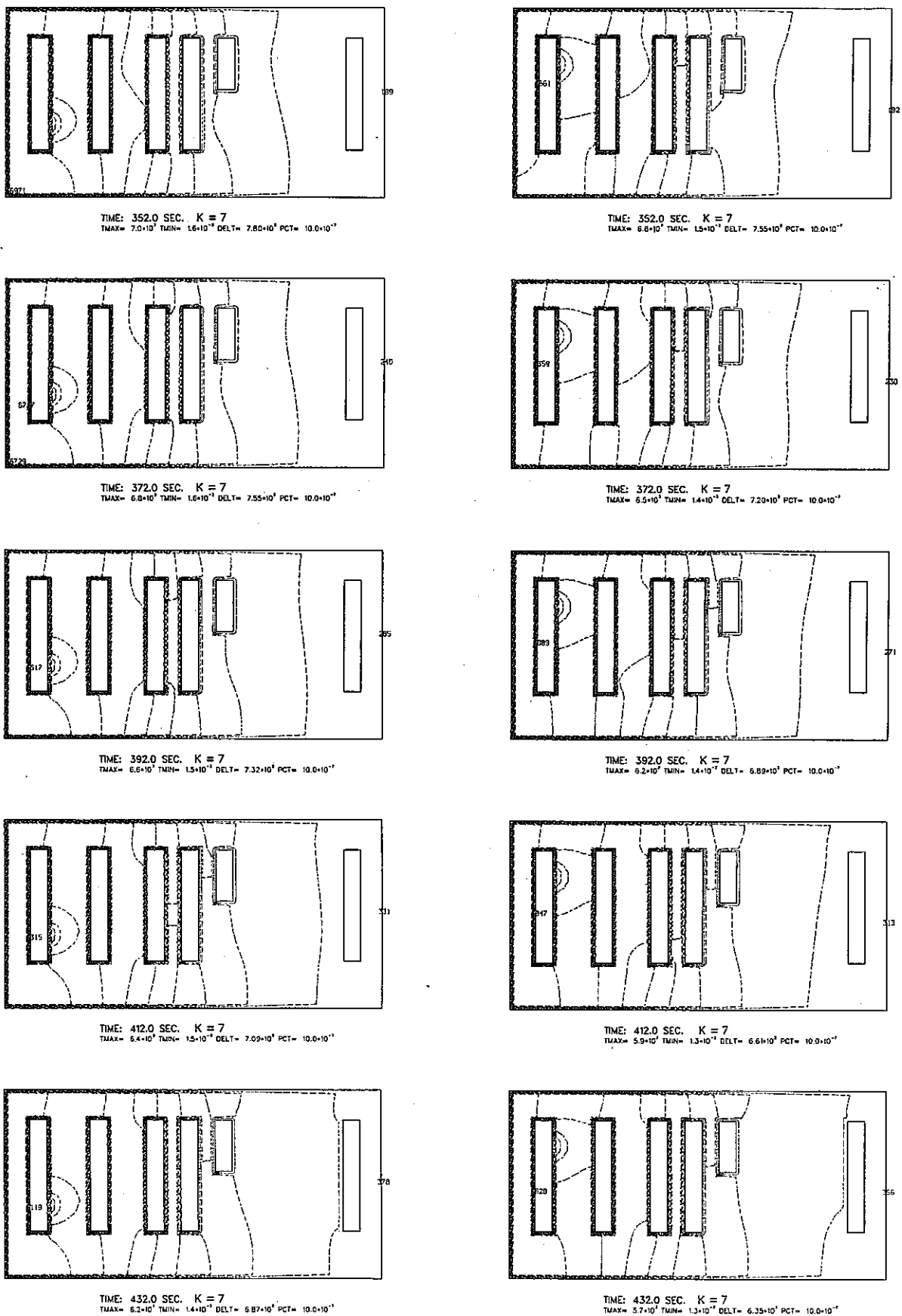


図3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)

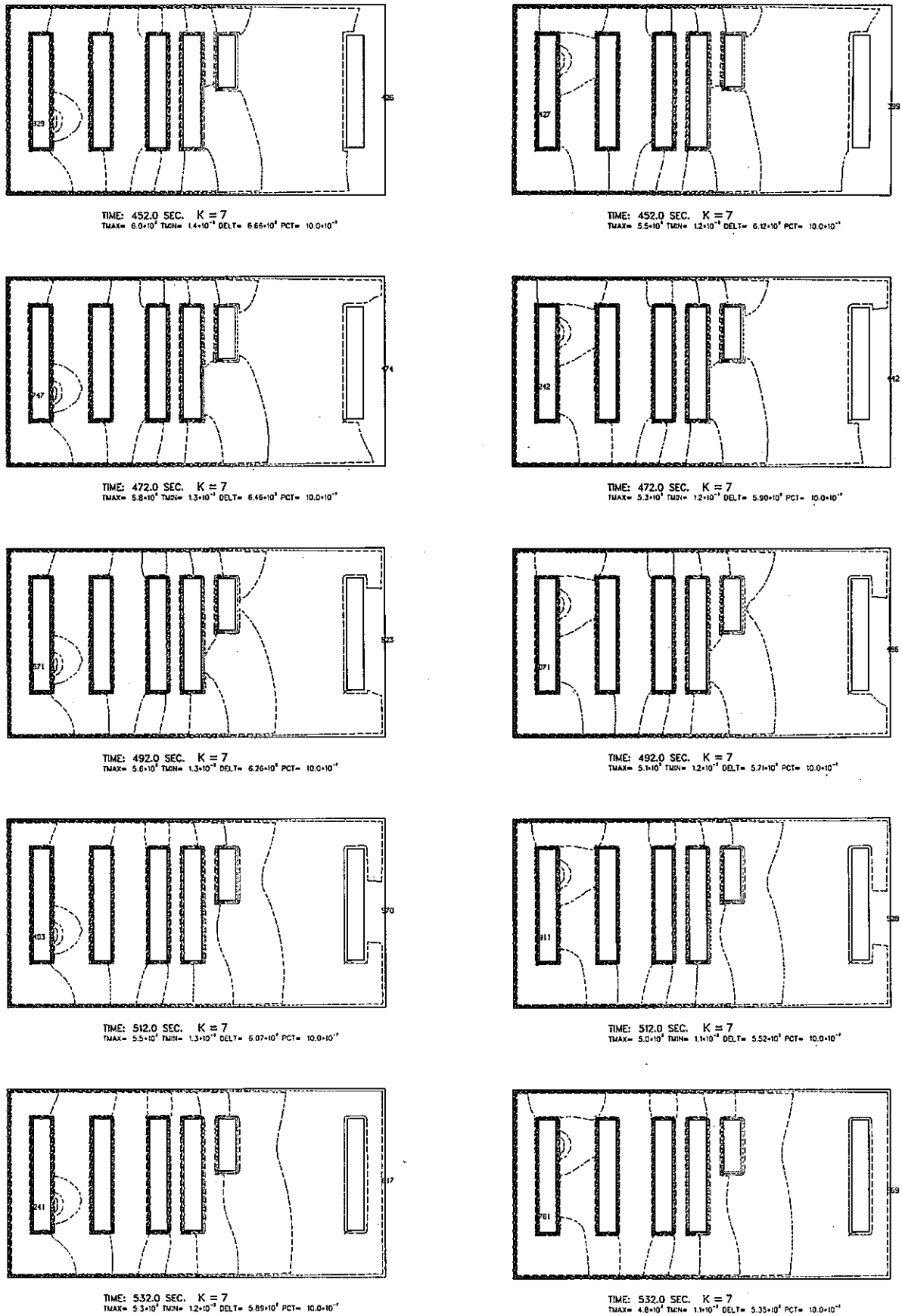
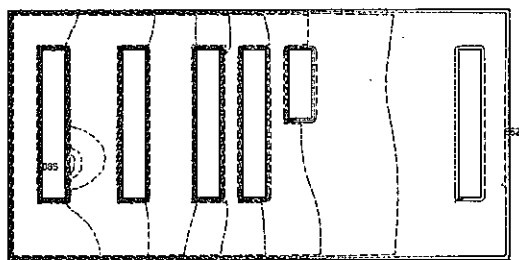
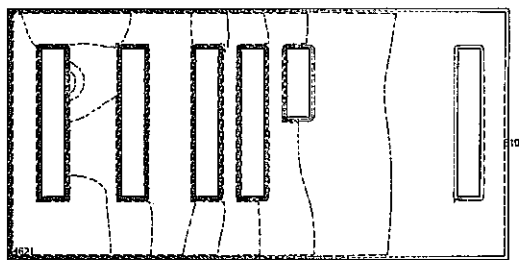


図3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7断面)

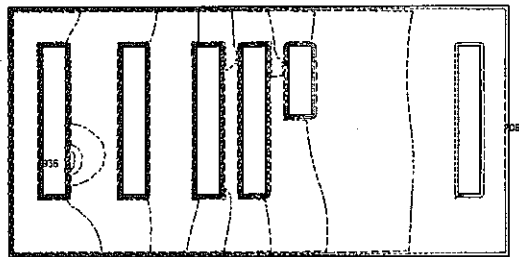




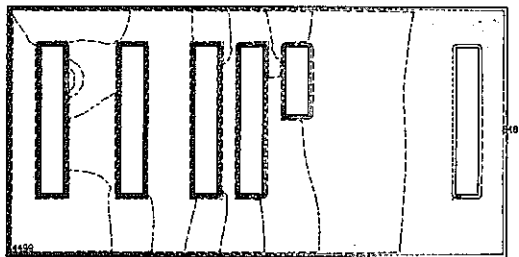
TIME: 552.0 SEC. K = 7  
 TMAX=  $5.1 \times 10^{-3}$  TMIN=  $1.2 \times 10^{-3}$  DELT=  $5.71 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



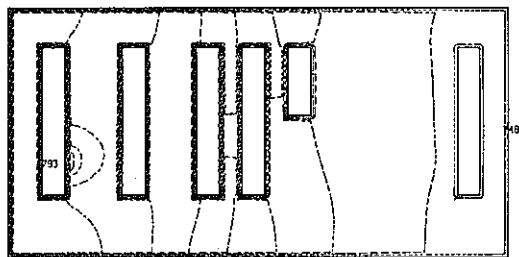
TIME: 552.0 SEC. K = 7  
 TMAX=  $4.7 \times 10^{-3}$  TMIN=  $1.1 \times 10^{-3}$  DELT=  $5.19 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



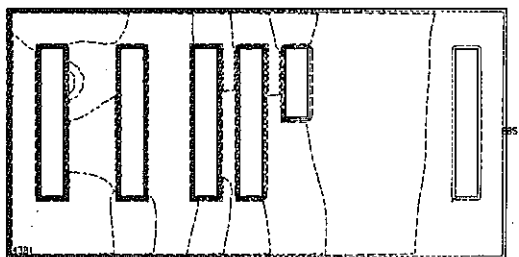
TIME: 572.0 SEC. K = 7  
 TMAX=  $5.0 \times 10^{-3}$  TMIN=  $1.2 \times 10^{-3}$  DELT=  $5.54 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



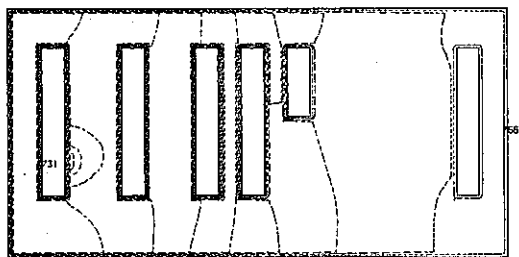
TIME: 572.0 SEC. K = 7  
 TMAX=  $4.5 \times 10^{-3}$  TMIN=  $1.0 \times 10^{-3}$  DELT=  $5.04 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



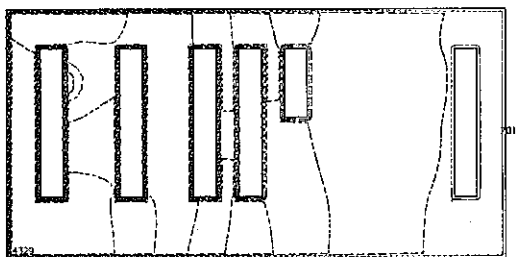
TIME: 592.0 SEC. K = 7  
 TMAX=  $4.8 \times 10^{-3}$  TMIN=  $1.1 \times 10^{-3}$  DELT=  $5.38 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



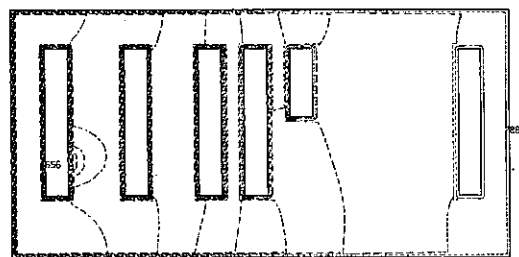
TIME: 592.0 SEC. K = 7  
 TMAX=  $4.4 \times 10^{-3}$  TMIN=  $1.0 \times 10^{-3}$  DELT=  $4.91 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



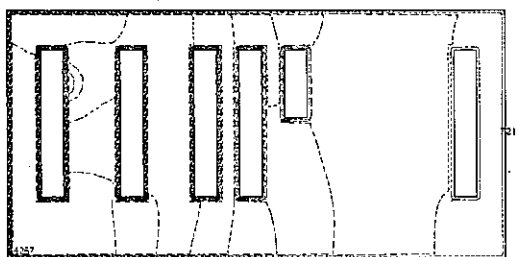
TIME: 601.0 SEC. K = 7  
 TMAX=  $4.6 \times 10^{-3}$  TMIN=  $1.1 \times 10^{-3}$  DELT=  $5.31 \times 10^3$  PCT=  $10.0 \times 10^{-4}$



TIME: 601.0 SEC. K = 7  
 TMAX=  $4.4 \times 10^{-3}$  TMIN=  $1.0 \times 10^{-3}$  DELT=  $4.85 \times 10^3$  PCT=  $10.0 \times 10^{-4}$

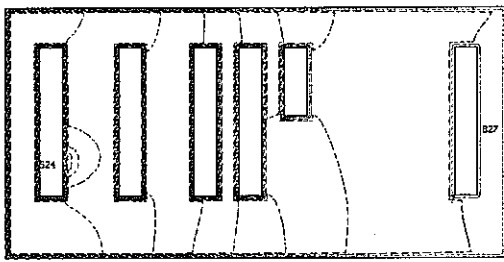


TIME: 612.0 SEC. K = 7  
 TMAX=  $4.7 \times 10^{-3}$  TMIN=  $1.1 \times 10^{-3}$  DELT=  $5.23 \times 10^3$  PCT=  $10.0 \times 10^{-4}$

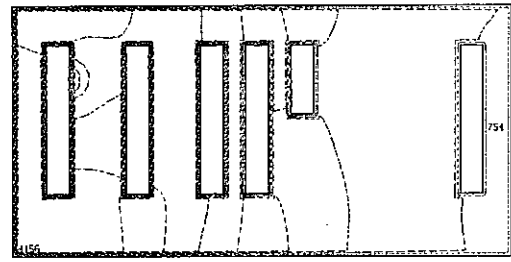


TIME: 612.0 SEC. K = 7  
 TMAX=  $4.3 \times 10^{-3}$  TMIN=  $9.8 \times 10^{-4}$  DELT=  $4.78 \times 10^3$  PCT=  $10.0 \times 10^{-4}$

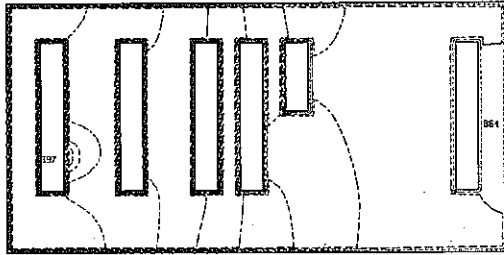
图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)



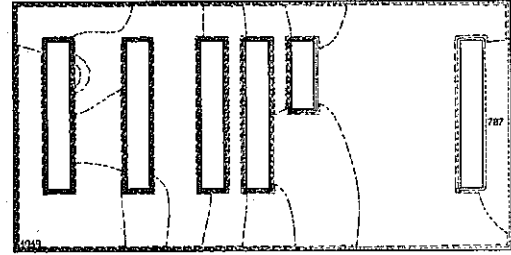
TIME: 632.0 SEC. K = 7  
 $T_{MAX} = 4.6 \cdot 10^3$   $T_{MIN} = 1.1 \cdot 10^3$  DELT =  $5.08 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



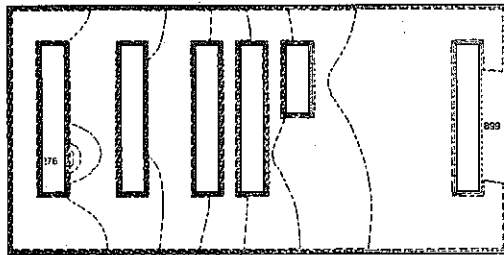
TIME: 632.0 SEC. K = 7  
 $T_{MAX} = 4.2 \cdot 10^3$   $T_{MIN} = 9.6 \cdot 10^2$  DELT =  $4.65 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



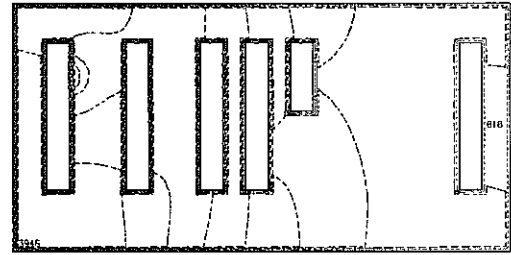
TIME: 652.0 SEC. K = 7  
 $T_{MAX} = 4.4 \cdot 10^3$   $T_{MIN} = 1.0 \cdot 10^3$  DELT =  $4.94 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



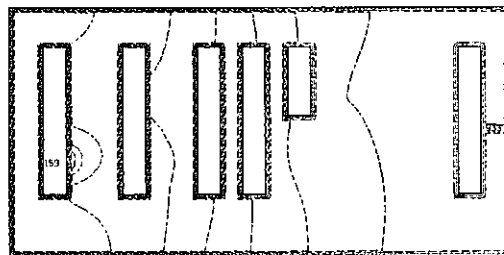
TIME: 652.0 SEC. K = 7  
 $T_{MAX} = 4.1 \cdot 10^3$   $T_{MIN} = 9.3 \cdot 10^2$  DELT =  $4.53 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



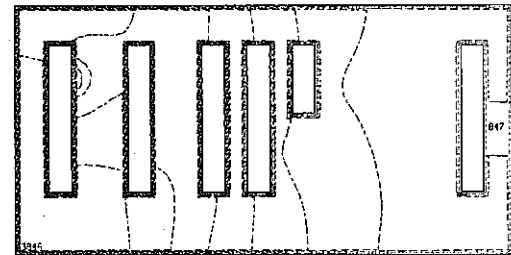
TIME: 672.0 SEC. K = 7  
 $T_{MAX} = 4.3 \cdot 10^3$   $T_{MIN} = 1.0 \cdot 10^3$  DELT =  $4.80 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



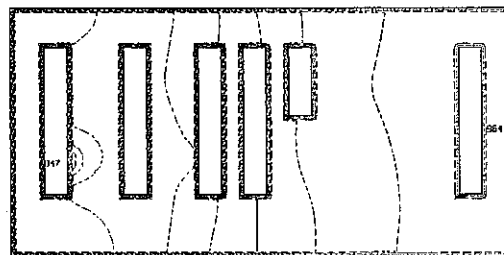
TIME: 672.0 SEC. K = 7  
 $T_{MAX} = 4.0 \cdot 10^3$   $T_{MIN} = 9.1 \cdot 10^2$  DELT =  $4.41 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



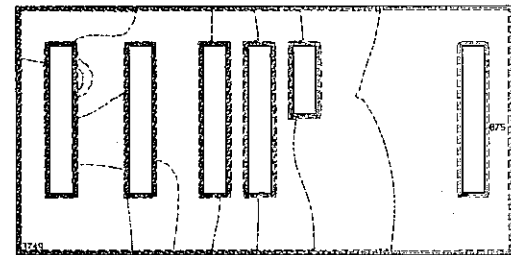
TIME: 692.0 SEC. K = 7  
 $T_{MAX} = 4.2 \cdot 10^3$   $T_{MIN} = 9.9 \cdot 10^2$  DELT =  $4.67 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



TIME: 692.0 SEC. K = 7  
 $T_{MAX} = 3.9 \cdot 10^3$   $T_{MIN} = 8.9 \cdot 10^2$  DELT =  $4.30 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

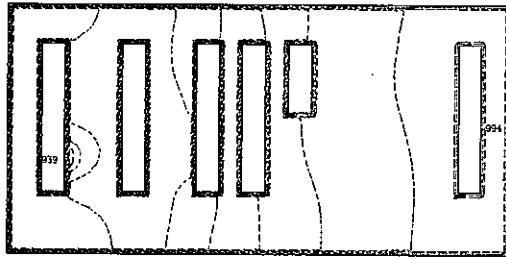


TIME: 712.0 SEC. K = 7  
 $T_{MAX} = 4.1 \cdot 10^3$   $T_{MIN} = 9.6 \cdot 10^2$  DELT =  $4.54 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

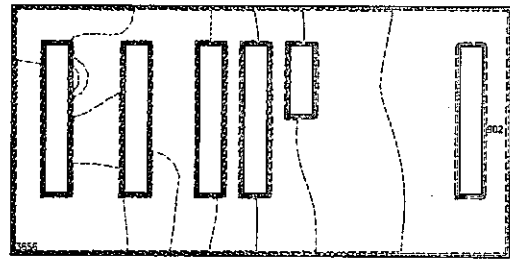


TIME: 712.0 SEC. K = 7  
 $T_{MAX} = 3.8 \cdot 10^3$   $T_{MIN} = 8.7 \cdot 10^2$  DELT =  $4.19 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

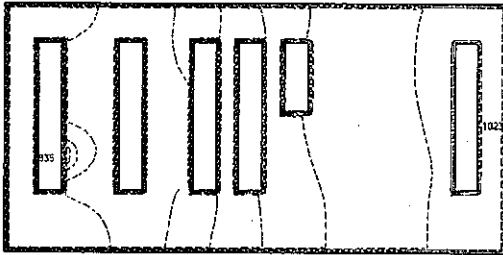
图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)



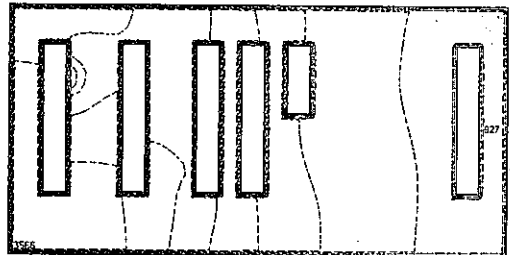
TIME: 732.0 SEC. K = 7  
 TMAX=  $4.0 \cdot 10^7$  TMIN=  $9.4 \cdot 10^{-1}$  DELT=  $4.42 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



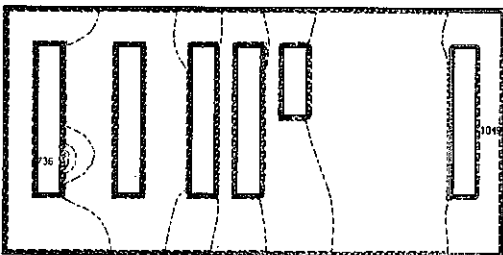
TIME: 732.0 SEC. K = 7  
 TMAX=  $3.7 \cdot 10^7$  TMIN=  $8.4 \cdot 10^{-1}$  DELT=  $4.09 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



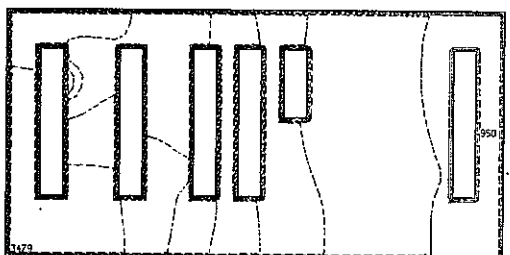
TIME: 752.0 SEC. K = 7  
 TMAX=  $3.9 \cdot 10^7$  TMIN=  $9.2 \cdot 10^{-1}$  DELT=  $4.30 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



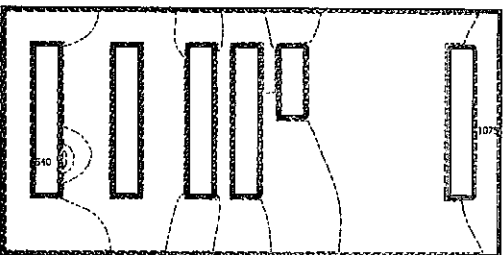
TIME: 752.0 SEC. K = 7  
 TMAX=  $3.6 \cdot 10^7$  TMIN=  $8.2 \cdot 10^{-1}$  DELT=  $3.99 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



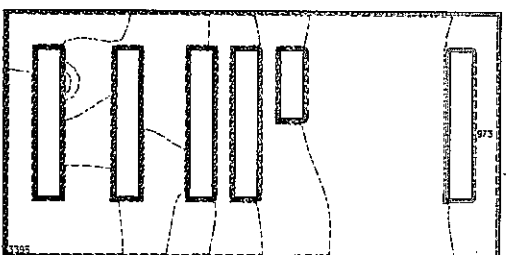
TIME: 772.0 SEC. K = 7  
 TMAX=  $3.8 \cdot 10^7$  TMIN=  $8.9 \cdot 10^{-1}$  DELT=  $4.19 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



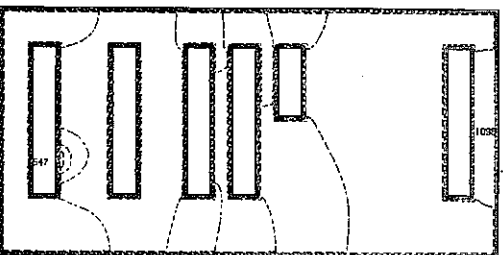
TIME: 772.0 SEC. K = 7  
 TMAX=  $3.5 \cdot 10^7$  TMIN=  $8.1 \cdot 10^{-1}$  DELT=  $3.89 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



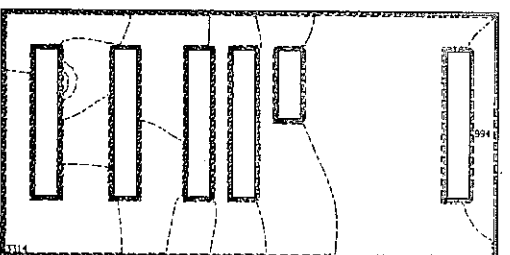
TIME: 792.0 SEC. K = 7  
 TMAX=  $3.7 \cdot 10^7$  TMIN=  $8.7 \cdot 10^{-1}$  DELT=  $4.08 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 792.0 SEC. K = 7  
 TMAX=  $3.4 \cdot 10^7$  TMIN=  $7.9 \cdot 10^{-1}$  DELT=  $3.79 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 812.0 SEC. K = 7  
 TMAX=  $3.6 \cdot 10^7$  TMIN=  $8.5 \cdot 10^{-1}$  DELT=  $3.98 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 812.0 SEC. K = 7  
 TMAX=  $3.3 \cdot 10^7$  TMIN=  $7.7 \cdot 10^{-1}$  DELT=  $3.70 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-1}$

図3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K = 7 断面)

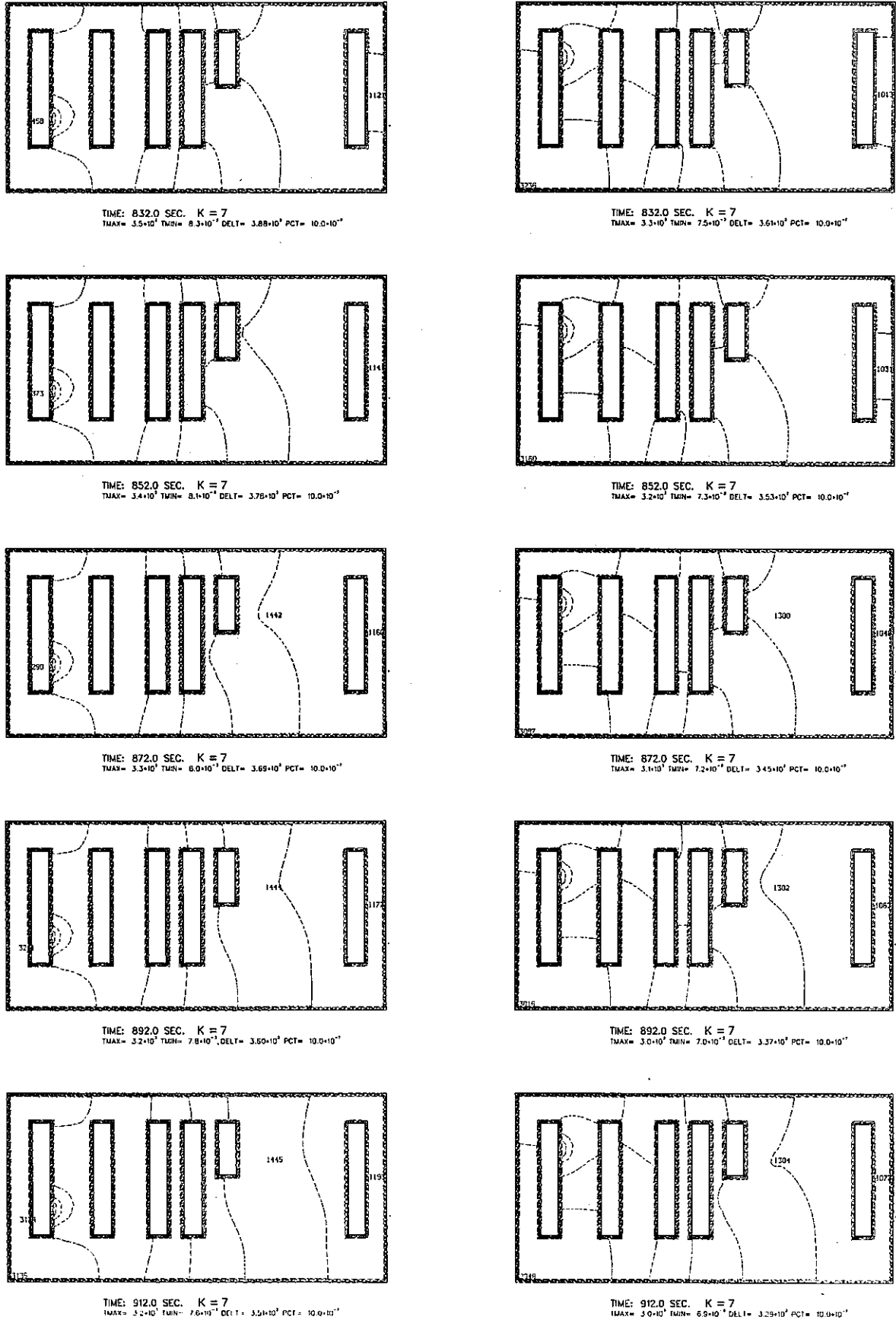
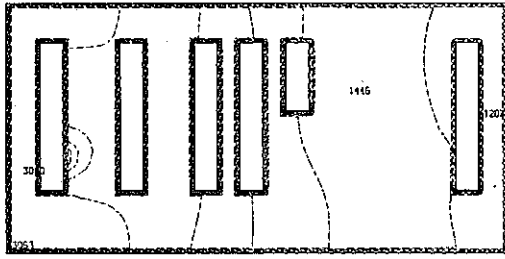
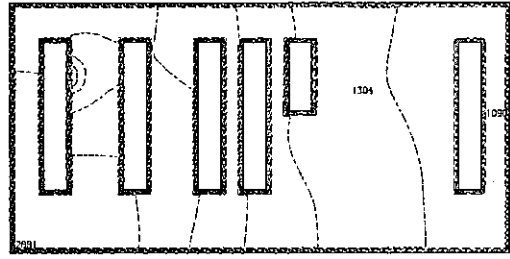


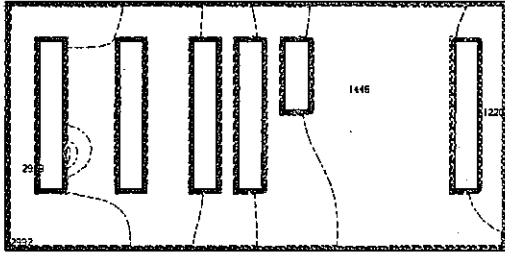
图3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)



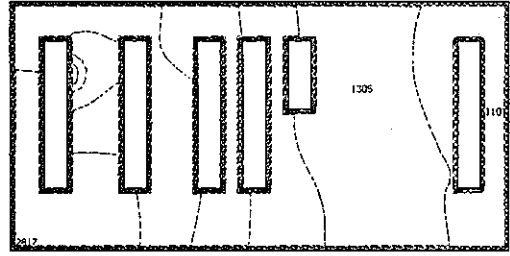
TIME: 932.0 SEC. K = 7  
 TMAX=  $3.1 \cdot 10^7$  TMIN=  $7.4 \cdot 10^{-1}$  DELT=  $3.43 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



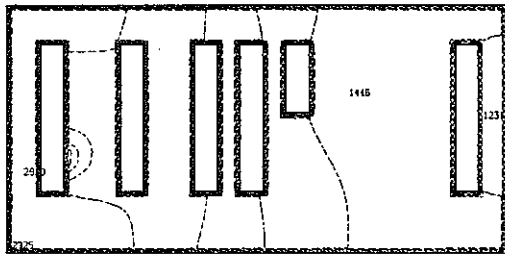
TIME: 932.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^7$  TMIN=  $6.7 \cdot 10^{-1}$  DELT=  $3.22 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



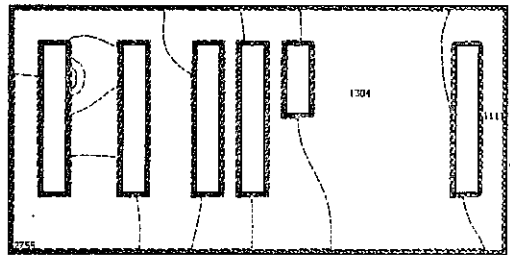
TIME: 952.0 SEC. K = 7  
 TMAX=  $3.0 \cdot 10^7$  TMIN=  $7.3 \cdot 10^{-1}$  DELT=  $3.35 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



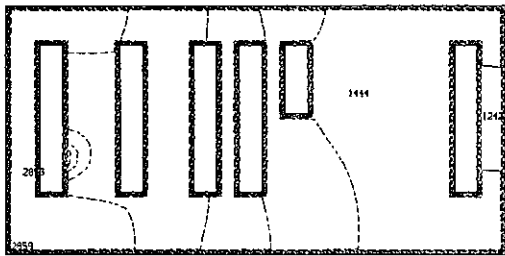
TIME: 952.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^7$  TMIN=  $6.6 \cdot 10^{-1}$  DELT=  $3.14 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



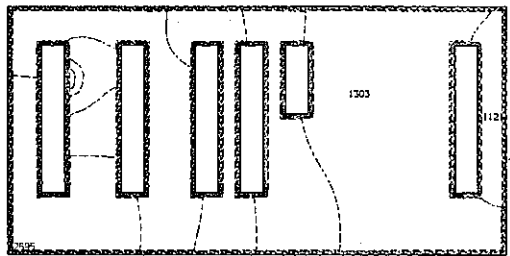
TIME: 972.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^7$  TMIN=  $7.1 \cdot 10^{-1}$  DELT=  $3.27 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



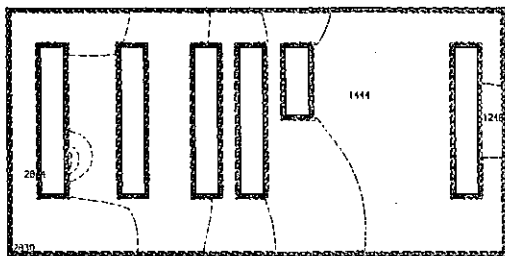
TIME: 972.0 SEC. K = 7  
 TMAX=  $2.6 \cdot 10^7$  TMIN=  $6.5 \cdot 10^{-1}$  DELT=  $3.07 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



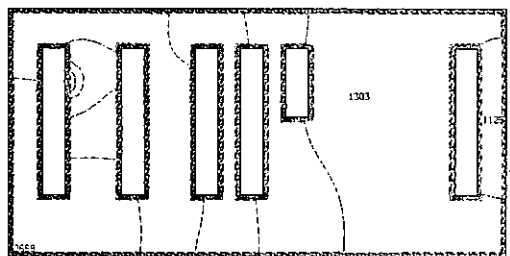
TIME: 992.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^7$  TMIN=  $7.0 \cdot 10^{-1}$  DELT=  $3.19 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 992.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^7$  TMIN=  $6.3 \cdot 10^{-1}$  DELT=  $3.01 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 1001.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^7$  TMIN=  $6.9 \cdot 10^{-1}$  DELT=  $3.16 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

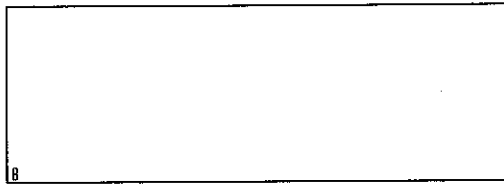


TIME: 1001.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^7$  TMIN=  $6.3 \cdot 10^{-1}$  DELT=  $2.98 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

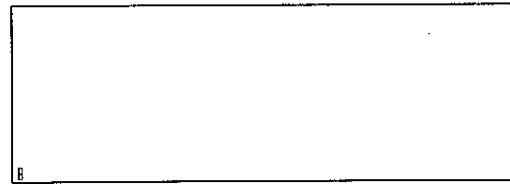
图 3.12 放射性物質漏洩時濃度過度分布 (破損箇所P3, P4, K=7 断面)

P5

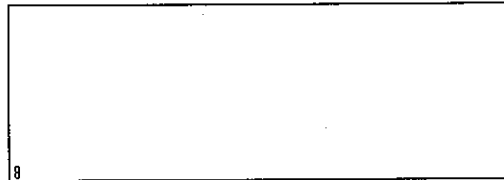
P6



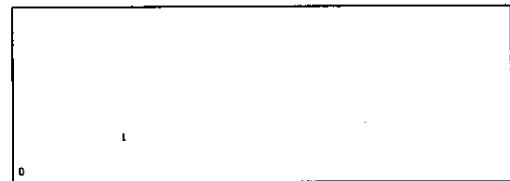
TIME: 0.0 SEC. J = 23  
 TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



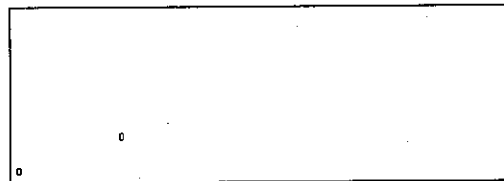
TIME: 0.0 SEC. J = 23  
 TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 1.0 SEC. J = 23  
 TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.54\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 1.0 SEC. J = 23  
 TMAX= 3.2\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 3.52\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



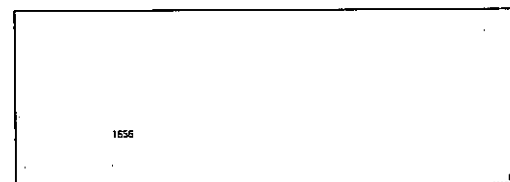
TIME: 2.0 SEC. J = 23  
 TMAX= 1.7\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 1.84\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



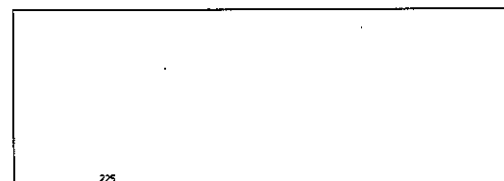
TIME: 2.0 SEC. J = 23  
 TMAX= 1.6\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 1.82\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



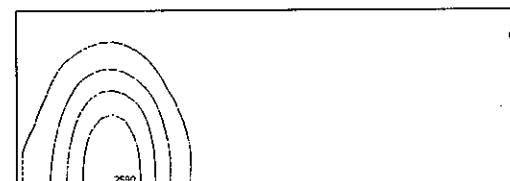
TIME: 12.0 SEC. J = 23  
 TMAX= 1.6\*10<sup>-7</sup> TMIN= 7.2\*10<sup>-7</sup> DELT= 1.75\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 12.0 SEC. J = 23  
 TMAX= 1.5\*10<sup>-7</sup> TMIN= 2.9\*10<sup>-7</sup> DELT= 1.71\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



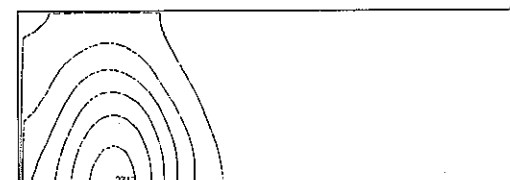
TIME: 32.0 SEC. J = 23  
 TMAX= 5.3\*10<sup>-7</sup> TMIN= 6.4\*10<sup>-7</sup> DELT= 5.86\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 32.0 SEC. J = 23  
 TMAX= 4.8\*10<sup>-7</sup> TMIN= 1.1\*10<sup>-7</sup> DELT= 5.31\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 52.0 SEC. J = 23  
 TMAX= 3.3\*10<sup>-7</sup> TMIN= 9.3\*10<sup>-7</sup> DELT= 3.66\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 52.0 SEC. J = 23  
 TMAX= 3.2\*10<sup>-7</sup> TMIN= 1.2\*10<sup>-7</sup> DELT= 3.54\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

图3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

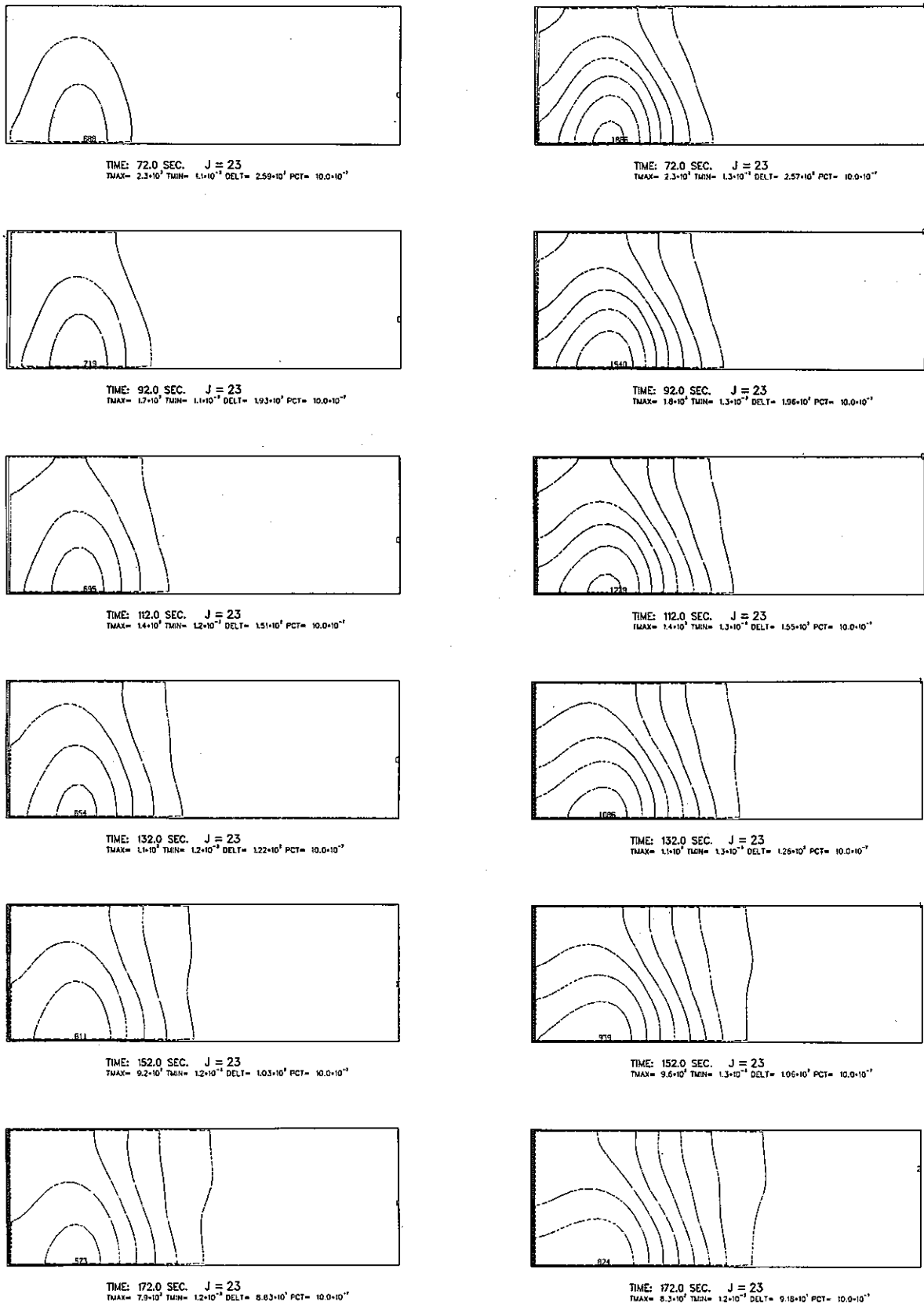


图3.13 放射性物質漏洩時濃度過度分布(破損箇所P5, P6, J=23断面)

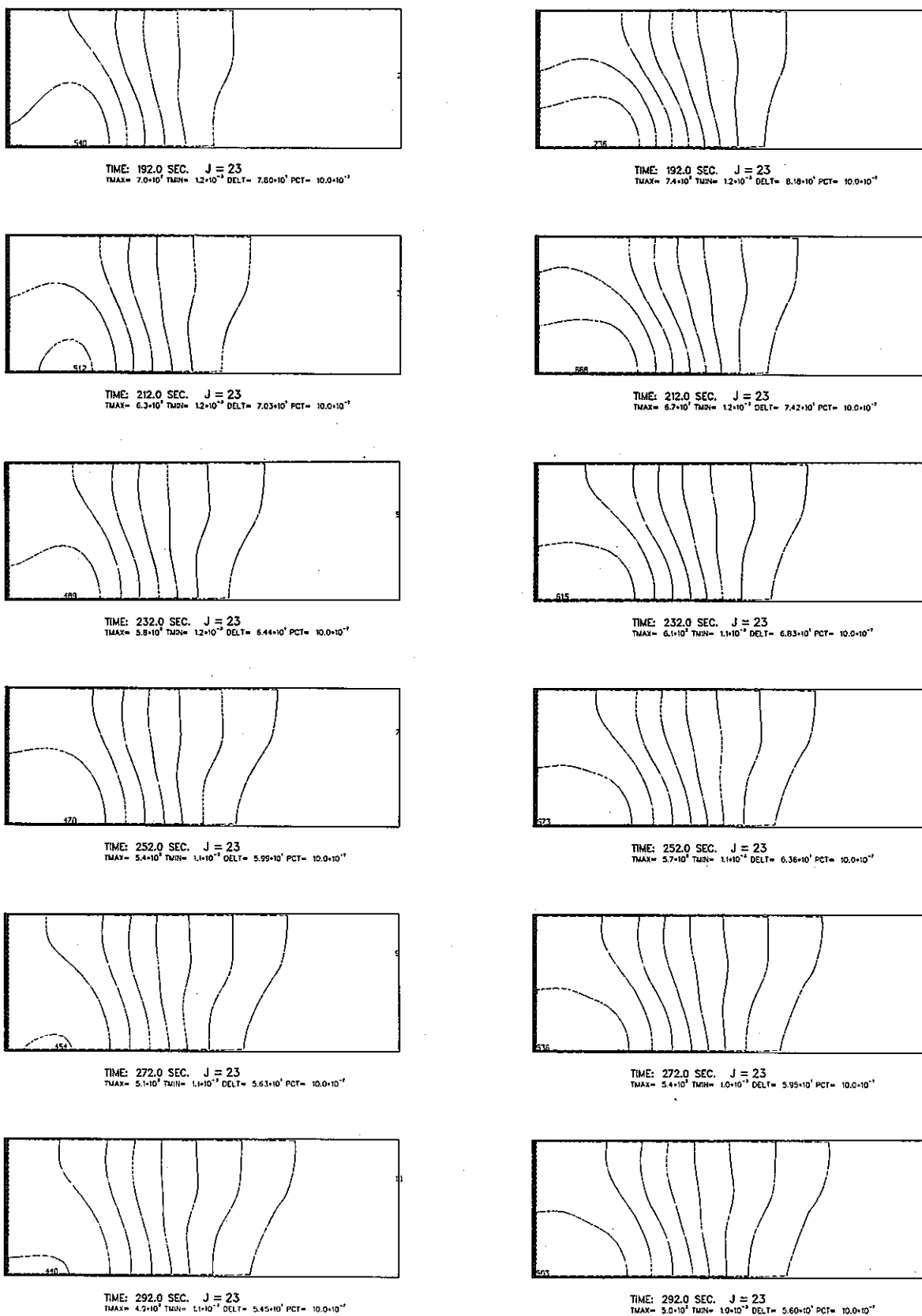
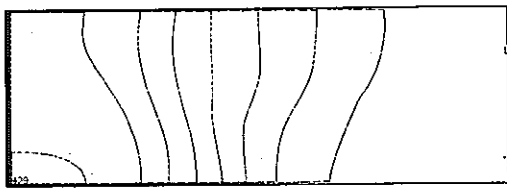
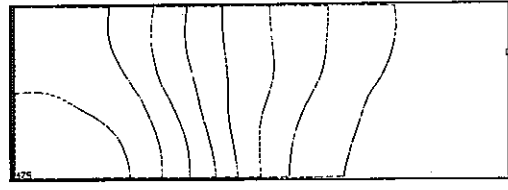


図3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

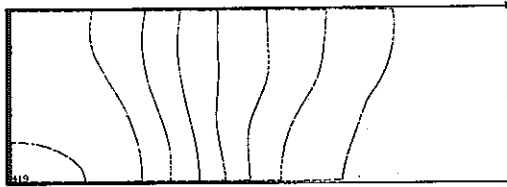




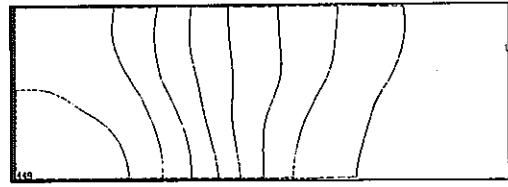
TIME: 312.0 SEC. J = 23  
 TMAX= 4.6\*10<sup>3</sup> TMIN= 1.1\*10<sup>-1</sup> DELT= 5.28\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



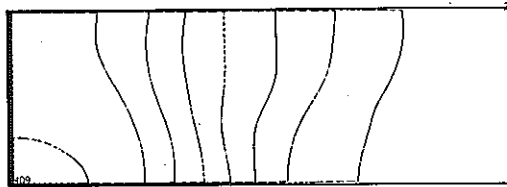
TIME: 312.0 SEC. J = 23  
 TMAX= 4.8\*10<sup>3</sup> TMIN= 9.7\*10<sup>-1</sup> DELT= 5.29\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



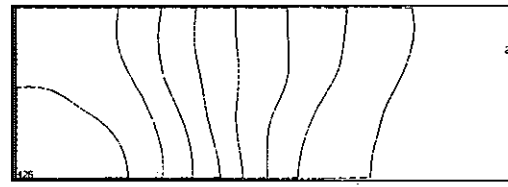
TIME: 332.0 SEC. J = 23  
 TMAX= 4.6\*10<sup>3</sup> TMIN= 1.0\*10<sup>-1</sup> DELT= 5.12\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



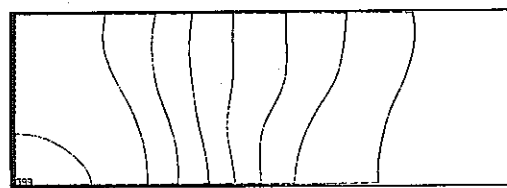
TIME: 332.0 SEC. J = 23  
 TMAX= 4.5\*10<sup>3</sup> TMIN= 9.4\*10<sup>-1</sup> DELT= 5.02\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



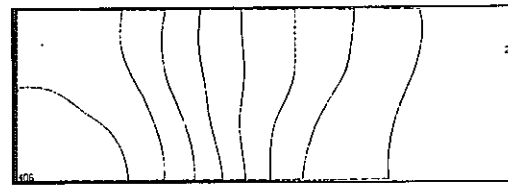
TIME: 352.0 SEC. J = 23  
 TMAX= 4.5\*10<sup>3</sup> TMIN= 1.0\*10<sup>-1</sup> DELT= 4.97\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



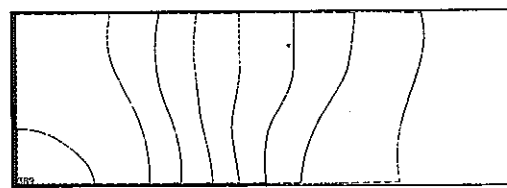
TIME: 352.0 SEC. J = 23  
 TMAX= 4.3\*10<sup>3</sup> TMIN= 9.4\*10<sup>-1</sup> DELT= 4.78\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



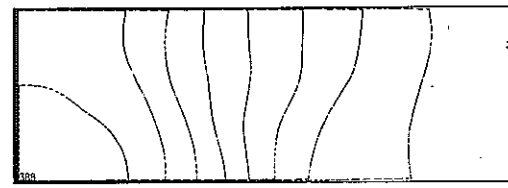
TIME: 372.0 SEC. J = 23  
 TMAX= 4.3\*10<sup>3</sup> TMIN= 9.8\*10<sup>-1</sup> DELT= 4.83\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



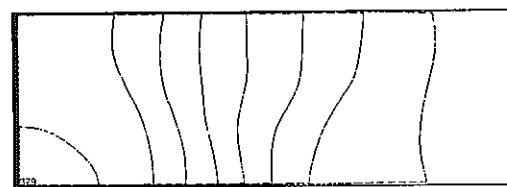
TIME: 372.0 SEC. J = 23  
 TMAX= 4.1\*10<sup>3</sup> TMIN= 8.9\*10<sup>-1</sup> DELT= 4.57\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



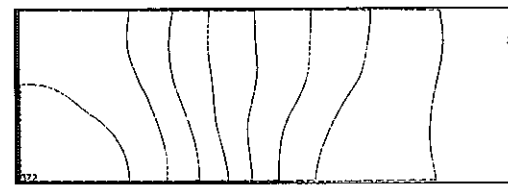
TIME: 392.0 SEC. J = 23  
 TMAX= 4.2\*10<sup>3</sup> TMIN= 9.6\*10<sup>-1</sup> DELT= 4.69\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 392.0 SEC. J = 23  
 TMAX= 3.9\*10<sup>3</sup> TMIN= 8.6\*10<sup>-1</sup> DELT= 4.38\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 412.0 SEC. J = 23  
 TMAX= 4.1\*10<sup>3</sup> TMIN= 9.4\*10<sup>-1</sup> DELT= 4.56\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 412.0 SEC. J = 23  
 TMAX= 3.8\*10<sup>3</sup> TMIN= 8.4\*10<sup>-1</sup> DELT= 4.20\*10<sup>1</sup> PCT= 10.0\*10<sup>-1</sup>

图3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

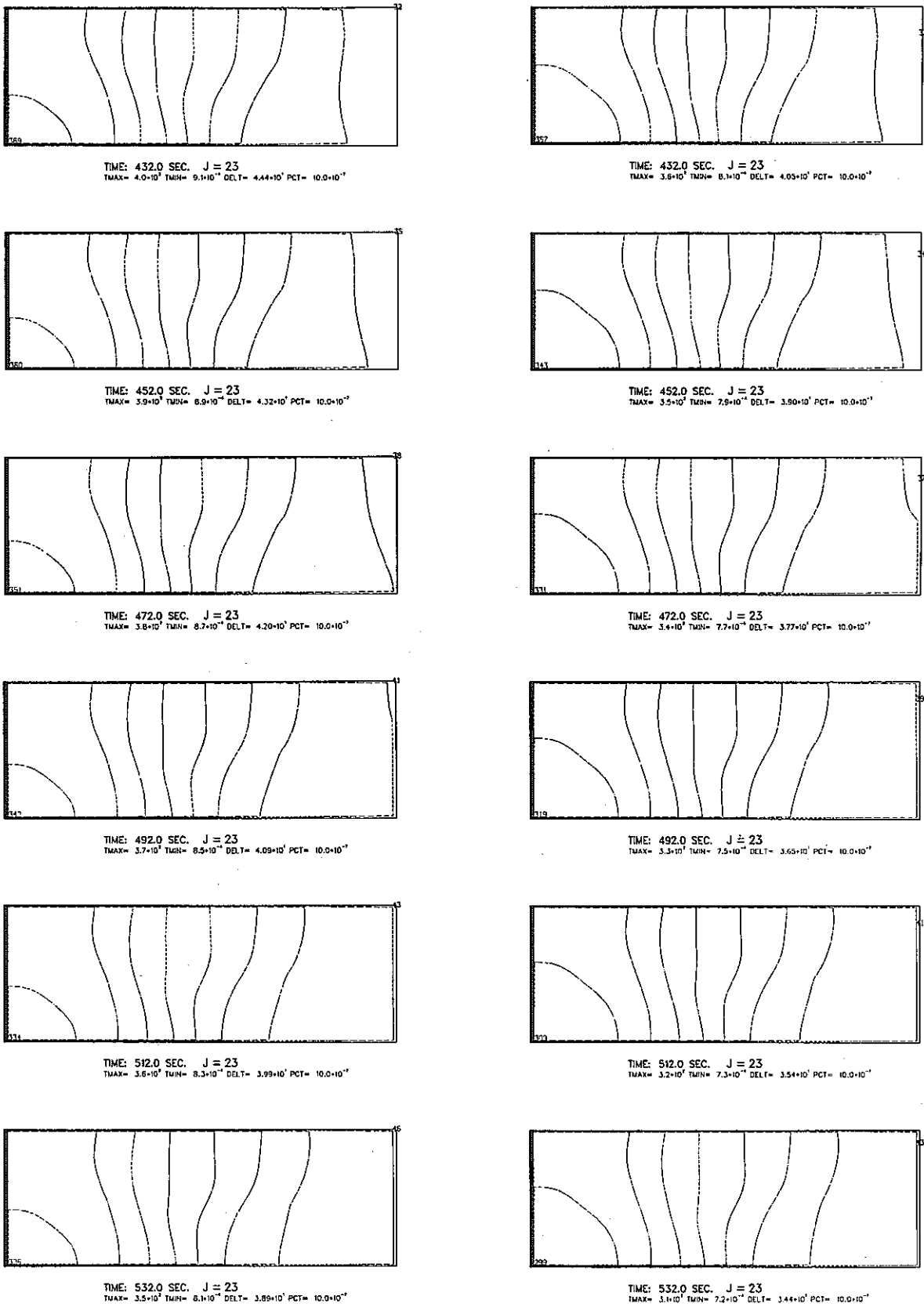
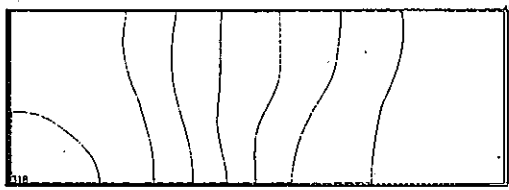
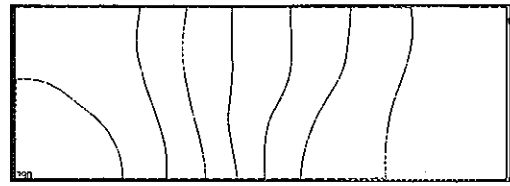


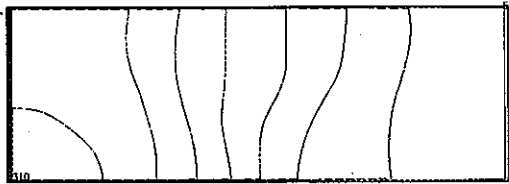
图3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)



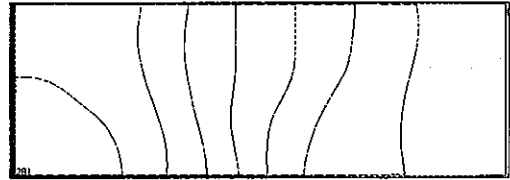
TIME: 552.0 SEC. J = 23  
 TMAX=  $3.4 \times 10^7$  TMIN=  $7.9 \times 10^5$  DELT=  $3.76 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



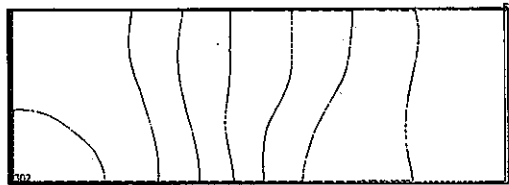
TIME: 552.0 SEC. J = 23  
 TMAX=  $3.0 \times 10^7$  TMIN=  $7.0 \times 10^5$  DELT=  $3.34 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



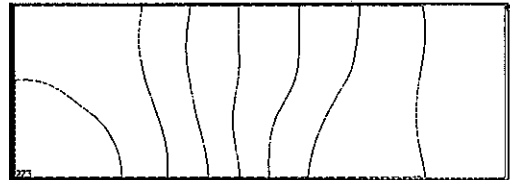
TIME: 572.0 SEC. J = 23  
 TMAX=  $3.3 \times 10^7$  TMIN=  $7.7 \times 10^5$  DELT=  $3.70 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



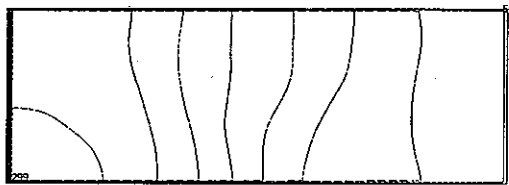
TIME: 572.0 SEC. J = 23  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.8 \times 10^5$  DELT=  $3.25 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



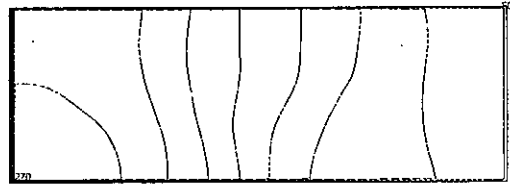
TIME: 592.0 SEC. J = 23  
 TMAX=  $3.2 \times 10^7$  TMIN=  $7.5 \times 10^5$  DELT=  $3.61 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



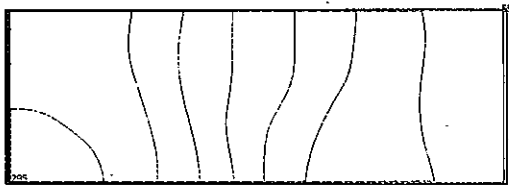
TIME: 592.0 SEC. J = 23  
 TMAX=  $2.9 \times 10^7$  TMIN=  $6.6 \times 10^5$  DELT=  $3.17 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



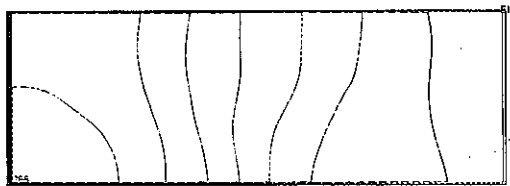
TIME: 601.0 SEC. J = 23  
 TMAX=  $3.2 \times 10^7$  TMIN=  $7.4 \times 10^5$  DELT=  $3.57 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



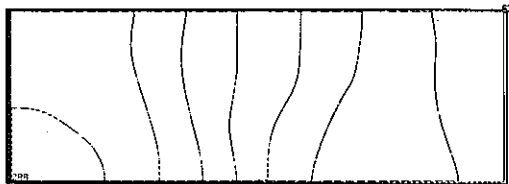
TIME: 601.0 SEC. J = 23  
 TMAX=  $2.8 \times 10^7$  TMIN=  $6.6 \times 10^5$  DELT=  $3.13 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



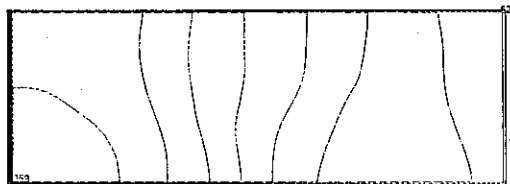
TIME: 612.0 SEC. J = 23  
 TMAX=  $3.2 \times 10^7$  TMIN=  $7.4 \times 10^5$  DELT=  $3.52 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 612.0 SEC. J = 23  
 TMAX=  $2.8 \times 10^7$  TMIN=  $6.5 \times 10^5$  DELT=  $3.09 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $3.1 \times 10^7$  TMIN=  $7.2 \times 10^5$  DELT=  $3.44 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $2.7 \times 10^7$  TMIN=  $6.3 \times 10^5$  DELT=  $3.01 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

图3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

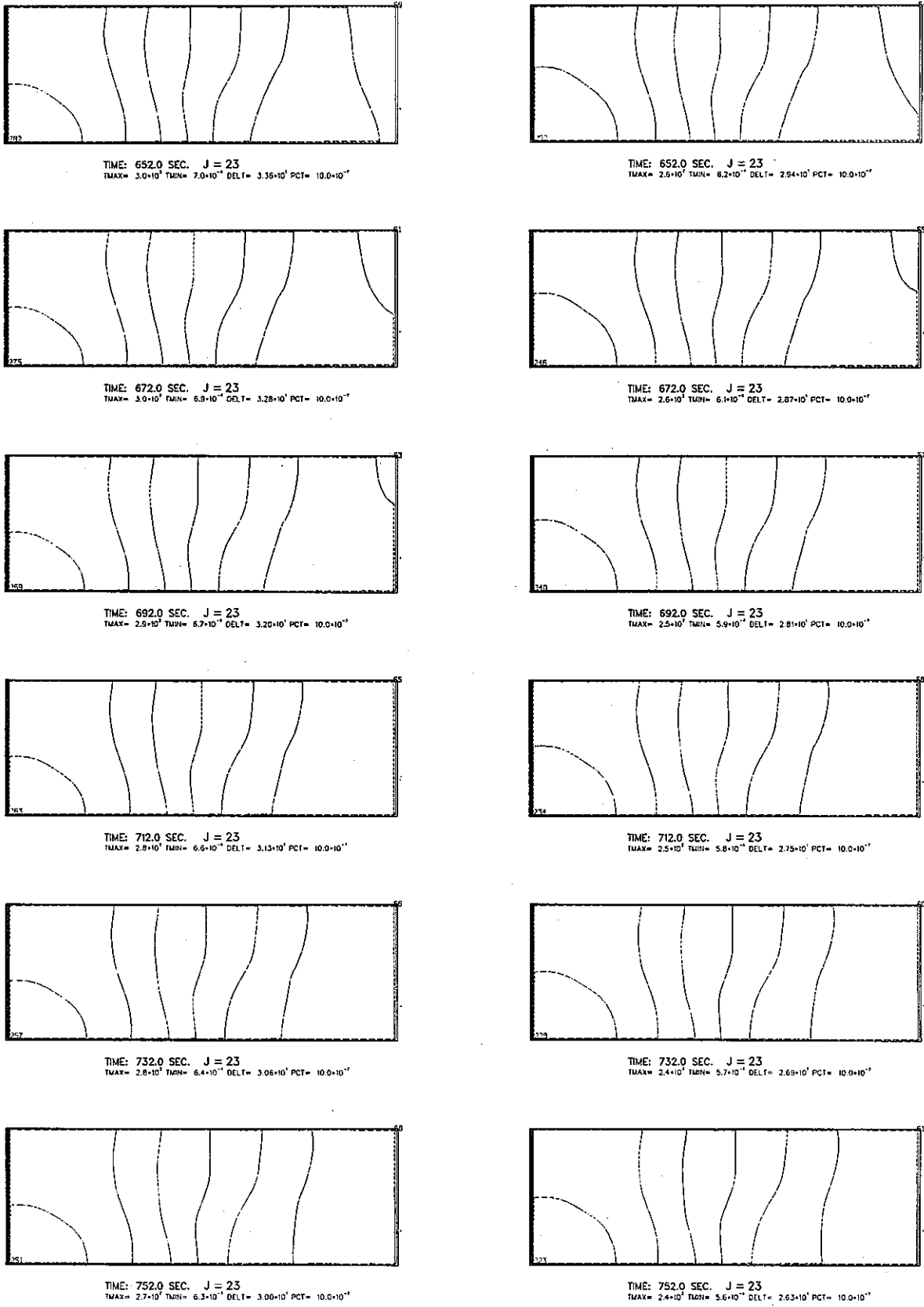


图3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

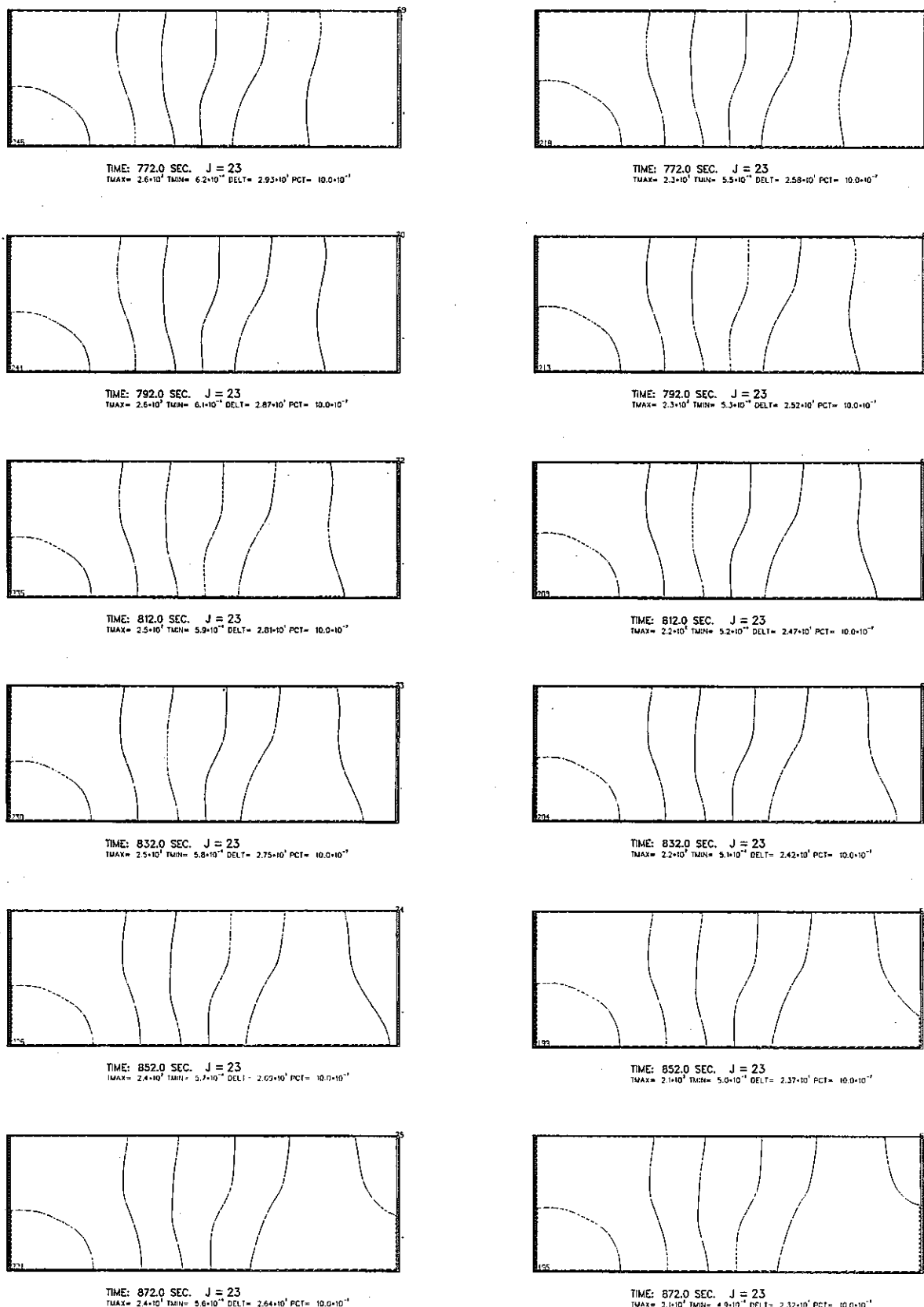


图3.13 放射性物质漏洩时浓度过度分布 (破损箇所P5, P6, J=23断面)

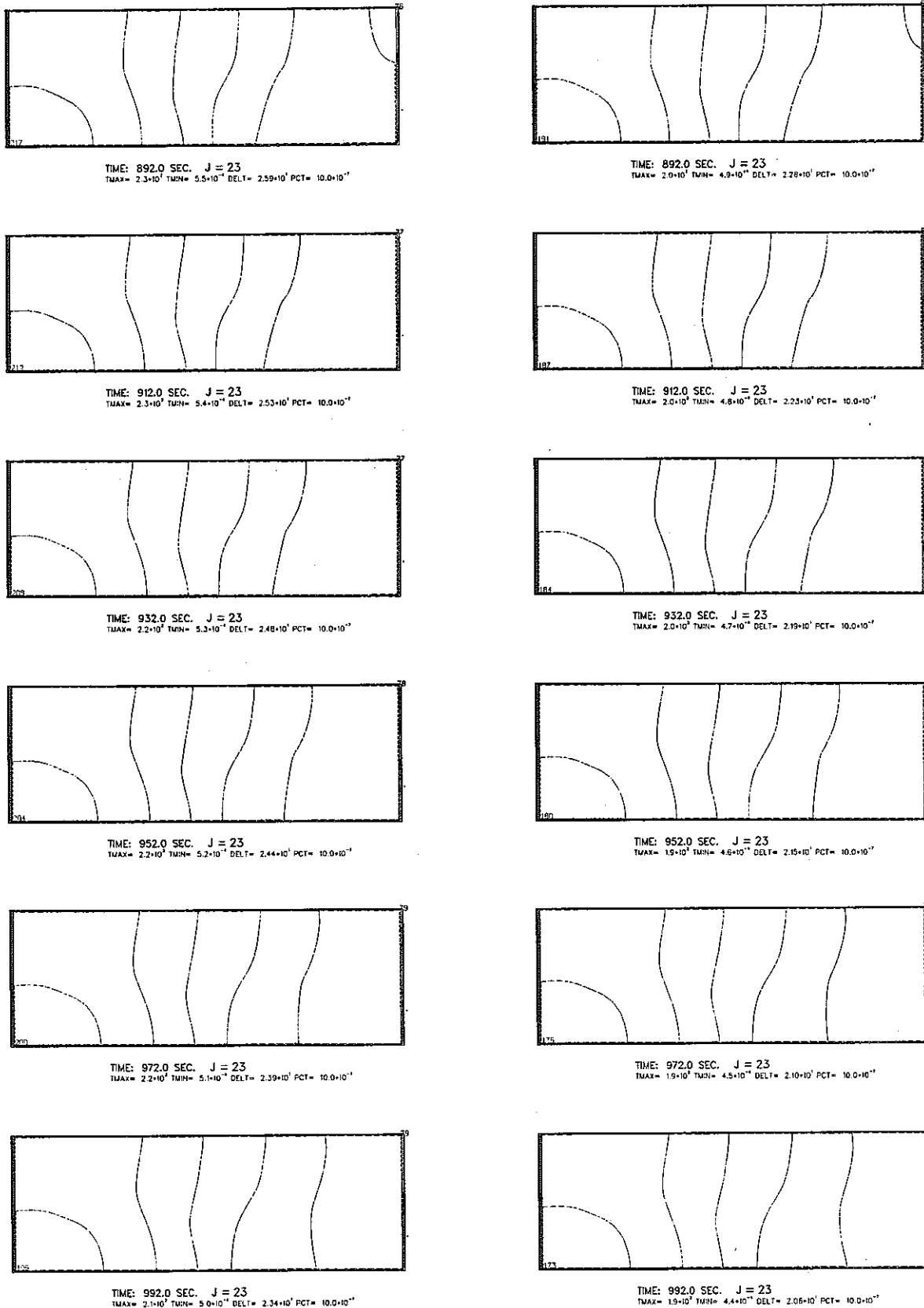


図3.13 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, J=23断面)

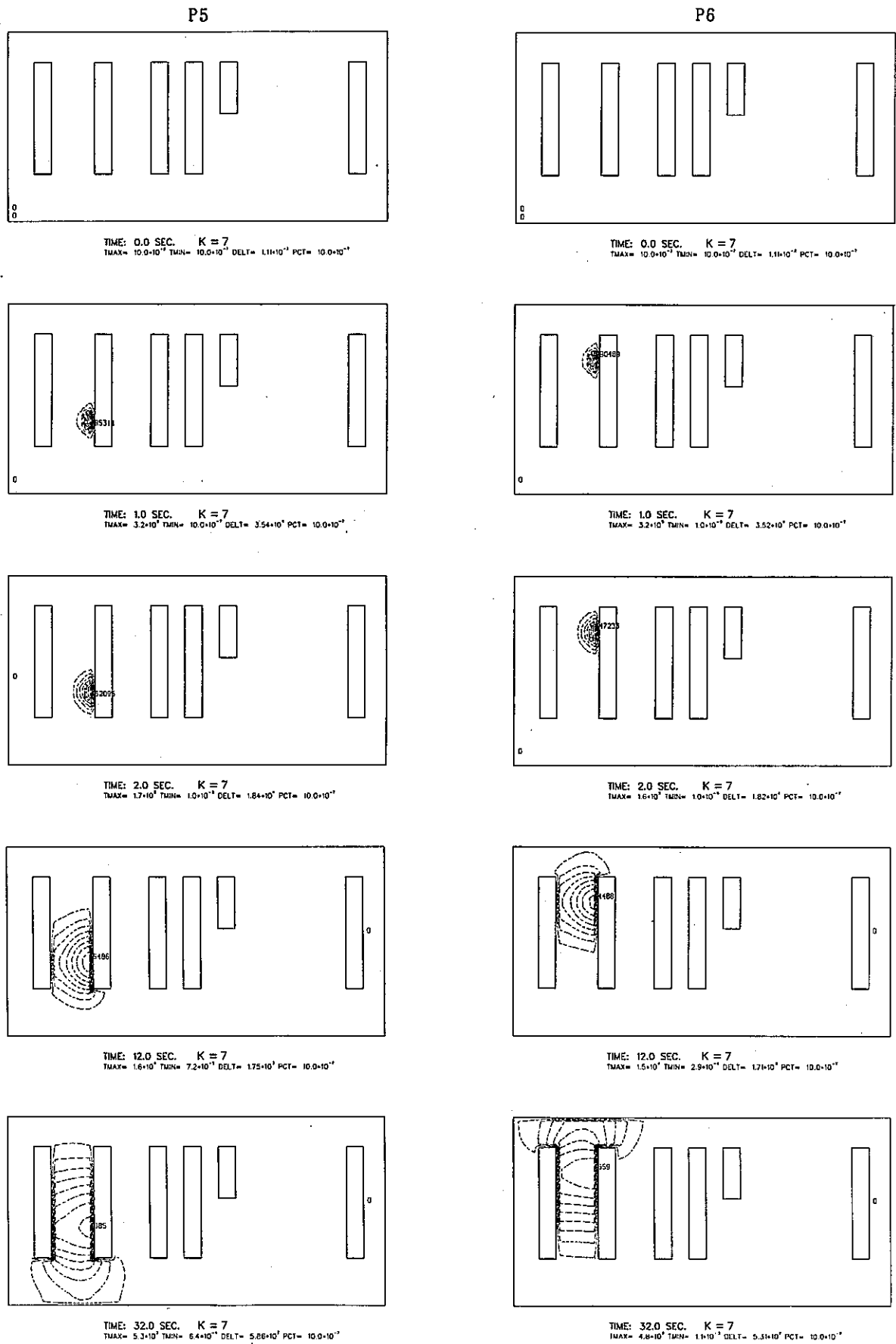


図3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)

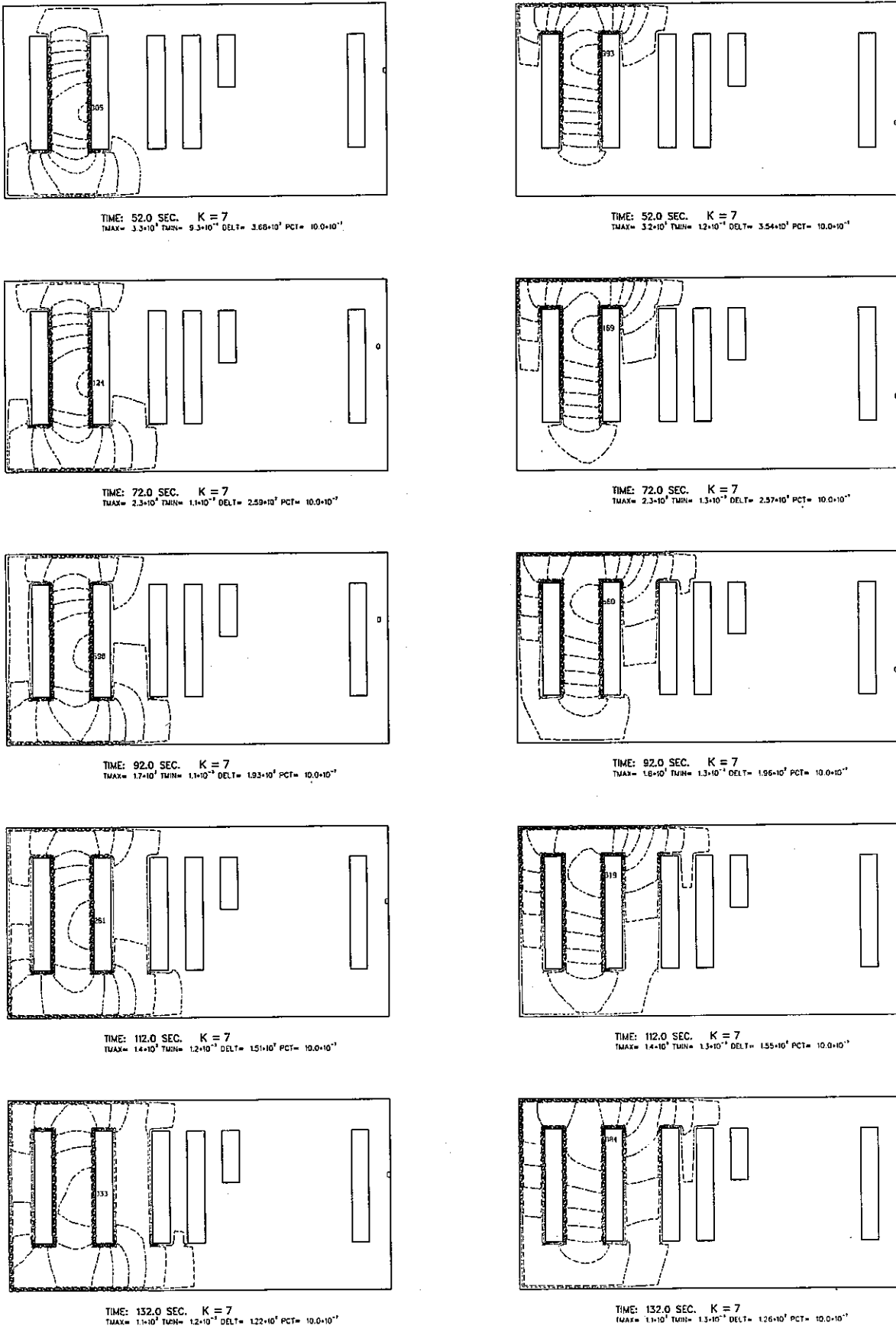


图3.14 放射性物质泄漏时浓度过度分布 (破损箇所P5, P6, K=7 断面)



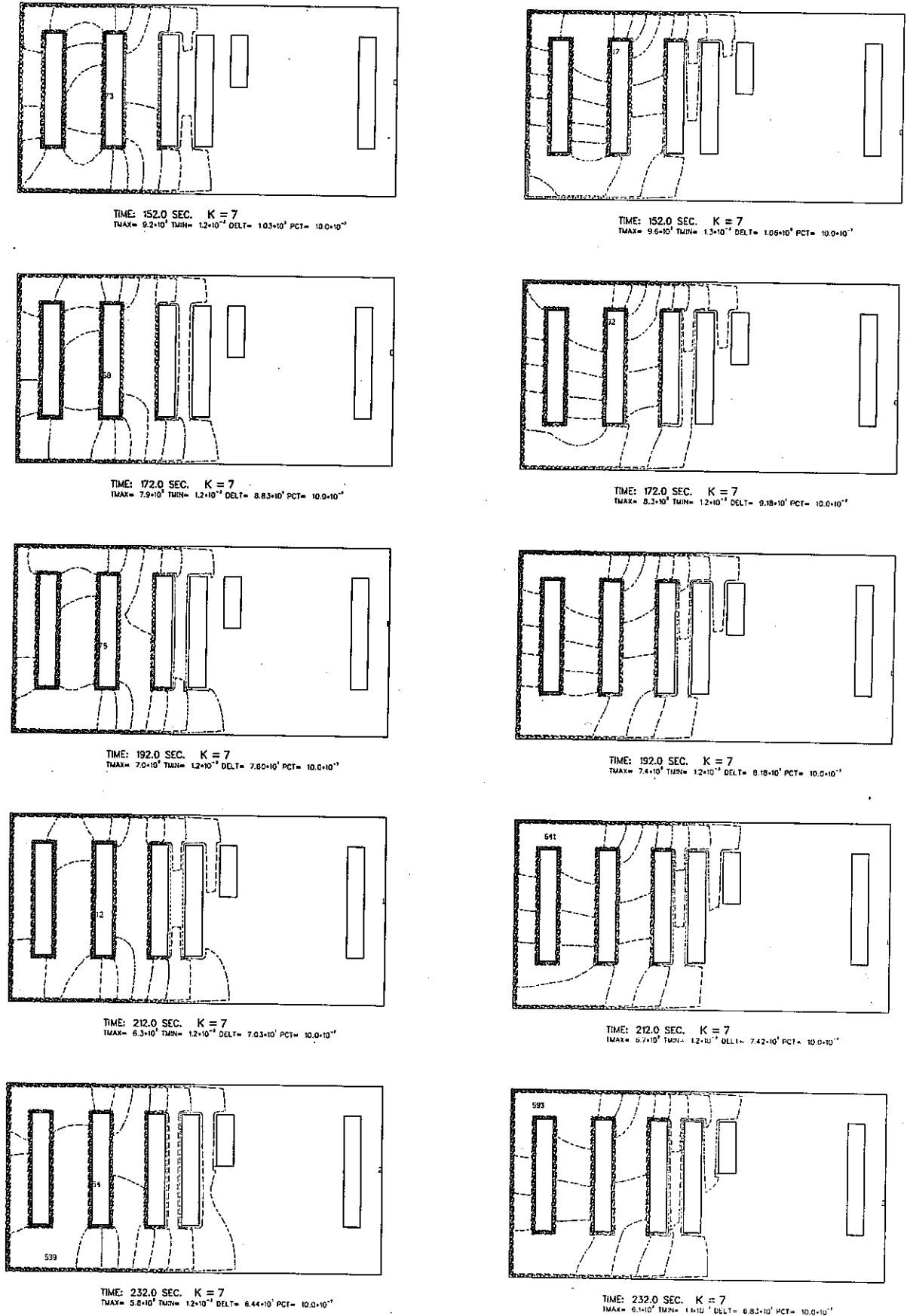


图3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)

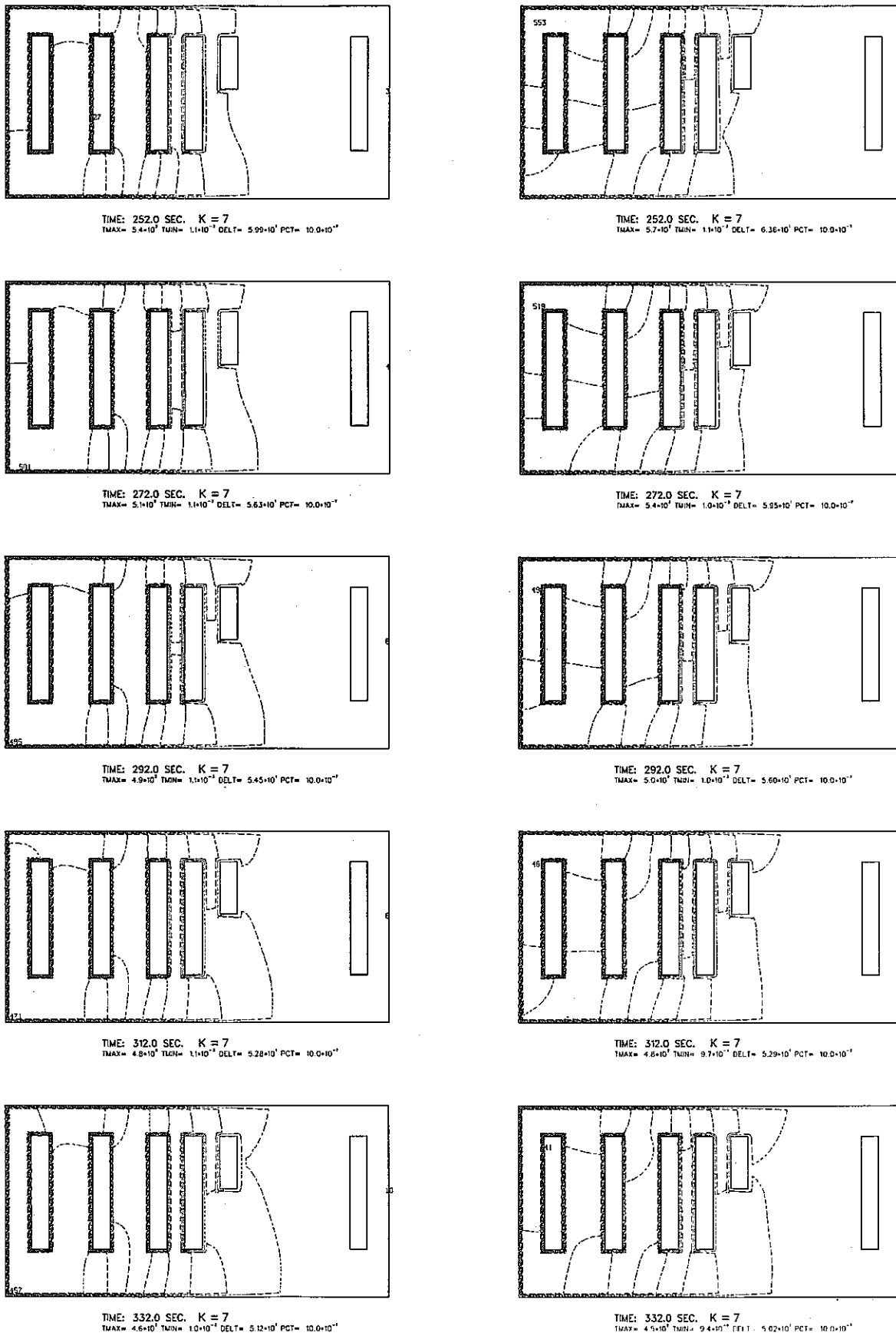
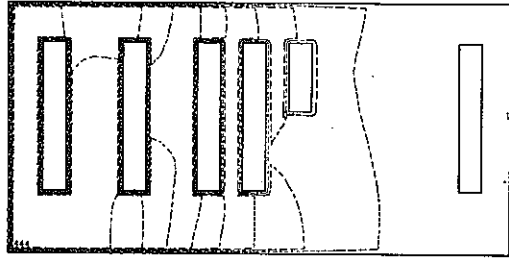
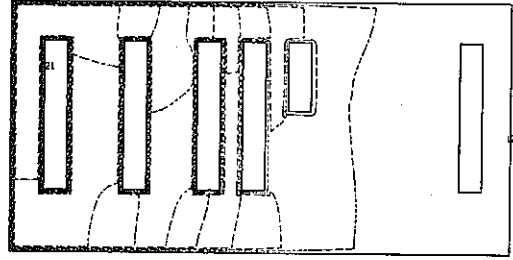


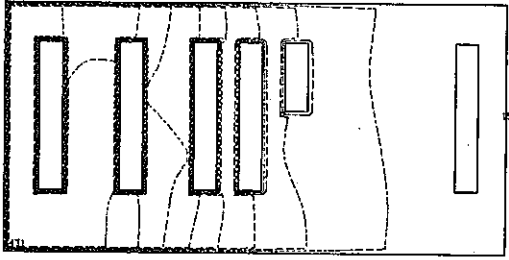
图3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)



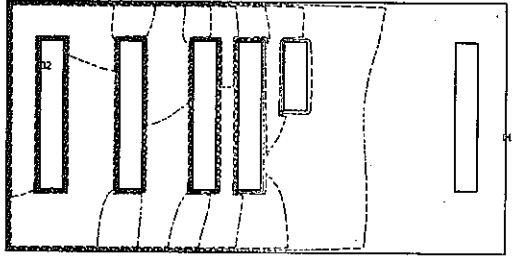
TIME: 352.0 SEC. K = 7  
 TMAX=  $4.5 \cdot 10^7$  TMIN=  $1.0 \cdot 10^{-7}$  DELT=  $4.97 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



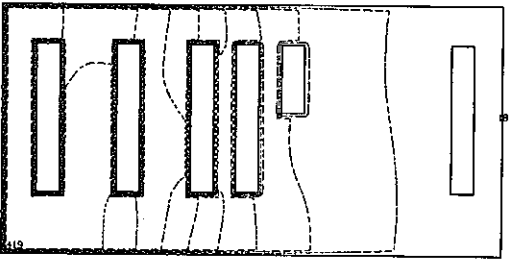
TIME: 352.0 SEC. K = 7  
 TMAX=  $4.3 \cdot 10^7$  TMIN=  $9.1 \cdot 10^{-7}$  DELT=  $4.78 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



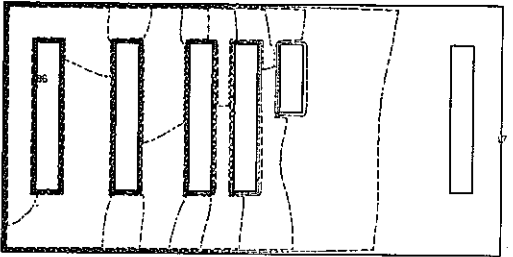
TIME: 372.0 SEC. K = 7  
 TMAX=  $4.5 \cdot 10^7$  TMIN=  $9.8 \cdot 10^{-7}$  DELT=  $4.83 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



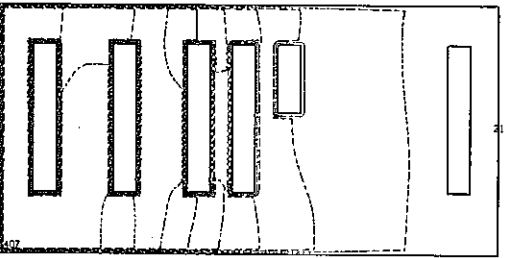
TIME: 372.0 SEC. K = 7  
 TMAX=  $4.1 \cdot 10^7$  TMIN=  $8.9 \cdot 10^{-7}$  DELT=  $4.57 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



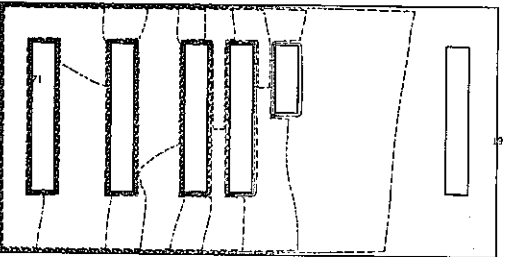
TIME: 392.0 SEC. K = 7  
 TMAX=  $4.2 \cdot 10^7$  TMIN=  $9.6 \cdot 10^{-7}$  DELT=  $4.69 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



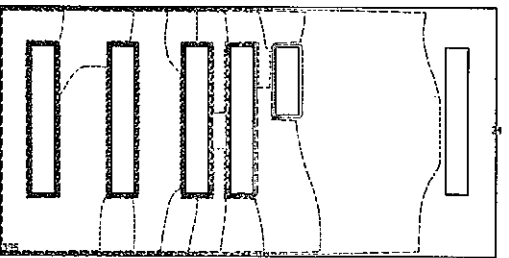
TIME: 392.0 SEC. K = 7  
 TMAX=  $3.9 \cdot 10^7$  TMIN=  $8.6 \cdot 10^{-7}$  DELT=  $4.38 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



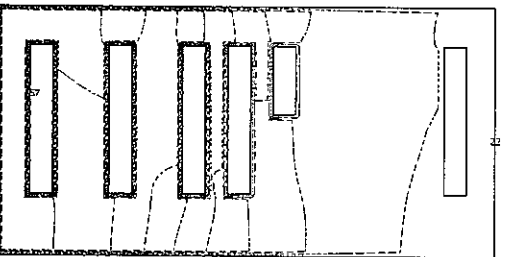
TIME: 412.0 SEC. K = 7  
 TMAX=  $4.1 \cdot 10^7$  TMIN=  $9.4 \cdot 10^{-7}$  DELT=  $4.56 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 412.0 SEC. K = 7  
 TMAX=  $3.8 \cdot 10^7$  TMIN=  $8.4 \cdot 10^{-7}$  DELT=  $4.20 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

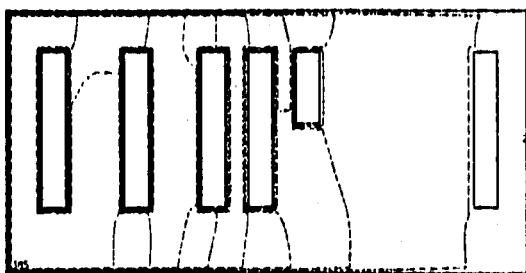


TIME: 432.0 SEC. K = 7  
 TMAX=  $4.0 \cdot 10^7$  TMIN=  $9.1 \cdot 10^{-7}$  DELT=  $4.44 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

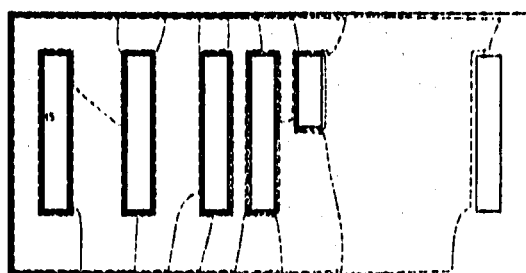


TIME: 432.0 SEC. K = 7  
 TMAX=  $3.6 \cdot 10^7$  TMIN=  $8.1 \cdot 10^{-7}$  DELT=  $4.05 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

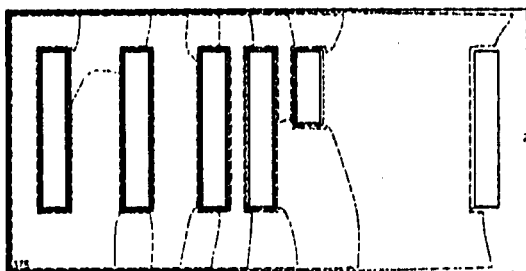
图3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)



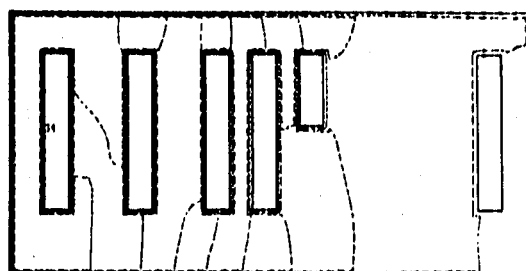
TIME: 452.0 SEC. K = 7  
 TMAX= 3.9\*10<sup>7</sup> TMIN= 8.9\*10<sup>3</sup> DELT= 4.32\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



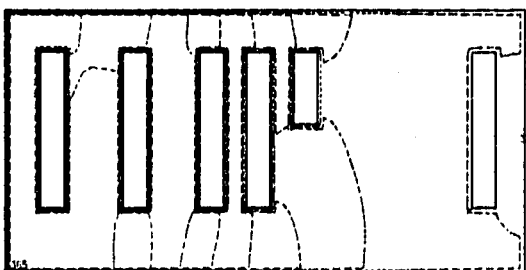
TIME: 452.0 SEC. K = 7  
 TMAX= 3.9\*10<sup>7</sup> TMIN= 7.9\*10<sup>3</sup> DELT= 3.90\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



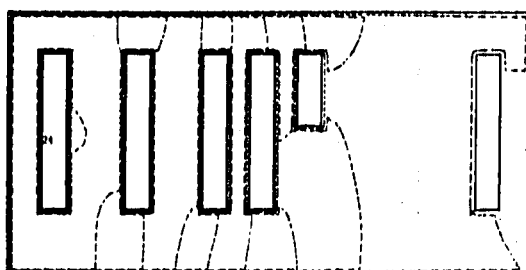
TIME: 472.0 SEC. K = 7  
 TMAX= 3.8\*10<sup>7</sup> TMIN= 8.7\*10<sup>3</sup> DELT= 4.20\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



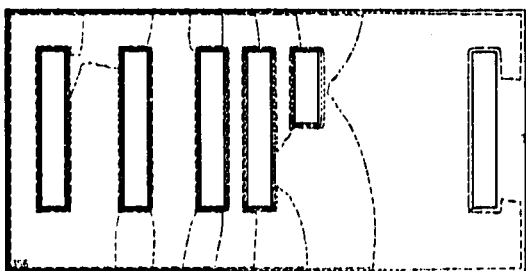
TIME: 472.0 SEC. K = 7  
 TMAX= 3.4\*10<sup>7</sup> TMIN= 7.7\*10<sup>3</sup> DELT= 3.77\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



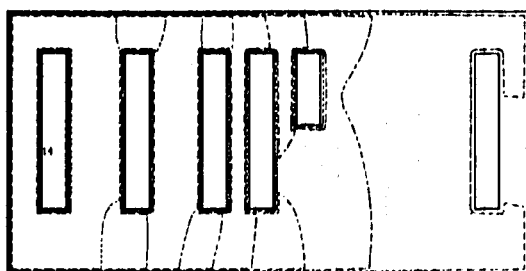
TIME: 492.0 SEC. K = 7  
 TMAX= 3.7\*10<sup>7</sup> TMIN= 8.5\*10<sup>3</sup> DELT= 4.09\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



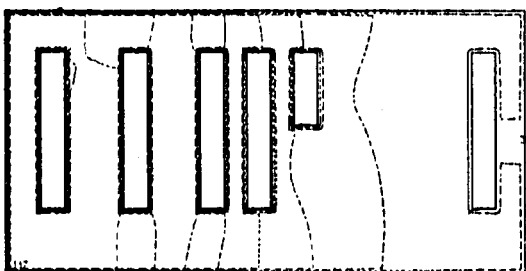
TIME: 492.0 SEC. K = 7  
 TMAX= 3.3\*10<sup>7</sup> TMIN= 7.5\*10<sup>3</sup> DELT= 3.85\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



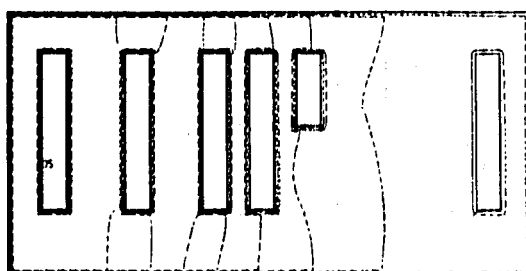
TIME: 512.0 SEC. K = 7  
 TMAX= 3.6\*10<sup>7</sup> TMIN= 8.3\*10<sup>3</sup> DELT= 3.99\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 512.0 SEC. K = 7  
 TMAX= 3.2\*10<sup>7</sup> TMIN= 7.3\*10<sup>3</sup> DELT= 3.54\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 532.0 SEC. K = 7  
 TMAX= 3.5\*10<sup>7</sup> TMIN= 8.1\*10<sup>3</sup> DELT= 3.89\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 532.0 SEC. K = 7  
 TMAX= 3.1\*10<sup>7</sup> TMIN= 7.2\*10<sup>3</sup> DELT= 3.44\*10<sup>7</sup> PCT= 10.0\*10<sup>-1</sup>

图3.14 放射性物质漏洩时浓度过度分布 (破损箇所P5, P6, K=7 断面)

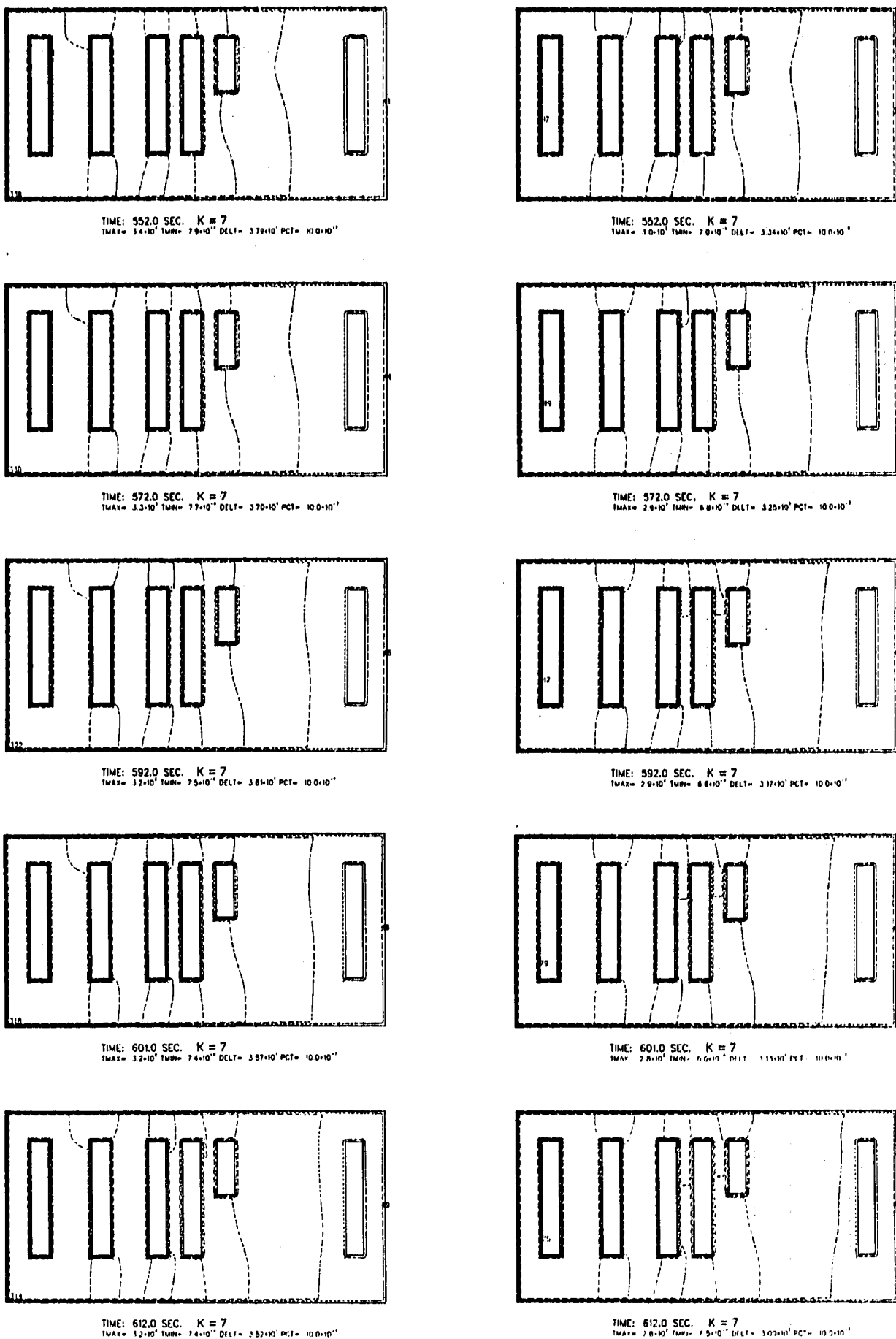


图3.14 放射性物质漏洩时浓度过度分布 (破损箇所P5, P6, K=7 断面)

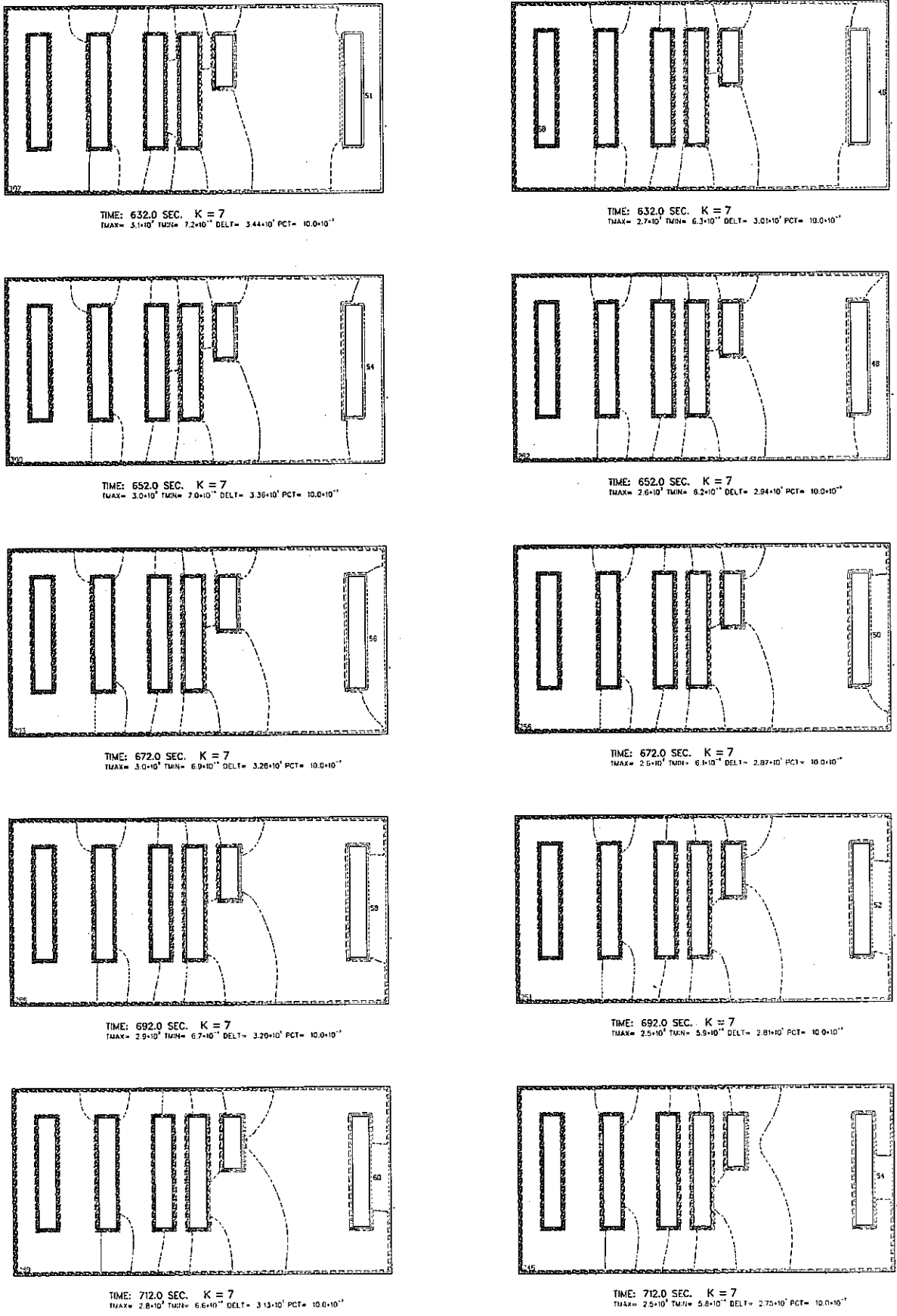
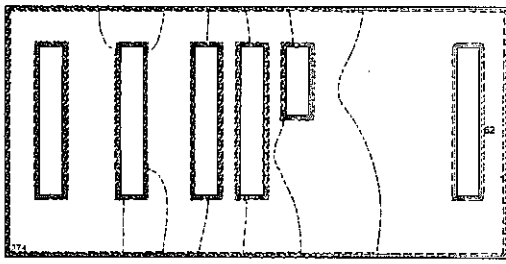
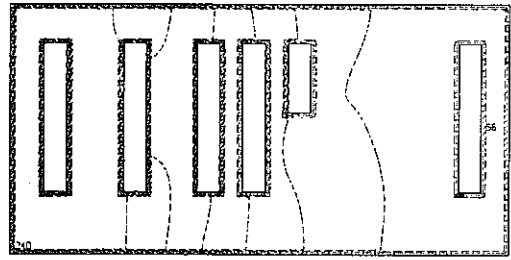


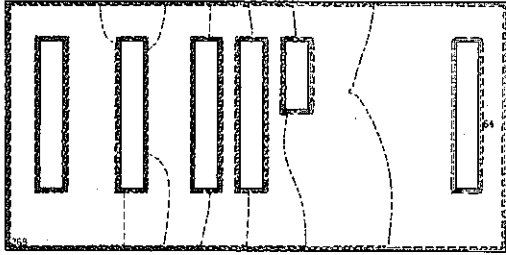
図3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)



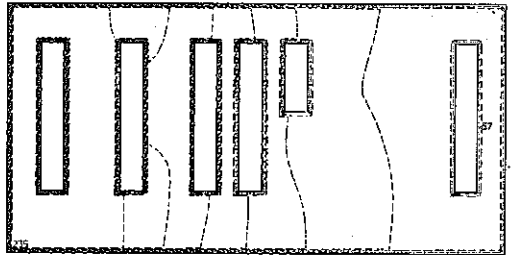
TIME: 732.0 SEC. K = 7  
 $T_{MAX} = 2.8 \cdot 10^7$   $T_{MIN} = 6.4 \cdot 10^7$  DELT =  $3.06 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



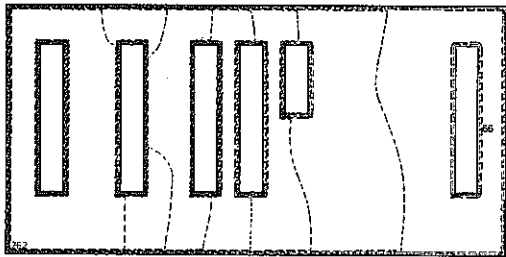
TIME: 732.0 SEC. K = 7  
 $T_{MAX} = 2.4 \cdot 10^7$   $T_{MIN} = 5.7 \cdot 10^7$  DELT =  $2.69 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



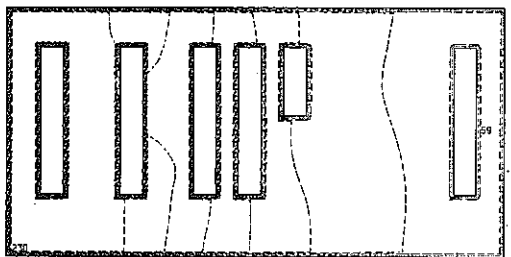
TIME: 752.0 SEC. K = 7  
 $T_{MAX} = 2.7 \cdot 10^7$   $T_{MIN} = 6.3 \cdot 10^7$  DELT =  $3.00 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



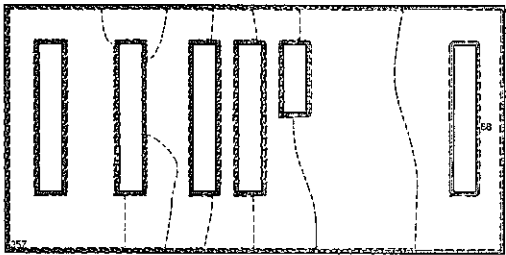
TIME: 752.0 SEC. K = 7  
 $T_{MAX} = 2.4 \cdot 10^7$   $T_{MIN} = 5.6 \cdot 10^7$  DELT =  $2.63 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



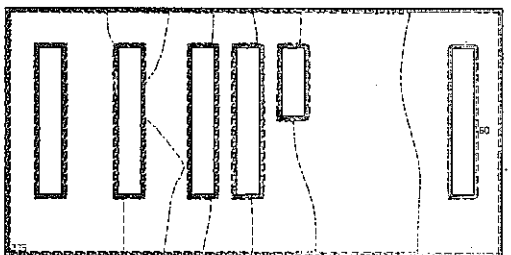
TIME: 772.0 SEC. K = 7  
 $T_{MAX} = 2.6 \cdot 10^7$   $T_{MIN} = 6.2 \cdot 10^7$  DELT =  $2.93 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



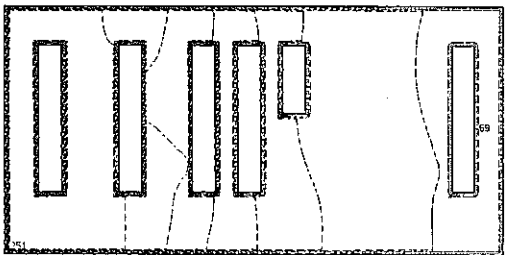
TIME: 772.0 SEC. K = 7  
 $T_{MAX} = 2.3 \cdot 10^7$   $T_{MIN} = 5.5 \cdot 10^7$  DELT =  $2.50 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



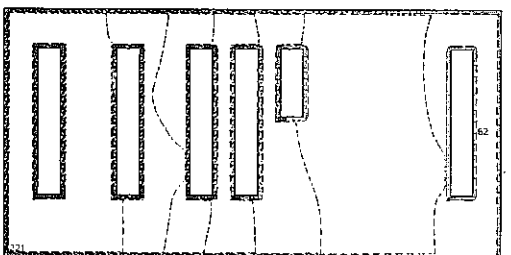
TIME: 792.0 SEC. K = 7  
 $T_{MAX} = 2.6 \cdot 10^7$   $T_{MIN} = 6.1 \cdot 10^7$  DELT =  $2.87 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 792.0 SEC. K = 7  
 $T_{MAX} = 2.3 \cdot 10^7$   $T_{MIN} = 5.3 \cdot 10^7$  DELT =  $2.52 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$

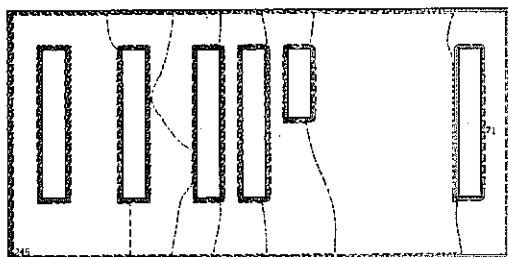


TIME: 812.0 SEC. K = 7  
 $T_{MAX} = 2.5 \cdot 10^7$   $T_{MIN} = 5.9 \cdot 10^7$  DELT =  $2.81 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$

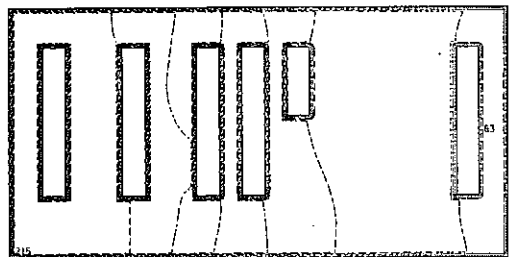


TIME: 812.0 SEC. K = 7  
 $T_{MAX} = 2.2 \cdot 10^7$   $T_{MIN} = 5.2 \cdot 10^7$  DELT =  $2.47 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$

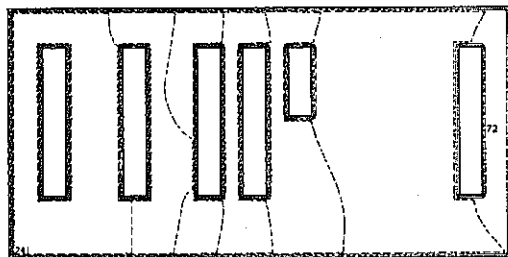
图3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)



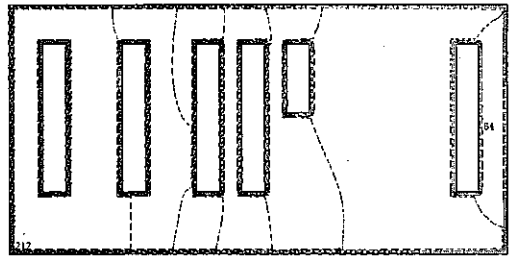
TIME: 832.0 SEC. K = 7  
 TMAX=  $2.5 \cdot 10^3$  TMIN=  $5.6 \cdot 10^{-3}$  DELT=  $2.75 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



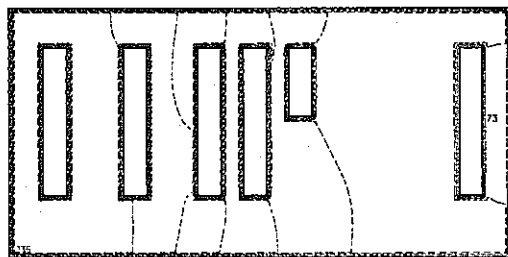
TIME: 832.0 SEC. K = 7  
 TMAX=  $2.2 \cdot 10^3$  TMIN=  $5.1 \cdot 10^{-3}$  DELT=  $2.42 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



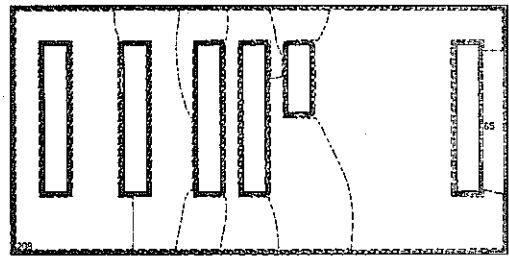
TIME: 852.0 SEC. K = 7  
 TMAX=  $2.4 \cdot 10^3$  TMIN=  $5.7 \cdot 10^{-3}$  DELT=  $2.69 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



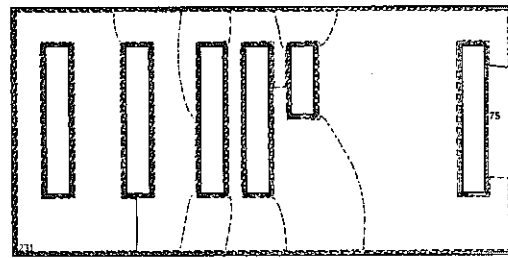
TIME: 852.0 SEC. K = 7  
 TMAX=  $2.1 \cdot 10^3$  TMIN=  $5.0 \cdot 10^{-3}$  DELT=  $2.37 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



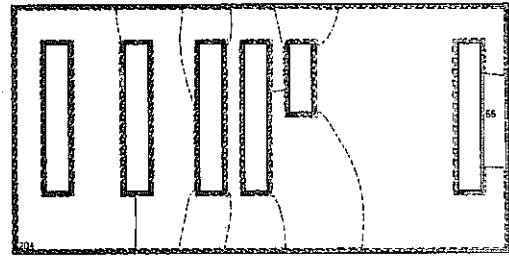
TIME: 872.0 SEC. K = 7  
 TMAX=  $2.4 \cdot 10^3$  TMIN=  $5.6 \cdot 10^{-3}$  DELT=  $2.64 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



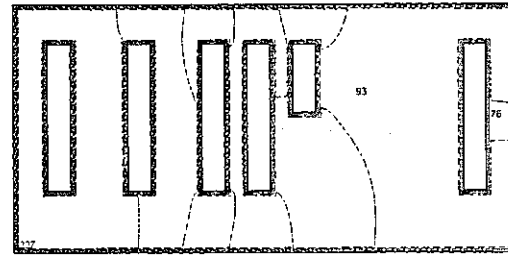
TIME: 872.0 SEC. K = 7  
 TMAX=  $2.1 \cdot 10^3$  TMIN=  $4.9 \cdot 10^{-3}$  DELT=  $2.32 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



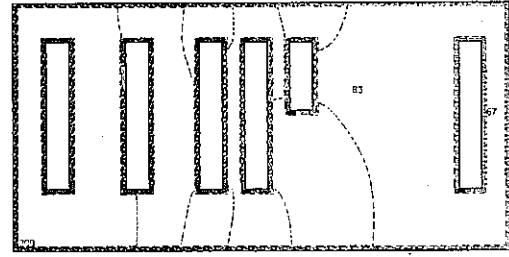
TIME: 892.0 SEC. K = 7  
 TMAX=  $2.3 \cdot 10^3$  TMIN=  $5.5 \cdot 10^{-3}$  DELT=  $2.59 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



TIME: 892.0 SEC. K = 7  
 TMAX=  $2.0 \cdot 10^3$  TMIN=  $4.9 \cdot 10^{-3}$  DELT=  $2.28 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



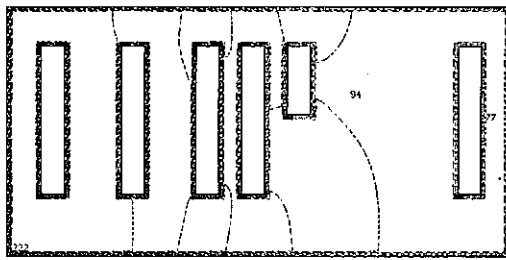
TIME: 912.0 SEC. K = 7  
 TMAX=  $2.3 \cdot 10^3$  TMIN=  $5.4 \cdot 10^{-3}$  DELT=  $2.53 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$



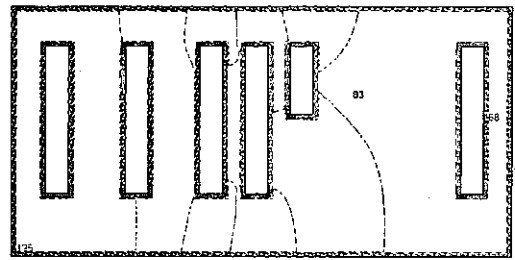
TIME: 912.0 SEC. K = 7  
 TMAX=  $2.0 \cdot 10^3$  TMIN=  $4.8 \cdot 10^{-3}$  DELT=  $2.23 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-4}$

图 3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)

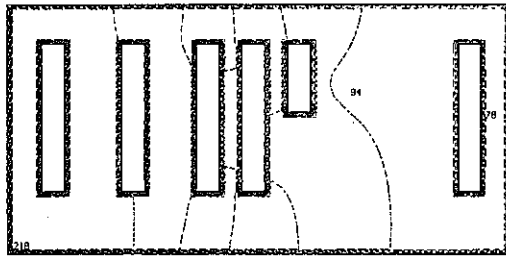




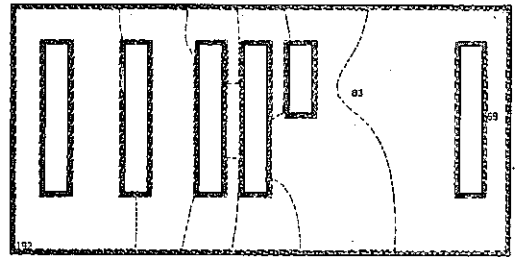
TIME: 932.0 SEC. K = 7  
 $T_{MAX} = 2.2 \cdot 10^{10}$   $T_{MIN} = 5.3 \cdot 10^{11}$  DELT =  $2.48 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



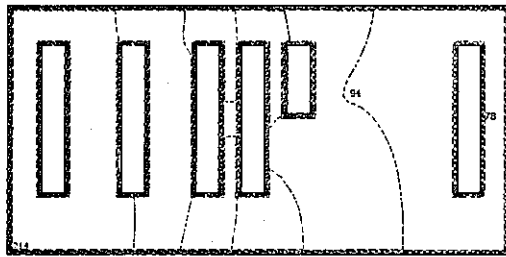
TIME: 932.0 SEC. K = 7  
 $T_{MAX} = 2.0 \cdot 10^{10}$   $T_{MIN} = 4.7 \cdot 10^{11}$  DELT =  $2.19 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



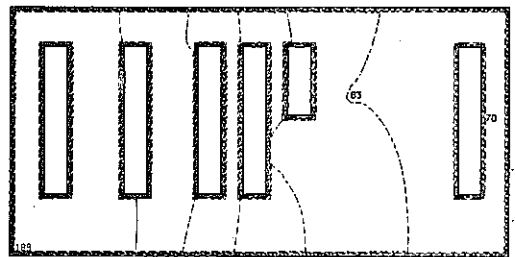
TIME: 952.0 SEC. K = 7  
 $T_{MAX} = 2.2 \cdot 10^{10}$   $T_{MIN} = 5.2 \cdot 10^{11}$  DELT =  $2.44 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



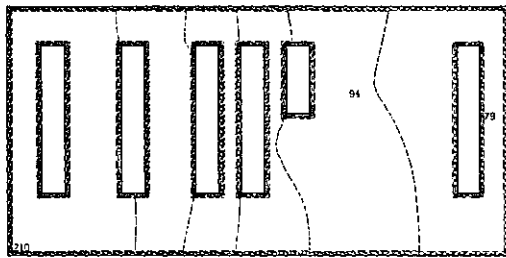
TIME: 952.0 SEC. K = 7  
 $T_{MAX} = 1.9 \cdot 10^{10}$   $T_{MIN} = 4.9 \cdot 10^{11}$  DELT =  $2.05 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



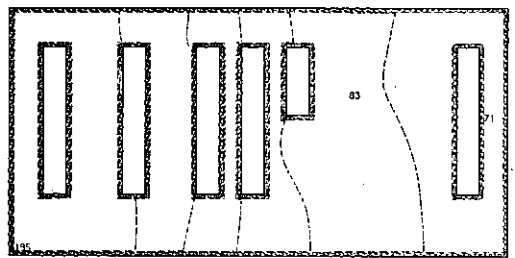
TIME: 972.0 SEC. K = 7  
 $T_{MAX} = 2.2 \cdot 10^{10}$   $T_{MIN} = 5.1 \cdot 10^{11}$  DELT =  $2.39 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



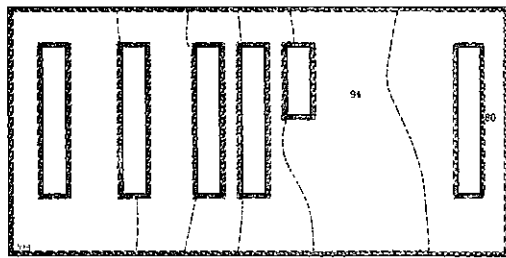
TIME: 972.0 SEC. K = 7  
 $T_{MAX} = 1.9 \cdot 10^{10}$   $T_{MIN} = 4.5 \cdot 10^{11}$  DELT =  $2.10 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



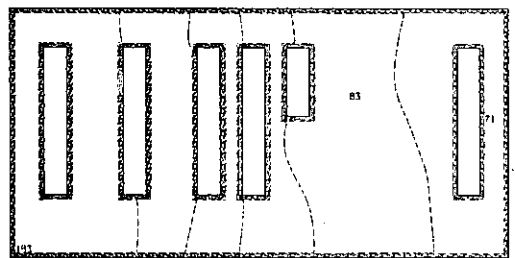
TIME: 992.0 SEC. K = 7  
 $T_{MAX} = 2.1 \cdot 10^{10}$   $T_{MIN} = 5.0 \cdot 10^{11}$  DELT =  $2.34 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 992.0 SEC. K = 7  
 $T_{MAX} = 1.9 \cdot 10^{10}$   $T_{MIN} = 4.4 \cdot 10^{11}$  DELT =  $2.05 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 1001.0 SEC. K = 7  
 $T_{MAX} = 2.1 \cdot 10^{10}$   $T_{MIN} = 5.0 \cdot 10^{11}$  DELT =  $2.32 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$

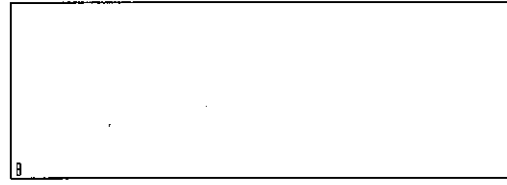
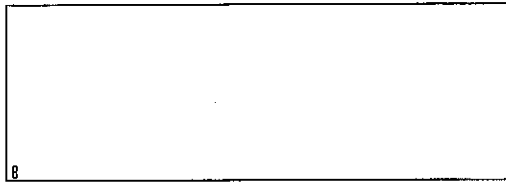


TIME: 1001.0 SEC. K = 7  
 $T_{MAX} = 1.8 \cdot 10^{10}$   $T_{MIN} = 4.4 \cdot 10^{11}$  DELT =  $2.05 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-7}$

图3.14 放射性物質漏洩時濃度過度分布 (破損箇所P5, P6, K=7 断面)

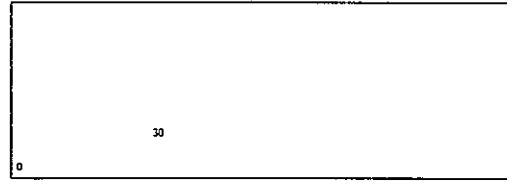
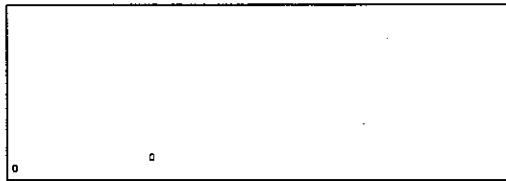
P7

P8



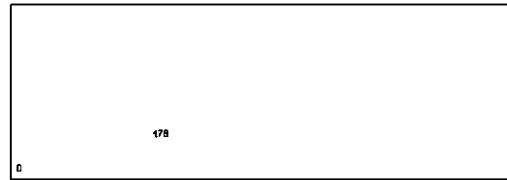
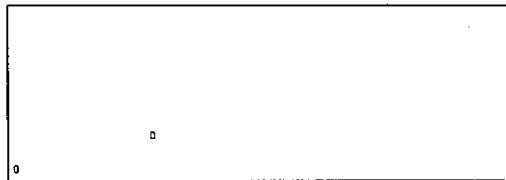
TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>



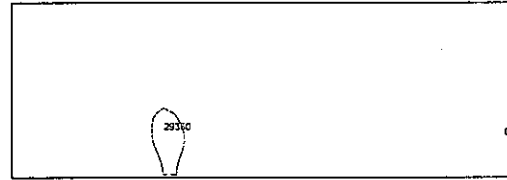
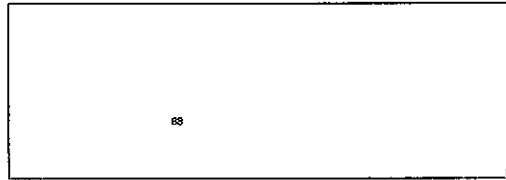
TIME: 1.0 SEC. J = 23  
TMAX= 9.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 9.99\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 1.0 SEC. J = 23  
TMAX= 9.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 9.99\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>



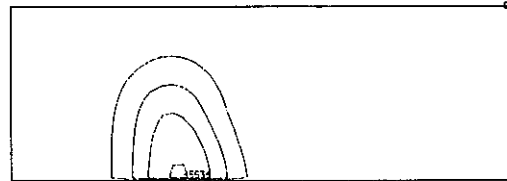
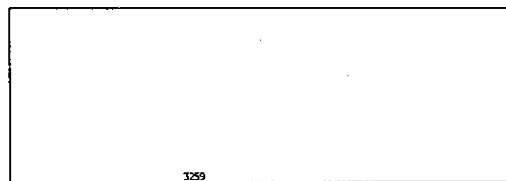
TIME: 2.0 SEC. J = 23  
TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.59\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 2.0 SEC. J = 23  
TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.59\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>



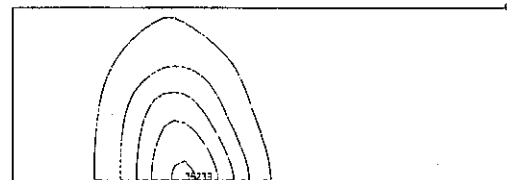
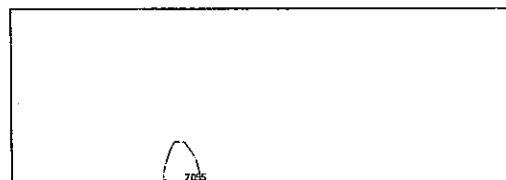
TIME: 12.0 SEC. J = 23  
TMAX= 2.2\*10<sup>-7</sup> TMIN= 1.5\*10<sup>-7</sup> DELT= 2.46\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 12.0 SEC. J = 23  
TMAX= 2.3\*10<sup>-7</sup> TMIN= 3.9\*10<sup>-7</sup> DELT= 2.50\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 32.0 SEC. J = 23  
TMAX= 9.5\*10<sup>-7</sup> TMIN= 8.9\*10<sup>-7</sup> DELT= 1.05\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 32.0 SEC. J = 23  
TMAX= 1.0\*10<sup>-7</sup> TMIN= 1.4\*10<sup>-7</sup> DELT= 1.11\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 52.0 SEC. J = 23  
TMAX= 5.5\*10<sup>-7</sup> TMIN= 3.0\*10<sup>-7</sup> DELT= 6.16\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

TIME: 52.0 SEC. J = 23  
TMAX= 6.3\*10<sup>-7</sup> TMIN= 3.7\*10<sup>-7</sup> DELT= 6.96\*10<sup>-3</sup> PCT= 10.0\*10<sup>-1</sup>

图3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

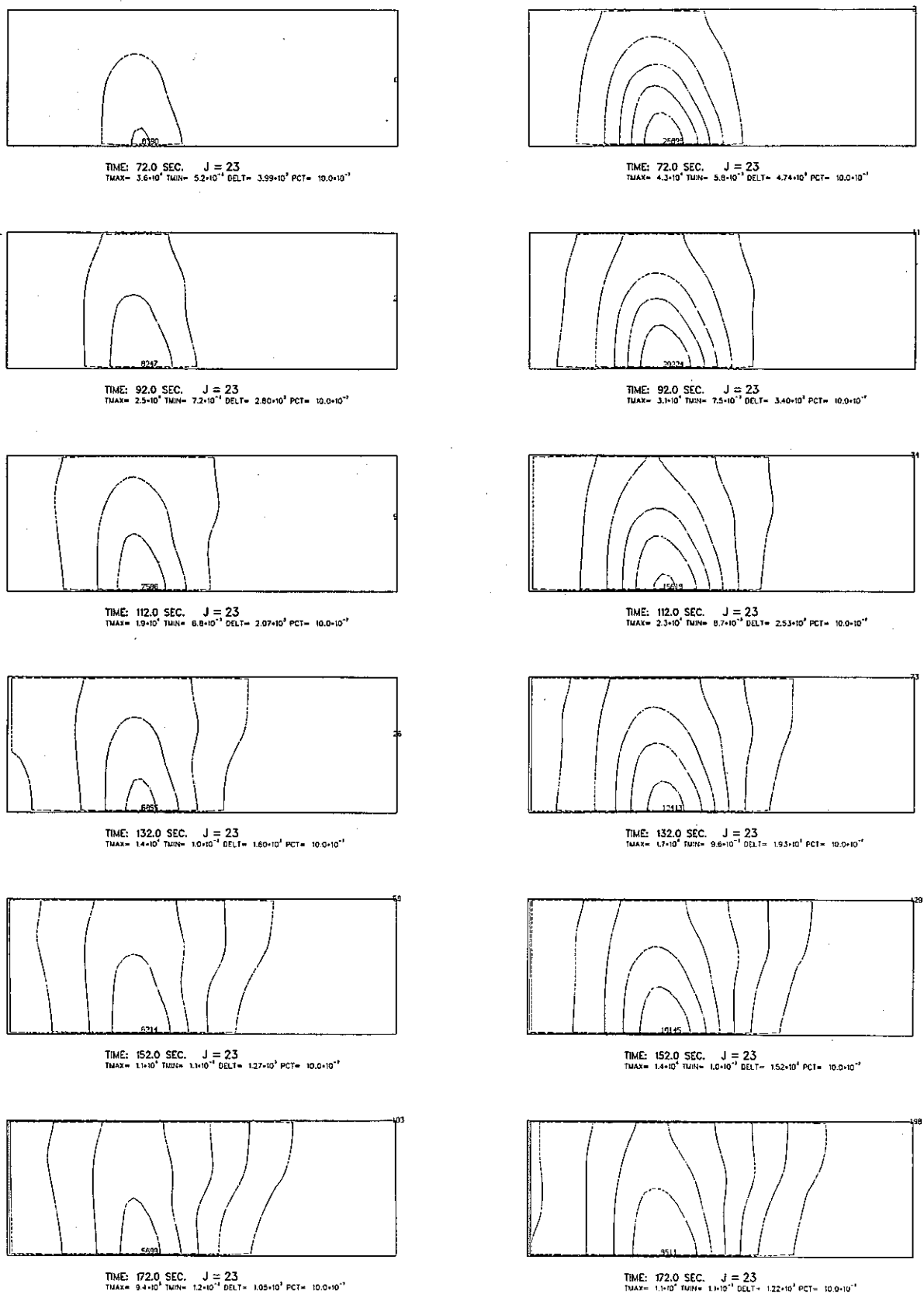


図3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

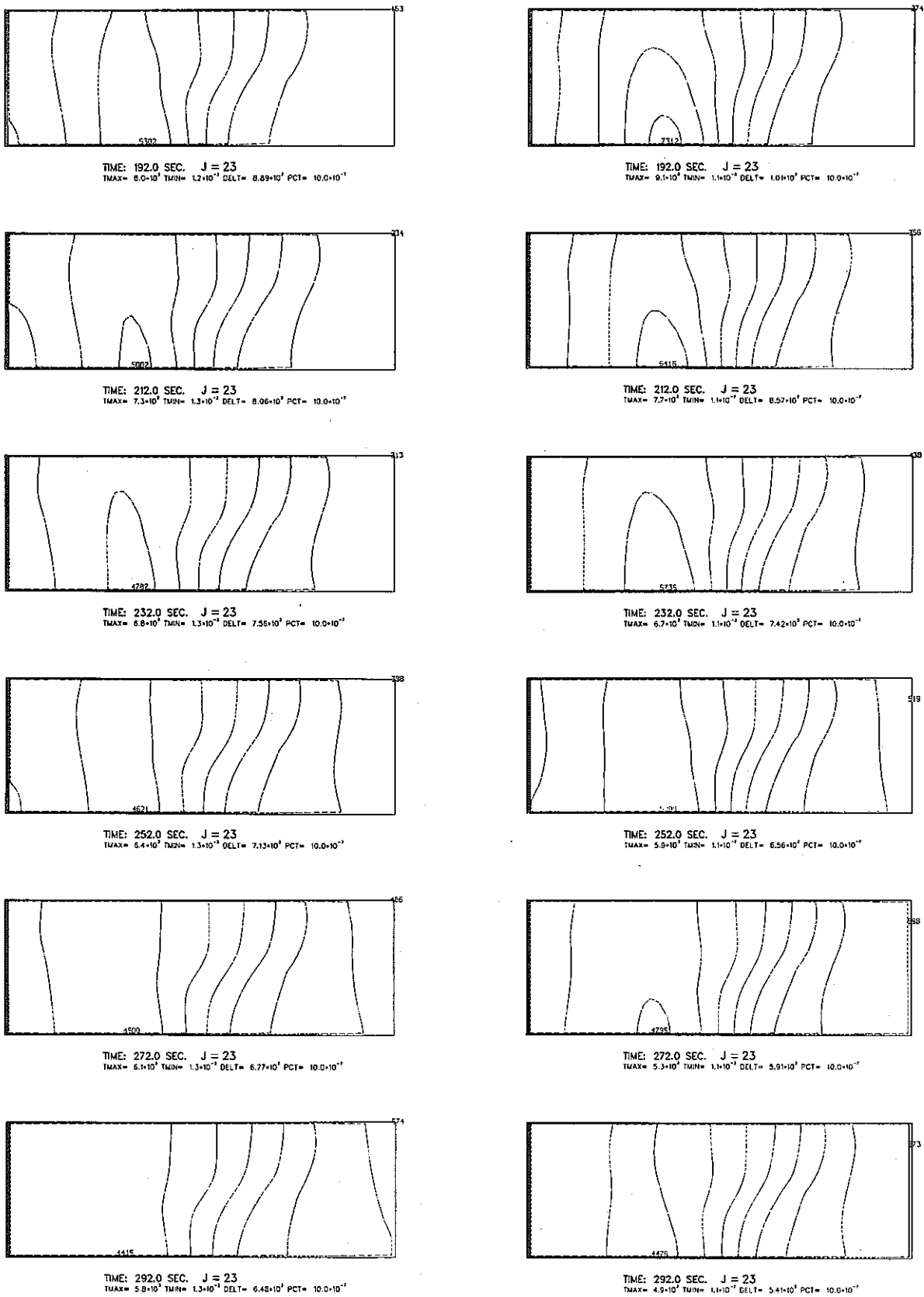
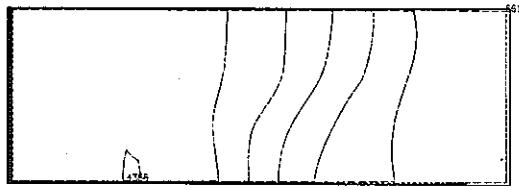
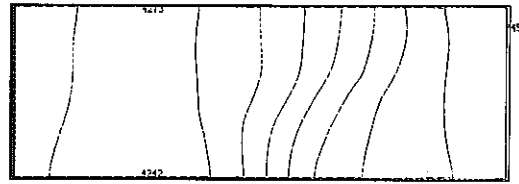


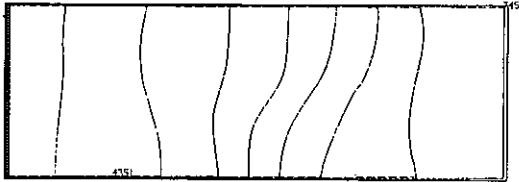
図3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)



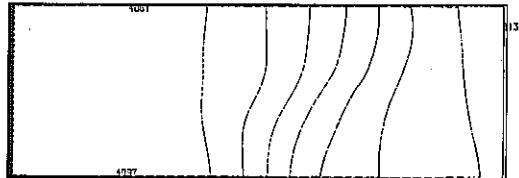
TIME: 312.0 SEC. J = 23  
 TMAX=  $5.6 \times 10^3$  TMIN=  $1.3 \times 10^{-2}$  DELT=  $6.23 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



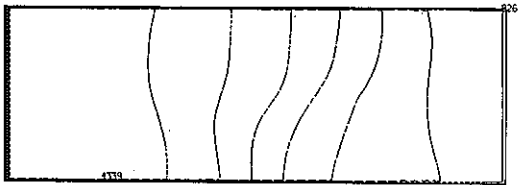
TIME: 312.0 SEC. J = 23  
 TMAX=  $4.5 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $5.02 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



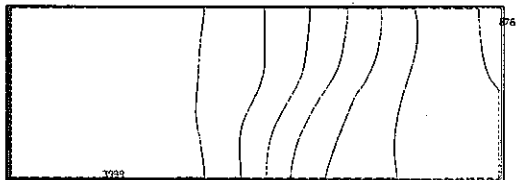
TIME: 332.0 SEC. J = 23  
 TMAX=  $5.4 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $6.03 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



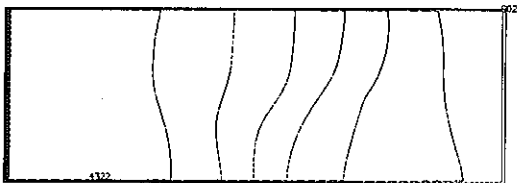
TIME: 332.0 SEC. J = 23  
 TMAX=  $4.2 \times 10^3$  TMIN=  $1.1 \times 10^{-2}$  DELT=  $4.72 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



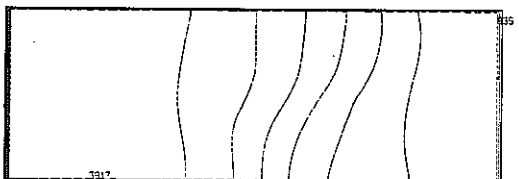
TIME: 352.0 SEC. J = 23  
 TMAX=  $5.3 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $5.96 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



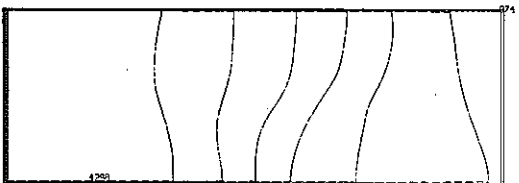
TIME: 352.0 SEC. J = 23  
 TMAX=  $4.1 \times 10^3$  TMIN=  $1.0 \times 10^{-2}$  DELT=  $4.53 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



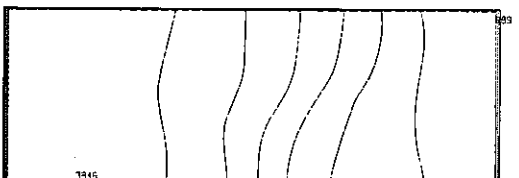
TIME: 372.0 SEC. J = 23  
 TMAX=  $5.1 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $5.71 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



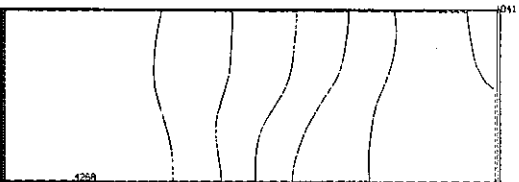
TIME: 372.0 SEC. J = 23  
 TMAX=  $4.0 \times 10^3$  TMIN=  $1.0 \times 10^{-2}$  DELT=  $4.45 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



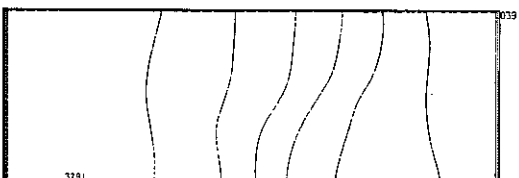
TIME: 392.0 SEC. J = 23  
 TMAX=  $5.0 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $5.56 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 392.0 SEC. J = 23  
 TMAX=  $3.9 \times 10^3$  TMIN=  $1.0 \times 10^{-2}$  DELT=  $4.39 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $4.9 \times 10^3$  TMIN=  $1.2 \times 10^{-2}$  DELT=  $5.43 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $3.9 \times 10^3$  TMIN=  $1.0 \times 10^{-2}$  DELT=  $4.33 \times 10^3$  PCT=  $10.0 \times 10^{-7}$

图3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

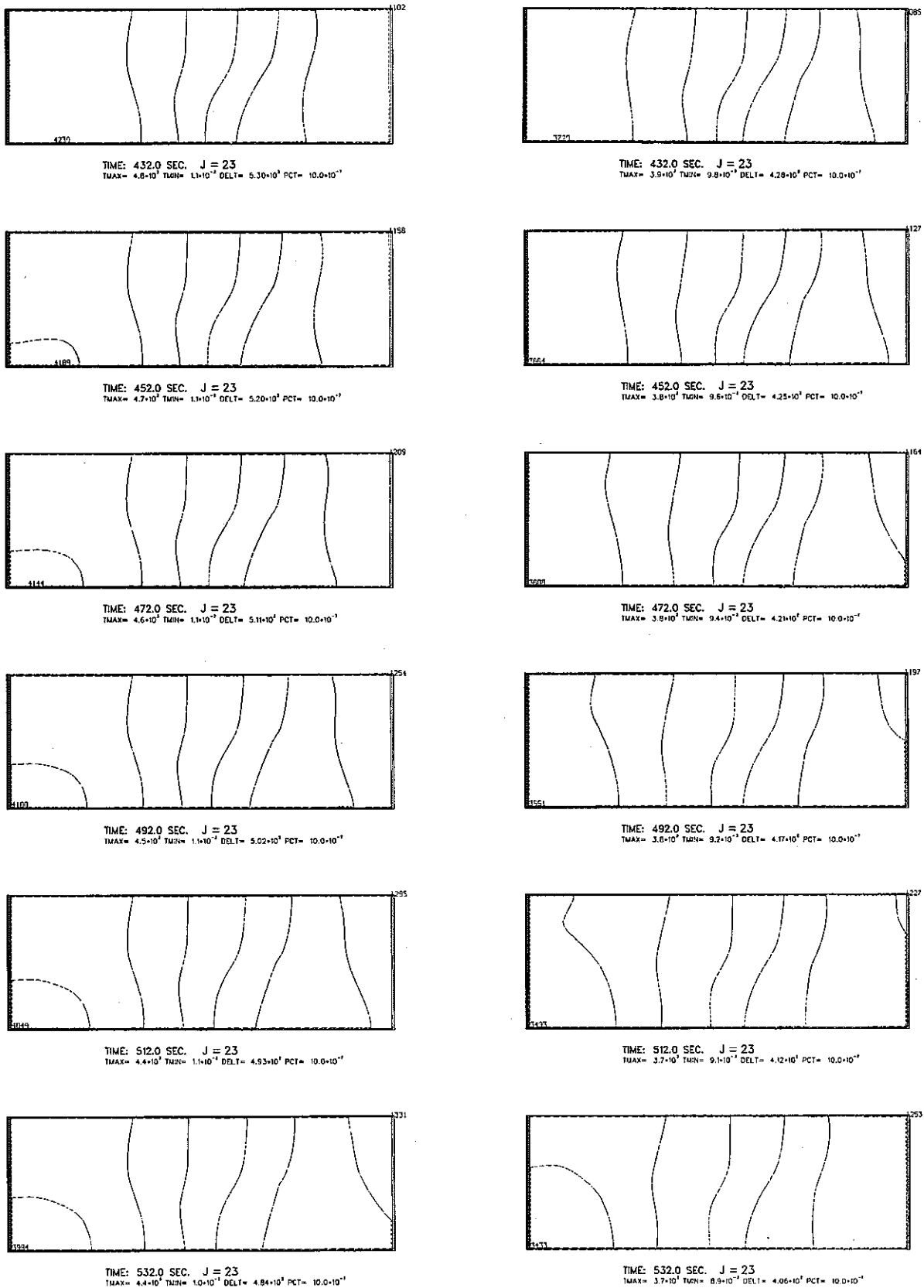
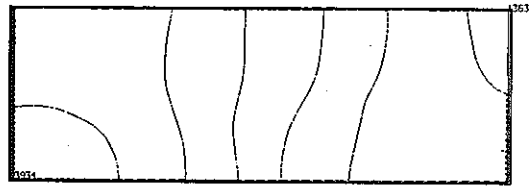
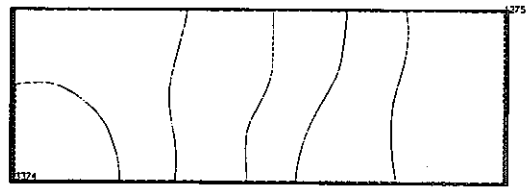


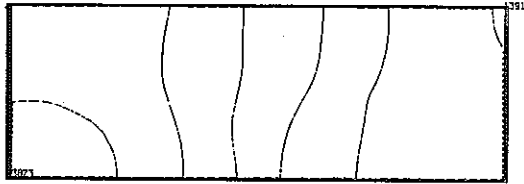
图3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)



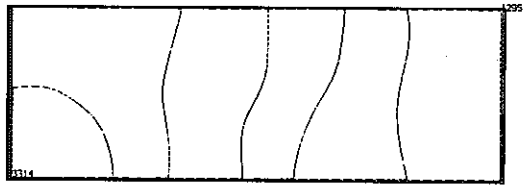
TIME: 552.0 SEC. J = 23  
 TMAX=  $4.3 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $4.75 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



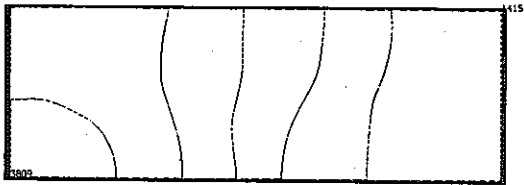
TIME: 552.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.7 \cdot 10^{-1}$  DELT=  $4.01 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



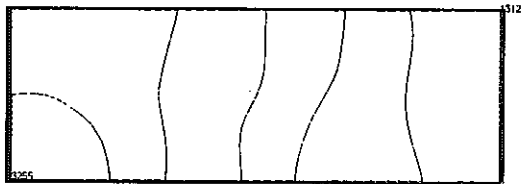
TIME: 572.0 SEC. J = 23  
 TMAX=  $4.2 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $4.66 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



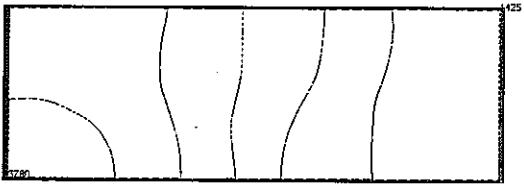
TIME: 572.0 SEC. J = 23  
 TMAX=  $3.6 \cdot 10^3$  TMIN=  $8.6 \cdot 10^{-1}$  DELT=  $3.95 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



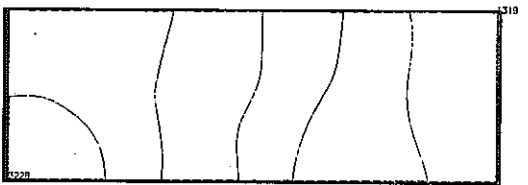
TIME: 592.0 SEC. J = 23  
 TMAX=  $4.1 \cdot 10^3$  TMIN=  $9.8 \cdot 10^{-1}$  DELT=  $4.57 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



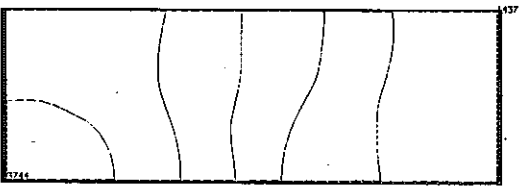
TIME: 592.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $8.4 \cdot 10^{-1}$  DELT=  $3.88 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



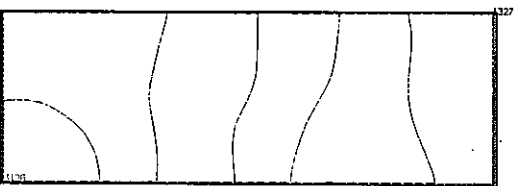
TIME: 601.0 SEC. J = 23  
 TMAX=  $4.1 \cdot 10^3$  TMIN=  $9.7 \cdot 10^{-1}$  DELT=  $4.53 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



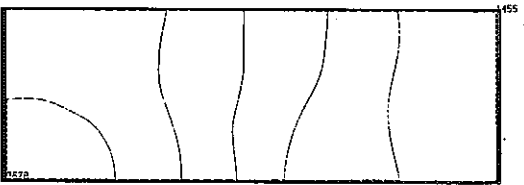
TIME: 601.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $8.3 \cdot 10^{-1}$  DELT=  $3.86 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



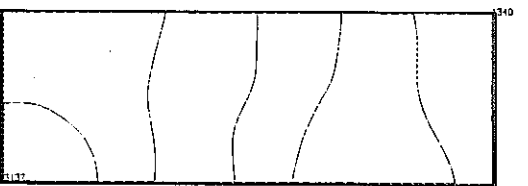
TIME: 612.0 SEC. J = 23  
 TMAX=  $4.0 \cdot 10^3$  TMIN=  $9.6 \cdot 10^{-1}$  DELT=  $4.48 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 612.0 SEC. J = 23  
 TMAX=  $3.4 \cdot 10^3$  TMIN=  $8.2 \cdot 10^{-1}$  DELT=  $3.82 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $4.0 \cdot 10^3$  TMIN=  $9.4 \cdot 10^{-1}$  DELT=  $4.39 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 632.0 SEC. J = 23  
 TMAX=  $3.4 \cdot 10^3$  TMIN=  $8.1 \cdot 10^{-1}$  DELT=  $3.76 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

图3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

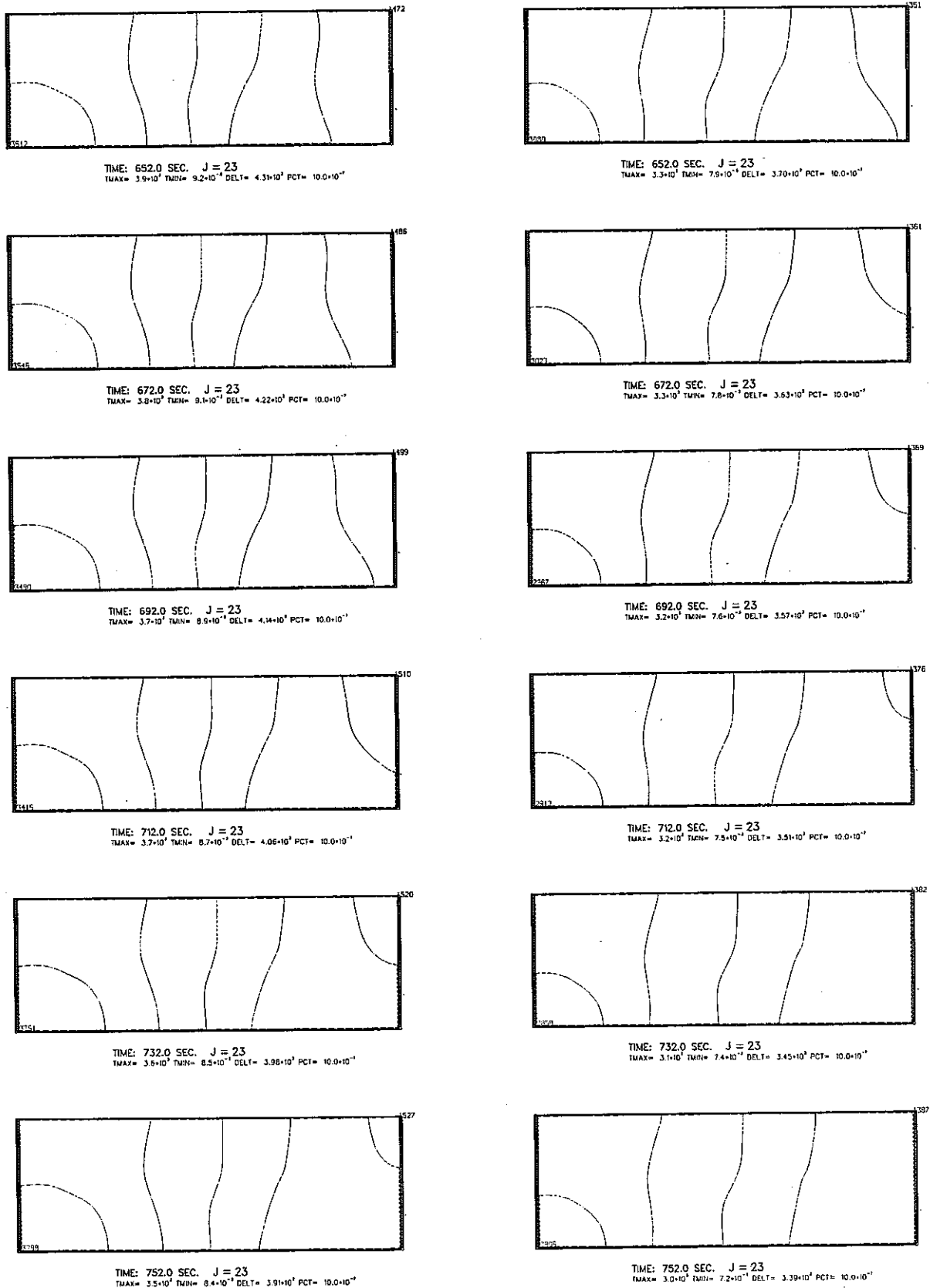


図 3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)



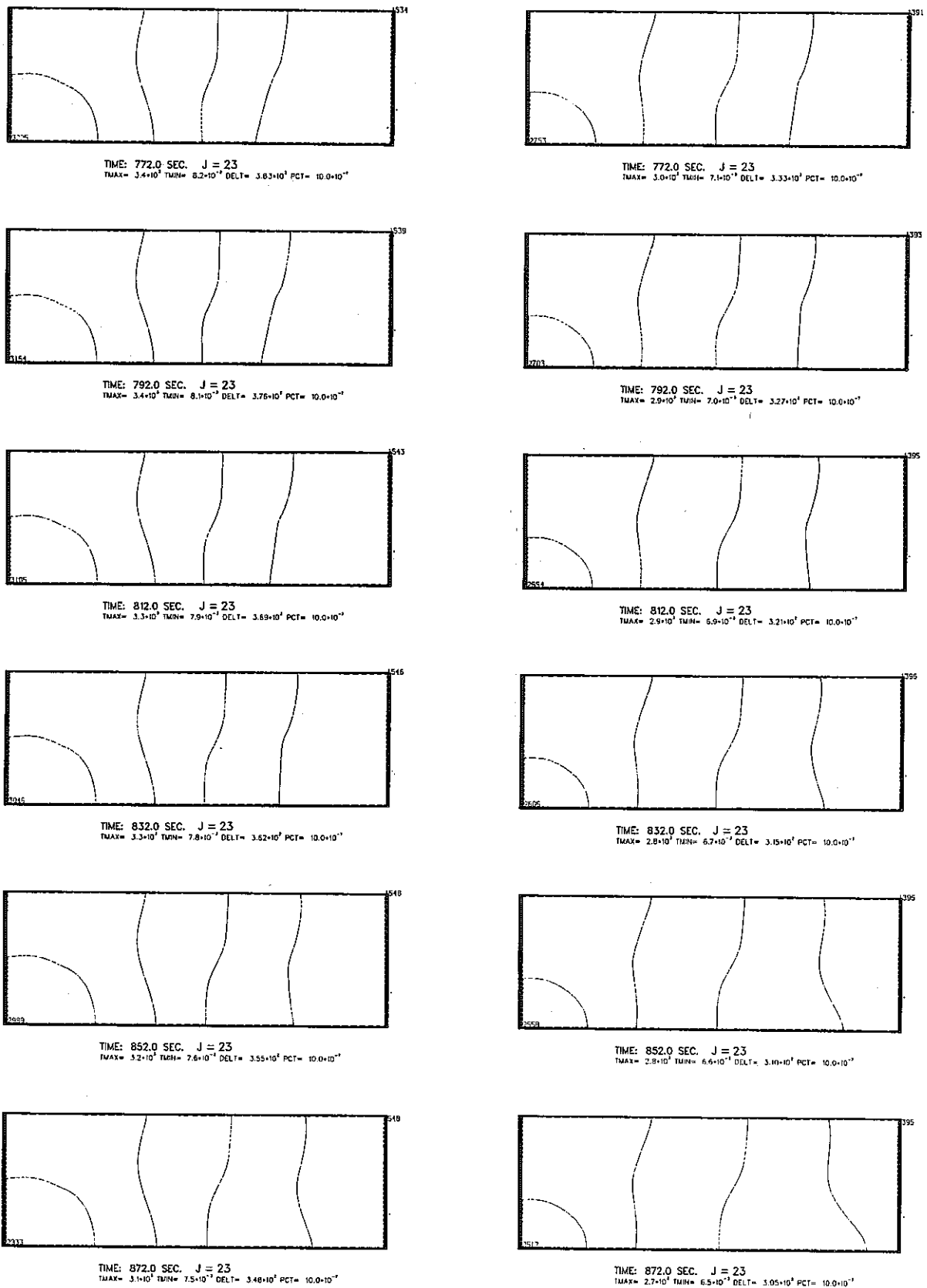


圖3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

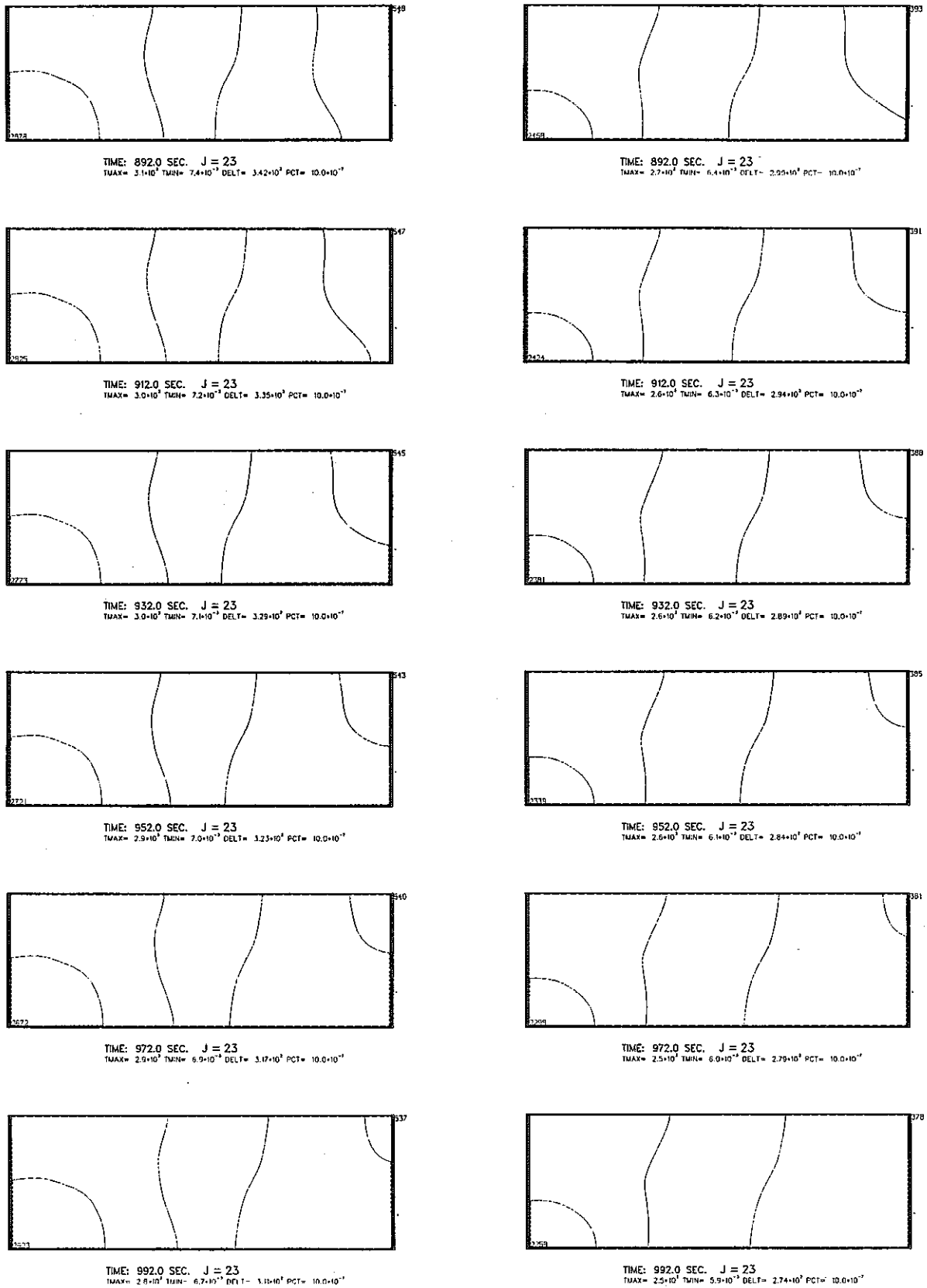


図3.15 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, J=23断面)

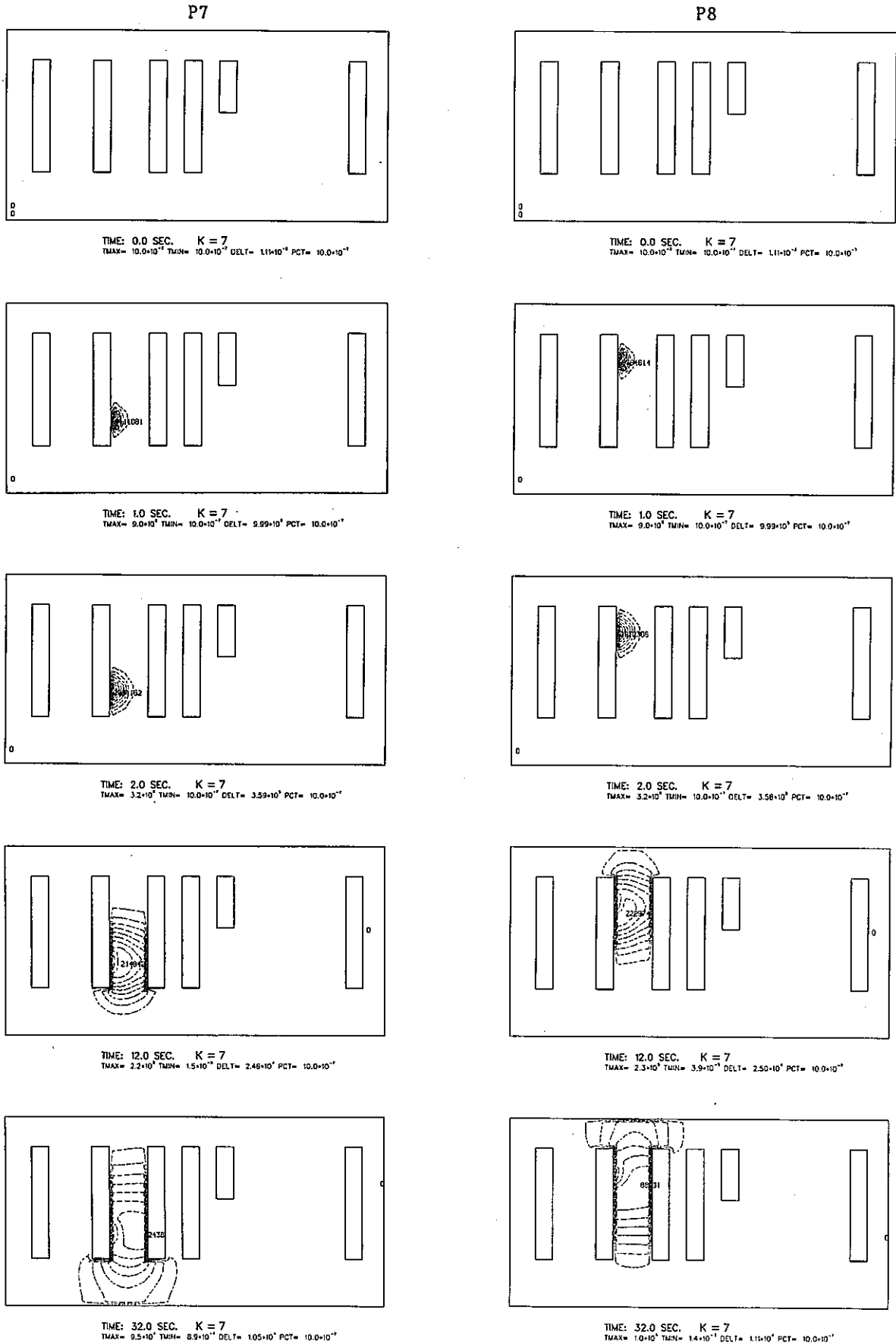


图3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K = 7 断面)

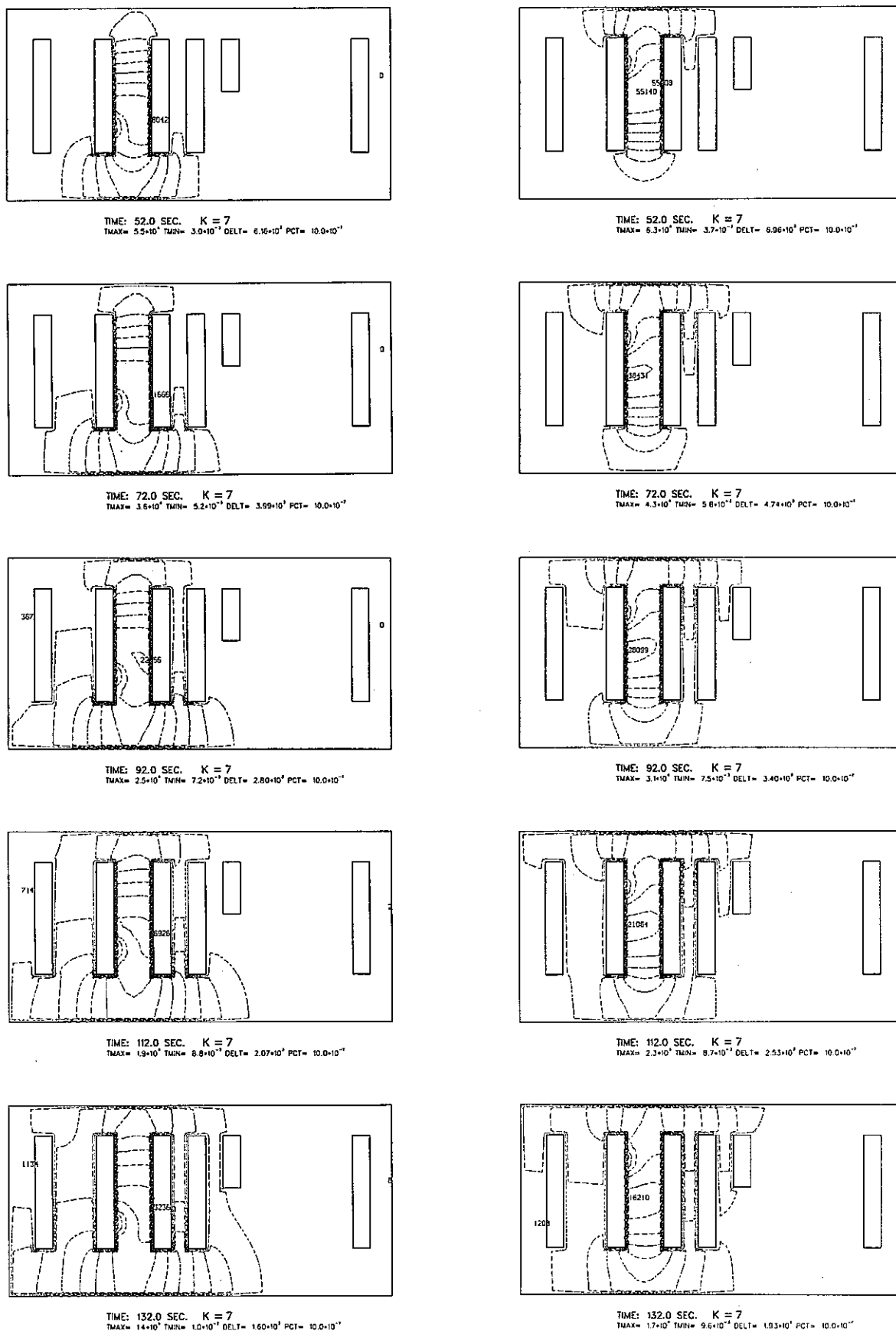


图3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)

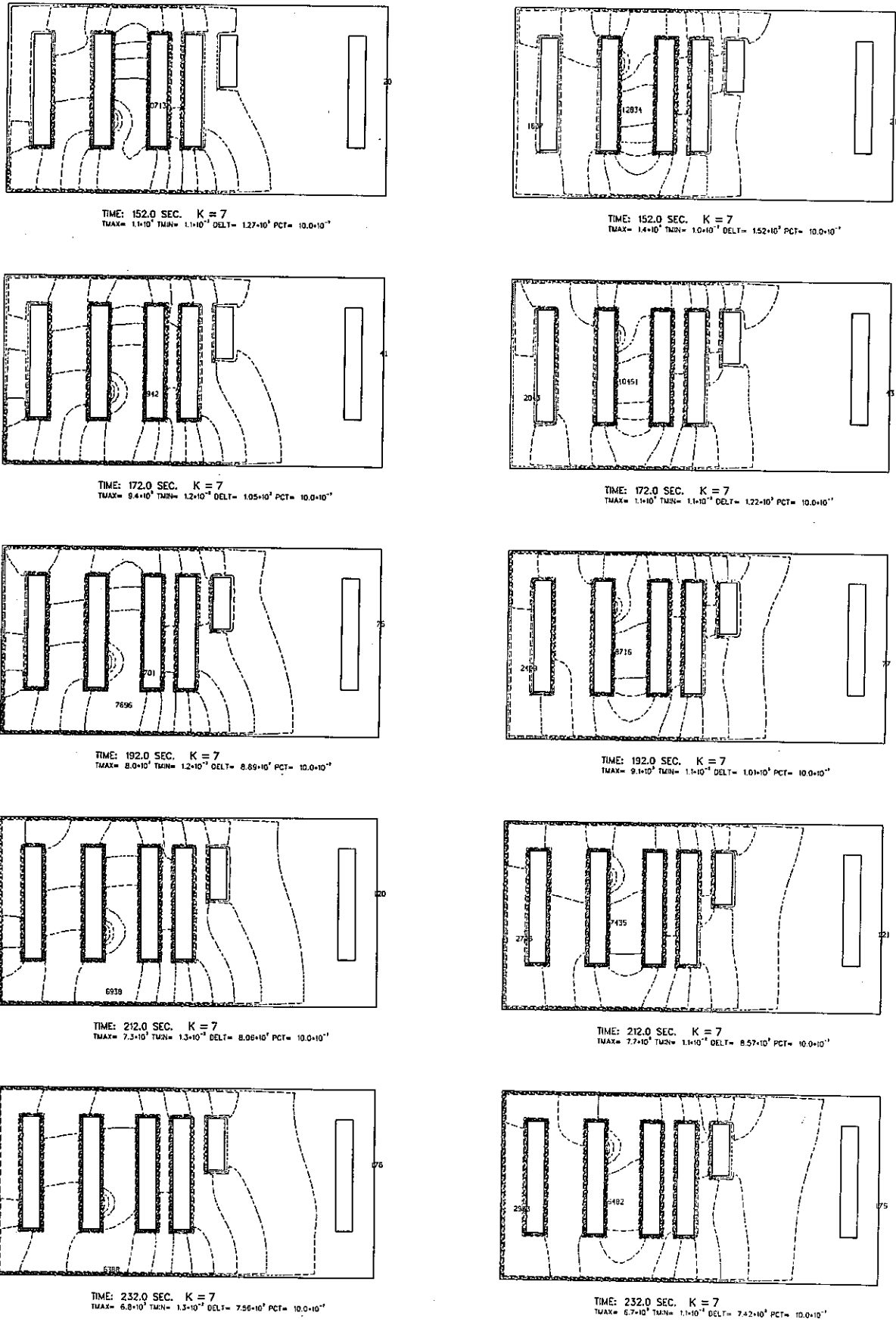


図3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)

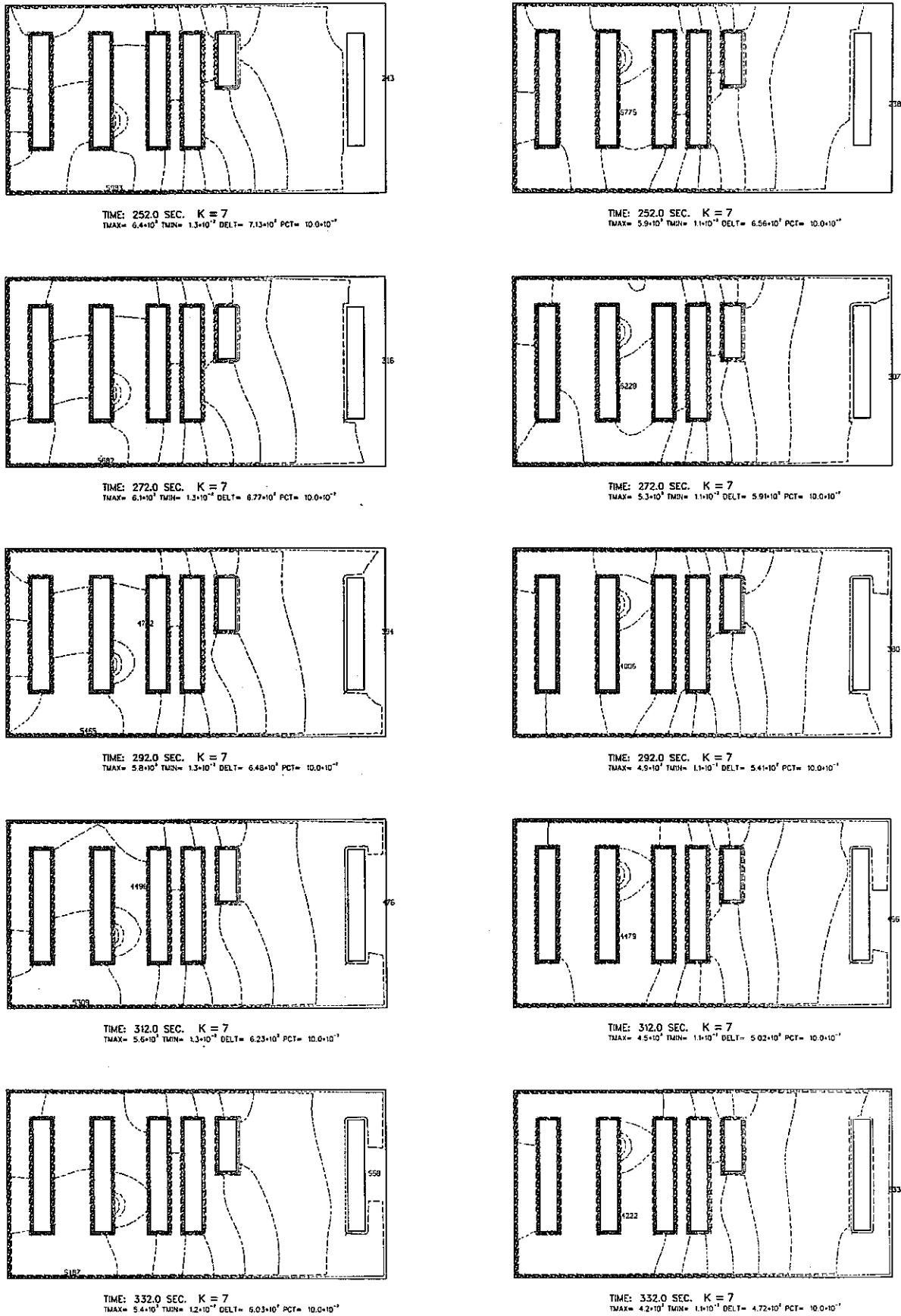
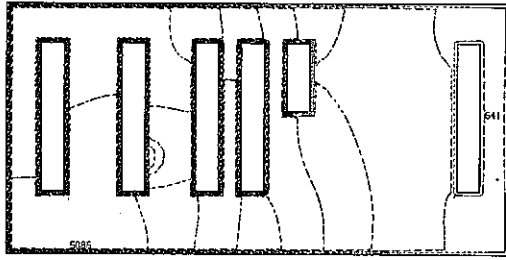
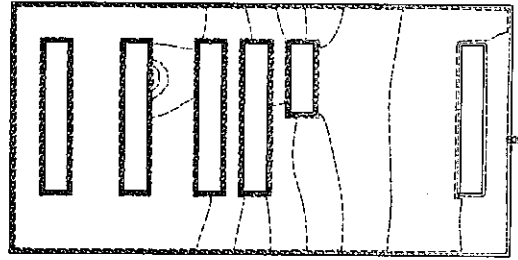


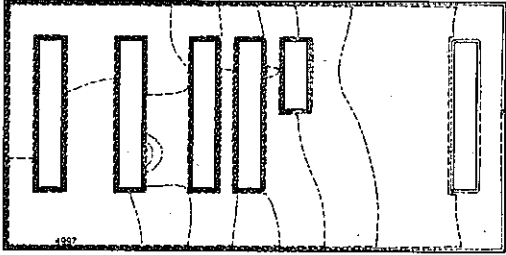
图3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)



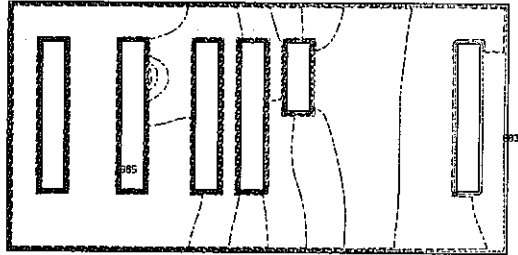
TIME: 352.0 SEC. K = 7  
 $T_{MAX} = 5.3 \times 10^7$   $T_{MIN} = 1.2 \times 10^{-1}$  DELT =  $5.85 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



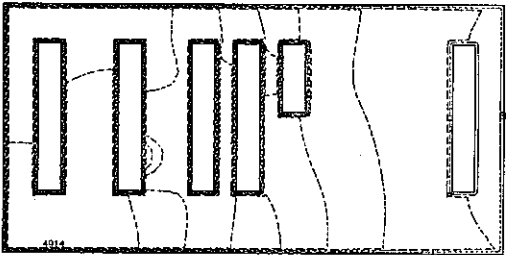
TIME: 352.0 SEC. K = 7  
 $T_{MAX} = 4.1 \times 10^7$   $T_{MIN} = 1.0 \times 10^{-1}$  DELT =  $4.53 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



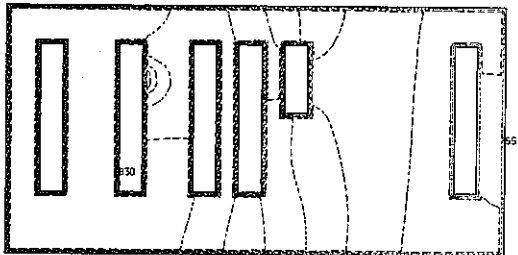
TIME: 372.0 SEC. K = 7  
 $T_{MAX} = 5.1 \times 10^7$   $T_{MIN} = 1.2 \times 10^{-1}$  DELT =  $5.71 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



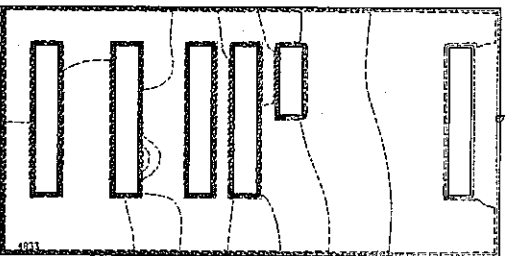
TIME: 372.0 SEC. K = 7  
 $T_{MAX} = 4.0 \times 10^7$   $T_{MIN} = 1.0 \times 10^{-1}$  DELT =  $4.45 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



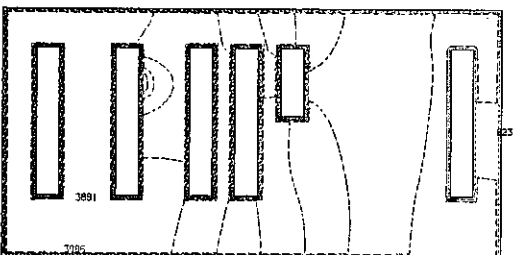
TIME: 392.0 SEC. K = 7  
 $T_{MAX} = 5.0 \times 10^7$   $T_{MIN} = 1.2 \times 10^{-1}$  DELT =  $5.56 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



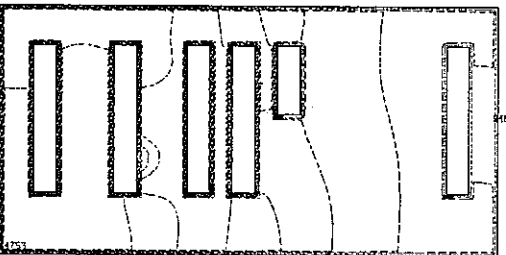
TIME: 392.0 SEC. K = 7  
 $T_{MAX} = 3.9 \times 10^7$   $T_{MIN} = 1.0 \times 10^{-1}$  DELT =  $4.39 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



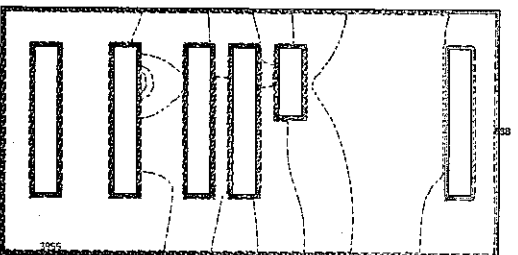
TIME: 412.0 SEC. K = 7  
 $T_{MAX} = 4.9 \times 10^7$   $T_{MIN} = 1.2 \times 10^{-1}$  DELT =  $5.43 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



TIME: 412.0 SEC. K = 7  
 $T_{MAX} = 3.9 \times 10^7$   $T_{MIN} = 1.0 \times 10^{-1}$  DELT =  $4.33 \times 10^7$  PCT =  $10.0 \times 10^{-7}$

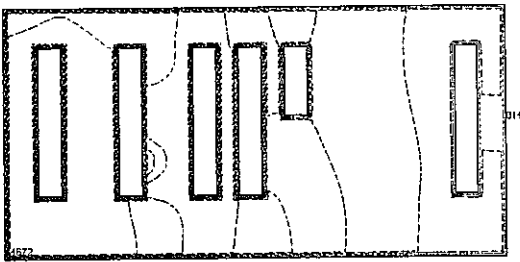


TIME: 432.0 SEC. K = 7  
 $T_{MAX} = 4.8 \times 10^7$   $T_{MIN} = 1.1 \times 10^{-1}$  DELT =  $5.30 \times 10^7$  PCT =  $10.0 \times 10^{-7}$

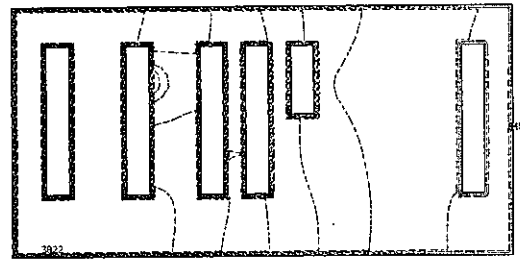


TIME: 432.0 SEC. K = 7  
 $T_{MAX} = 3.9 \times 10^7$   $T_{MIN} = 9.8 \times 10^{-1}$  DELT =  $4.28 \times 10^7$  PCT =  $10.0 \times 10^{-7}$

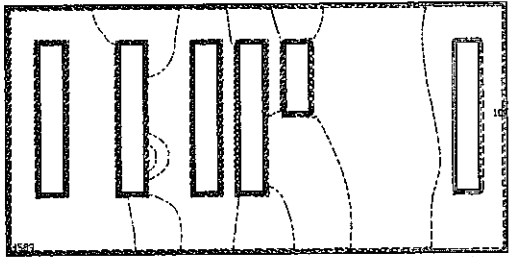
图 3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)



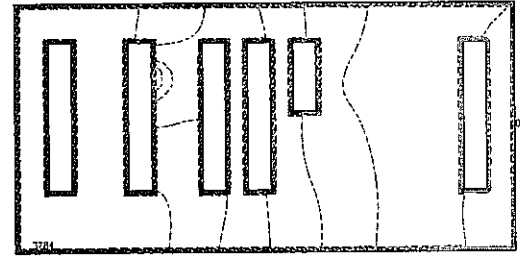
TIME: 452.0 SEC. K = 7  
 TMAX=  $4.7 \cdot 10^7$  TMIN=  $1.1 \cdot 10^7$  DELT=  $5.20 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



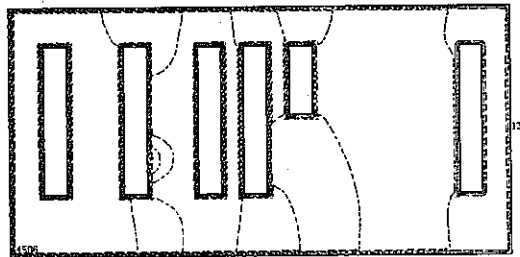
TIME: 452.0 SEC. K = 7  
 TMAX=  $3.9 \cdot 10^7$  TMIN=  $3.6 \cdot 10^7$  DELT=  $4.25 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



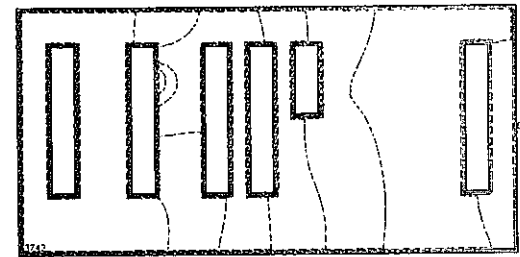
TIME: 472.0 SEC. K = 7  
 TMAX=  $4.6 \cdot 10^7$  TMIN=  $1.1 \cdot 10^7$  DELT=  $5.11 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



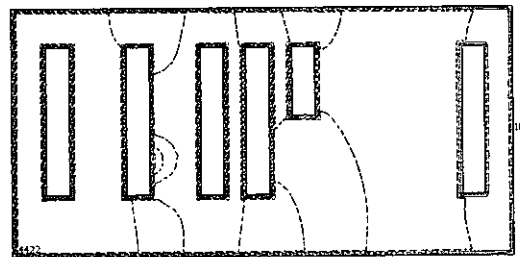
TIME: 472.0 SEC. K = 7  
 TMAX=  $3.8 \cdot 10^7$  TMIN=  $9.4 \cdot 10^6$  DELT=  $4.21 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



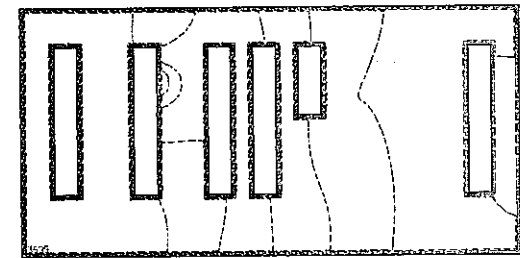
TIME: 492.0 SEC. K = 7  
 TMAX=  $4.5 \cdot 10^7$  TMIN=  $1.1 \cdot 10^7$  DELT=  $5.02 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



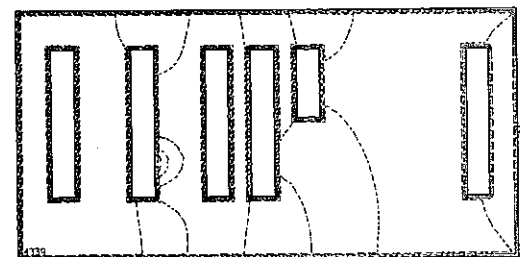
TIME: 492.0 SEC. K = 7  
 TMAX=  $3.8 \cdot 10^7$  TMIN=  $9.2 \cdot 10^6$  DELT=  $4.07 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



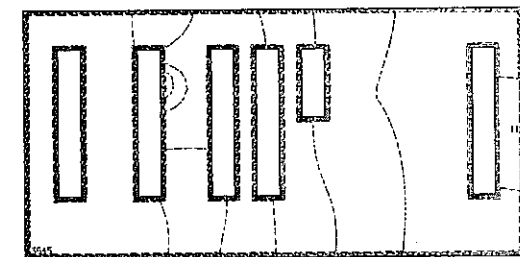
TIME: 512.0 SEC. K = 7  
 TMAX=  $4.4 \cdot 10^7$  TMIN=  $1.1 \cdot 10^7$  DELT=  $4.93 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 512.0 SEC. K = 7  
 TMAX=  $3.7 \cdot 10^7$  TMIN=  $9.1 \cdot 10^6$  DELT=  $4.12 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



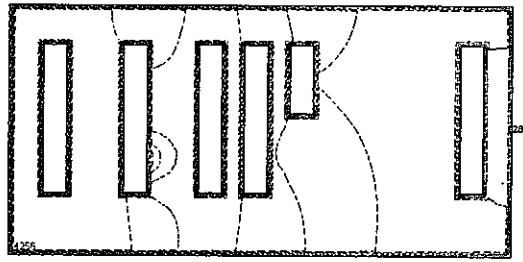
TIME: 532.0 SEC. K = 7  
 TMAX=  $4.4 \cdot 10^7$  TMIN=  $1.0 \cdot 10^7$  DELT=  $4.84 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



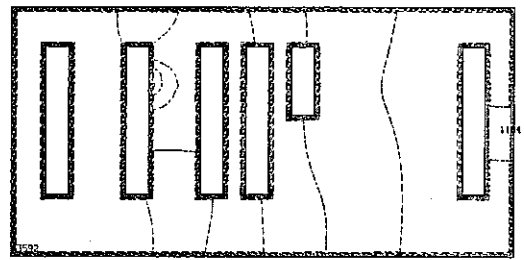
TIME: 532.0 SEC. K = 7  
 TMAX=  $3.7 \cdot 10^7$  TMIN=  $8.9 \cdot 10^6$  DELT=  $4.06 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

图3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)

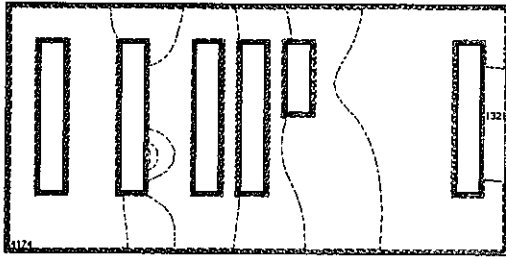




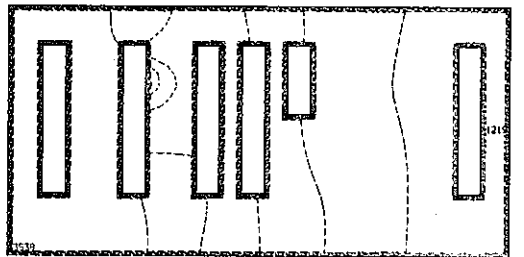
TIME: 552.0 SEC. K = 7  
 $T_{MAX} = 4.3 \cdot 10^7$   $T_{MIN} = 1.0 \cdot 10^{-7}$  DELT =  $4.75 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



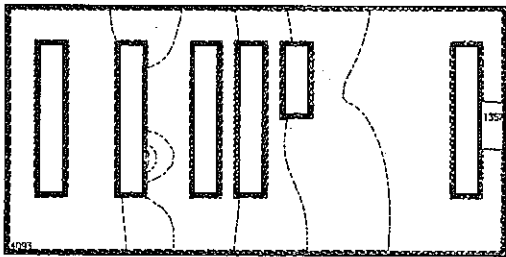
TIME: 552.0 SEC. K = 7  
 $T_{MAX} = 3.6 \cdot 10^7$   $T_{MIN} = 8.7 \cdot 10^{-7}$  DELT =  $4.0 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



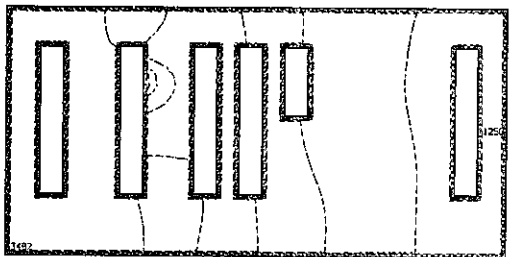
TIME: 572.0 SEC. K = 7  
 $T_{MAX} = 4.2 \cdot 10^7$   $T_{MIN} = 1.0 \cdot 10^{-7}$  DELT =  $4.66 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



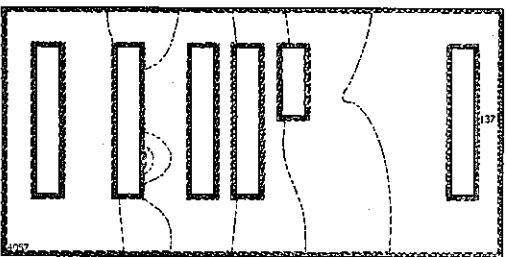
TIME: 572.0 SEC. K = 7  
 $T_{MAX} = 3.6 \cdot 10^7$   $T_{MIN} = 8.6 \cdot 10^{-7}$  DELT =  $3.95 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



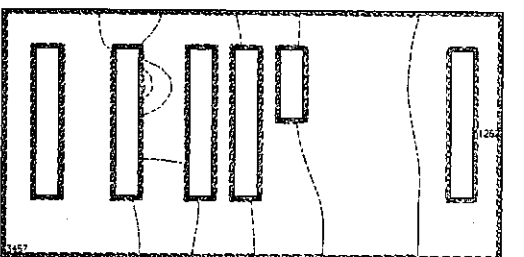
TIME: 592.0 SEC. K = 7  
 $T_{MAX} = 4.1 \cdot 10^7$   $T_{MIN} = 9.8 \cdot 10^{-7}$  DELT =  $4.57 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



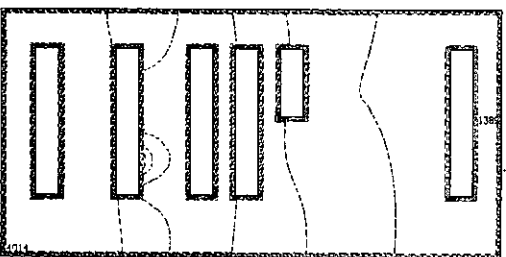
TIME: 592.0 SEC. K = 7  
 $T_{MAX} = 3.5 \cdot 10^7$   $T_{MIN} = 8.4 \cdot 10^{-7}$  DELT =  $3.88 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



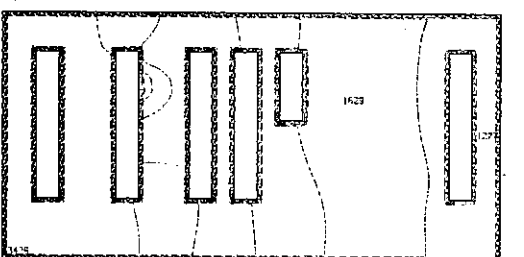
TIME: 601.0 SEC. K = 7  
 $T_{MAX} = 4.1 \cdot 10^7$   $T_{MIN} = 9.7 \cdot 10^{-7}$  DELT =  $4.53 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 601.0 SEC. K = 7  
 $T_{MAX} = 3.5 \cdot 10^7$   $T_{MIN} = 8.3 \cdot 10^{-7}$  DELT =  $3.86 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 612.0 SEC. K = 7  
 $T_{MAX} = 4.0 \cdot 10^7$   $T_{MIN} = 9.6 \cdot 10^{-7}$  DELT =  $4.48 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$



TIME: 612.0 SEC. K = 7  
 $T_{MAX} = 3.4 \cdot 10^7$   $T_{MIN} = 8.2 \cdot 10^{-7}$  DELT =  $3.82 \cdot 10^7$  PCT =  $10.0 \cdot 10^{-7}$

图3.16 放射性物质漏洩时浓度过度分布 (破损箇所P7, P8, K=7 断面)

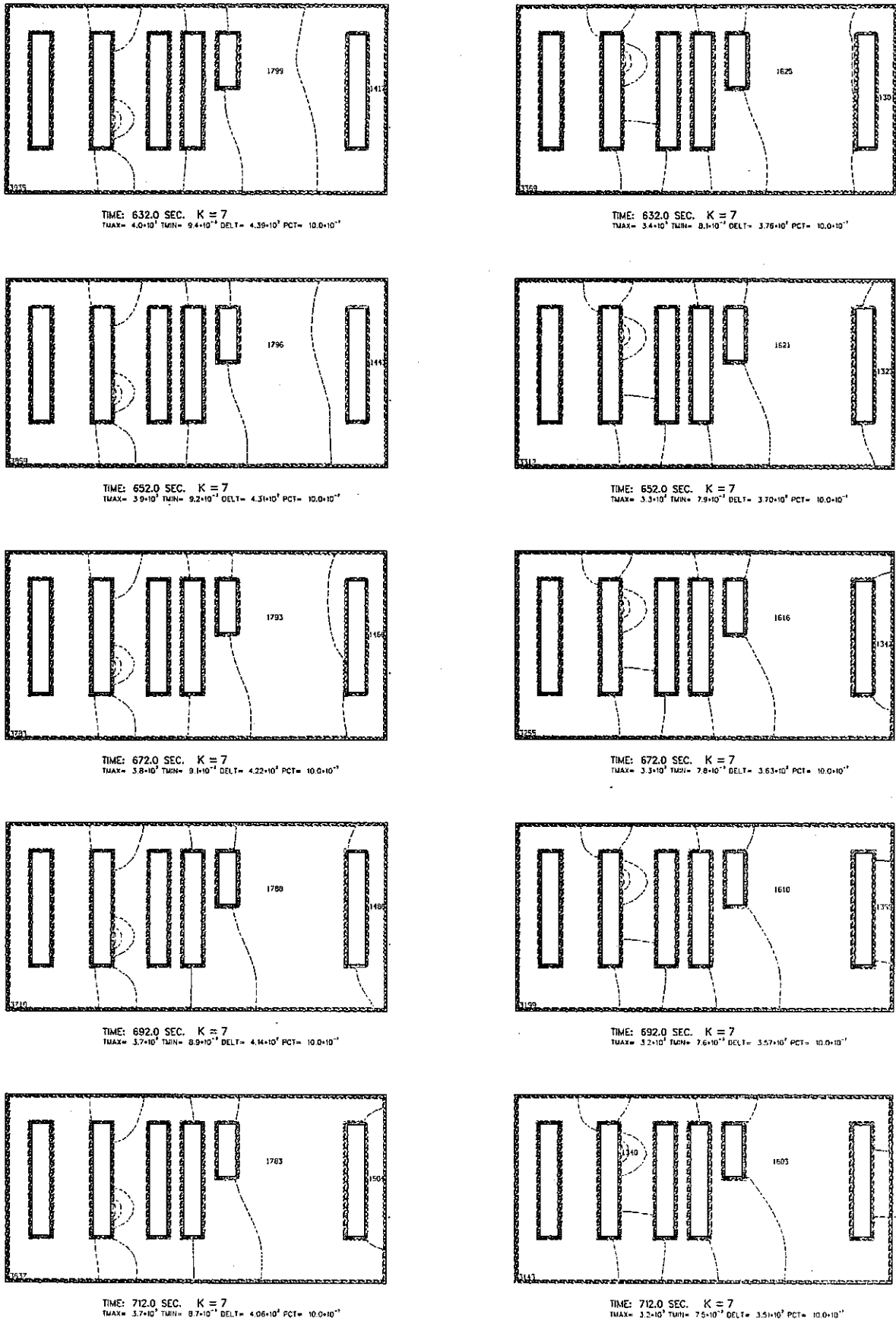
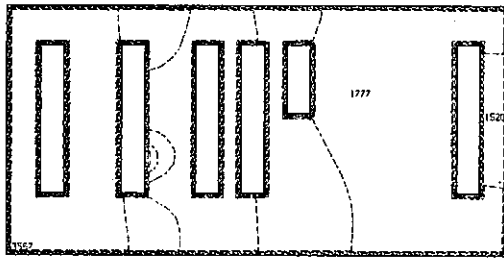
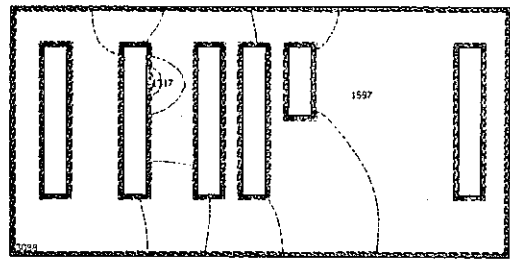


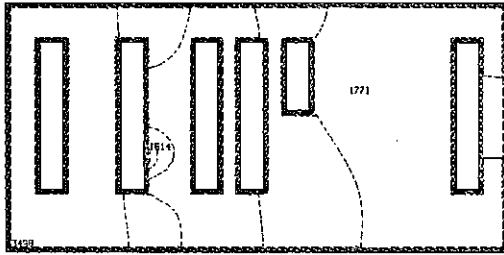
図3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K= 7 断面)



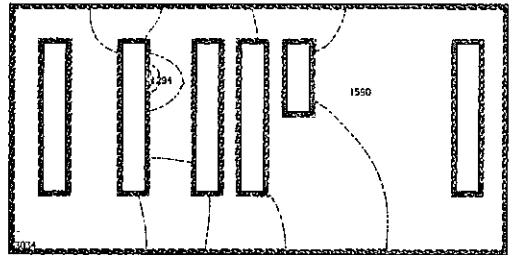
TIME: 732.0 SEC. K = 7  
 TMAX =  $3.6 \times 10^3$  TMIN =  $8.5 \times 10^{-1}$  DELT =  $3.68 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



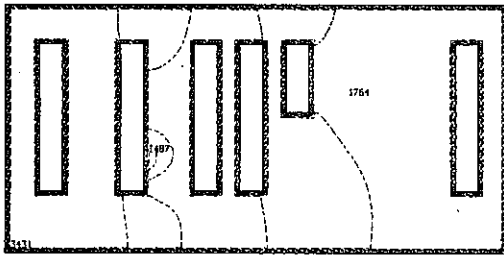
TIME: 732.0 SEC. K = 7  
 TMAX =  $3.1 \times 10^3$  TMIN =  $7.4 \times 10^{-1}$  DELT =  $3.45 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



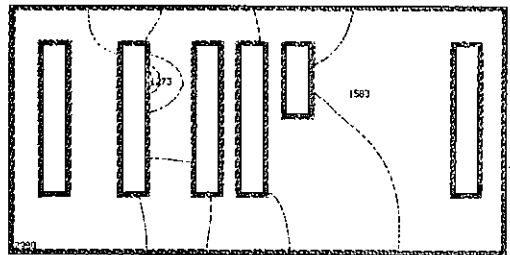
TIME: 752.0 SEC. K = 7  
 TMAX =  $3.5 \times 10^3$  TMIN =  $8.4 \times 10^{-1}$  DELT =  $3.91 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



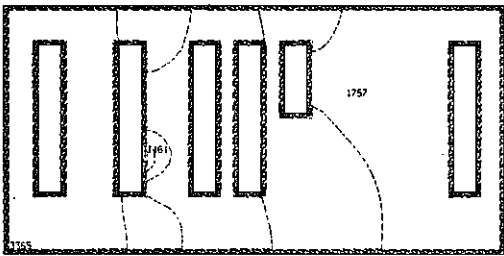
TIME: 752.0 SEC. K = 7  
 TMAX =  $3.0 \times 10^3$  TMIN =  $7.2 \times 10^{-1}$  DELT =  $3.39 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



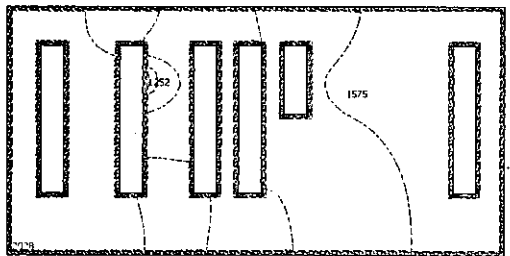
TIME: 772.0 SEC. K = 7  
 TMAX =  $3.4 \times 10^3$  TMIN =  $8.2 \times 10^{-1}$  DELT =  $3.83 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



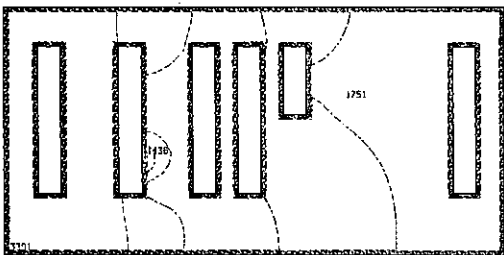
TIME: 772.0 SEC. K = 7  
 TMAX =  $3.0 \times 10^3$  TMIN =  $7.1 \times 10^{-1}$  DELT =  $3.33 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



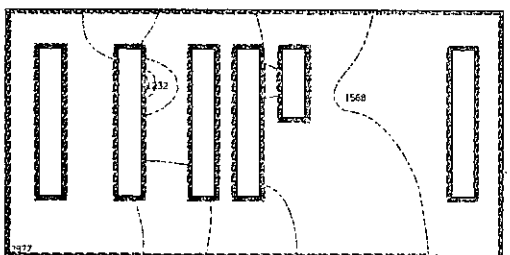
TIME: 792.0 SEC. K = 7  
 TMAX =  $3.4 \times 10^3$  TMIN =  $8.1 \times 10^{-1}$  DELT =  $3.76 \times 10^3$  PCT =  $10.0 \times 10^{-1}$



TIME: 792.0 SEC. K = 7  
 TMAX =  $2.9 \times 10^3$  TMIN =  $7.0 \times 10^{-1}$  DELT =  $3.27 \times 10^3$  PCT =  $10.0 \times 10^{-1}$

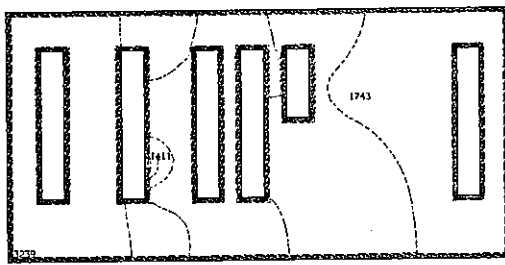


TIME: 812.0 SEC. K = 7  
 TMAX =  $3.3 \times 10^3$  TMIN =  $7.9 \times 10^{-1}$  DELT =  $3.69 \times 10^3$  PCT =  $10.0 \times 10^{-1}$

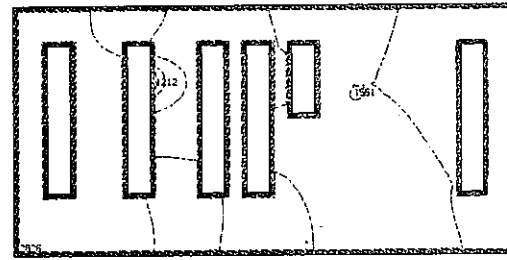


TIME: 812.0 SEC. K = 7  
 TMAX =  $2.9 \times 10^3$  TMIN =  $6.9 \times 10^{-1}$  DELT =  $3.21 \times 10^3$  PCT =  $10.0 \times 10^{-1}$

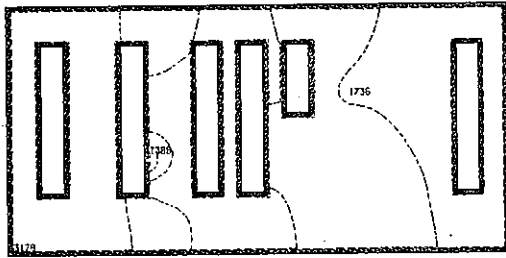
図3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)



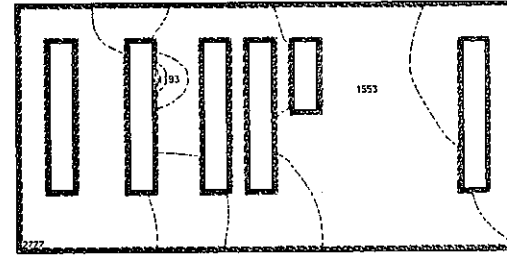
TIME: 832.0 SEC. K = 7  
 $T_{MAX} = 3.3 \cdot 10^3$   $T_{MIN} = 7.6 \cdot 10^{-2}$  DELT =  $3.62 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



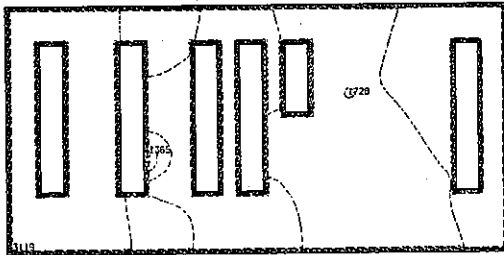
TIME: 832.0 SEC. K = 7  
 $T_{MAX} = 2.8 \cdot 10^3$   $T_{MIN} = 6.7 \cdot 10^{-2}$  DELT =  $3.15 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



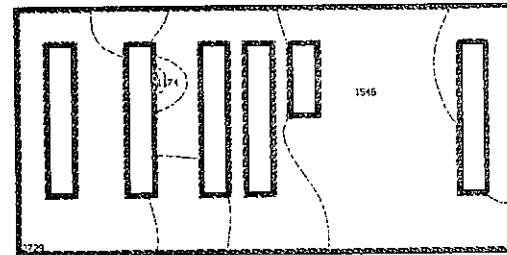
TIME: 852.0 SEC. K = 7  
 $T_{MAX} = 3.2 \cdot 10^3$   $T_{MIN} = 7.6 \cdot 10^{-2}$  DELT =  $3.55 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



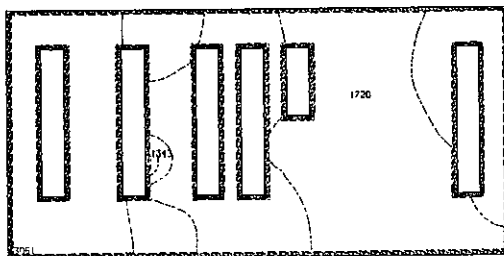
TIME: 852.0 SEC. K = 7  
 $T_{MAX} = 2.8 \cdot 10^3$   $T_{MIN} = 6.6 \cdot 10^{-2}$  DELT =  $3.10 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



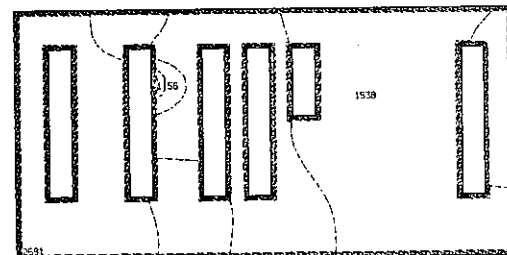
TIME: 872.0 SEC. K = 7  
 $T_{MAX} = 3.1 \cdot 10^3$   $T_{MIN} = 7.5 \cdot 10^{-2}$  DELT =  $3.48 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



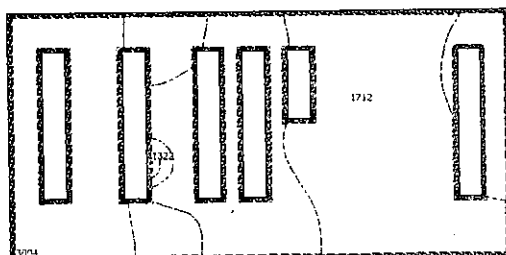
TIME: 872.0 SEC. K = 7  
 $T_{MAX} = 2.7 \cdot 10^3$   $T_{MIN} = 6.5 \cdot 10^{-2}$  DELT =  $3.05 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



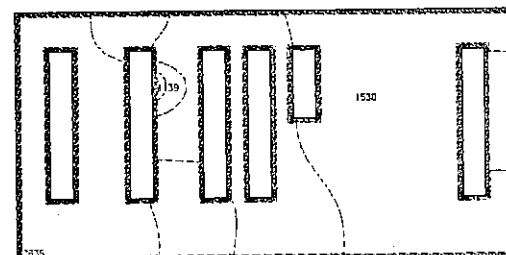
TIME: 892.0 SEC. K = 7  
 $T_{MAX} = 3.1 \cdot 10^3$   $T_{MIN} = 7.4 \cdot 10^{-2}$  DELT =  $3.42 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



TIME: 892.0 SEC. K = 7  
 $T_{MAX} = 2.7 \cdot 10^3$   $T_{MIN} = 6.4 \cdot 10^{-2}$  DELT =  $2.99 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

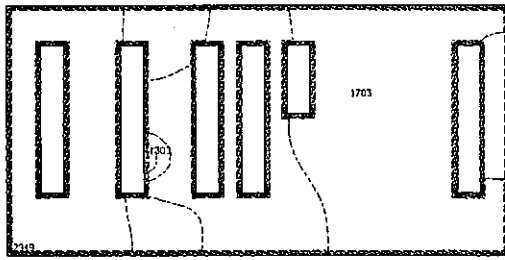


TIME: 912.0 SEC. K = 7  
 $T_{MAX} = 3.0 \cdot 10^3$   $T_{MIN} = 7.2 \cdot 10^{-2}$  DELT =  $3.35 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

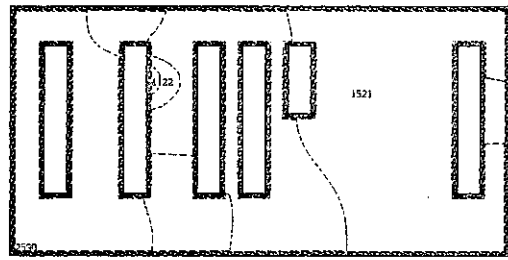


TIME: 912.0 SEC. K = 7  
 $T_{MAX} = 2.6 \cdot 10^3$   $T_{MIN} = 6.3 \cdot 10^{-2}$  DELT =  $2.94 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

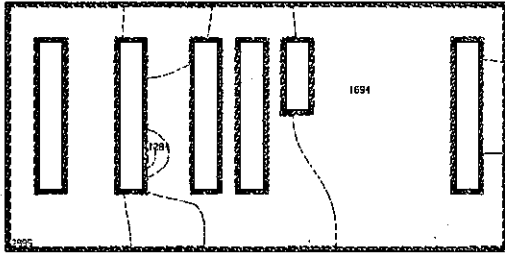
図3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)



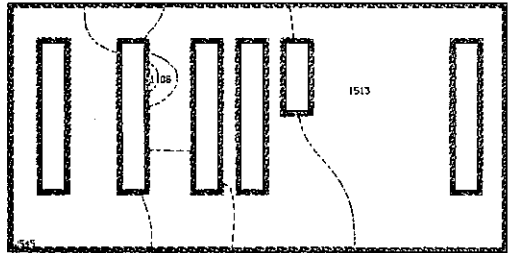
TIME: 932.0 SEC. K = 7  
 TMAX=  $3.0 \cdot 10^3$  TMIN=  $7.1 \cdot 10^{-1}$  DELT=  $3.29 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



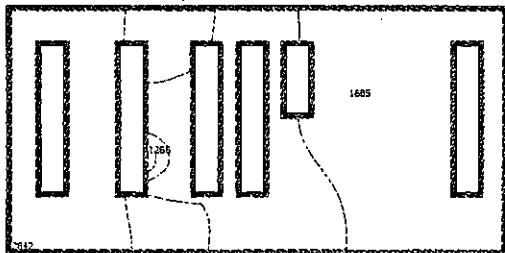
TIME: 932.0 SEC. K = 7  
 TMAX=  $2.6 \cdot 10^3$  TMIN=  $6.2 \cdot 10^{-1}$  DELT=  $2.89 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



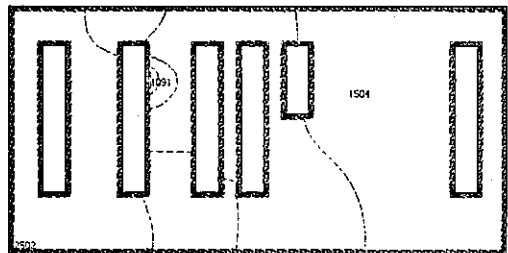
TIME: 952.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^3$  TMIN=  $7.0 \cdot 10^{-1}$  DELT=  $3.23 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



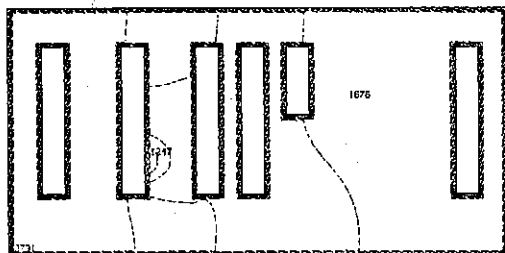
TIME: 952.0 SEC. K = 7  
 TMAX=  $2.6 \cdot 10^3$  TMIN=  $6.4 \cdot 10^{-1}$  DELT=  $2.84 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



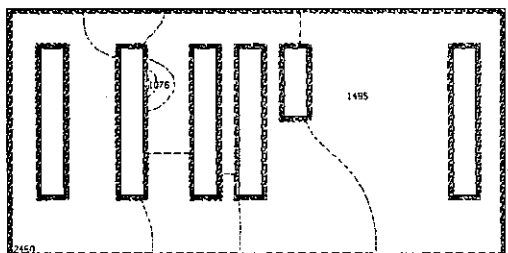
TIME: 972.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^3$  TMIN=  $6.9 \cdot 10^{-1}$  DELT=  $3.17 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



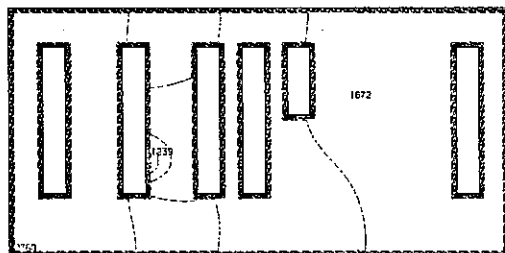
TIME: 972.0 SEC. K = 7  
 TMAX=  $2.5 \cdot 10^3$  TMIN=  $6.0 \cdot 10^{-1}$  DELT=  $2.79 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



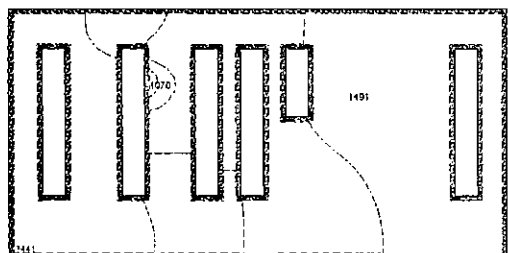
TIME: 992.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^3$  TMIN=  $6.7 \cdot 10^{-1}$  DELT=  $3.11 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 992.0 SEC. K = 7  
 TMAX=  $2.5 \cdot 10^3$  TMIN=  $5.9 \cdot 10^{-1}$  DELT=  $2.74 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 1001.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^3$  TMIN=  $6.7 \cdot 10^{-1}$  DELT=  $3.09 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

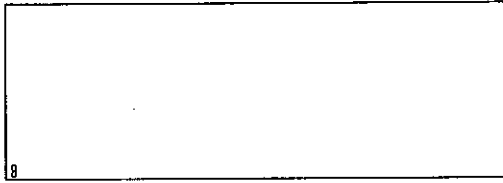


TIME: 1001.0 SEC. K = 7  
 TMAX=  $2.5 \cdot 10^3$  TMIN=  $5.8 \cdot 10^{-1}$  DELT=  $2.72 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

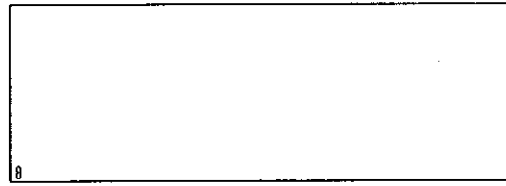
図3.16 放射性物質漏洩時濃度過度分布 (破損箇所P7, P8, K=7 断面)

P9

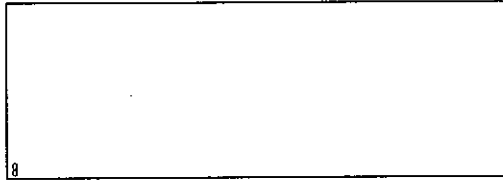
P10



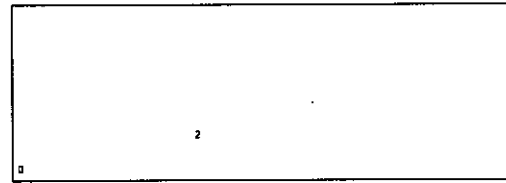
TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



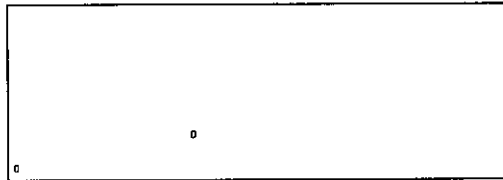
TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



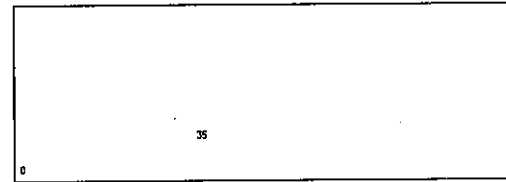
TIME: 1.0 SEC. J = 23  
 TMAX=  $3.4 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.75 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



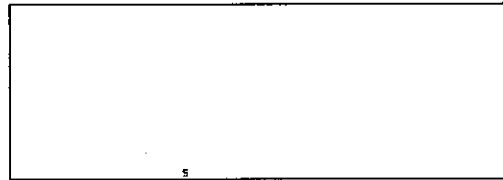
TIME: 1.0 SEC. J = 23  
 TMAX=  $3.4 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.72 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



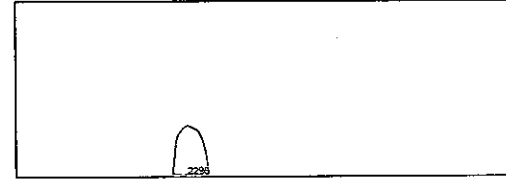
TIME: 2.0 SEC. J = 23  
 TMAX=  $1.7 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.88 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



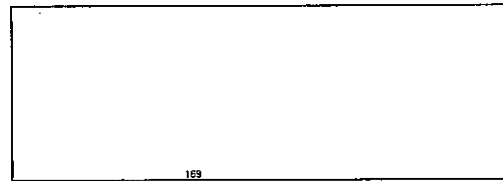
TIME: 2.0 SEC. J = 23  
 TMAX=  $1.7 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.85 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



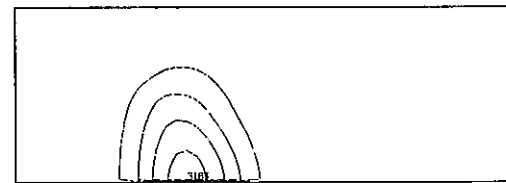
TIME: 12.0 SEC. J = 23  
 TMAX=  $1.7 \times 10^{-7}$  TMIN=  $1.1 \times 10^{-7}$  DELT=  $1.84 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



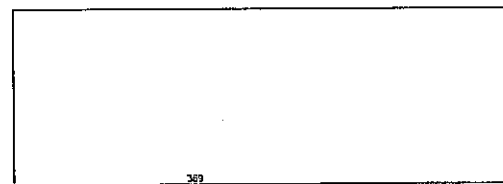
TIME: 12.0 SEC. J = 23  
 TMAX=  $1.6 \times 10^{-7}$  TMIN=  $1.3 \times 10^{-7}$  DELT=  $1.83 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



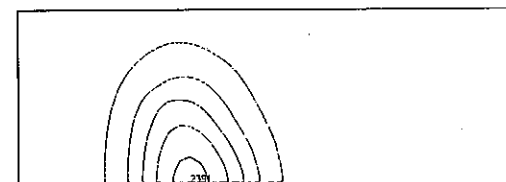
TIME: 32.0 SEC. J = 23  
 TMAX=  $6.2 \times 10^{-7}$  TMIN=  $2.2 \times 10^{-7}$  DELT=  $6.84 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



TIME: 32.0 SEC. J = 23  
 TMAX=  $6.3 \times 10^{-7}$  TMIN=  $3.4 \times 10^{-7}$  DELT=  $7.04 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



TIME: 52.0 SEC. J = 23  
 TMAX=  $3.7 \times 10^{-7}$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $4.89 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$



TIME: 52.0 SEC. J = 23  
 TMAX=  $4.0 \times 10^{-7}$  TMIN=  $1.3 \times 10^{-7}$  DELT=  $4.42 \times 10^{-3}$  PCT=  $10.0 \times 10^{-1}$

图3.17 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, J=23 断面)

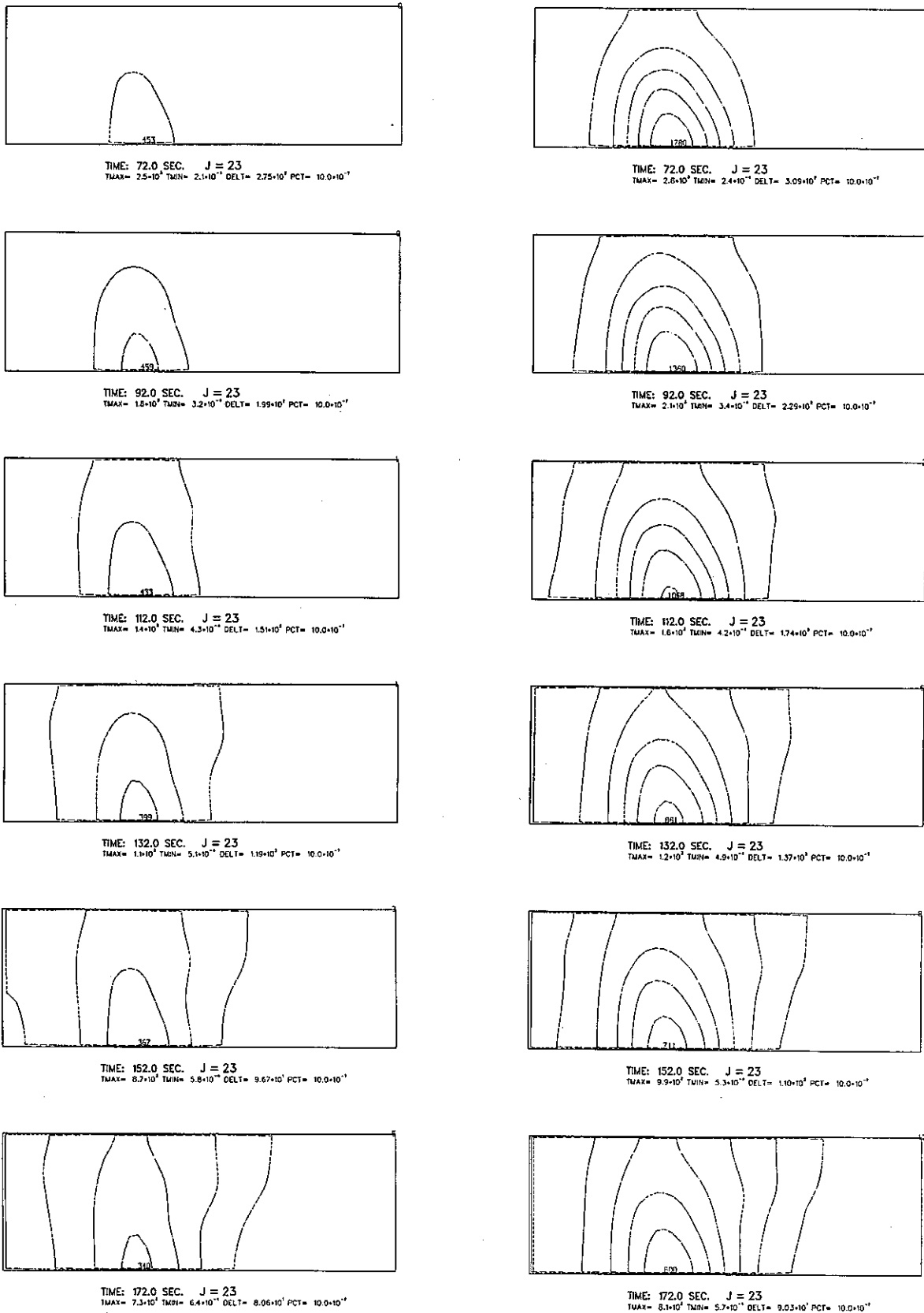


图 3.17 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, J=23 断面)

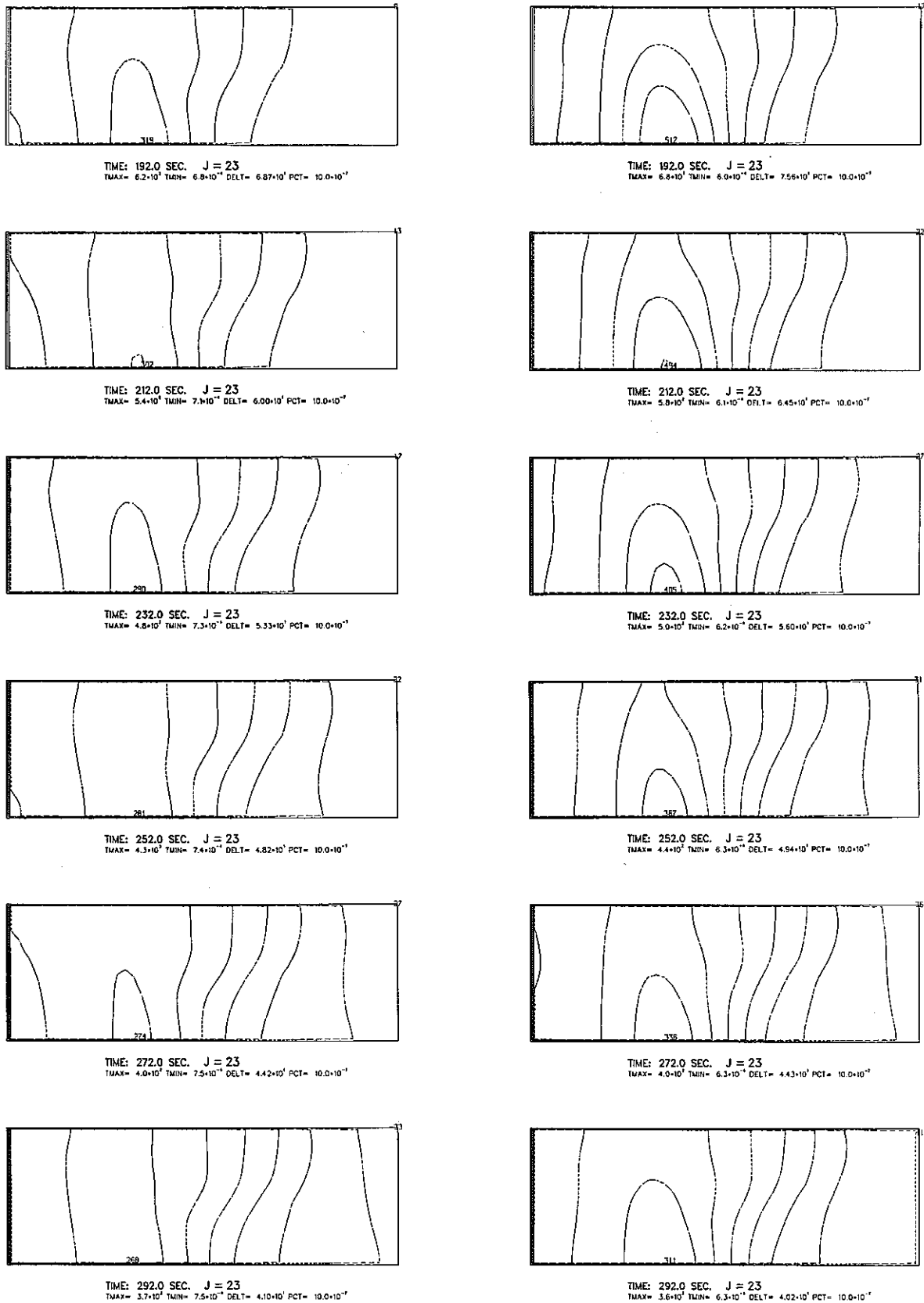


図3.17 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, J=23 断面)



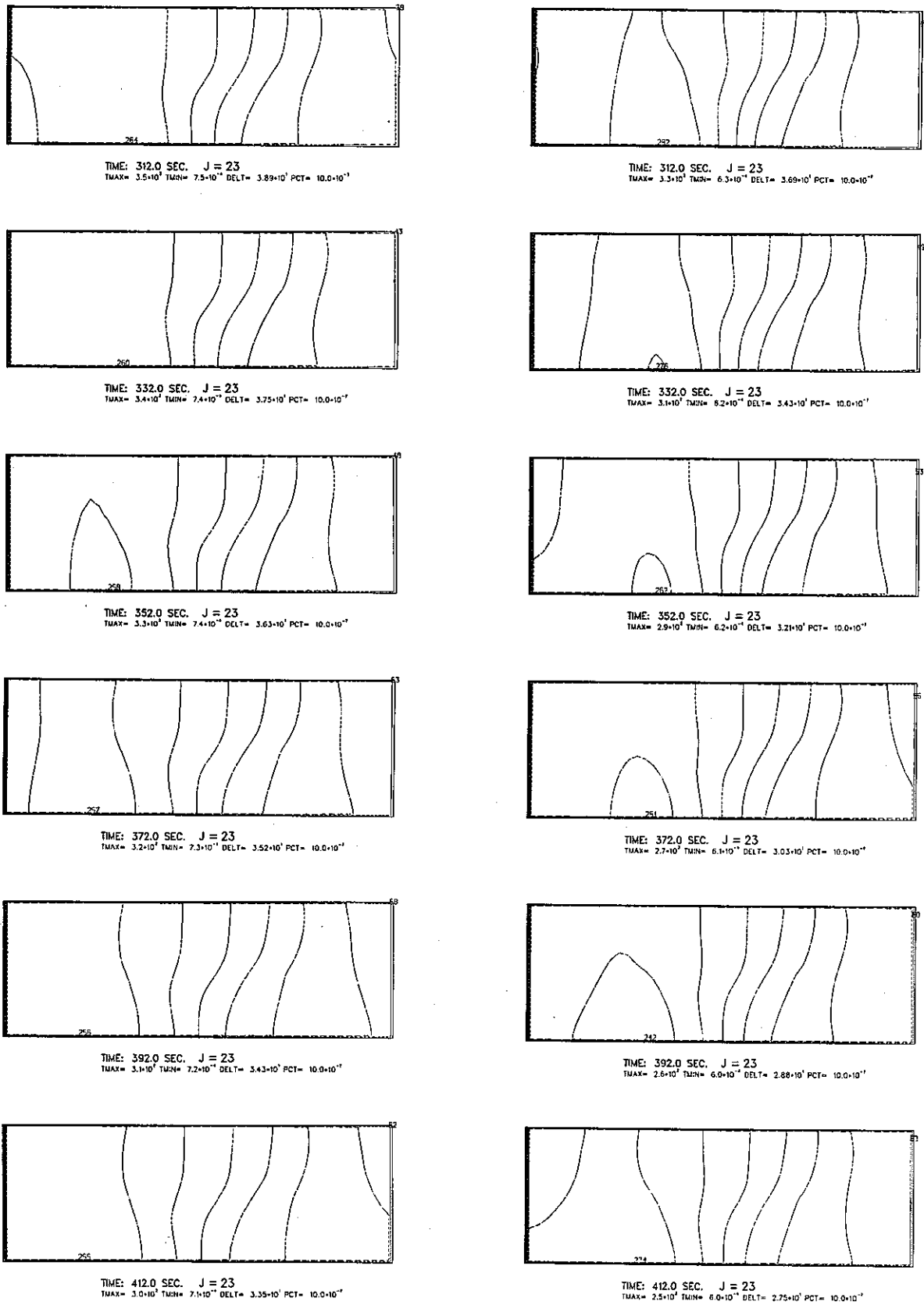


图3.17 放射性物質漏洩時濃度過度分布(破損箇所P9, P10, J=23 断面)

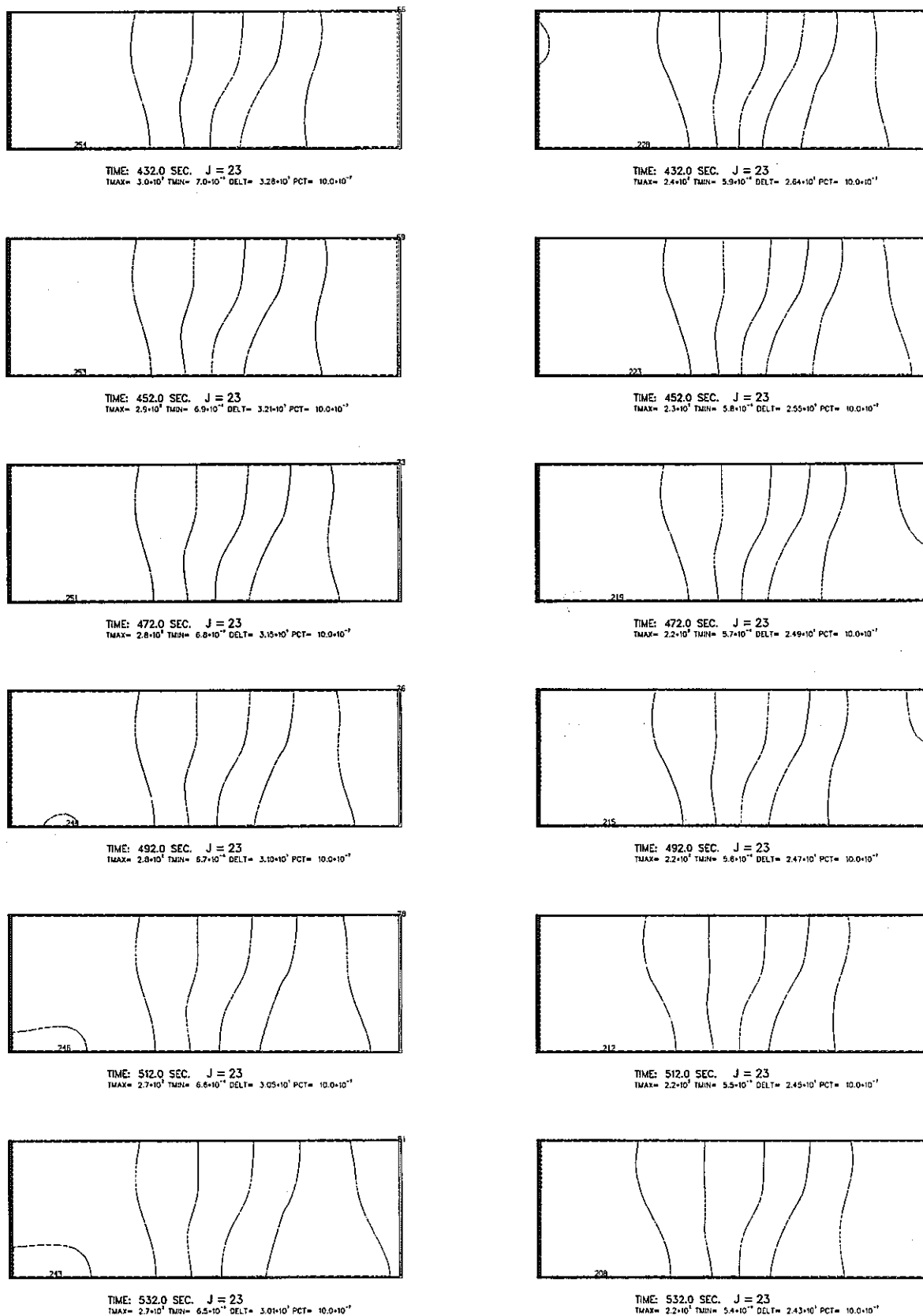


図3.17 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, J=23 断面)

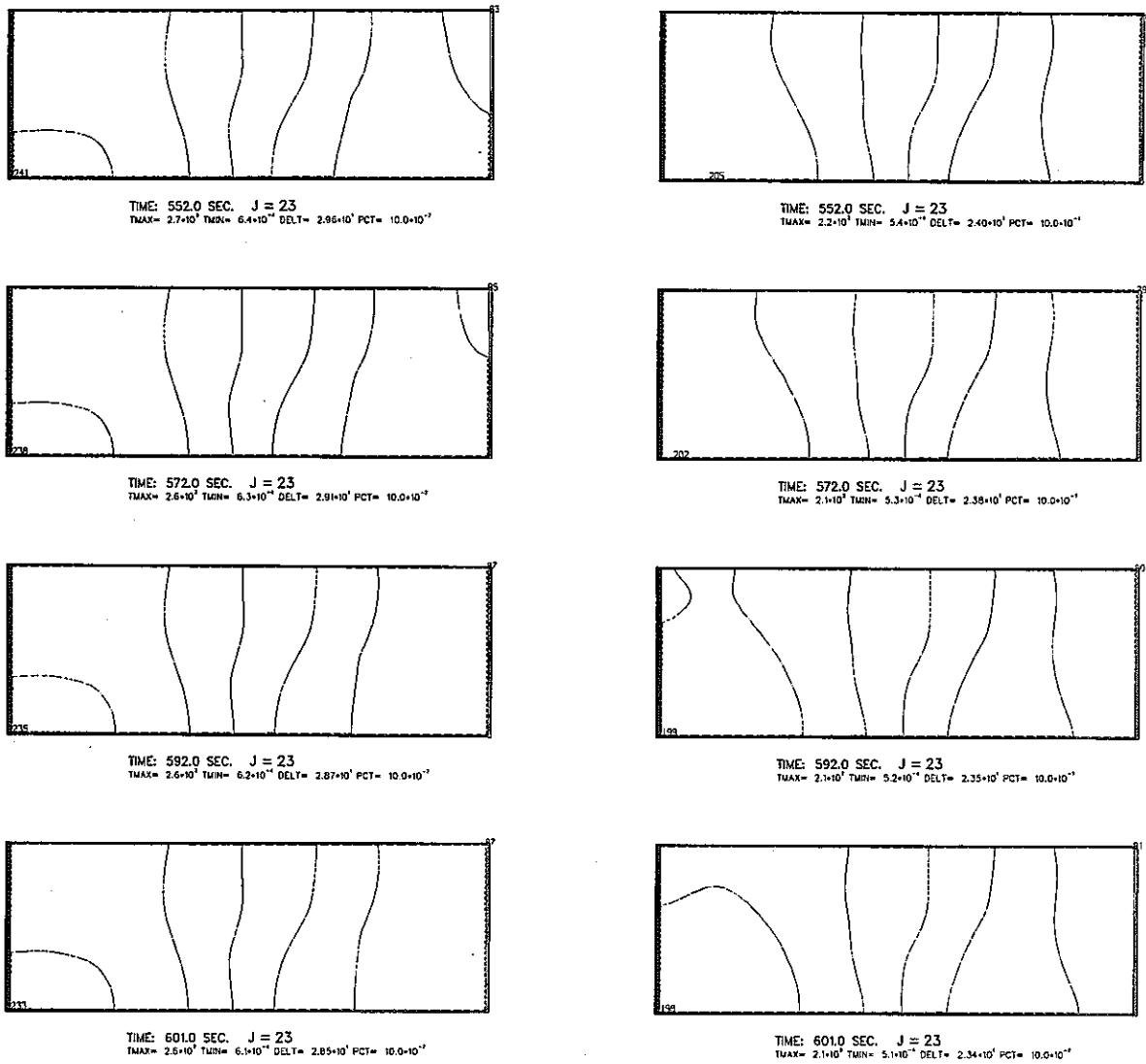


图 3.17 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, J=23 断面)

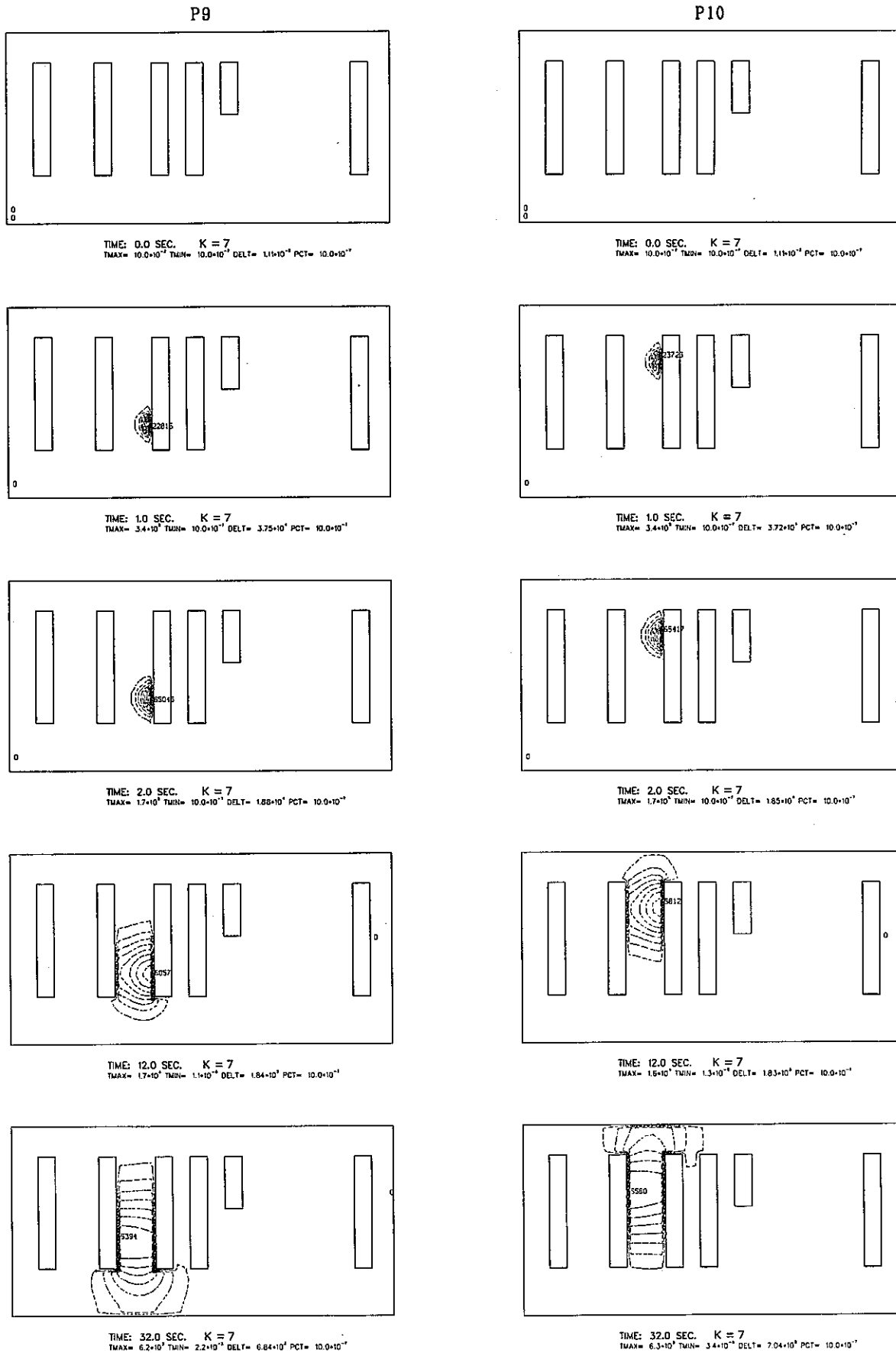
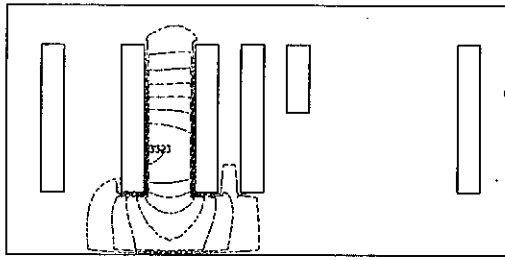
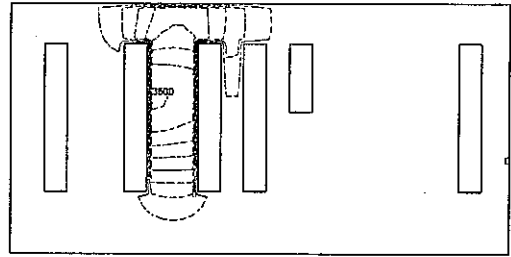


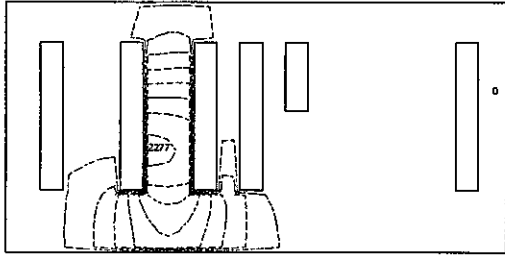
图3.18 放射性物质漏洩时浓度过度分布 (破损箇所P9, P10, K=7 断面)



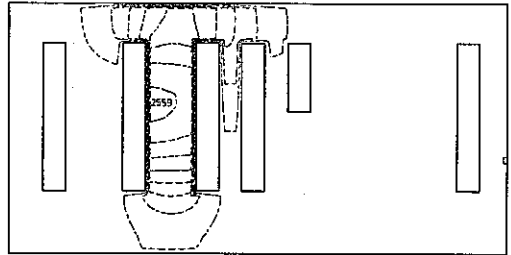
TIME: 52.0 SEC. K = 7  
 $T_{MAX} = 3.7 \cdot 10^3$   $T_{MIN} = 1.0 \cdot 10^{-3}$  DELT =  $4.08 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



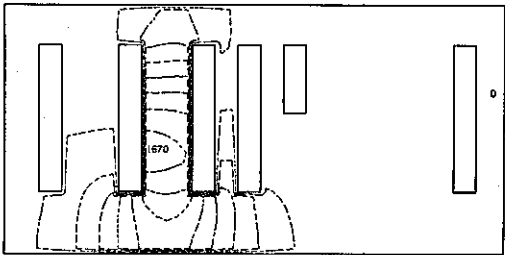
TIME: 52.0 SEC. K = 7  
 $T_{MAX} = 4.0 \cdot 10^3$   $T_{MIN} = 1.3 \cdot 10^{-3}$  DELT =  $4.42 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



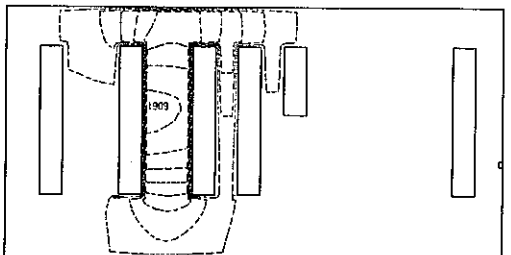
TIME: 72.0 SEC. K = 7  
 $T_{MAX} = 2.5 \cdot 10^3$   $T_{MIN} = 2.1 \cdot 10^{-3}$  DELT =  $2.75 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



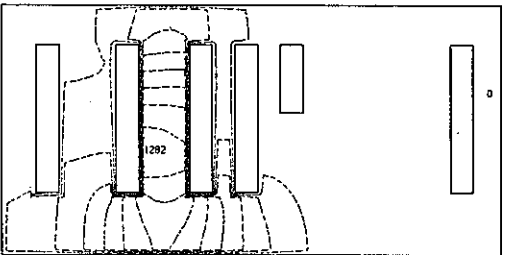
TIME: 72.0 SEC. K = 7  
 $T_{MAX} = 2.8 \cdot 10^3$   $T_{MIN} = 2.4 \cdot 10^{-3}$  DELT =  $3.09 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



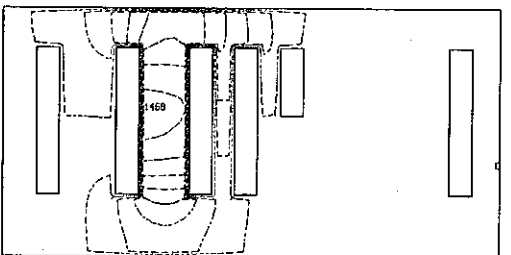
TIME: 92.0 SEC. K = 7  
 $T_{MAX} = 1.8 \cdot 10^3$   $T_{MIN} = 3.2 \cdot 10^{-3}$  DELT =  $1.99 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



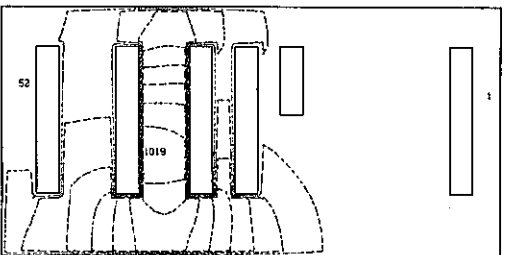
TIME: 92.0 SEC. K = 7  
 $T_{MAX} = 2.1 \cdot 10^3$   $T_{MIN} = 3.4 \cdot 10^{-3}$  DELT =  $2.29 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



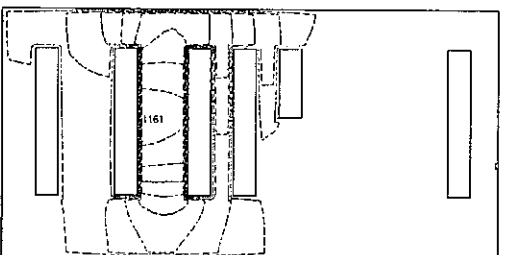
TIME: 112.0 SEC. K = 7  
 $T_{MAX} = 1.4 \cdot 10^3$   $T_{MIN} = 4.3 \cdot 10^{-3}$  DELT =  $1.51 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



TIME: 112.0 SEC. K = 7  
 $T_{MAX} = 1.6 \cdot 10^3$   $T_{MIN} = 4.2 \cdot 10^{-3}$  DELT =  $1.74 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



TIME: 132.0 SEC. K = 7  
 $T_{MAX} = 1.1 \cdot 10^3$   $T_{MIN} = 5.1 \cdot 10^{-3}$  DELT =  $1.19 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$



TIME: 132.0 SEC. K = 7  
 $T_{MAX} = 1.2 \cdot 10^3$   $T_{MIN} = 4.9 \cdot 10^{-3}$  DELT =  $1.37 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-3}$

图3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)

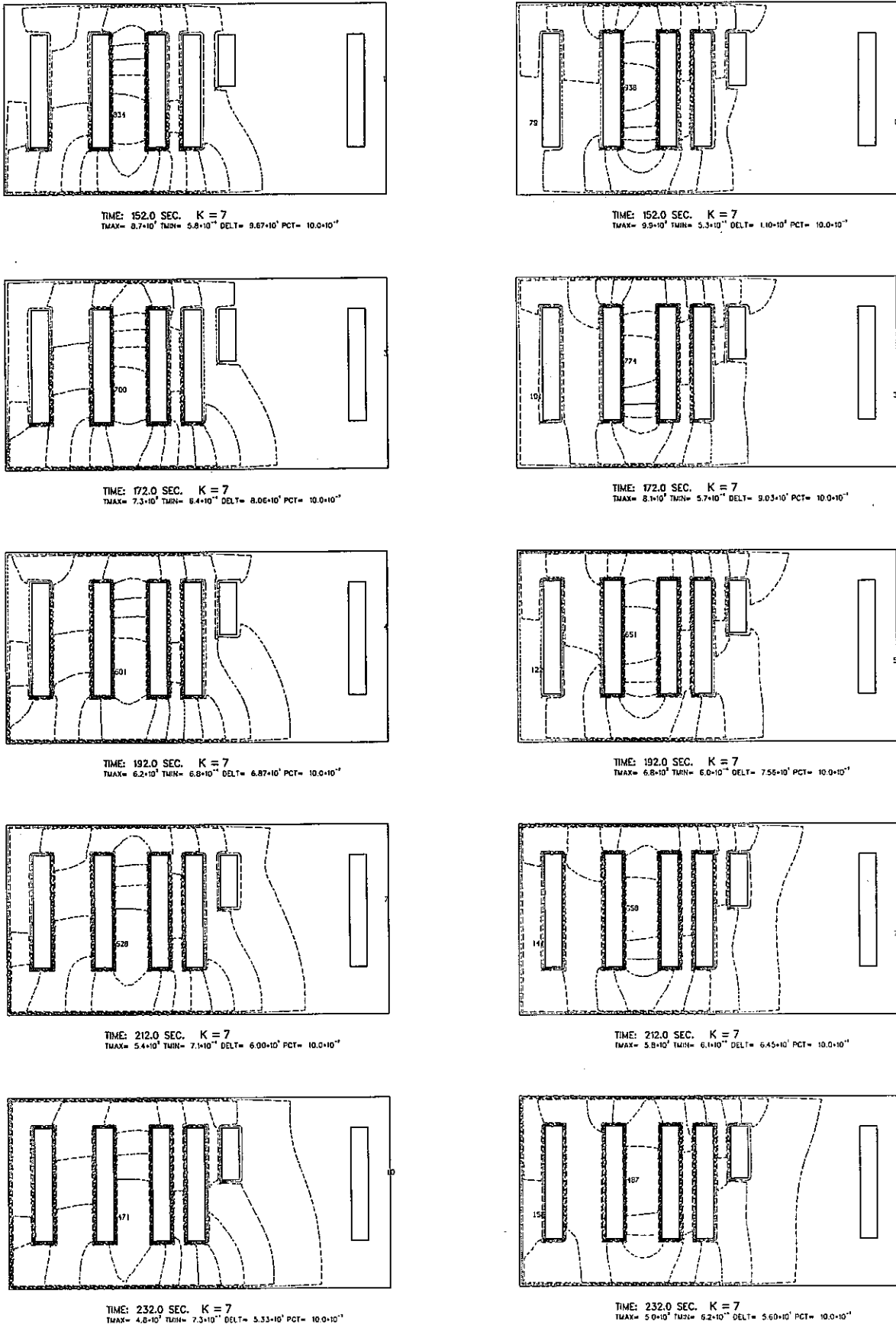


图3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)

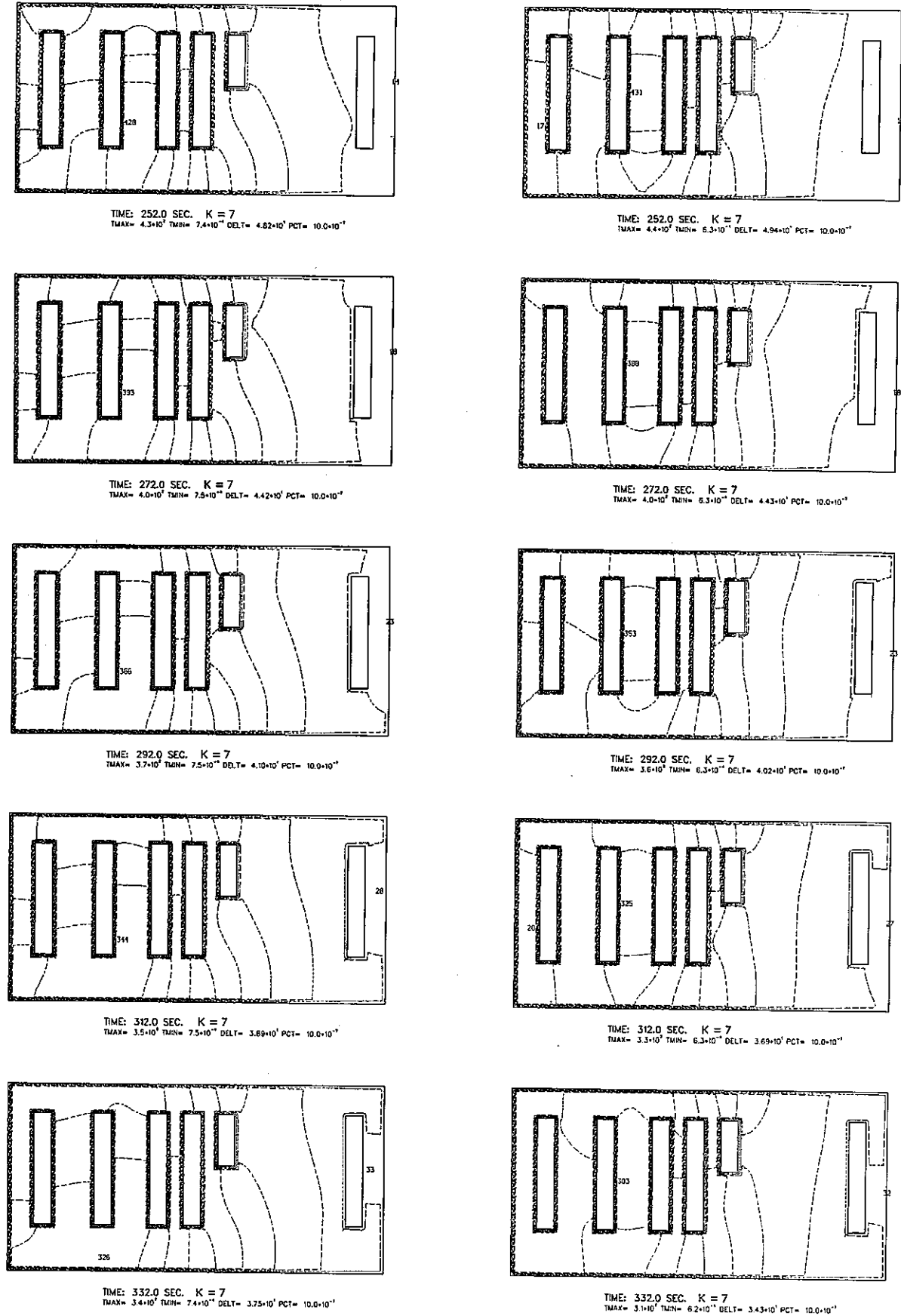
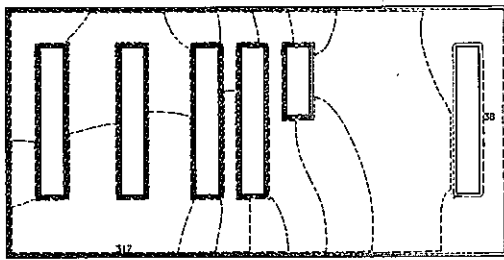
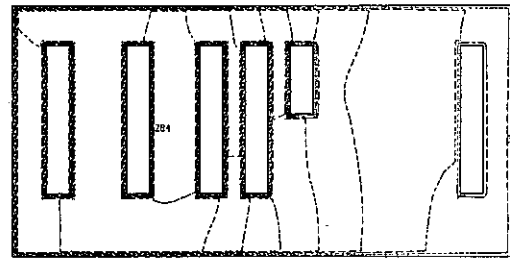


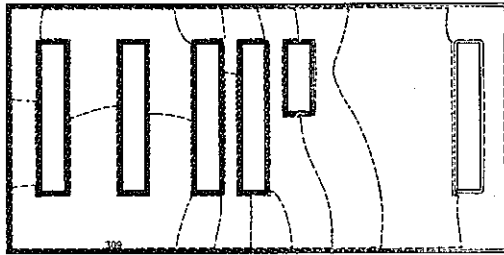
图3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)



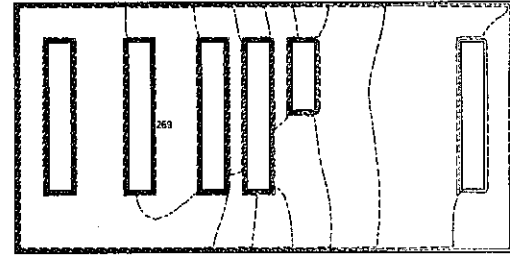
TIME: 352.0 SEC. K = 7  
 TMAX= 3.3\*10<sup>3</sup> TMIN= 7.4\*10<sup>-2</sup> DELT= 3.63\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



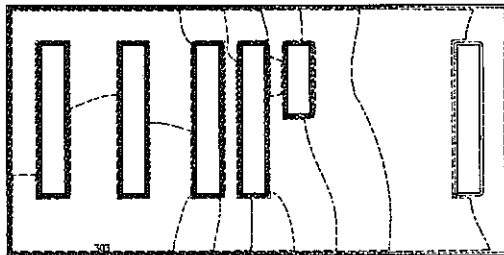
TIME: 352.0 SEC. K = 7  
 TMAX= 2.9\*10<sup>3</sup> TMIN= 6.2\*10<sup>-2</sup> DELT= 3.21\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



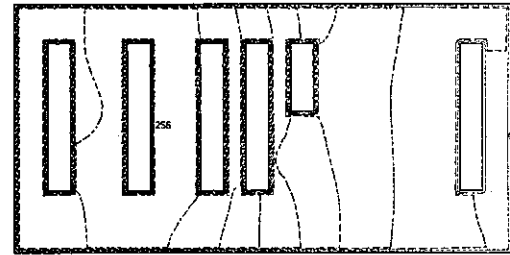
TIME: 372.0 SEC. K = 7  
 TMAX= 3.2\*10<sup>3</sup> TMIN= 7.3\*10<sup>-2</sup> DELT= 3.52\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



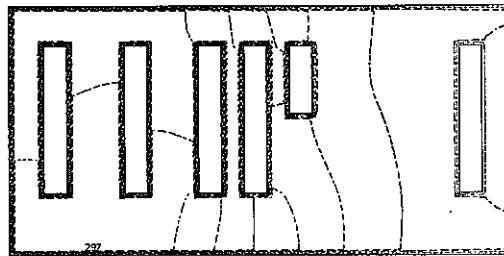
TIME: 372.0 SEC. K = 7  
 TMAX= 2.7\*10<sup>3</sup> TMIN= 6.1\*10<sup>-2</sup> DELT= 3.03\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



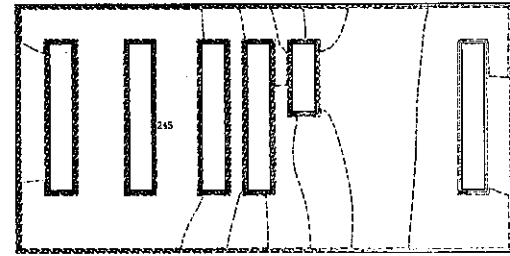
TIME: 392.0 SEC. K = 7  
 TMAX= 3.4\*10<sup>3</sup> TMIN= 7.2\*10<sup>-2</sup> DELT= 3.43\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



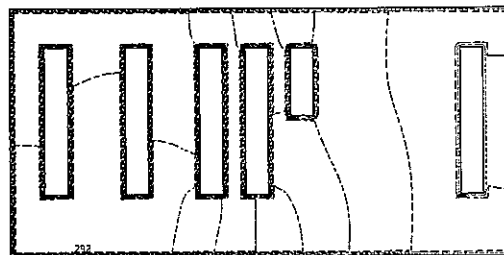
TIME: 392.0 SEC. K = 7  
 TMAX= 2.6\*10<sup>3</sup> TMIN= 6.0\*10<sup>-2</sup> DELT= 2.88\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



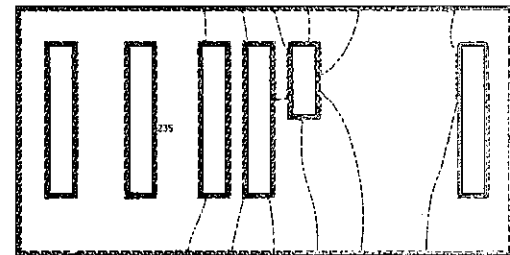
TIME: 412.0 SEC. K = 7  
 TMAX= 3.0\*10<sup>3</sup> TMIN= 7.1\*10<sup>-2</sup> DELT= 3.35\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



TIME: 412.0 SEC. K = 7  
 TMAX= 2.2\*10<sup>3</sup> TMIN= 6.0\*10<sup>-2</sup> DELT= 2.75\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



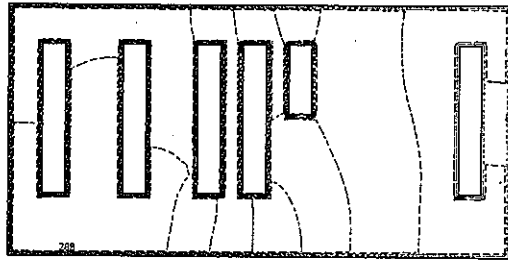
TIME: 432.0 SEC. K = 7  
 TMAX= 3.6\*10<sup>3</sup> TMIN= 7.0\*10<sup>-2</sup> DELT= 3.28\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>



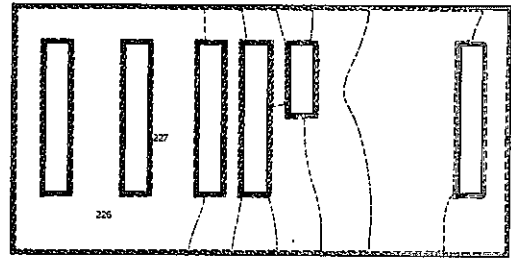
TIME: 432.0 SEC. K = 7  
 TMAX= 2.4\*10<sup>3</sup> TMIN= 5.9\*10<sup>-2</sup> DELT= 2.64\*10<sup>3</sup> PCT= 10.0\*10<sup>-3</sup>

圖 3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)

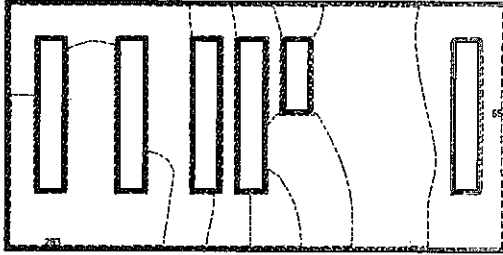




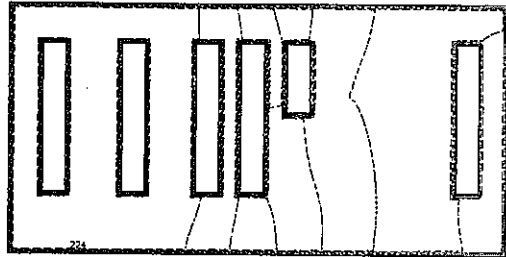
TIME: 452.0 SEC. K = 7  
 $T_{MAX} = 2.9 \times 10^7$   $T_{MIN} = 6.9 \times 10^6$  DELT =  $3.2 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



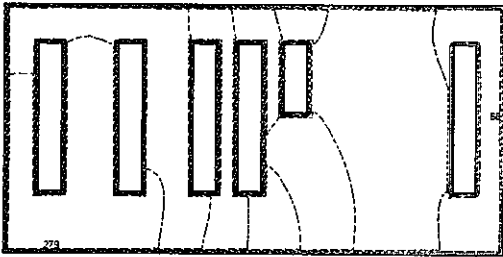
TIME: 452.0 SEC. K = 7  
 $T_{MAX} = 2.3 \times 10^7$   $T_{MIN} = 5.8 \times 10^6$  DELT =  $2.55 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



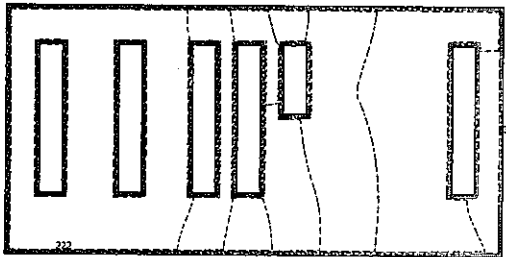
TIME: 472.0 SEC. K = 7  
 $T_{MAX} = 2.8 \times 10^7$   $T_{MIN} = 6.8 \times 10^6$  DELT =  $3.15 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



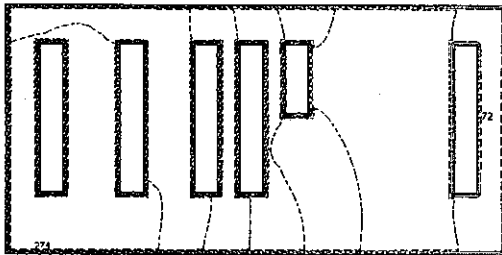
TIME: 472.0 SEC. K = 7  
 $T_{MAX} = 2.2 \times 10^7$   $T_{MIN} = 5.7 \times 10^6$  DELT =  $2.49 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



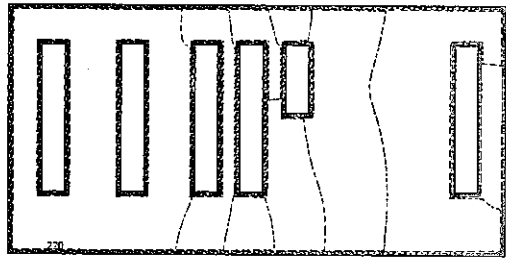
TIME: 492.0 SEC. K = 7  
 $T_{MAX} = 2.8 \times 10^7$   $T_{MIN} = 6.7 \times 10^6$  DELT =  $3.10 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



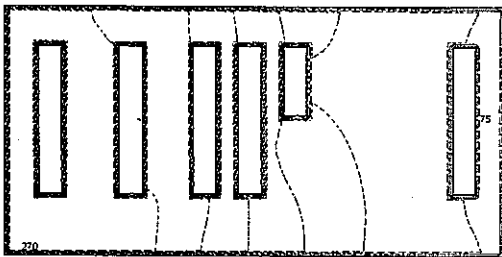
TIME: 492.0 SEC. K = 7  
 $T_{MAX} = 2.2 \times 10^7$   $T_{MIN} = 5.6 \times 10^6$  DELT =  $2.47 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



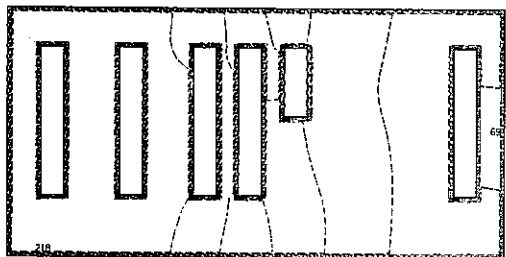
TIME: 512.0 SEC. K = 7  
 $T_{MAX} = 2.7 \times 10^7$   $T_{MIN} = 6.6 \times 10^6$  DELT =  $3.05 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



TIME: 512.0 SEC. K = 7  
 $T_{MAX} = 2.2 \times 10^7$   $T_{MIN} = 5.5 \times 10^6$  DELT =  $2.45 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



TIME: 532.0 SEC. K = 7  
 $T_{MAX} = 2.7 \times 10^7$   $T_{MIN} = 6.5 \times 10^6$  DELT =  $3.0 \times 10^7$  PCT =  $10.0 \times 10^{-7}$



TIME: 532.0 SEC. K = 7  
 $T_{MAX} = 2.2 \times 10^7$   $T_{MIN} = 5.4 \times 10^6$  DELT =  $2.43 \times 10^7$  PCT =  $10.0 \times 10^{-7}$

图3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)

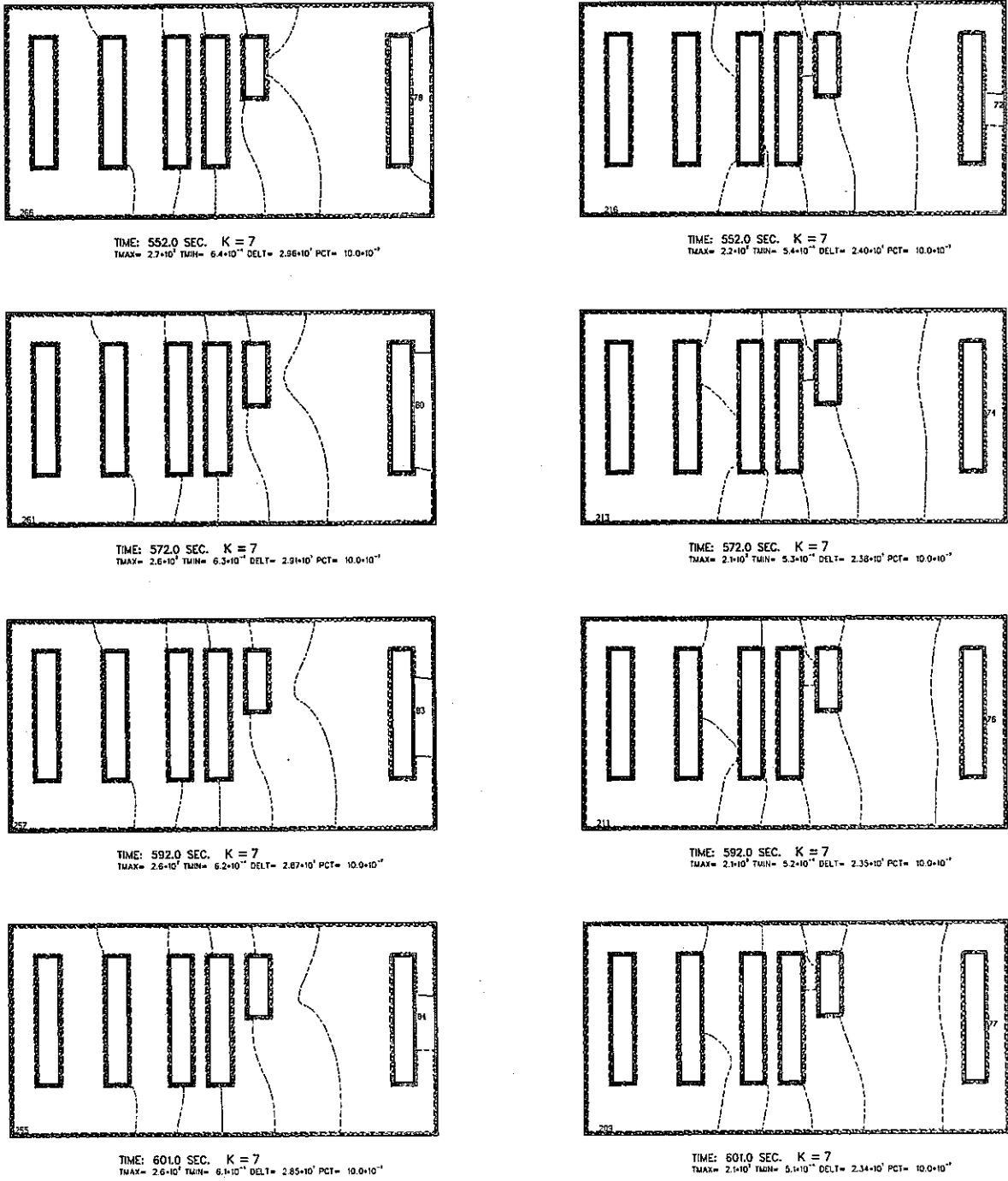
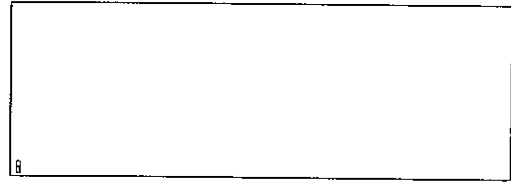
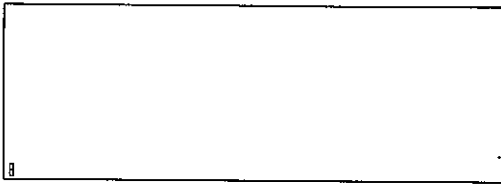


图3.18 放射性物質漏洩時濃度過度分布 (破損箇所P9, P10, K=7 断面)

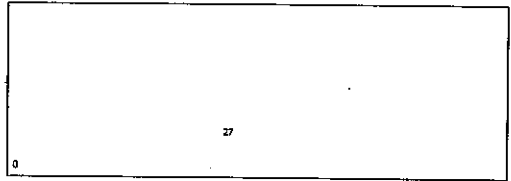
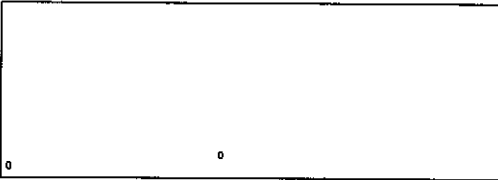
P11

P12



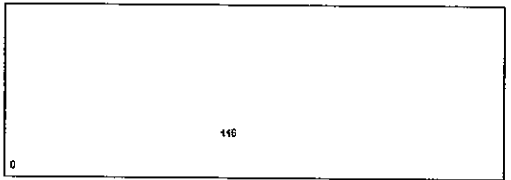
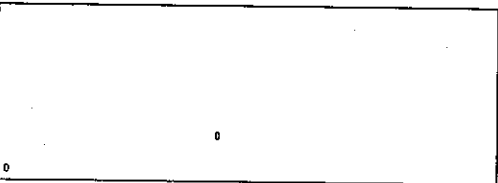
TIME: 0.0 SEC. J = 23  
TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 0.0 SEC. J = 23  
TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$



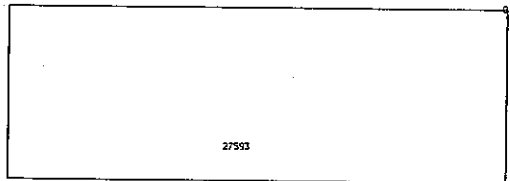
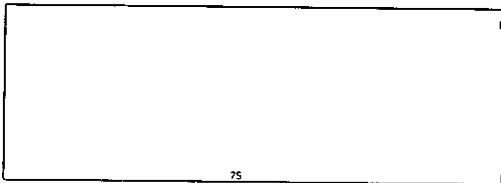
TIME: 1.0 SEC. J = 23  
TMAX=  $8.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $8.92 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 1.0 SEC. J = 23  
TMAX=  $8.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $8.91 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$



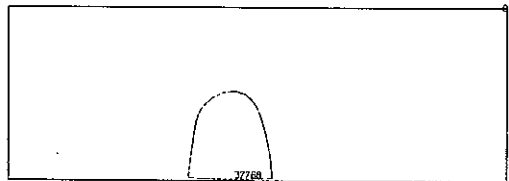
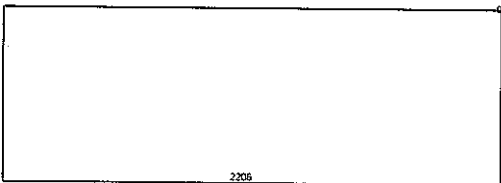
TIME: 2.0 SEC. J = 23  
TMAX=  $3.2 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.60 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 2.0 SEC. J = 23  
TMAX=  $3.2 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.60 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$



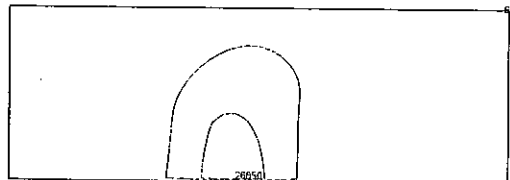
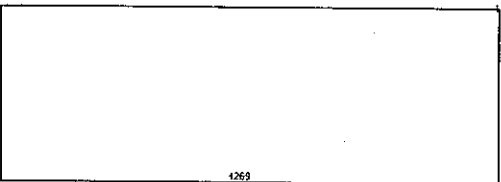
TIME: 12.0 SEC. J = 23  
TMAX=  $4.0 \times 10^{-7}$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $4.43 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 12.0 SEC. J = 23  
TMAX=  $4.1 \times 10^{-7}$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $4.55 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$



TIME: 32.0 SEC. J = 23  
TMAX=  $1.5 \times 10^{-7}$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $1.65 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 32.0 SEC. J = 23  
TMAX=  $1.6 \times 10^{-7}$  TMIN=  $1.5 \times 10^{-7}$  DELT=  $1.55 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$



TIME: 52.0 SEC. J = 23  
TMAX=  $6.8 \times 10^{-7}$  TMIN=  $1.3 \times 10^{-7}$  DELT=  $7.56 \times 10^{-3}$  PCT=  $10.0 \times 10^{-7}$

TIME: 52.0 SEC. J = 23  
TMAX=  $9.2 \times 10^{-7}$  TMIN=  $1.5 \times 10^{-7}$  DELT=  $1.02 \times 10^{-2}$  PCT=  $10.0 \times 10^{-7}$

图3.19 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, J=23断面)

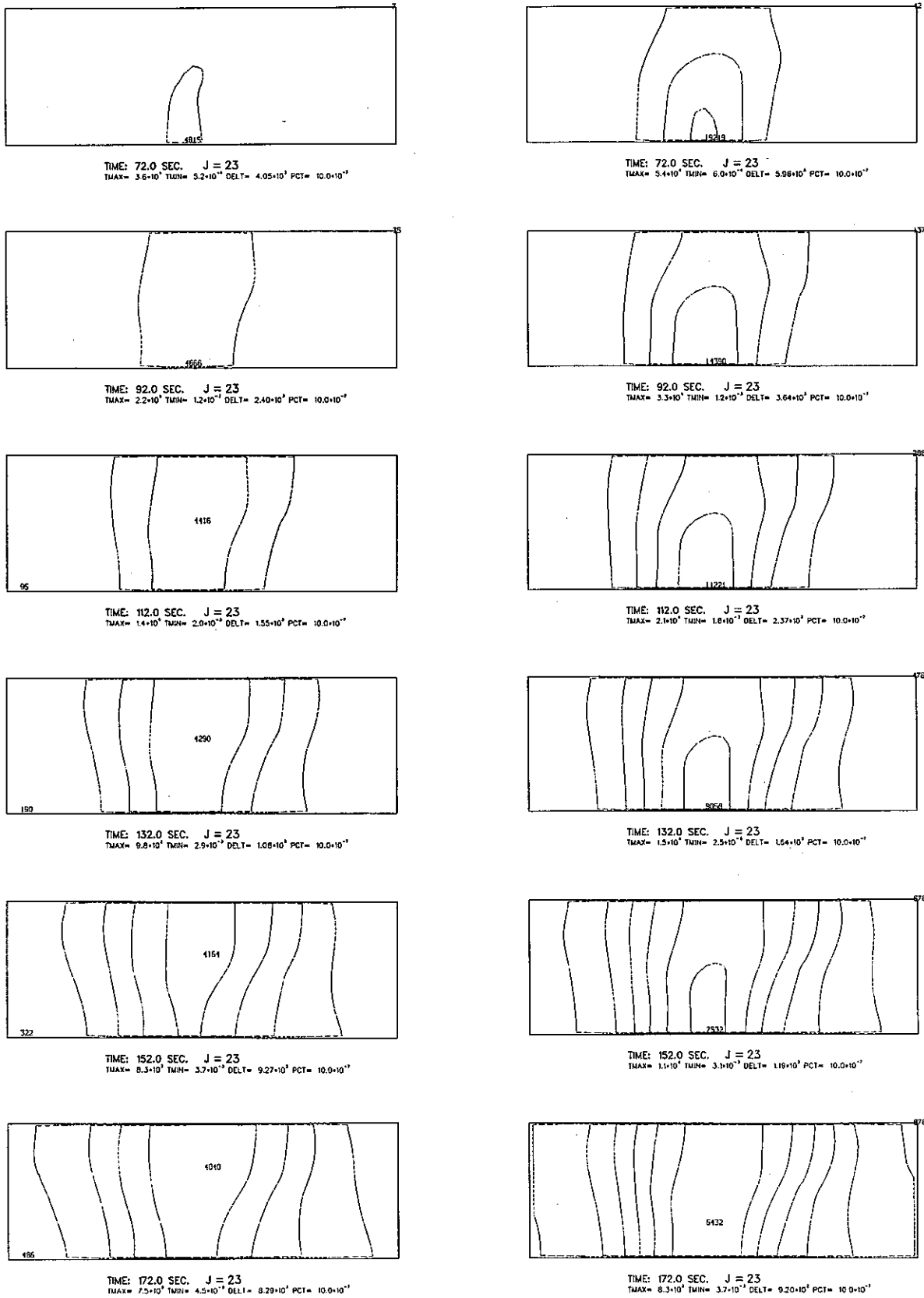


图3.19 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, J=23断面)

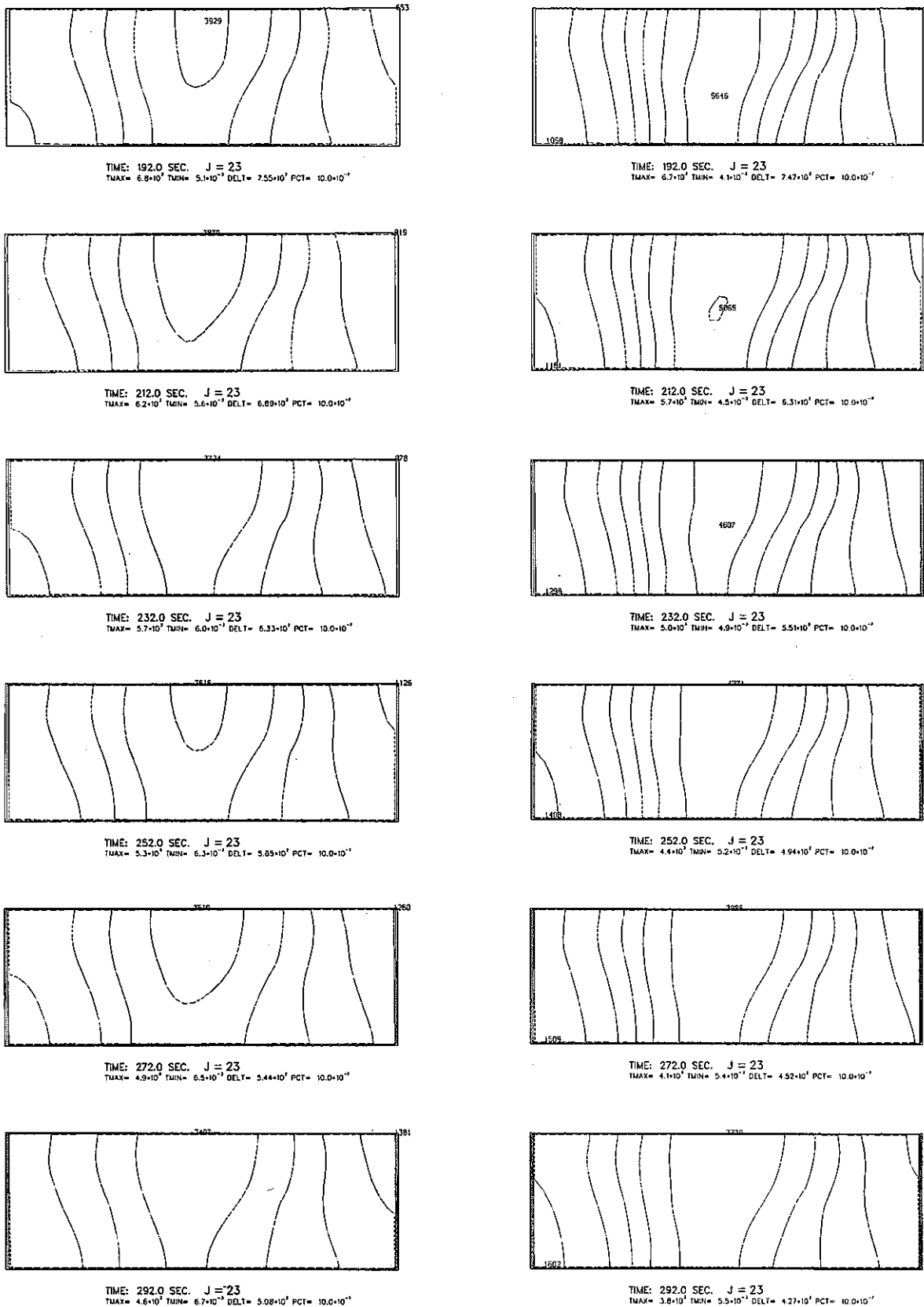


図3.19 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, J=23断面)

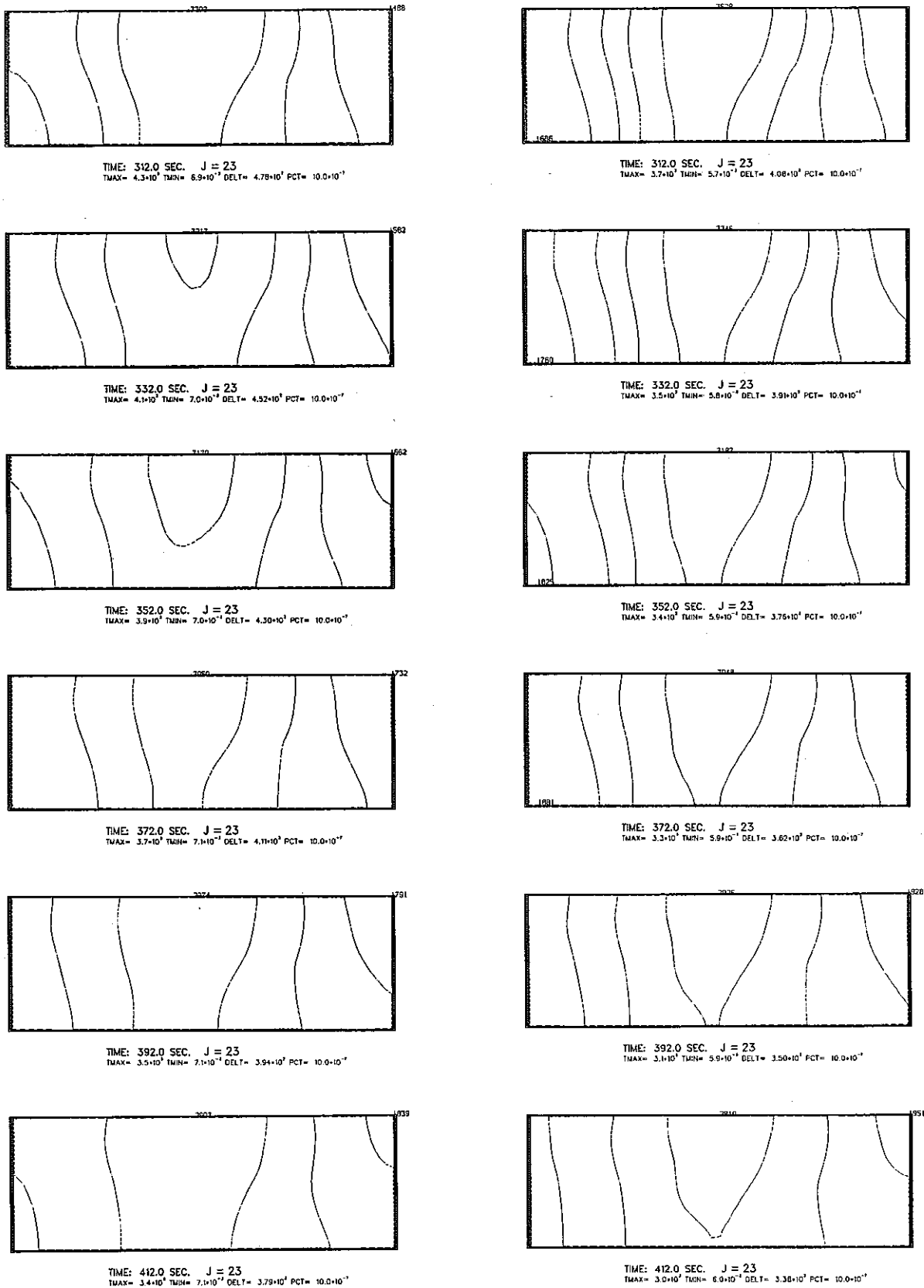


图3.19 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, J=23断面)

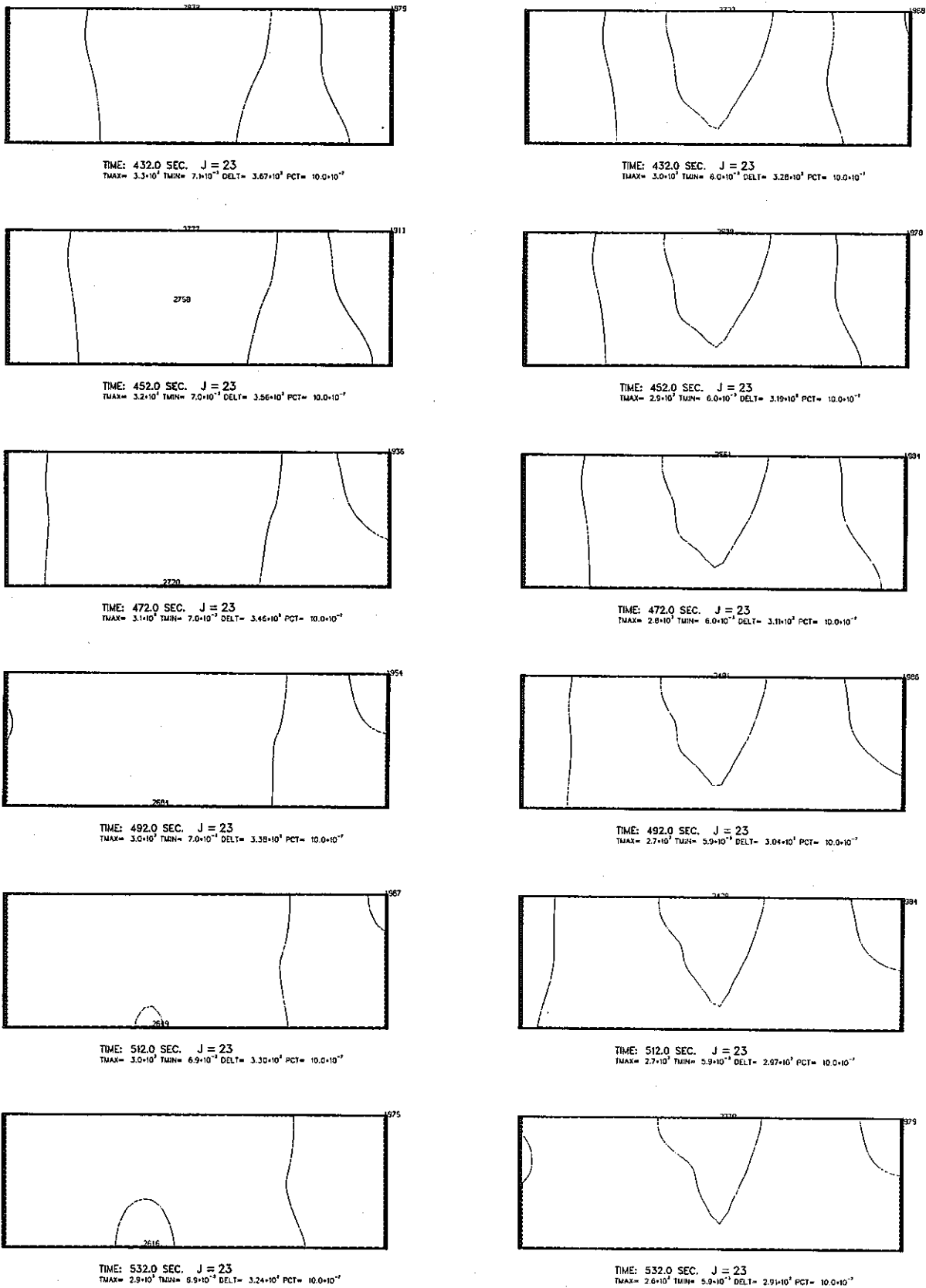


图3.19 放射性物质漏洩时浓度过度分布 (破损箇所P11, P12, J=23断面)

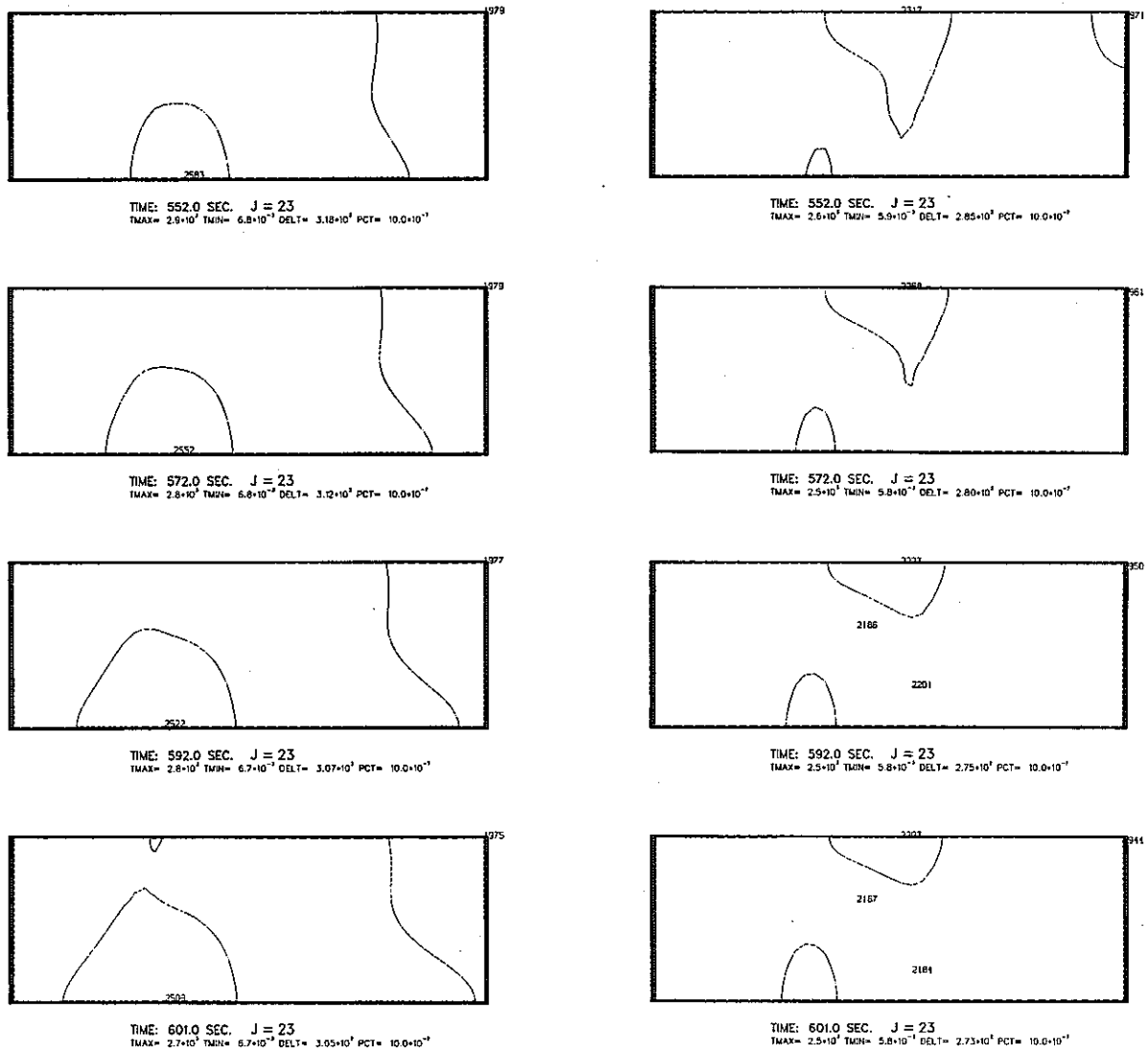


図3.19 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, J=23断面)



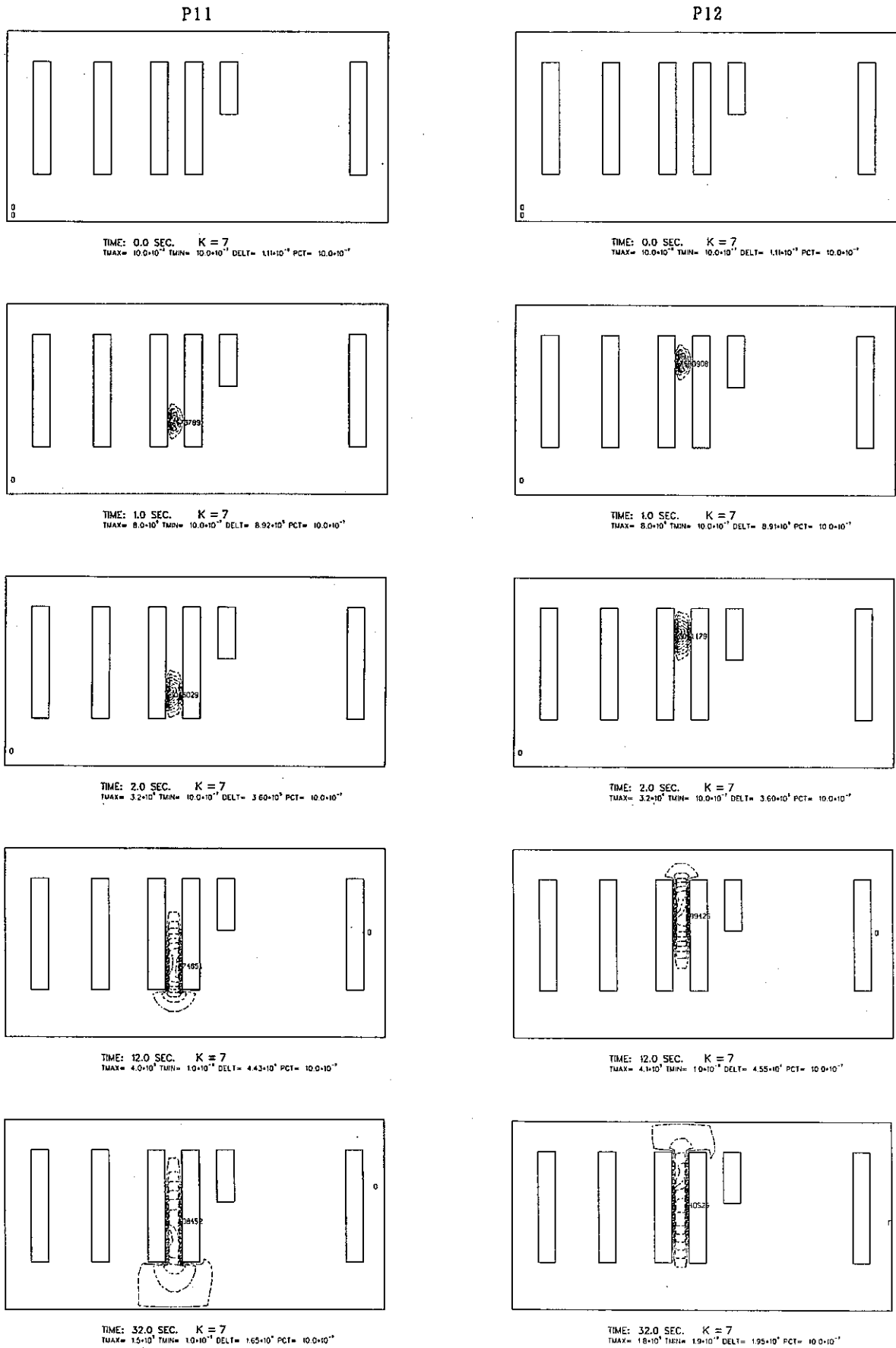


图3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K = 7 断面)

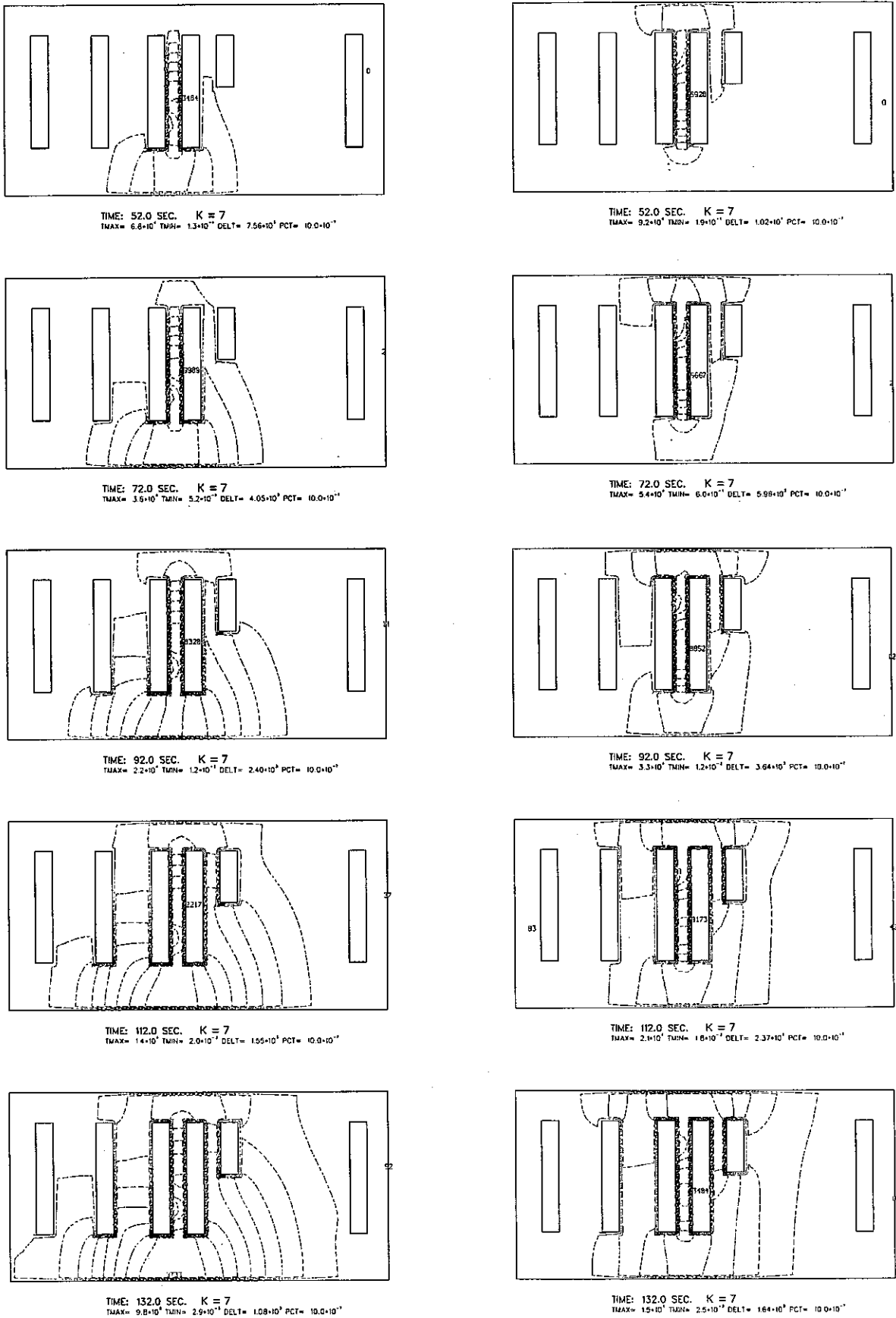


図3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K=7 断面)

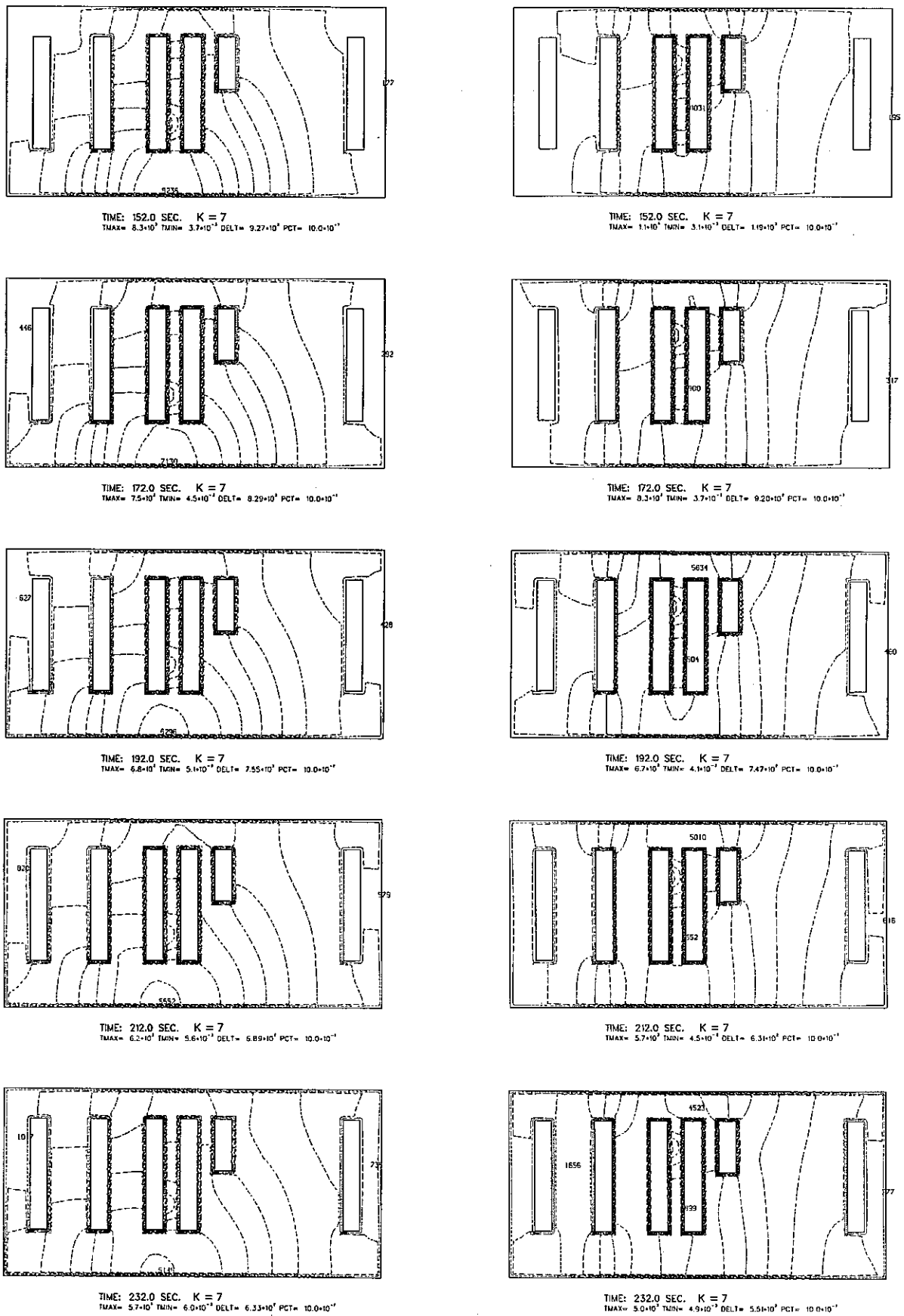
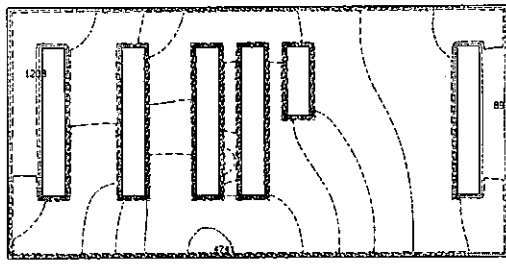
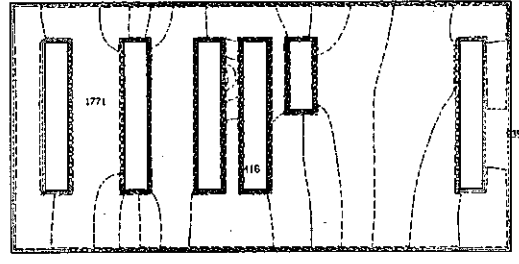


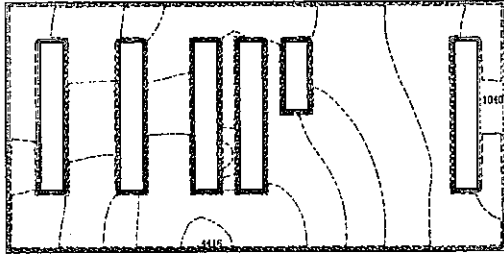
图3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K=7 断面)



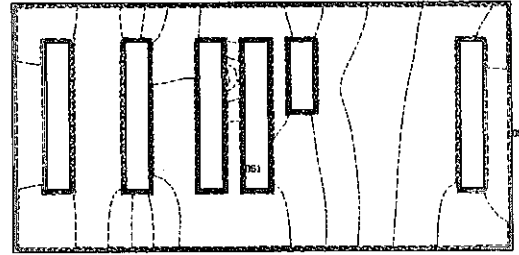
TIME: 252.0 SEC. K = 7  
 $T_{MAX} = 5.3 \times 10^7$   $T_{MIN} = 6.3 \times 10^{-3}$  DELT =  $5.85 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



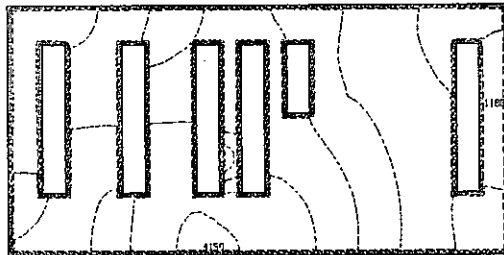
TIME: 252.0 SEC. K = 7  
 $T_{MAX} = 4.4 \times 10^7$   $T_{MIN} = 5.2 \times 10^{-3}$  DELT =  $4.94 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



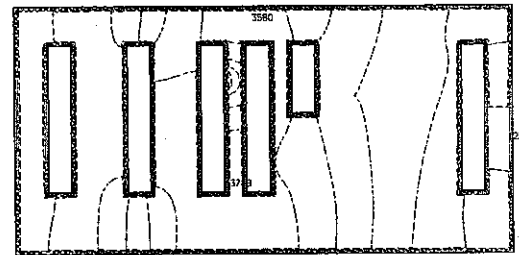
TIME: 272.0 SEC. K = 7  
 $T_{MAX} = 4.9 \times 10^7$   $T_{MIN} = 6.5 \times 10^{-3}$  DELT =  $5.44 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



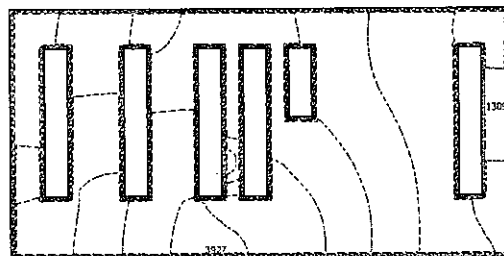
TIME: 272.0 SEC. K = 7  
 $T_{MAX} = 4.1 \times 10^7$   $T_{MIN} = 5.4 \times 10^{-3}$  DELT =  $4.52 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



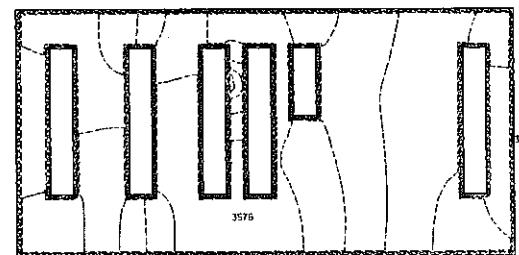
TIME: 292.0 SEC. K = 7  
 $T_{MAX} = 4.6 \times 10^7$   $T_{MIN} = 6.7 \times 10^{-3}$  DELT =  $5.08 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



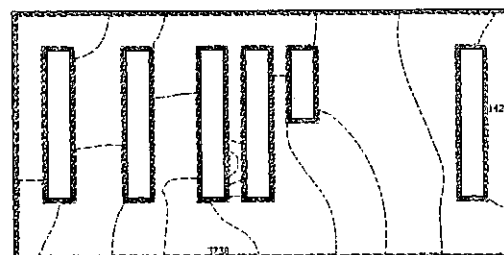
TIME: 292.0 SEC. K = 7  
 $T_{MAX} = 3.8 \times 10^7$   $T_{MIN} = 5.5 \times 10^{-3}$  DELT =  $4.27 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



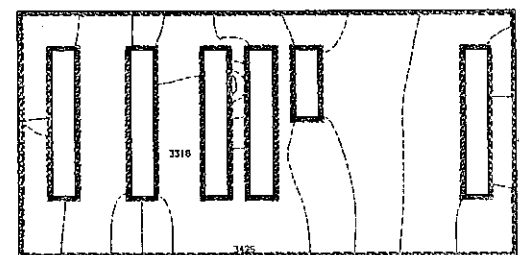
TIME: 312.0 SEC. K = 7  
 $T_{MAX} = 4.3 \times 10^7$   $T_{MIN} = 6.9 \times 10^{-3}$  DELT =  $4.78 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



TIME: 312.0 SEC. K = 7  
 $T_{MAX} = 3.7 \times 10^7$   $T_{MIN} = 5.7 \times 10^{-3}$  DELT =  $4.08 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



TIME: 332.0 SEC. K = 7  
 $T_{MAX} = 4.1 \times 10^7$   $T_{MIN} = 7.0 \times 10^{-3}$  DELT =  $4.52 \times 10^7$  PCT =  $10.0 \times 10^{-1}$



TIME: 332.0 SEC. K = 7  
 $T_{MAX} = 3.5 \times 10^7$   $T_{MIN} = 5.8 \times 10^{-3}$  DELT =  $3.91 \times 10^7$  PCT =  $10.0 \times 10^{-1}$

图3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K=7 断面)

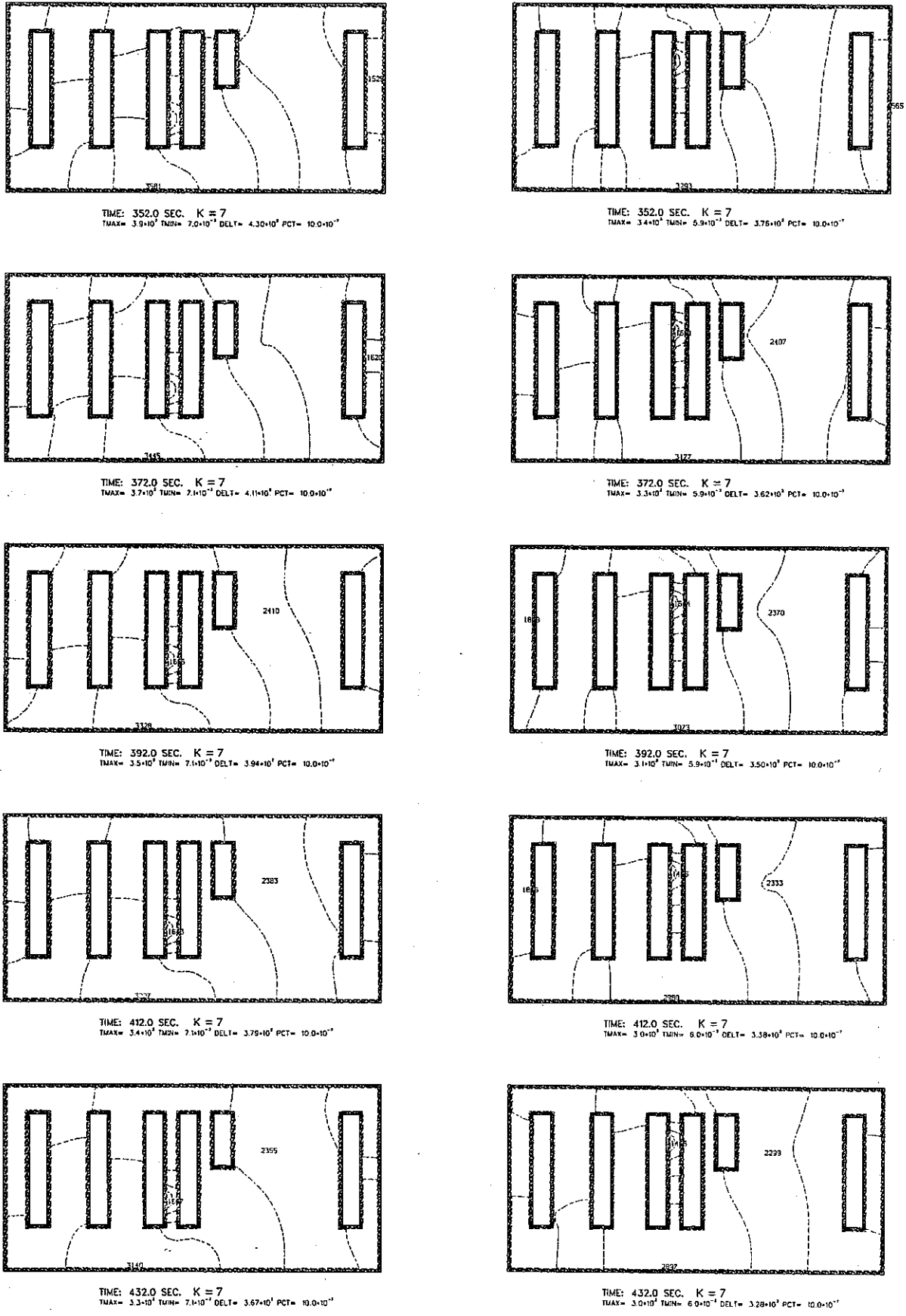


图3.20 放射性物质漏洩时浓度过度分布 (破损箇所P11, P12, K=7 断面)

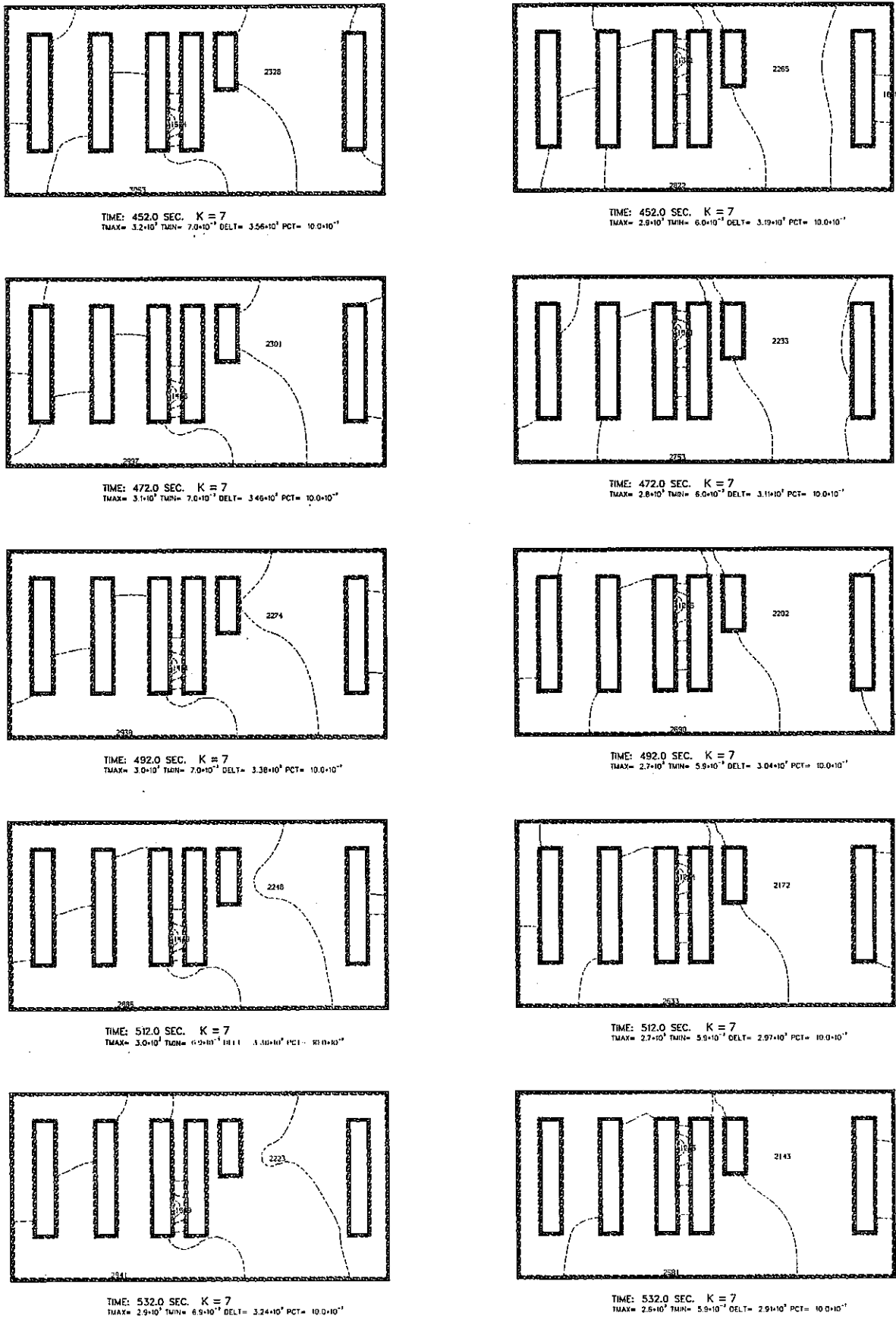


图3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K=7 断面)

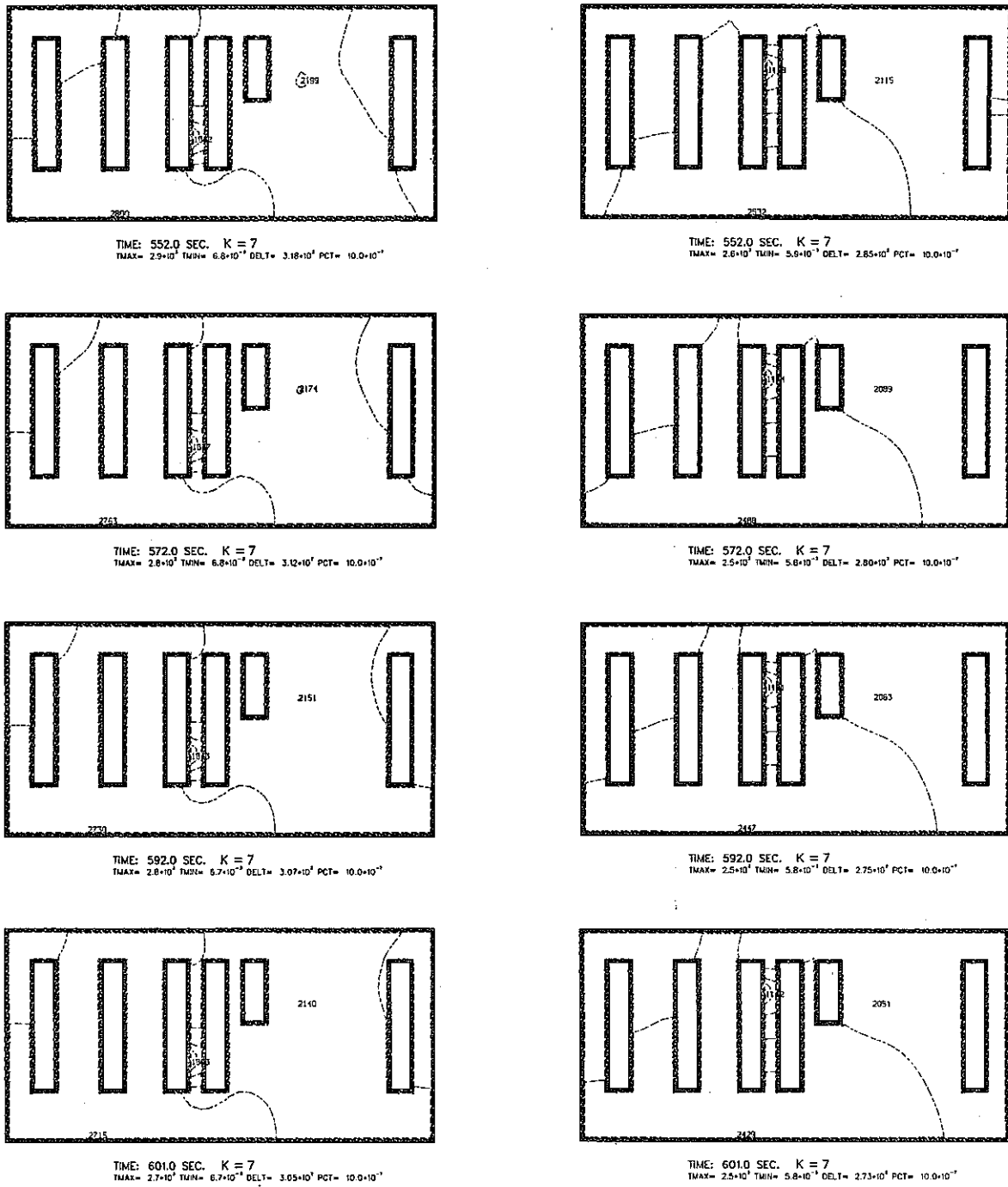
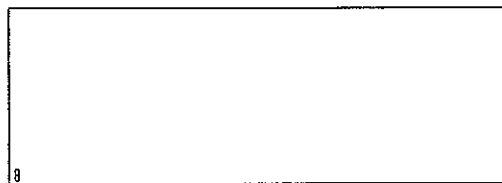
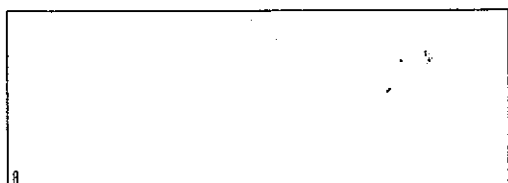


図3.20 放射性物質漏洩時濃度過度分布 (破損箇所P11, P12, K=7 断面)

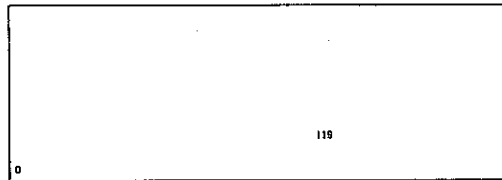
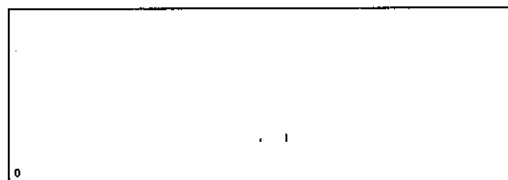
P13

P14



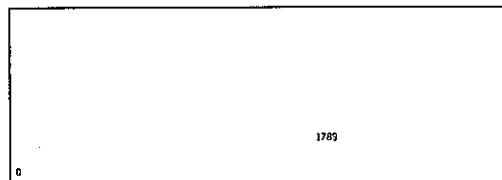
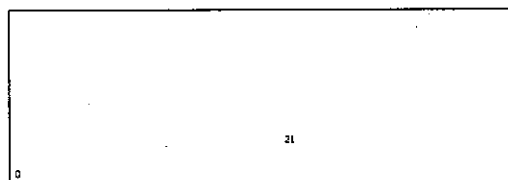
TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 0.0 SEC. J = 23  
TMAX= 10.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.11\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>



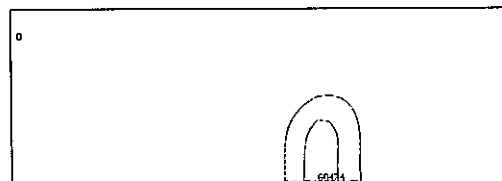
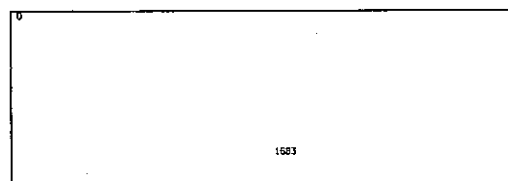
TIME: 1.0 SEC. J = 23  
TMAX= 3.2\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.56\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 1.0 SEC. J = 23  
TMAX= 6.0\*10<sup>-7</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 8.85\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>



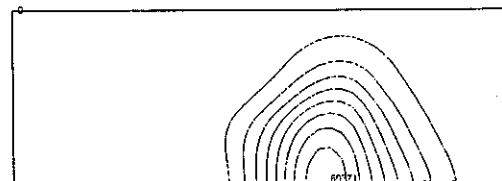
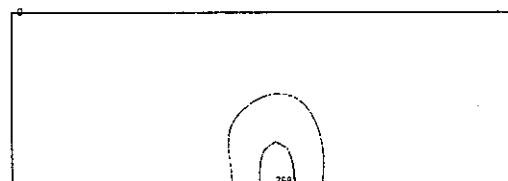
TIME: 2.0 SEC. J = 23  
TMAX= 1.7\*10<sup>-6</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 1.92\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 2.0 SEC. J = 23  
TMAX= 3.1\*10<sup>-6</sup> TMIN= 10.0\*10<sup>-7</sup> DELT= 3.46\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>



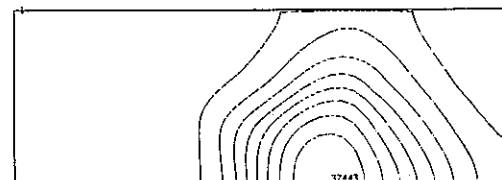
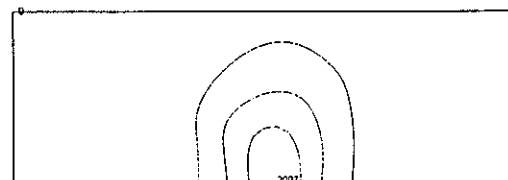
TIME: 12.0 SEC. J = 23  
TMAX= 2.7\*10<sup>-6</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 2.95\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 12.0 SEC. J = 23  
TMAX= 2.1\*10<sup>-6</sup> TMIN= 1.0\*10<sup>-7</sup> DELT= 2.34\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 32.0 SEC. J = 23  
TMAX= 1.0\*10<sup>-5</sup> TMIN= 1.1\*10<sup>-7</sup> DELT= 1.15\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 32.0 SEC. J = 23  
TMAX= 6.2\*10<sup>-6</sup> TMIN= 1.1\*10<sup>-7</sup> DELT= 6.92\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 52.0 SEC. J = 23  
TMAX= 4.9\*10<sup>-5</sup> TMIN= 4.0\*10<sup>-7</sup> DELT= 5.42\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

TIME: 52.0 SEC. J = 23  
TMAX= 3.7\*10<sup>-5</sup> TMIN= 5.1\*10<sup>-7</sup> DELT= 4.16\*10<sup>-1</sup> PCT= 10.0\*10<sup>-7</sup>

图3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)



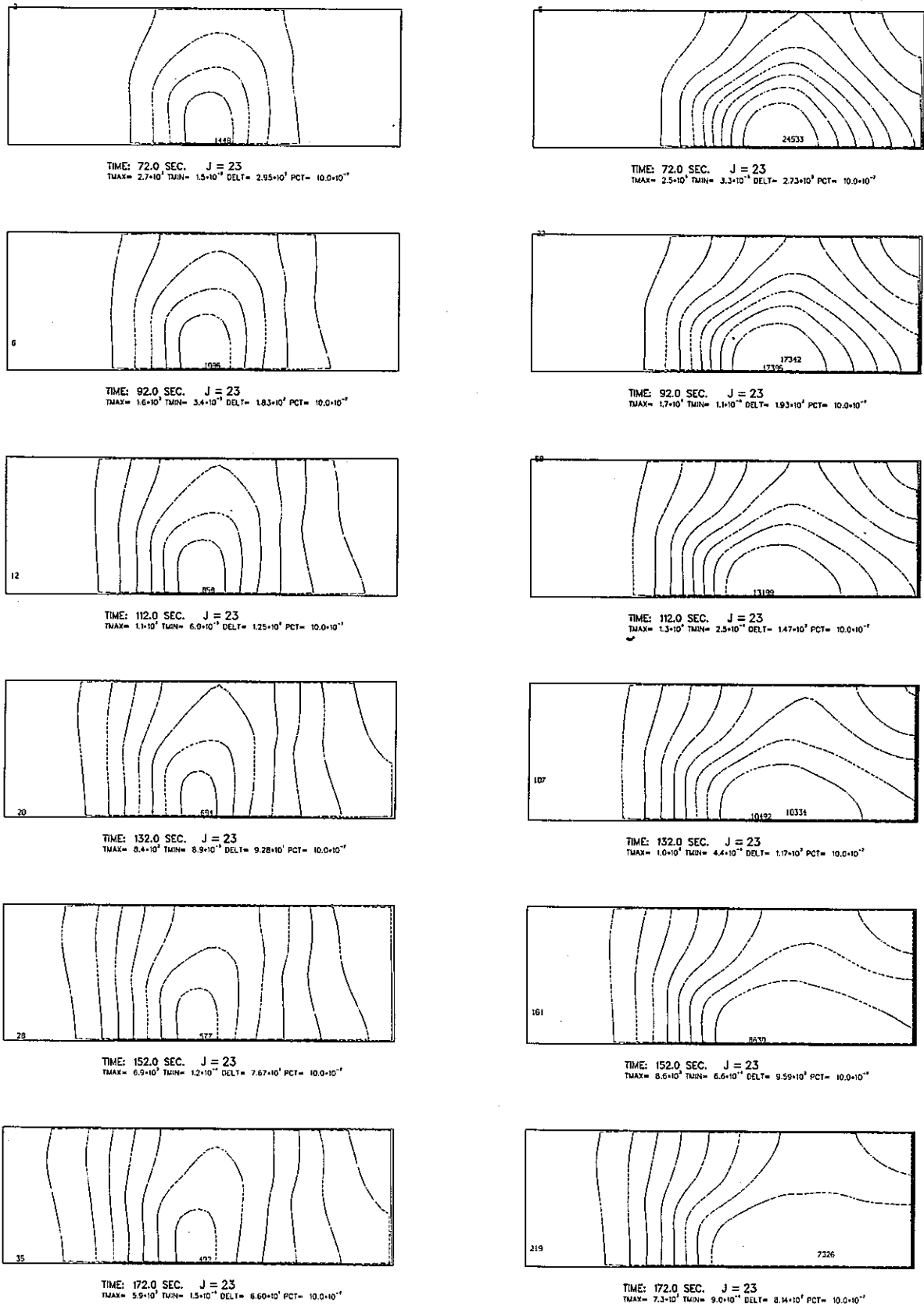


図3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)

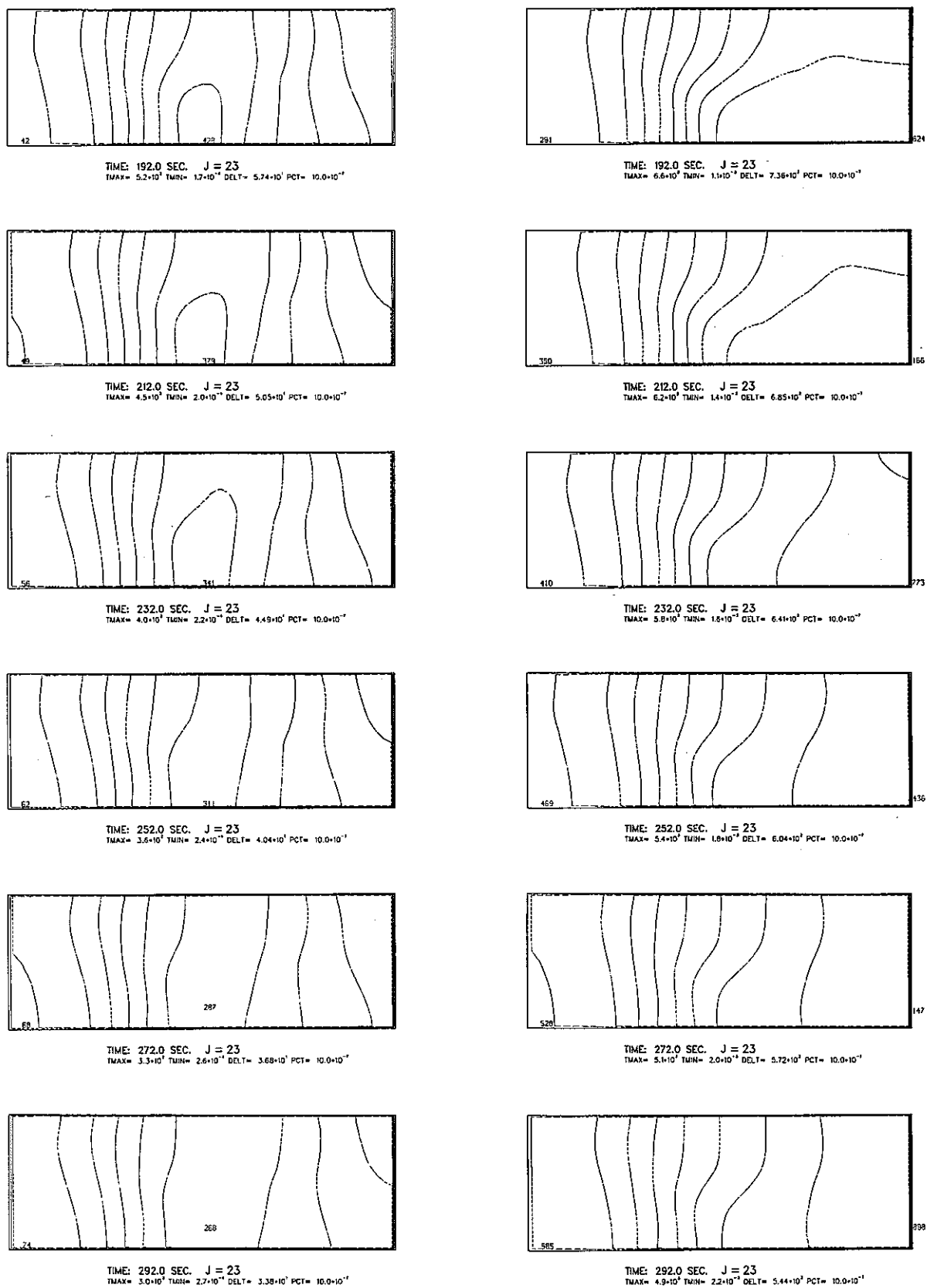
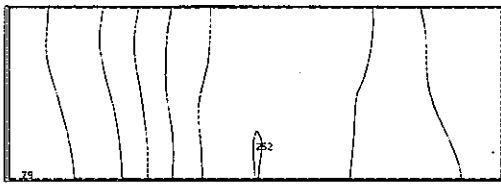
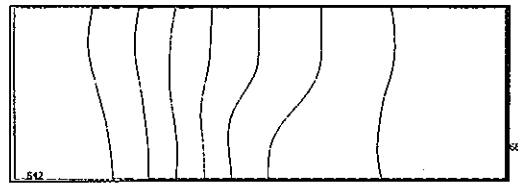


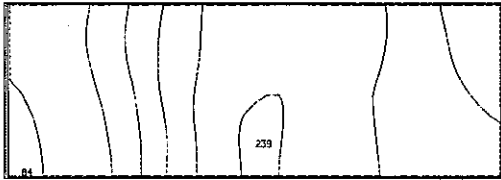
図3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)



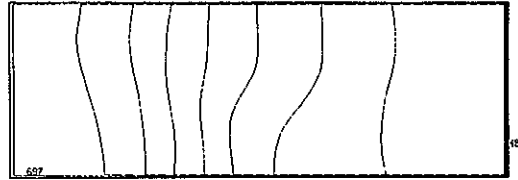
TIME: 312.0 SEC. J = 23  
 TMAX=  $2.8 \cdot 10^3$  TMIN=  $2.8 \cdot 10^2$  DELT=  $3.15 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



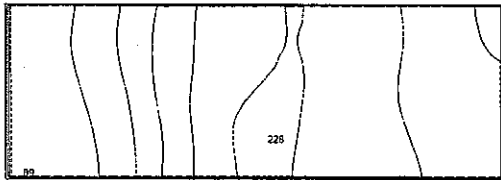
TIME: 312.0 SEC. J = 23  
 TMAX=  $4.7 \cdot 10^3$  TMIN=  $2.4 \cdot 10^3$  DELT=  $5.20 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 332.0 SEC. J = 23  
 TMAX=  $2.7 \cdot 10^3$  TMIN=  $2.9 \cdot 10^2$  DELT=  $2.95 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



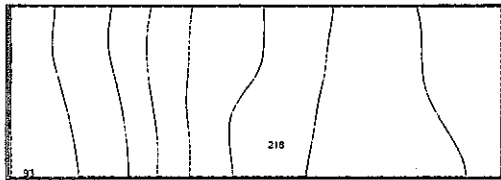
TIME: 332.0 SEC. J = 23  
 TMAX=  $4.5 \cdot 10^3$  TMIN=  $2.6 \cdot 10^3$  DELT=  $5.01 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



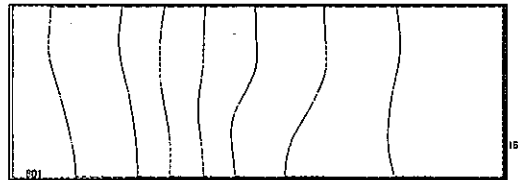
TIME: 352.0 SEC. J = 23  
 TMAX=  $2.5 \cdot 10^3$  TMIN=  $3.0 \cdot 10^2$  DELT=  $2.78 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



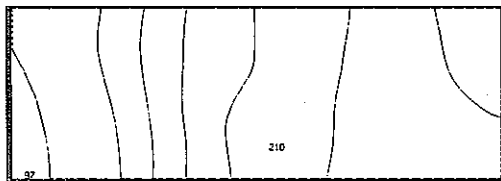
TIME: 352.0 SEC. J = 23  
 TMAX=  $4.4 \cdot 10^3$  TMIN=  $2.7 \cdot 10^3$  DELT=  $4.84 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



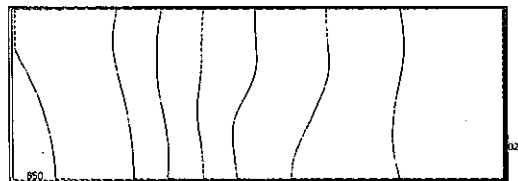
TIME: 372.0 SEC. J = 23  
 TMAX=  $2.4 \cdot 10^3$  TMIN=  $3.1 \cdot 10^2$  DELT=  $2.64 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



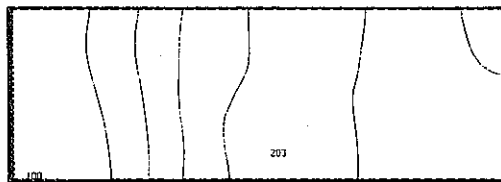
TIME: 372.0 SEC. J = 23  
 TMAX=  $4.2 \cdot 10^3$  TMIN=  $2.8 \cdot 10^3$  DELT=  $4.69 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



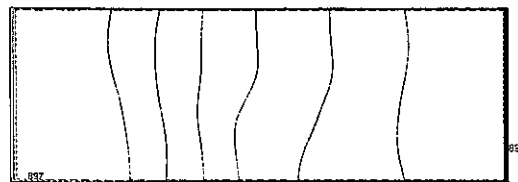
TIME: 392.0 SEC. J = 23  
 TMAX=  $2.3 \cdot 10^3$  TMIN=  $3.1 \cdot 10^2$  DELT=  $2.52 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 392.0 SEC. J = 23  
 TMAX=  $4.1 \cdot 10^3$  TMIN=  $3.0 \cdot 10^3$  DELT=  $4.56 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

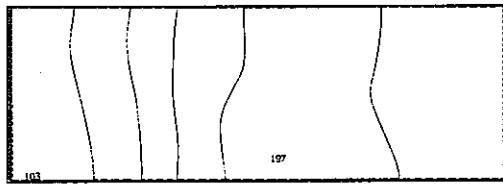


TIME: 412.0 SEC. J = 23  
 TMAX=  $2.2 \cdot 10^3$  TMIN=  $3.2 \cdot 10^2$  DELT=  $2.42 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

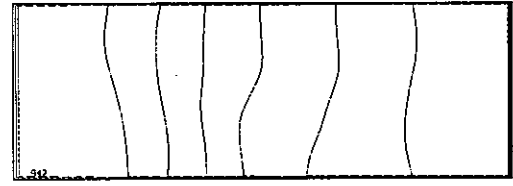


TIME: 412.0 SEC. J = 23  
 TMAX=  $4.0 \cdot 10^3$  TMIN=  $3.1 \cdot 10^3$  DELT=  $4.44 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

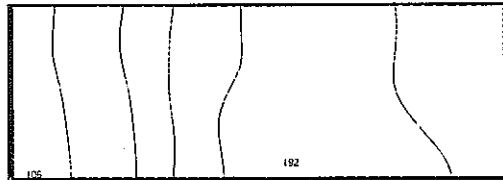
図 3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)



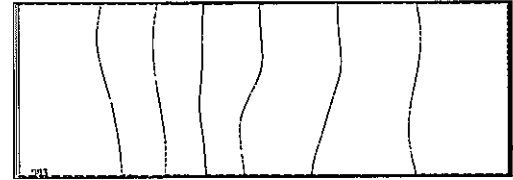
TIME: 432.0 SEC. J = 23  
 $T_{MAX} = 2.1 \cdot 10^3$   $T_{MIN} = 3.2 \cdot 10^{-1}$  DELT =  $2.33 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



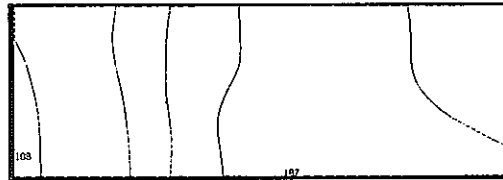
TIME: 432.0 SEC. J = 23  
 $T_{MAX} = 3.9 \cdot 10^3$   $T_{MIN} = 3.2 \cdot 10^{-1}$  DELT =  $4.34 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



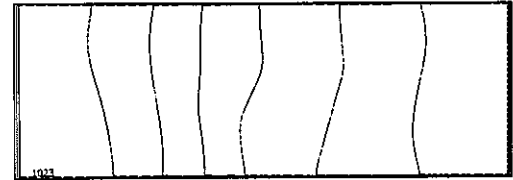
TIME: 452.0 SEC. J = 23  
 $T_{MAX} = 2.0 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $2.25 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



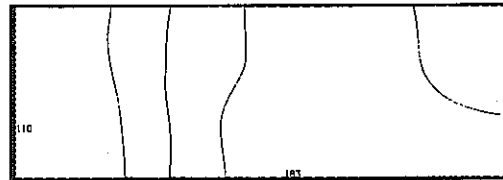
TIME: 452.0 SEC. J = 23  
 $T_{MAX} = 3.6 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $4.24 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



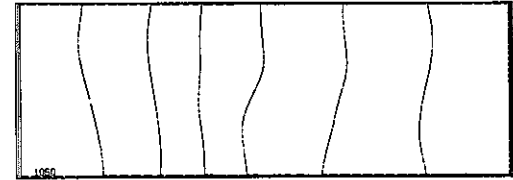
TIME: 472.0 SEC. J = 23  
 $T_{MAX} = 2.0 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $2.19 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



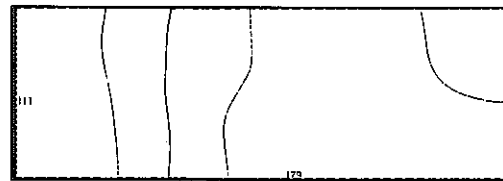
TIME: 472.0 SEC. J = 23  
 $T_{MAX} = 3.7 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $4.15 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



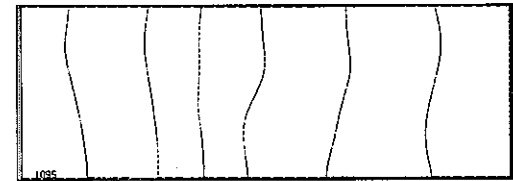
TIME: 492.0 SEC. J = 23  
 $T_{MAX} = 1.9 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $2.15 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



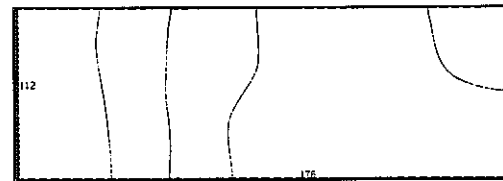
TIME: 492.0 SEC. J = 23  
 $T_{MAX} = 3.7 \cdot 10^3$   $T_{MIN} = 3.4 \cdot 10^{-1}$  DELT =  $4.07 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



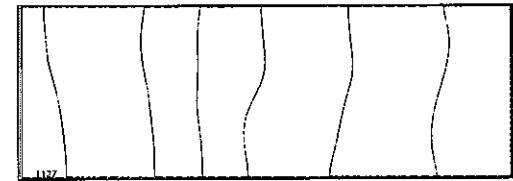
TIME: 512.0 SEC. J = 23  
 $T_{MAX} = 1.9 \cdot 10^3$   $T_{MIN} = 3.3 \cdot 10^{-1}$  DELT =  $2.11 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$



TIME: 512.0 SEC. J = 23  
 $T_{MAX} = 3.6 \cdot 10^3$   $T_{MIN} = 3.5 \cdot 10^{-1}$  DELT =  $3.99 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

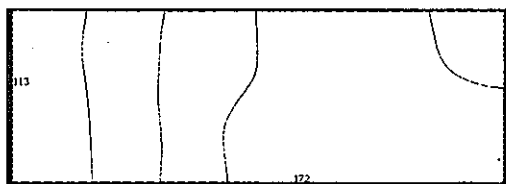


TIME: 532.0 SEC. J = 23  
 $T_{MAX} = 1.9 \cdot 10^3$   $T_{MIN} = 3.4 \cdot 10^{-1}$  DELT =  $2.07 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

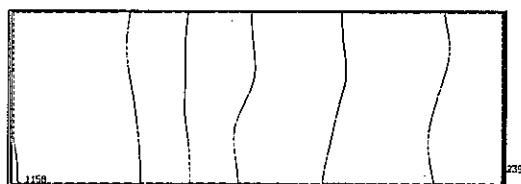


TIME: 532.0 SEC. J = 23  
 $T_{MAX} = 3.5 \cdot 10^3$   $T_{MIN} = 3.6 \cdot 10^{-1}$  DELT =  $3.92 \cdot 10^3$  PCT =  $10.0 \cdot 10^{-1}$

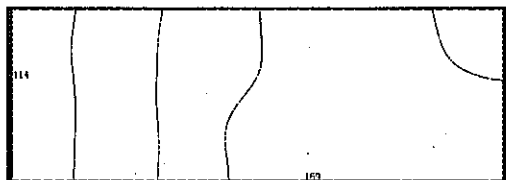
图3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)



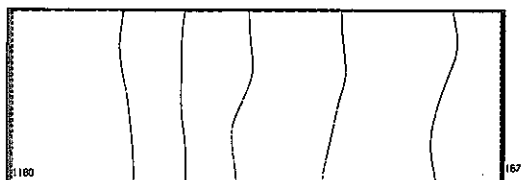
TIME: 552.0 SEC. J = 23  
 TMAX=  $1.8 \cdot 10^7$  TMIN=  $3.4 \cdot 10^{-3}$  DELT=  $2.0 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



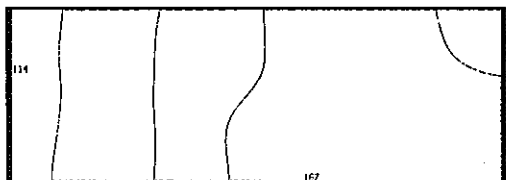
TIME: 552.0 SEC. J = 23  
 TMAX=  $3.5 \cdot 10^7$  TMIN=  $3.6 \cdot 10^{-3}$  DELT=  $3.85 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 572.0 SEC. J = 23  
 TMAX=  $1.8 \cdot 10^7$  TMIN=  $3.4 \cdot 10^{-3}$  DELT=  $2.0 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



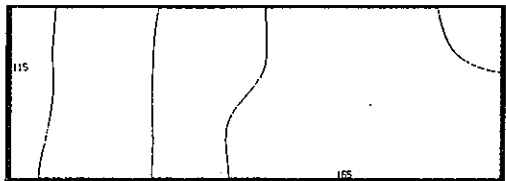
TIME: 572.0 SEC. J = 23  
 TMAX=  $3.4 \cdot 10^7$  TMIN=  $3.7 \cdot 10^{-3}$  DELT=  $3.78 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



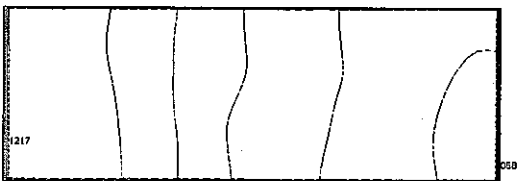
TIME: 592.0 SEC. J = 23  
 TMAX=  $1.8 \cdot 10^7$  TMIN=  $3.4 \cdot 10^{-3}$  DELT=  $1.98 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 592.0 SEC. J = 23  
 TMAX=  $3.3 \cdot 10^7$  TMIN=  $3.7 \cdot 10^{-3}$  DELT=  $3.7 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 601.0 SEC. J = 23  
 TMAX=  $1.8 \cdot 10^7$  TMIN=  $3.4 \cdot 10^{-3}$  DELT=  $1.98 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 601.0 SEC. J = 23  
 TMAX=  $3.3 \cdot 10^7$  TMIN=  $3.7 \cdot 10^{-3}$  DELT=  $3.68 \cdot 10^1$  PCT=  $10.0 \cdot 10^{-1}$

图3.21 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, J=23断面)

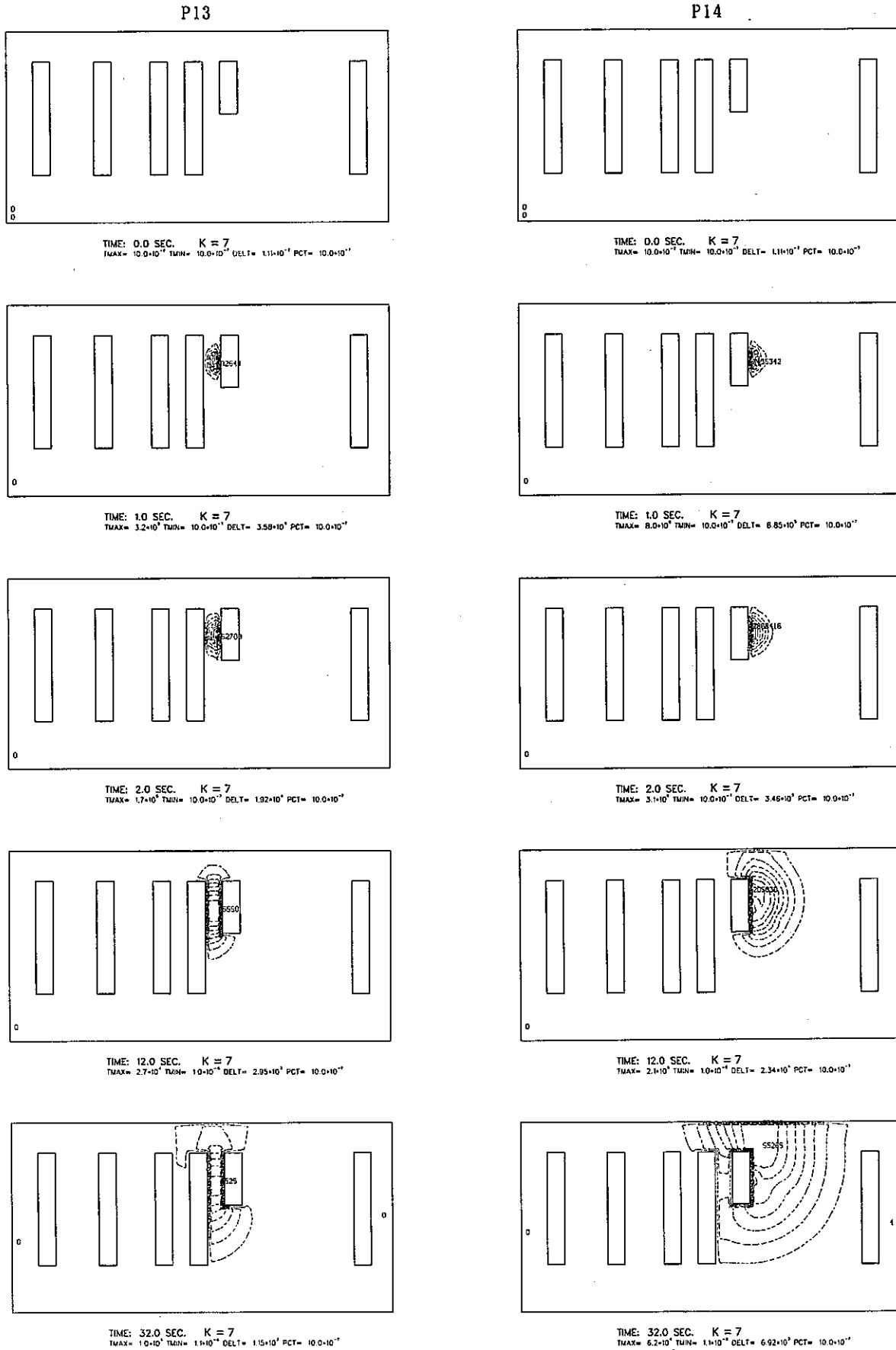


図3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)

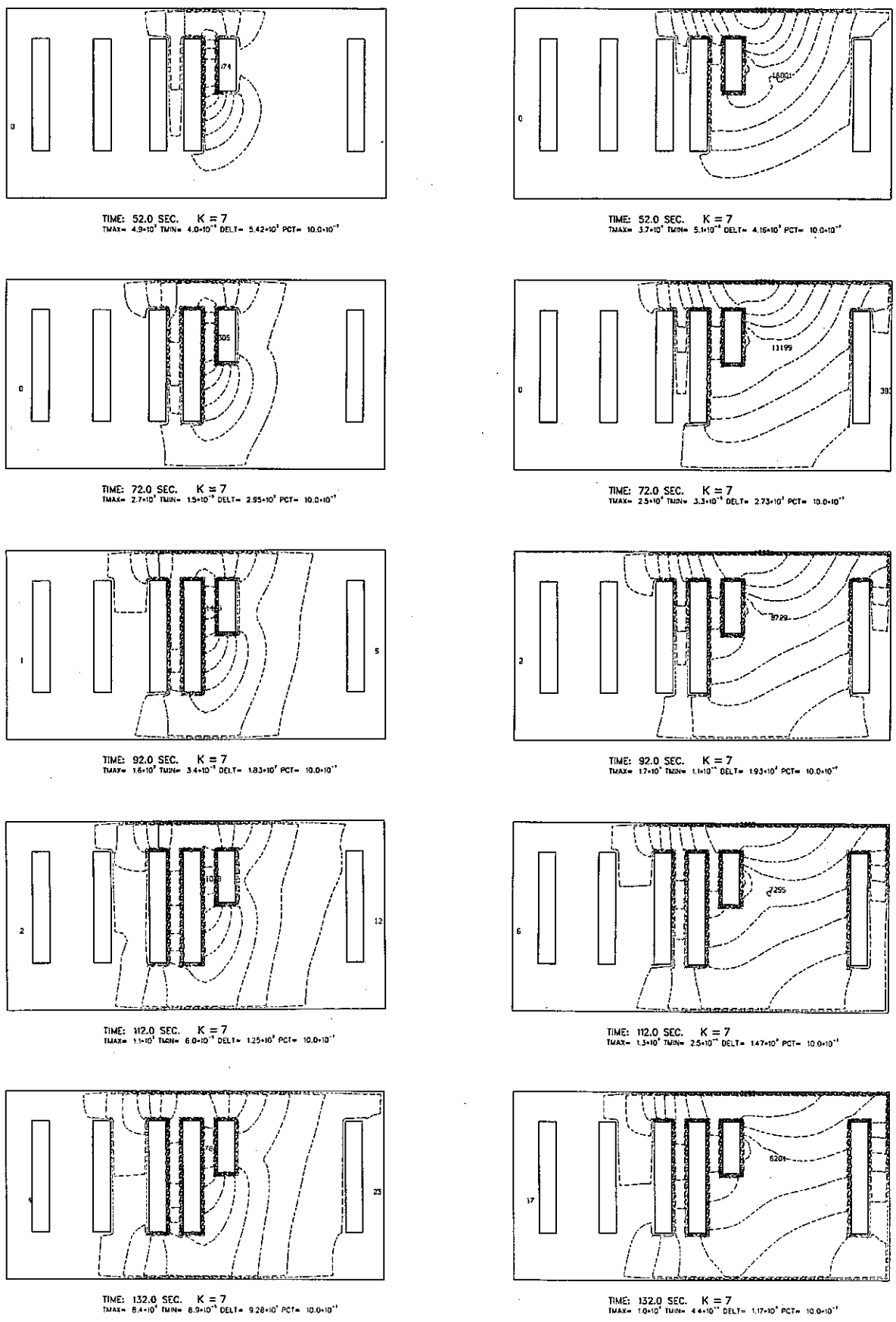
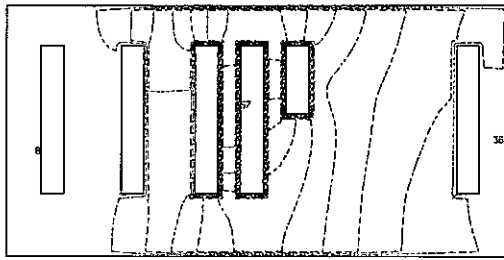
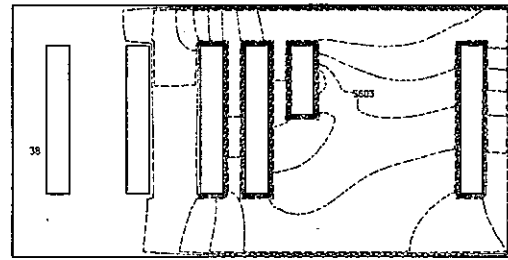


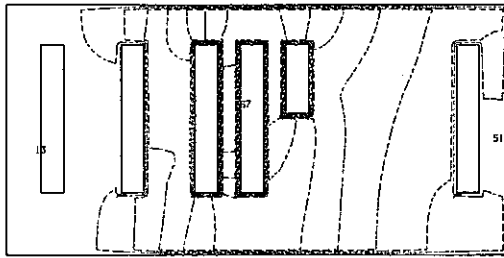
图3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)



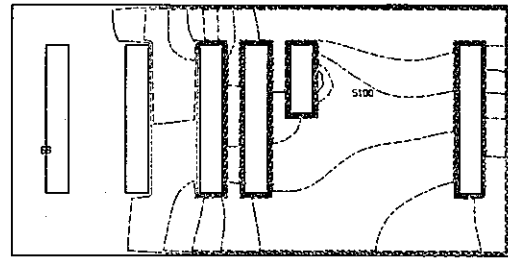
TIME: 152.0 SEC. K = 7  
 TMAX=  $6.9 \times 10^{10}$  TMIN=  $1.2 \times 10^{10}$  DELT=  $7.67 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



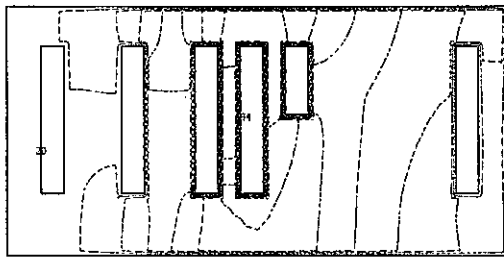
TIME: 152.0 SEC. K = 7  
 TMAX=  $6.6 \times 10^{10}$  TMIN=  $6.6 \times 10^{10}$  DELT=  $9.59 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



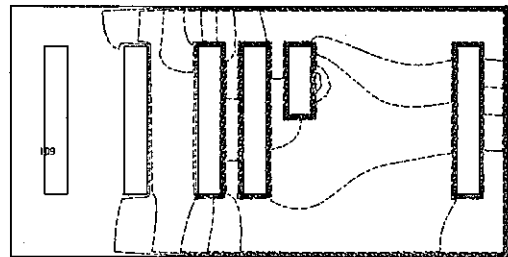
TIME: 172.0 SEC. K = 7  
 TMAX=  $5.9 \times 10^{10}$  TMIN=  $1.5 \times 10^{10}$  DELT=  $6.60 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



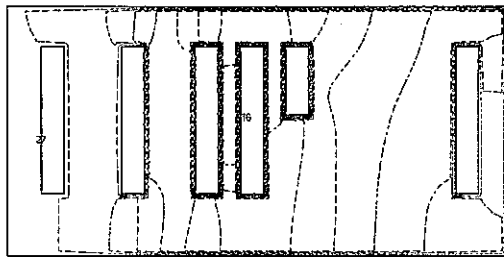
TIME: 172.0 SEC. K = 7  
 TMAX=  $7.3 \times 10^{10}$  TMIN=  $9.0 \times 10^9$  DELT=  $8.14 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



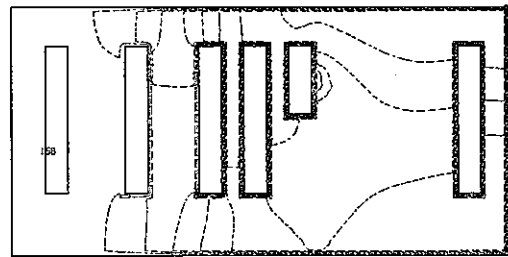
TIME: 192.0 SEC. K = 7  
 TMAX=  $5.2 \times 10^{10}$  TMIN=  $1.7 \times 10^{10}$  DELT=  $5.74 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



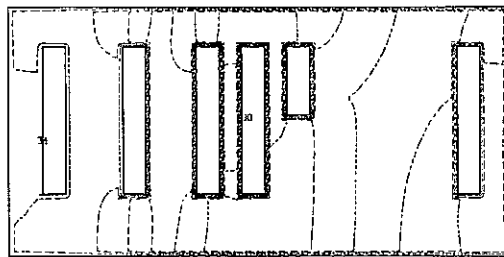
TIME: 192.0 SEC. K = 7  
 TMAX=  $6.5 \times 10^{10}$  TMIN=  $1.1 \times 10^{10}$  DELT=  $7.36 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



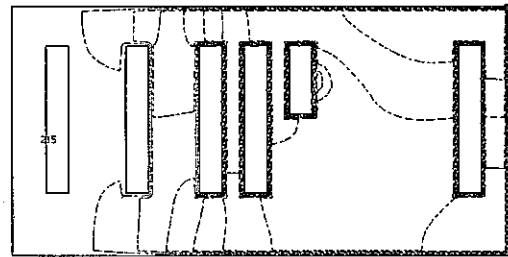
TIME: 212.0 SEC. K = 7  
 TMAX=  $4.5 \times 10^{10}$  TMIN=  $2.0 \times 10^{10}$  DELT=  $5.05 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 212.0 SEC. K = 7  
 TMAX=  $6.2 \times 10^{10}$  TMIN=  $1.4 \times 10^{10}$  DELT=  $6.85 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



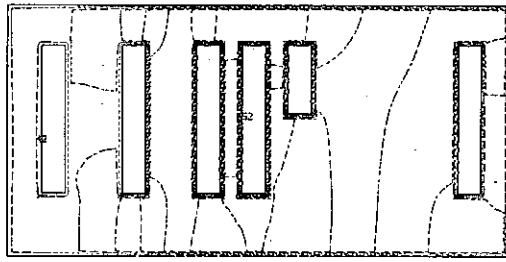
TIME: 232.0 SEC. K = 7  
 TMAX=  $4.0 \times 10^{10}$  TMIN=  $2.2 \times 10^{10}$  DELT=  $4.43 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



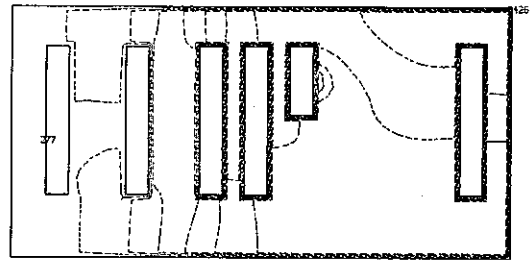
TIME: 232.0 SEC. K = 7  
 TMAX=  $5.5 \times 10^{10}$  TMIN=  $1.6 \times 10^{10}$  DELT=  $6.41 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

図3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)

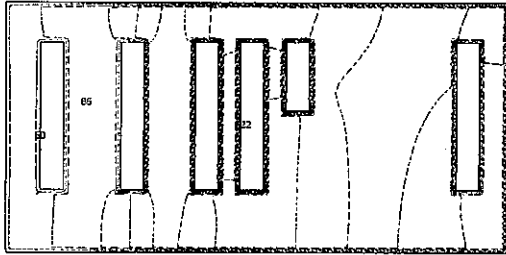




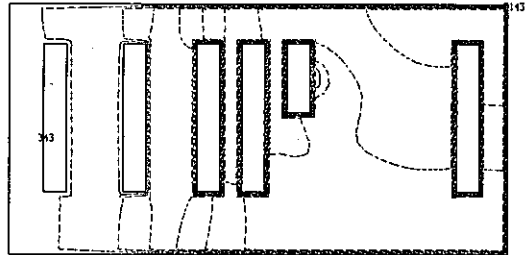
TIME: 252.0 SEC. K = 7  
 $T_{MAX} = 3.6 \cdot 10^{10}$   $T_{MIN} = 2.4 \cdot 10^{10}$  DELT =  $4.04 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



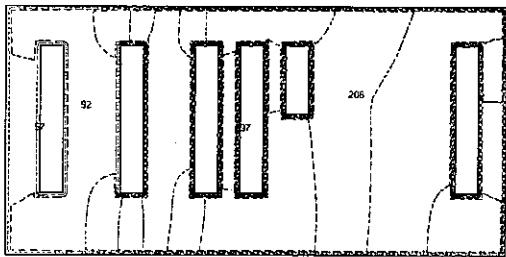
TIME: 252.0 SEC. K = 7  
 $T_{MAX} = 5.4 \cdot 10^{10}$   $T_{MIN} = 1.8 \cdot 10^{10}$  DELT =  $6.04 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



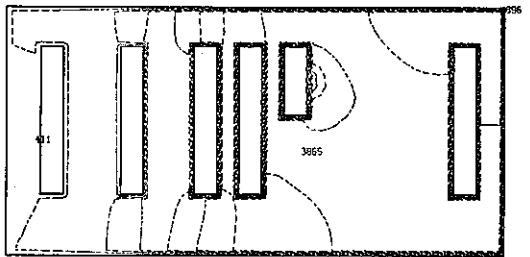
TIME: 272.0 SEC. K = 7  
 $T_{MAX} = 3.3 \cdot 10^{10}$   $T_{MIN} = 2.6 \cdot 10^{10}$  DELT =  $3.68 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



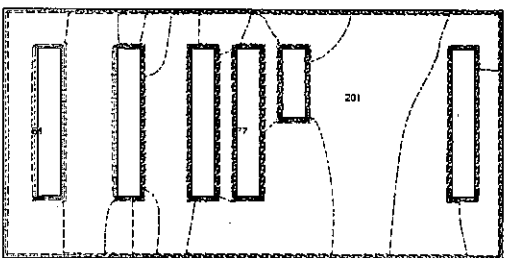
TIME: 272.0 SEC. K = 7  
 $T_{MAX} = 5.1 \cdot 10^{10}$   $T_{MIN} = 2.0 \cdot 10^{10}$  DELT =  $5.72 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



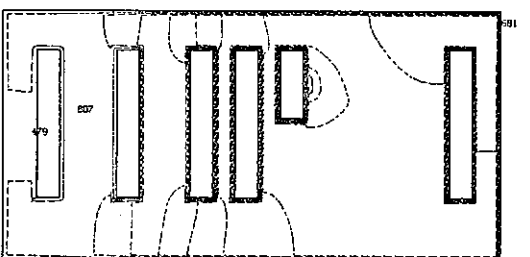
TIME: 292.0 SEC. K = 7  
 $T_{MAX} = 3.0 \cdot 10^{10}$   $T_{MIN} = 2.7 \cdot 10^{10}$  DELT =  $3.39 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



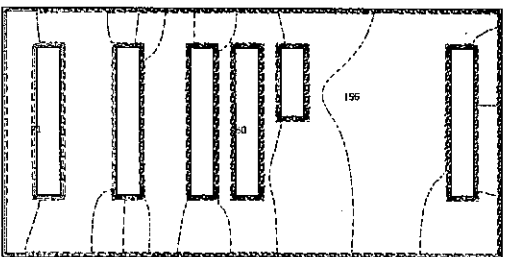
TIME: 292.0 SEC. K = 7  
 $T_{MAX} = 4.9 \cdot 10^{10}$   $T_{MIN} = 2.2 \cdot 10^{10}$  DELT =  $5.44 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



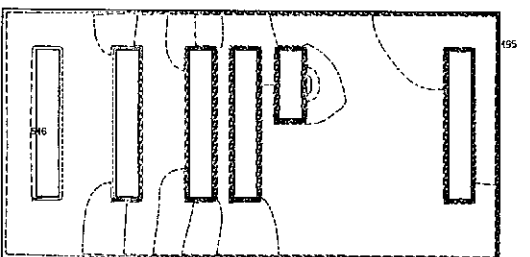
TIME: 312.0 SEC. K = 7  
 $T_{MAX} = 2.9 \cdot 10^{10}$   $T_{MIN} = 2.8 \cdot 10^{10}$  DELT =  $3.15 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$



TIME: 312.0 SEC. K = 7  
 $T_{MAX} = 4.7 \cdot 10^{10}$   $T_{MIN} = 2.4 \cdot 10^{10}$  DELT =  $5.20 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$

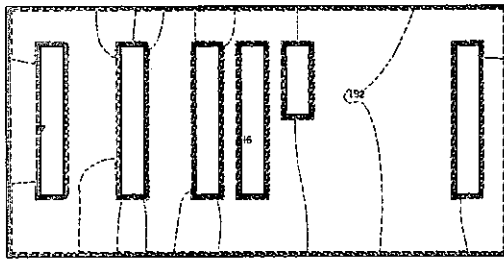


TIME: 332.0 SEC. K = 7  
 $T_{MAX} = 2.7 \cdot 10^{10}$   $T_{MIN} = 2.9 \cdot 10^{10}$  DELT =  $2.95 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$

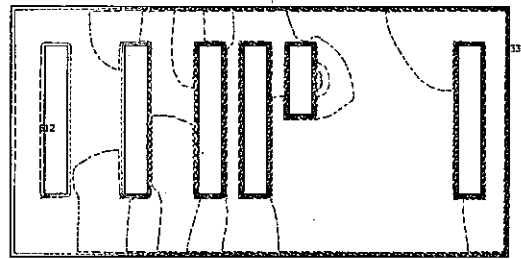


TIME: 332.0 SEC. K = 7  
 $T_{MAX} = 4.5 \cdot 10^{10}$   $T_{MIN} = 2.6 \cdot 10^{10}$  DELT =  $5.01 \cdot 10^9$  PCT =  $10.0 \cdot 10^{-4}$

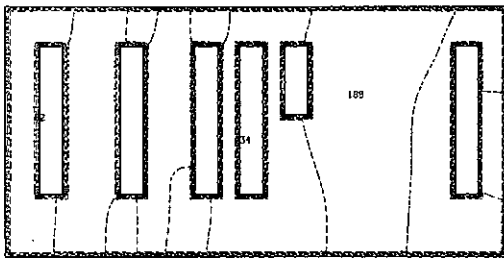
图3.22 放射性物质泄漏时浓度过度分布 (破损箇所P13, P14, K=7 断面)



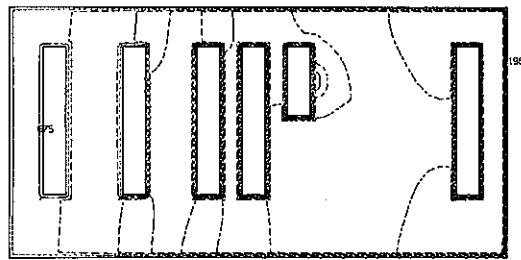
TIME: 352.0 SEC. K = 7  
 TMAX= 2.5\*10<sup>7</sup> TMIN= 3.0\*10<sup>-7</sup> DELT= 2.78\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



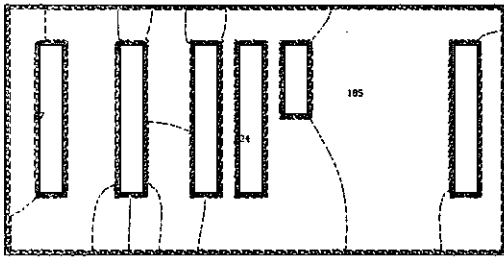
TIME: 352.0 SEC. K = 7  
 TMAX= 4.4\*10<sup>7</sup> TMIN= 2.7\*10<sup>-7</sup> DELT= 4.8\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



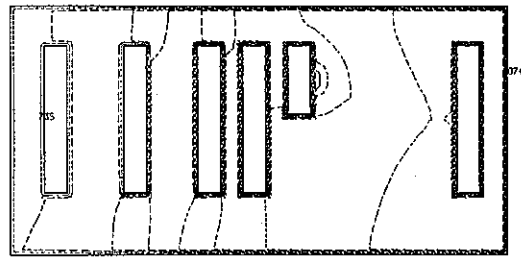
TIME: 372.0 SEC. K = 7  
 TMAX= 2.4\*10<sup>7</sup> TMIN= 3.1\*10<sup>-7</sup> DELT= 2.64\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



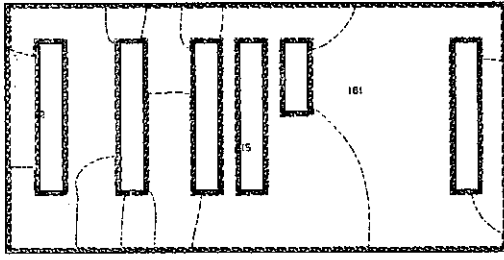
TIME: 372.0 SEC. K = 7  
 TMAX= 4.2\*10<sup>7</sup> TMIN= 2.8\*10<sup>-7</sup> DELT= 4.69\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



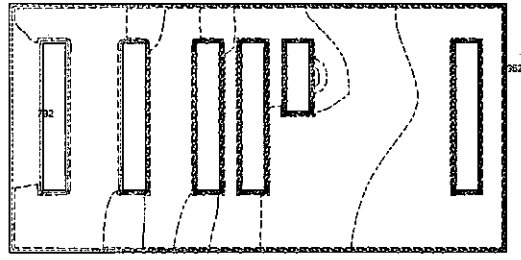
TIME: 392.0 SEC. K = 7  
 TMAX= 2.3\*10<sup>7</sup> TMIN= 3.1\*10<sup>-7</sup> DELT= 2.52\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



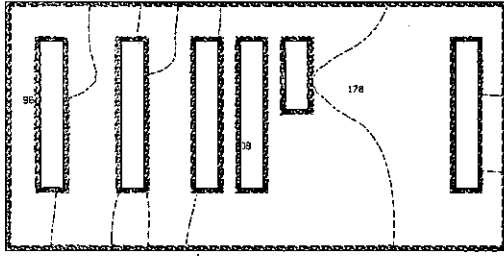
TIME: 392.0 SEC. K = 7  
 TMAX= 4.1\*10<sup>7</sup> TMIN= 3.0\*10<sup>-7</sup> DELT= 4.56\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



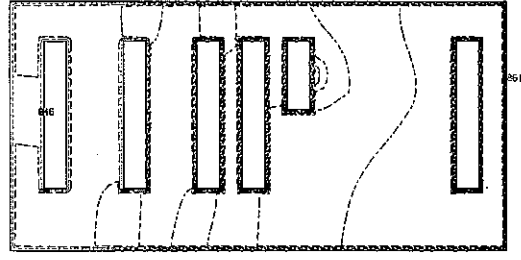
TIME: 412.0 SEC. K = 7  
 TMAX= 2.2\*10<sup>7</sup> TMIN= 3.2\*10<sup>-7</sup> DELT= 2.42\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 412.0 SEC. K = 7  
 TMAX= 4.0\*10<sup>7</sup> TMIN= 3.1\*10<sup>-7</sup> DELT= 4.44\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>

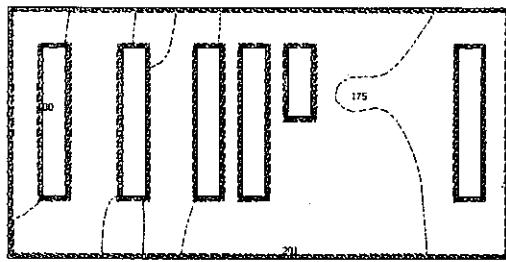


TIME: 432.0 SEC. K = 7  
 TMAX= 2.1\*10<sup>7</sup> TMIN= 3.2\*10<sup>-7</sup> DELT= 2.33\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>

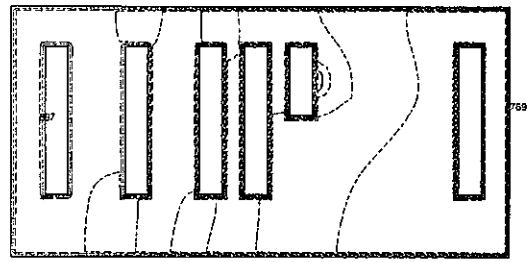


TIME: 432.0 SEC. K = 7  
 TMAX= 3.9\*10<sup>7</sup> TMIN= 3.2\*10<sup>-7</sup> DELT= 4.3\*10<sup>7</sup> PCT= 10.0\*10<sup>-7</sup>

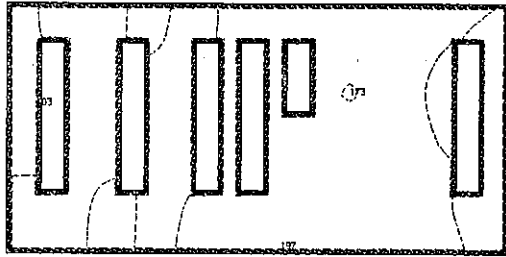
图3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)



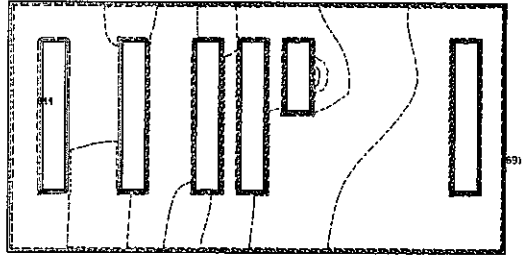
TIME: 452.0 SEC. K = 7  
 TMAX=  $2.0 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $2.25 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



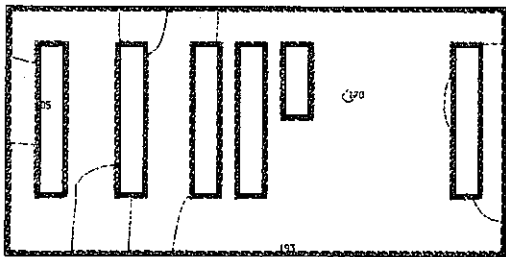
TIME: 452.0 SEC. K = 7  
 TMAX=  $3.8 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $4.24 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



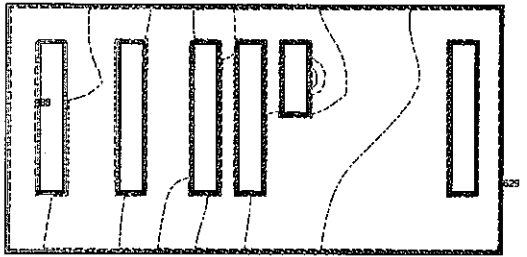
TIME: 472.0 SEC. K = 7  
 TMAX=  $2.0 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $2.19 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



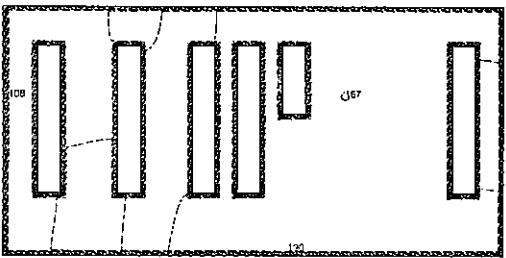
TIME: 472.0 SEC. K = 7  
 TMAX=  $3.7 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $4.15 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



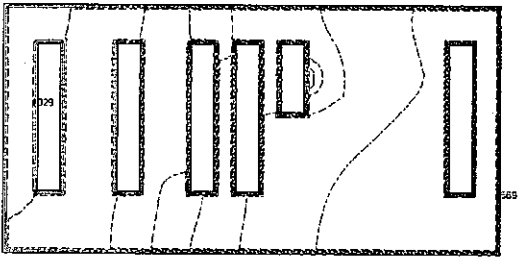
TIME: 492.0 SEC. K = 7  
 TMAX=  $1.9 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $2.15 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



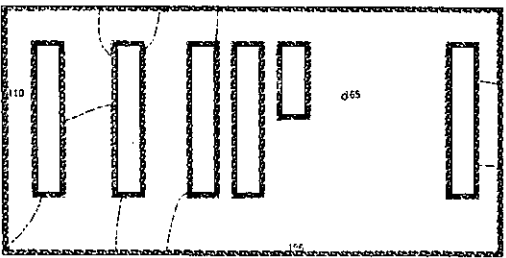
TIME: 492.0 SEC. K = 7  
 TMAX=  $3.7 \times 10^7$  TMIN=  $3.4 \times 10^{-1}$  DELT=  $4.07 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



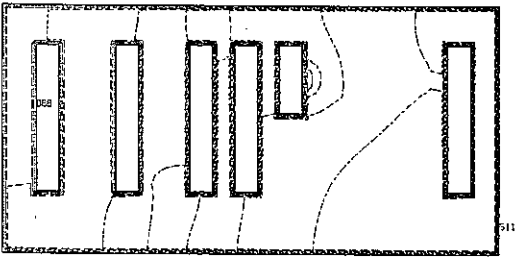
TIME: 512.0 SEC. K = 7  
 TMAX=  $1.9 \times 10^7$  TMIN=  $3.3 \times 10^{-1}$  DELT=  $2.11 \times 10^3$  PCT=  $10.0 \times 10^{-1}$



TIME: 512.0 SEC. K = 7  
 TMAX=  $3.6 \times 10^7$  TMIN=  $3.5 \times 10^{-1}$  DELT=  $3.99 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

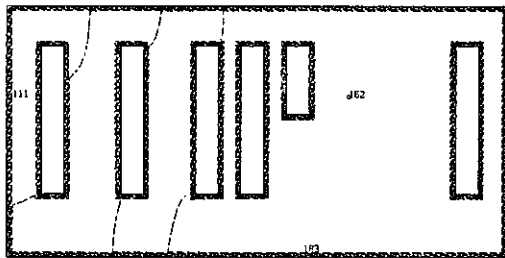


TIME: 532.0 SEC. K = 7  
 TMAX=  $1.9 \times 10^7$  TMIN=  $3.4 \times 10^{-1}$  DELT=  $2.07 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

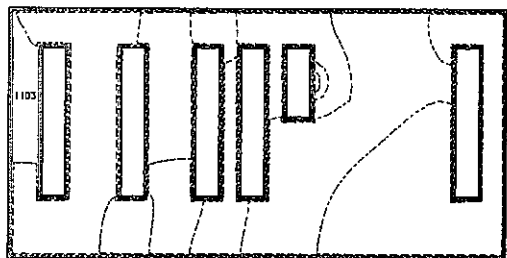


TIME: 532.0 SEC. K = 7  
 TMAX=  $3.5 \times 10^7$  TMIN=  $3.6 \times 10^{-1}$  DELT=  $3.92 \times 10^3$  PCT=  $10.0 \times 10^{-1}$

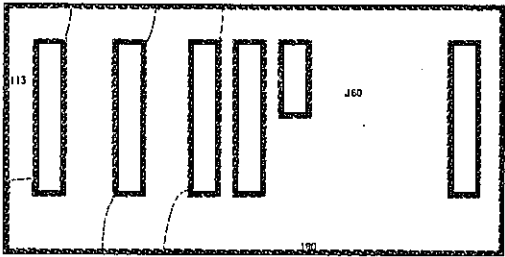
图3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)



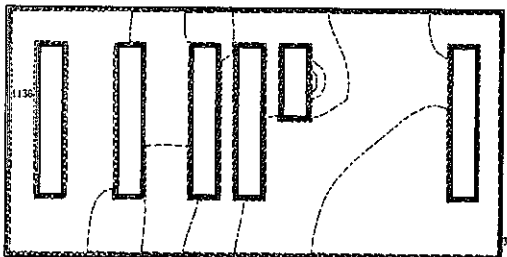
TIME: 552.0 SEC. K = 7  
 TMAX= 1.8\*10<sup>3</sup> TMIN= 3.4\*10<sup>-1</sup> DELT= 2.04\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



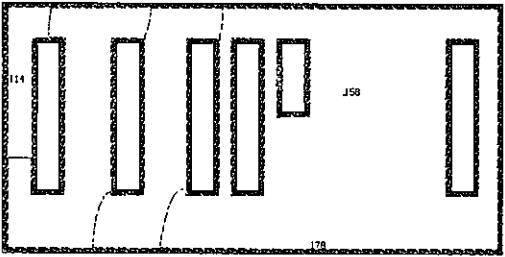
TIME: 552.0 SEC. K = 7  
 TMAX= 3.5\*10<sup>3</sup> TMIN= 3.6\*10<sup>-1</sup> DELT= 3.85\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



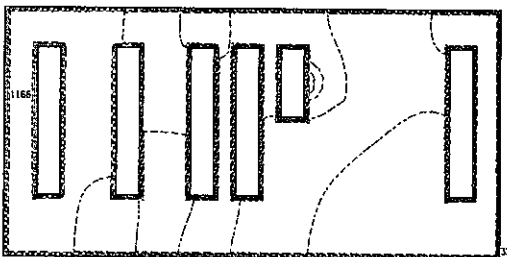
TIME: 572.0 SEC. K = 7  
 TMAX= 1.8\*10<sup>3</sup> TMIN= 3.4\*10<sup>-1</sup> DELT= 2.01\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



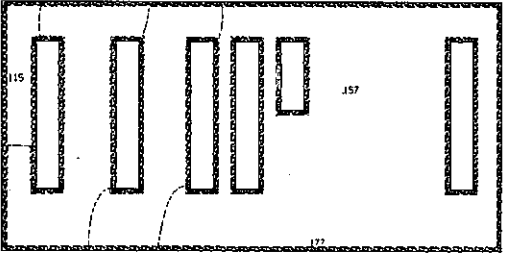
TIME: 572.0 SEC. K = 7  
 TMAX= 3.4\*10<sup>3</sup> TMIN= 3.7\*10<sup>-1</sup> DELT= 3.78\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



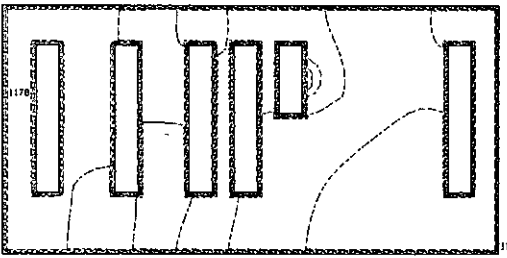
TIME: 592.0 SEC. K = 7  
 TMAX= 1.8\*10<sup>3</sup> TMIN= 3.4\*10<sup>-1</sup> DELT= 1.98\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 592.0 SEC. K = 7  
 TMAX= 3.3\*10<sup>3</sup> TMIN= 3.7\*10<sup>-1</sup> DELT= 3.71\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



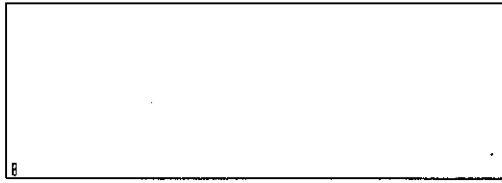
TIME: 601.0 SEC. K = 7  
 TMAX= 1.8\*10<sup>3</sup> TMIN= 3.4\*10<sup>-1</sup> DELT= 1.96\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>



TIME: 601.0 SEC. K = 7  
 TMAX= 3.3\*10<sup>3</sup> TMIN= 3.7\*10<sup>-1</sup> DELT= 3.68\*10<sup>3</sup> PCT= 10.0\*10<sup>-1</sup>

图3.22 放射性物質漏洩時濃度過度分布 (破損箇所P13, P14, K=7 断面)

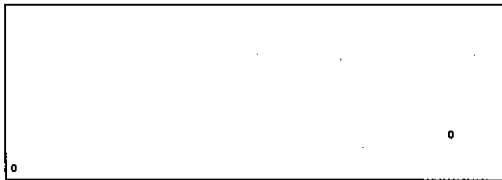
P15



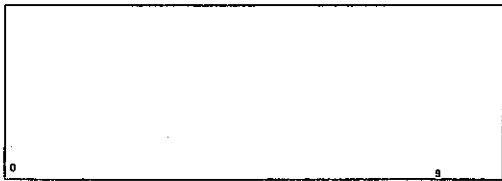
TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



TIME: 1.0 SEC. J = 23  
 TMAX=  $3.2 \times 10^3$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.52 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



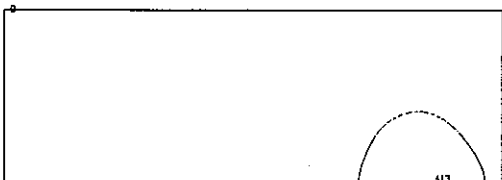
TIME: 2.0 SEC. J = 23  
 TMAX=  $1.6 \times 10^4$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.81 \times 10^4$  PCT=  $10.0 \times 10^{-7}$



TIME: 12.0 SEC. J = 23  
 TMAX=  $1.6 \times 10^5$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.73 \times 10^5$  PCT=  $10.0 \times 10^{-7}$



TIME: 32.0 SEC. J = 23  
 TMAX=  $4.3 \times 10^5$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $4.73 \times 10^5$  PCT=  $10.0 \times 10^{-7}$

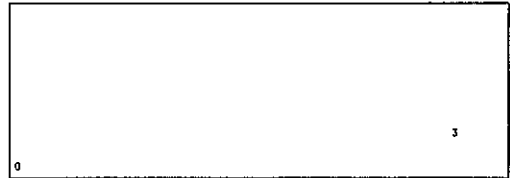


TIME: 52.0 SEC. J = 23  
 TMAX=  $2.1 \times 10^6$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $2.38 \times 10^6$  PCT=  $10.0 \times 10^{-7}$

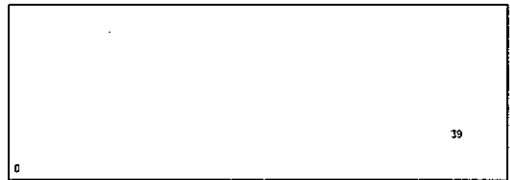
P16



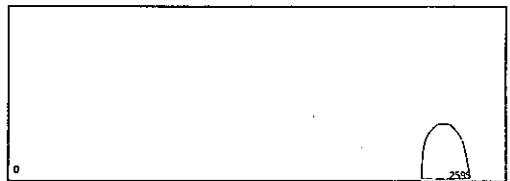
TIME: 0.0 SEC. J = 23  
 TMAX=  $10.0 \times 10^{-7}$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.11 \times 10^{-7}$  PCT=  $10.0 \times 10^{-7}$



TIME: 1.0 SEC. J = 23  
 TMAX=  $3.2 \times 10^3$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $3.50 \times 10^3$  PCT=  $10.0 \times 10^{-7}$



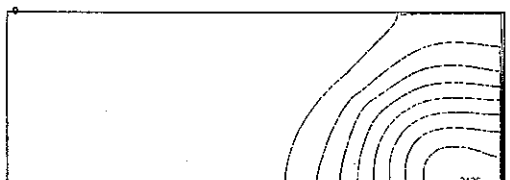
TIME: 2.0 SEC. J = 23  
 TMAX=  $1.6 \times 10^4$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.79 \times 10^4$  PCT=  $10.0 \times 10^{-7}$



TIME: 12.0 SEC. J = 23  
 TMAX=  $1.6 \times 10^5$  TMIN=  $10.0 \times 10^{-7}$  DELT=  $1.80 \times 10^5$  PCT=  $10.0 \times 10^{-7}$



TIME: 32.0 SEC. J = 23  
 TMAX=  $4.8 \times 10^5$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $5.31 \times 10^5$  PCT=  $10.0 \times 10^{-7}$



TIME: 52.0 SEC. J = 23  
 TMAX=  $2.5 \times 10^6$  TMIN=  $1.0 \times 10^{-7}$  DELT=  $2.73 \times 10^6$  PCT=  $10.0 \times 10^{-7}$

図 3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)

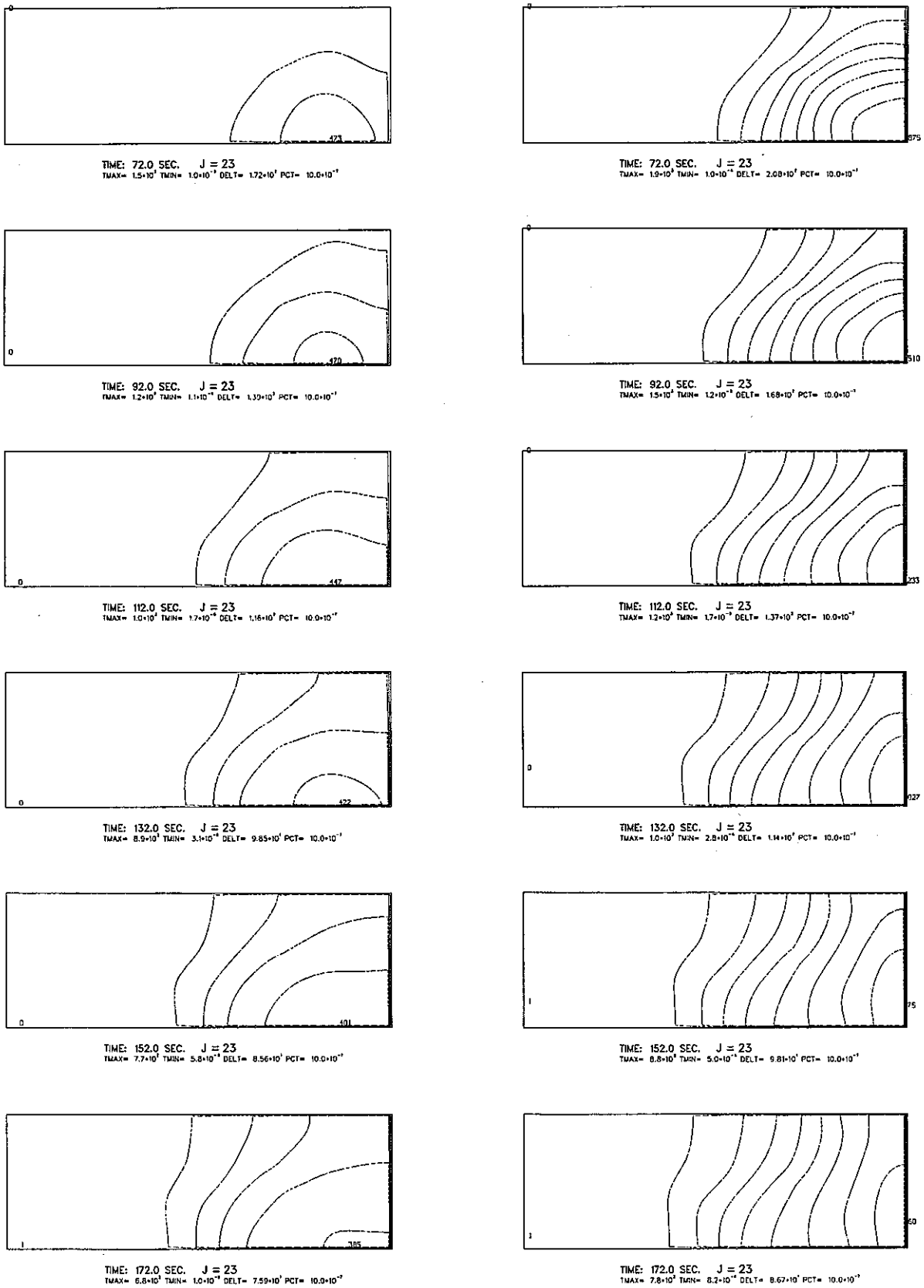
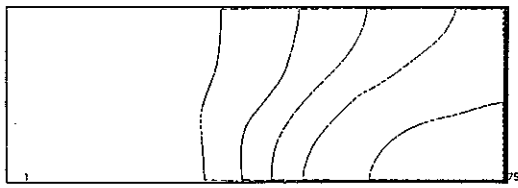
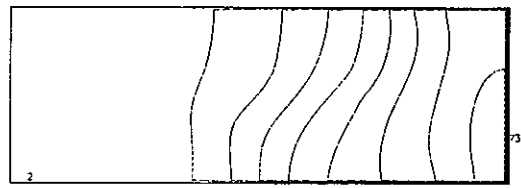


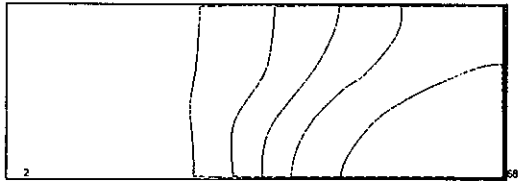
図3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)



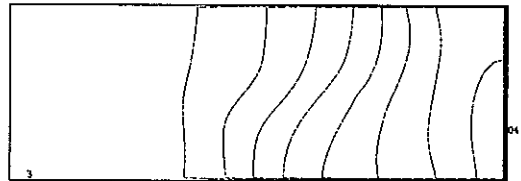
TIME: 192.0 SEC. J = 23  
 TMAX=  $6.2 \times 10^3$  TMIN=  $1.6 \times 10^3$  DELT=  $6.86 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 192.0 SEC. J = 23  
 TMAX=  $7.0 \times 10^3$  TMIN=  $1.2 \times 10^3$  DELT=  $7.79 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



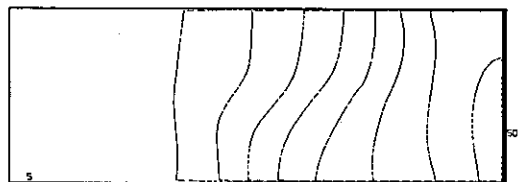
TIME: 212.0 SEC. J = 23  
 TMAX=  $5.7 \times 10^3$  TMIN=  $2.4 \times 10^3$  DELT=  $6.25 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



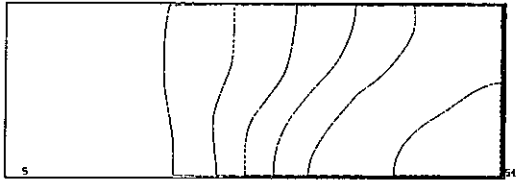
TIME: 212.0 SEC. J = 23  
 TMAX=  $6.4 \times 10^3$  TMIN=  $1.8 \times 10^3$  DELT=  $7.09 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



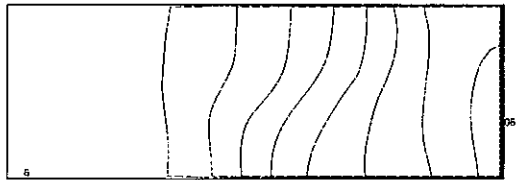
TIME: 232.0 SEC. J = 23  
 TMAX=  $5.2 \times 10^3$  TMIN=  $3.3 \times 10^3$  DELT=  $5.83 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



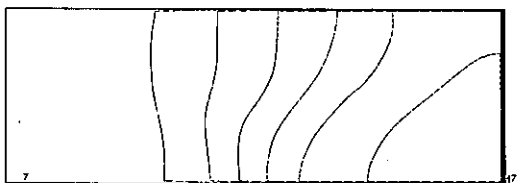
TIME: 232.0 SEC. J = 23  
 TMAX=  $5.9 \times 10^3$  TMIN=  $2.4 \times 10^3$  DELT=  $6.52 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



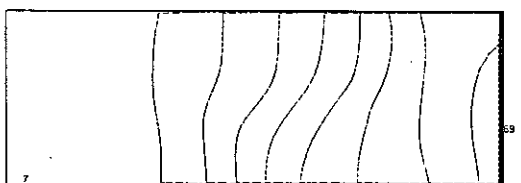
TIME: 252.0 SEC. J = 23  
 TMAX=  $4.9 \times 10^3$  TMIN=  $4.2 \times 10^3$  DELT=  $5.46 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



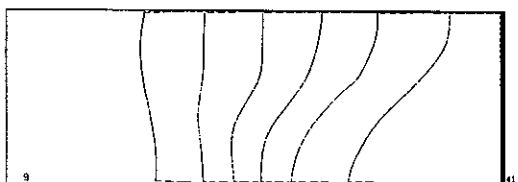
TIME: 252.0 SEC. J = 23  
 TMAX=  $5.4 \times 10^3$  TMIN=  $3.1 \times 10^3$  DELT=  $6.04 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



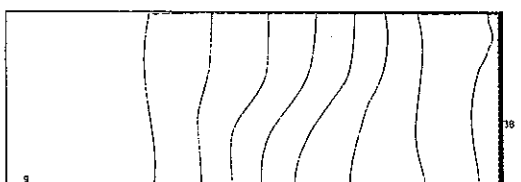
TIME: 272.0 SEC. J = 23  
 TMAX=  $4.6 \times 10^3$  TMIN=  $5.2 \times 10^3$  DELT=  $5.16 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 272.0 SEC. J = 23  
 TMAX=  $5.1 \times 10^3$  TMIN=  $3.8 \times 10^3$  DELT=  $5.63 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 292.0 SEC. J = 23  
 TMAX=  $4.4 \times 10^3$  TMIN=  $6.3 \times 10^3$  DELT=  $4.90 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 292.0 SEC. J = 23  
 TMAX=  $4.8 \times 10^3$  TMIN=  $4.6 \times 10^3$  DELT=  $5.28 \times 10^1$  PCT=  $10.0 \times 10^{-1}$

图3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)

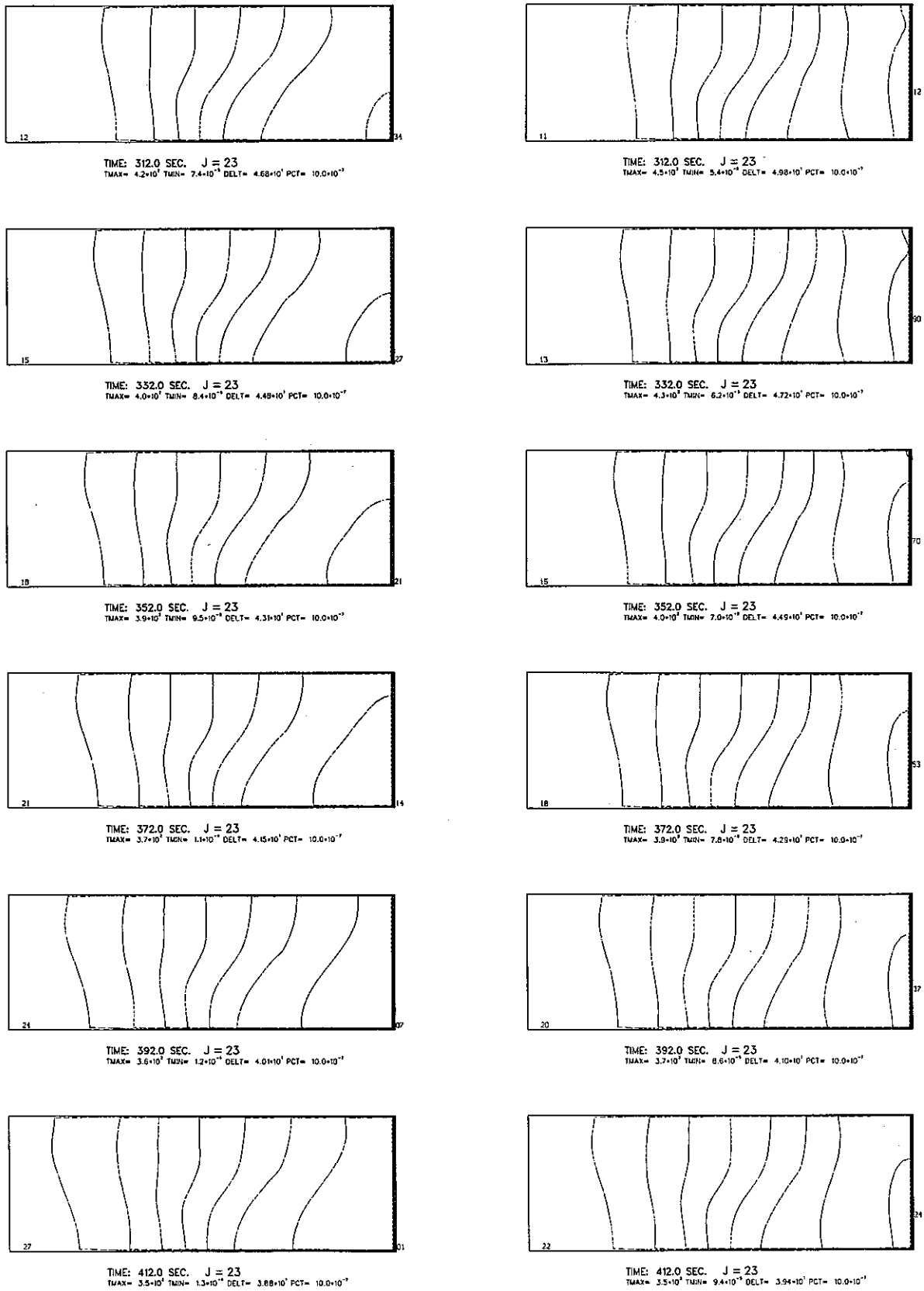


図3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)



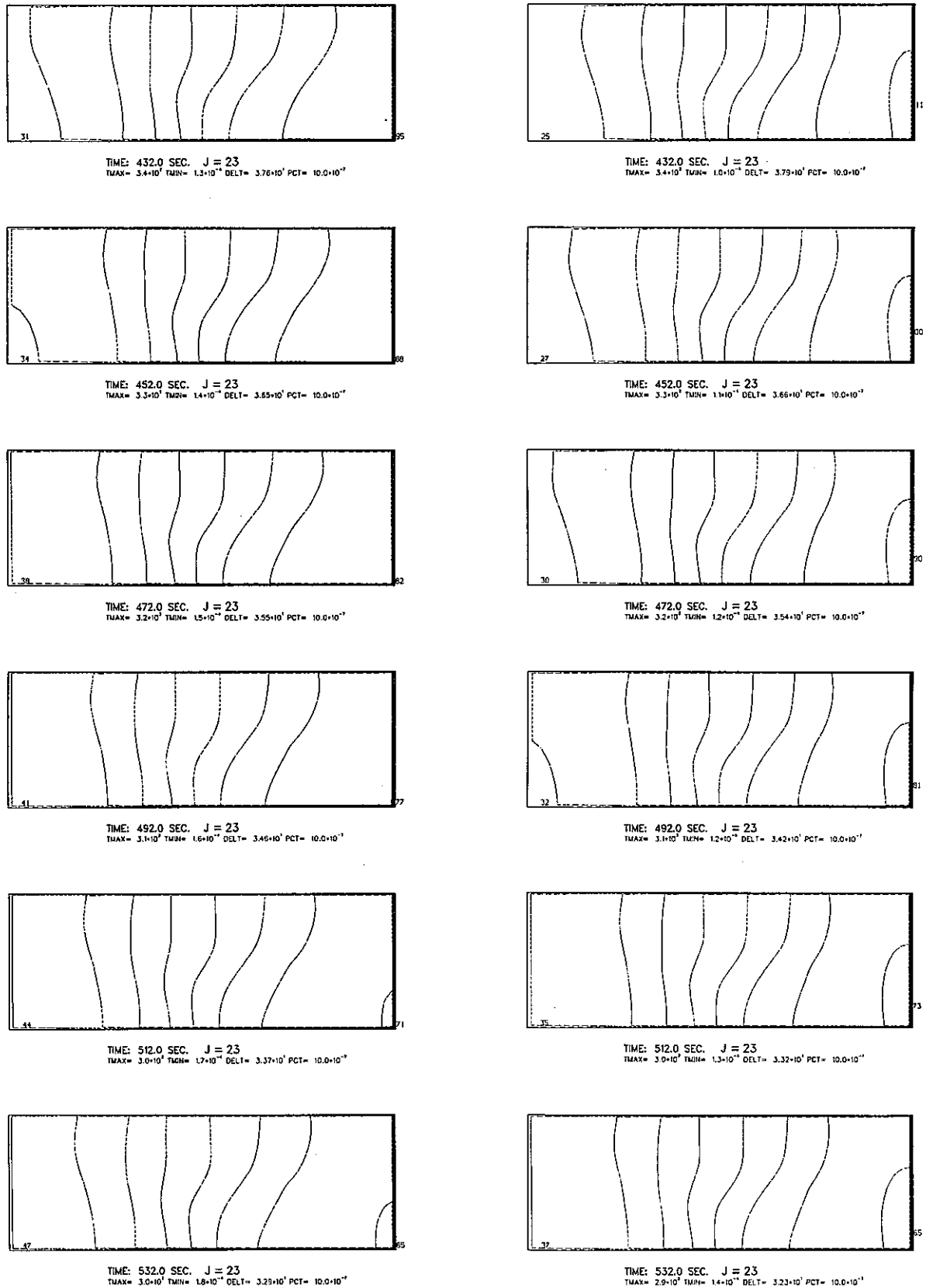


図 3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)

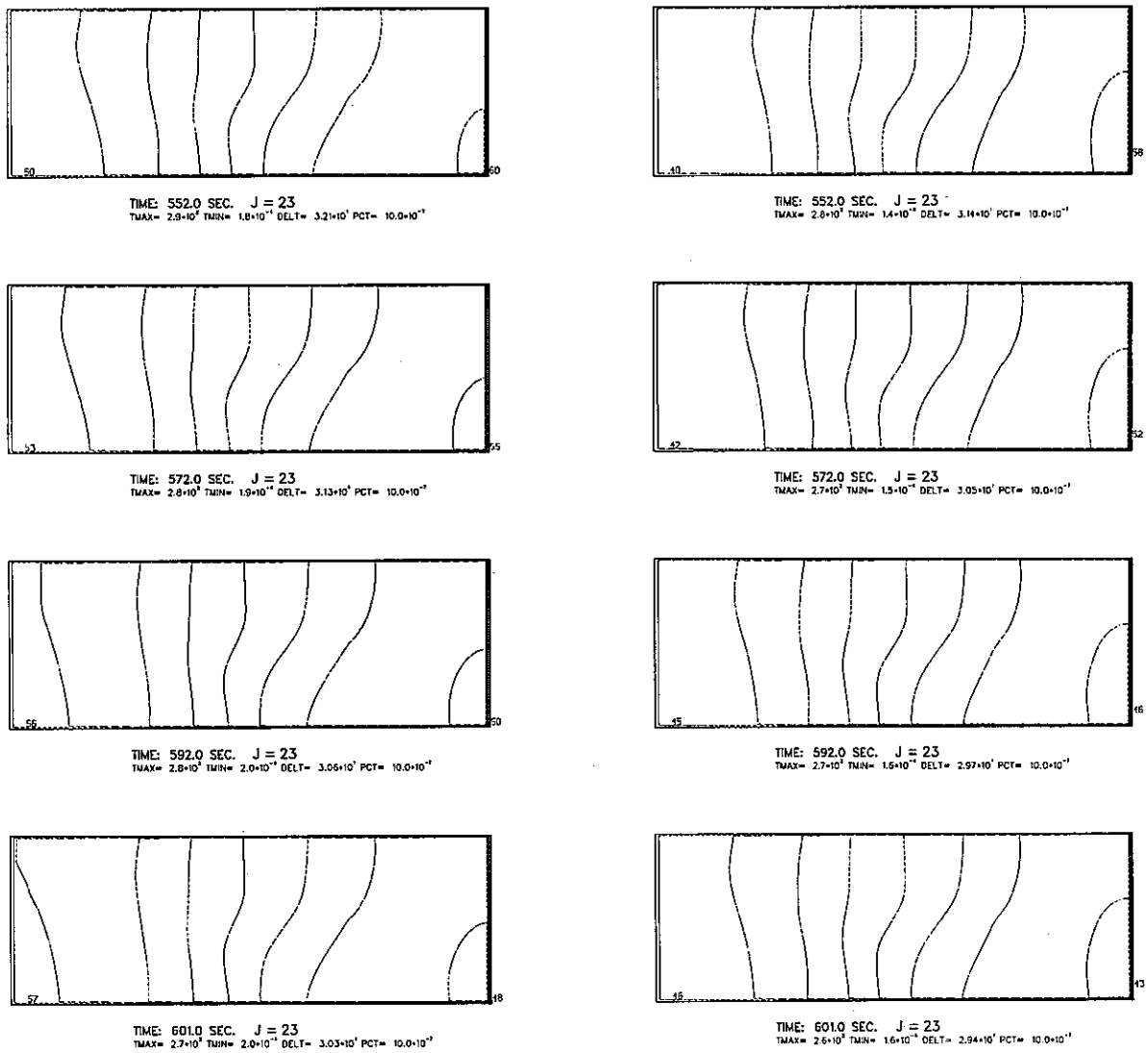


图3.23 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, J=23断面)

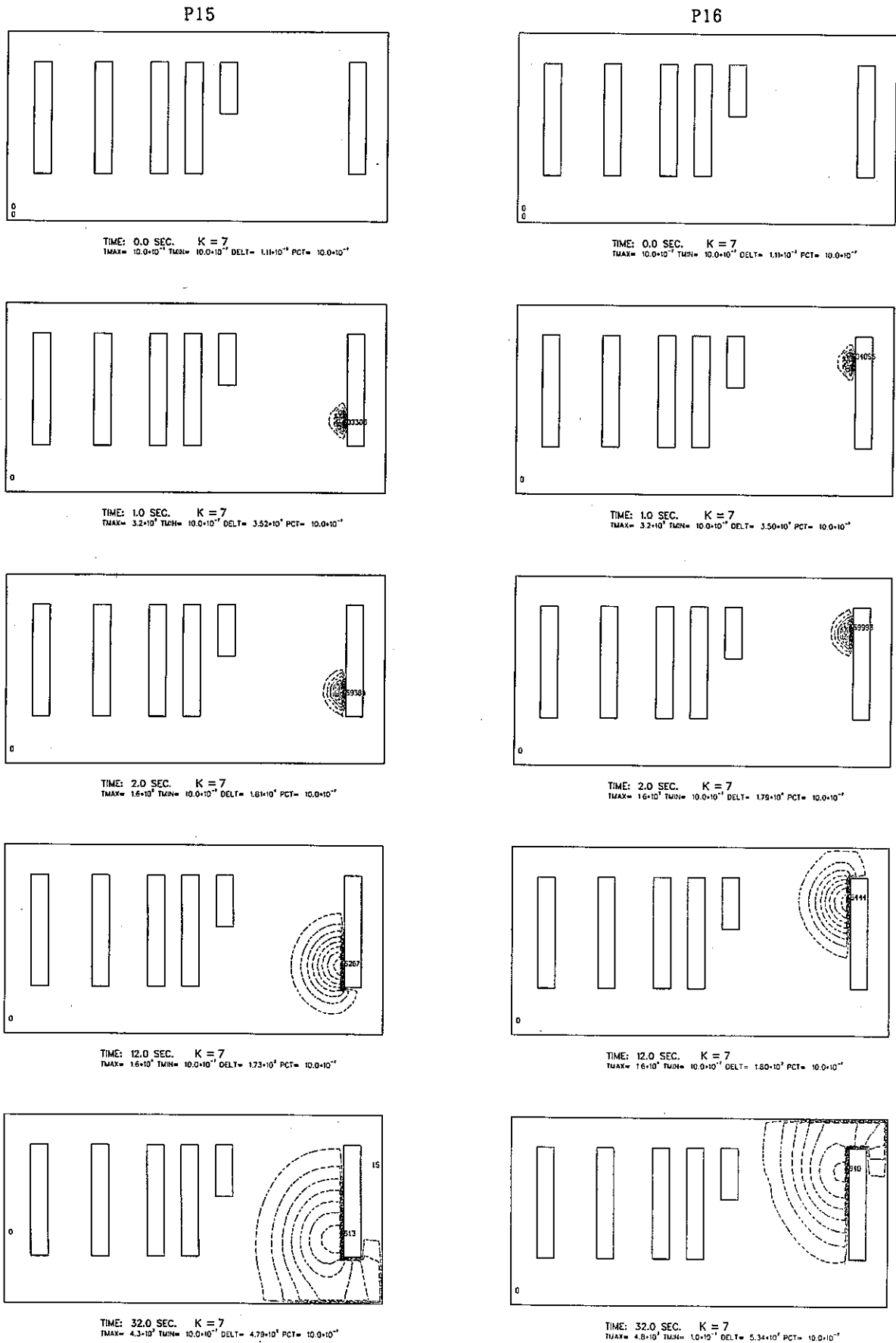


图3.24 放射性物质漏洩时浓度过度分布 (破损箇所P15, P16, K=7 断面)

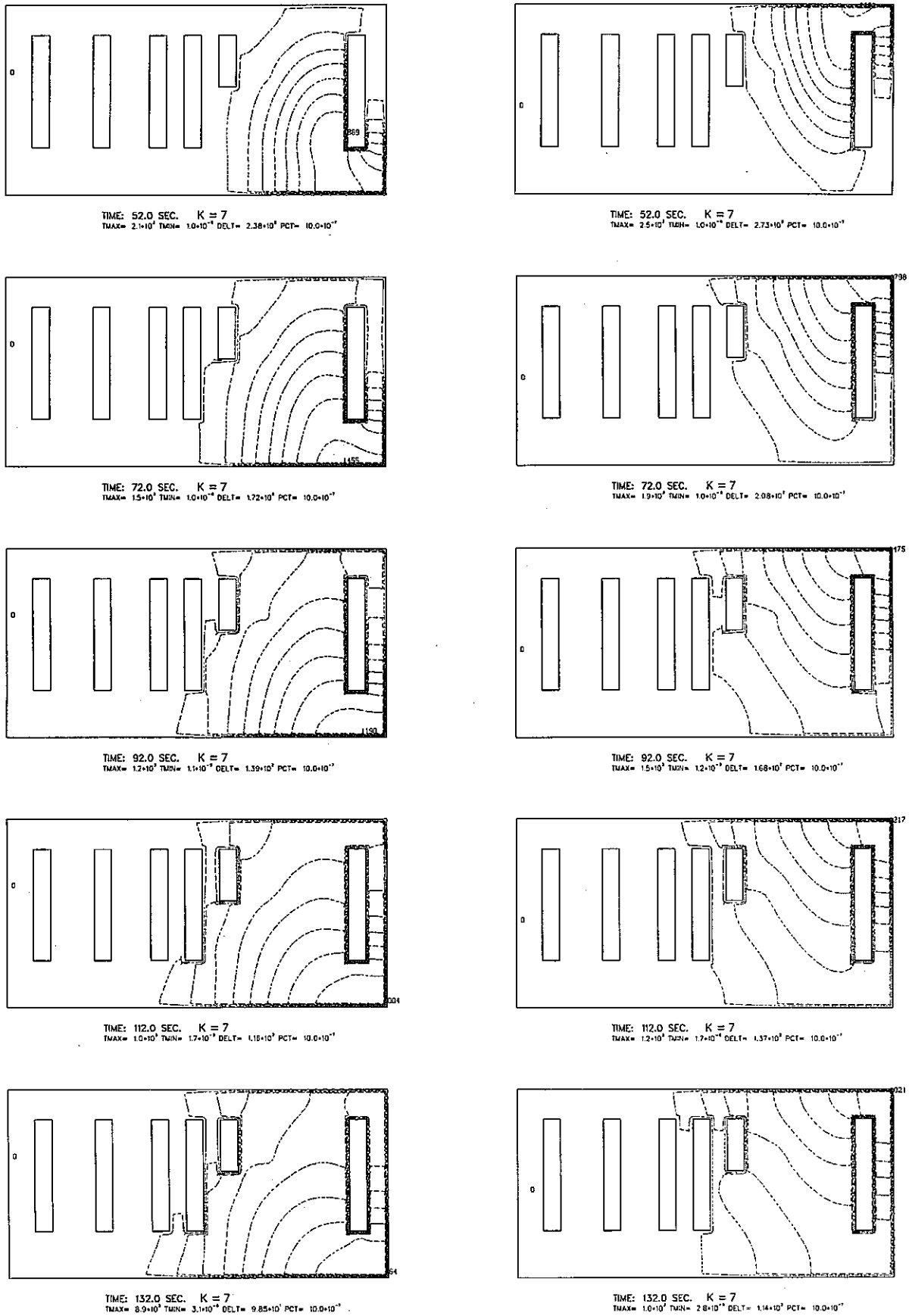


圖3.24 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, K=7 断面)

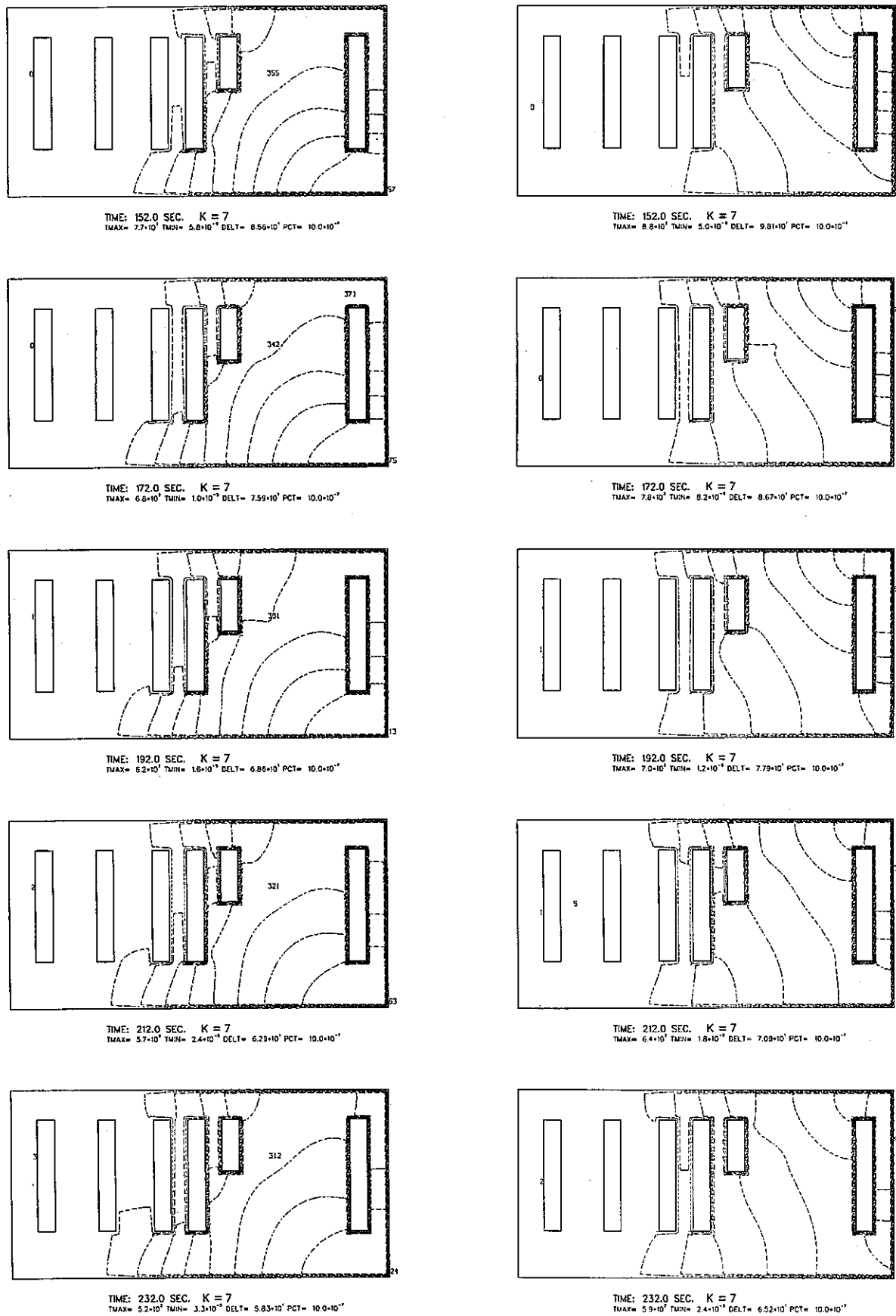


図3.24 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, K=7 断面)

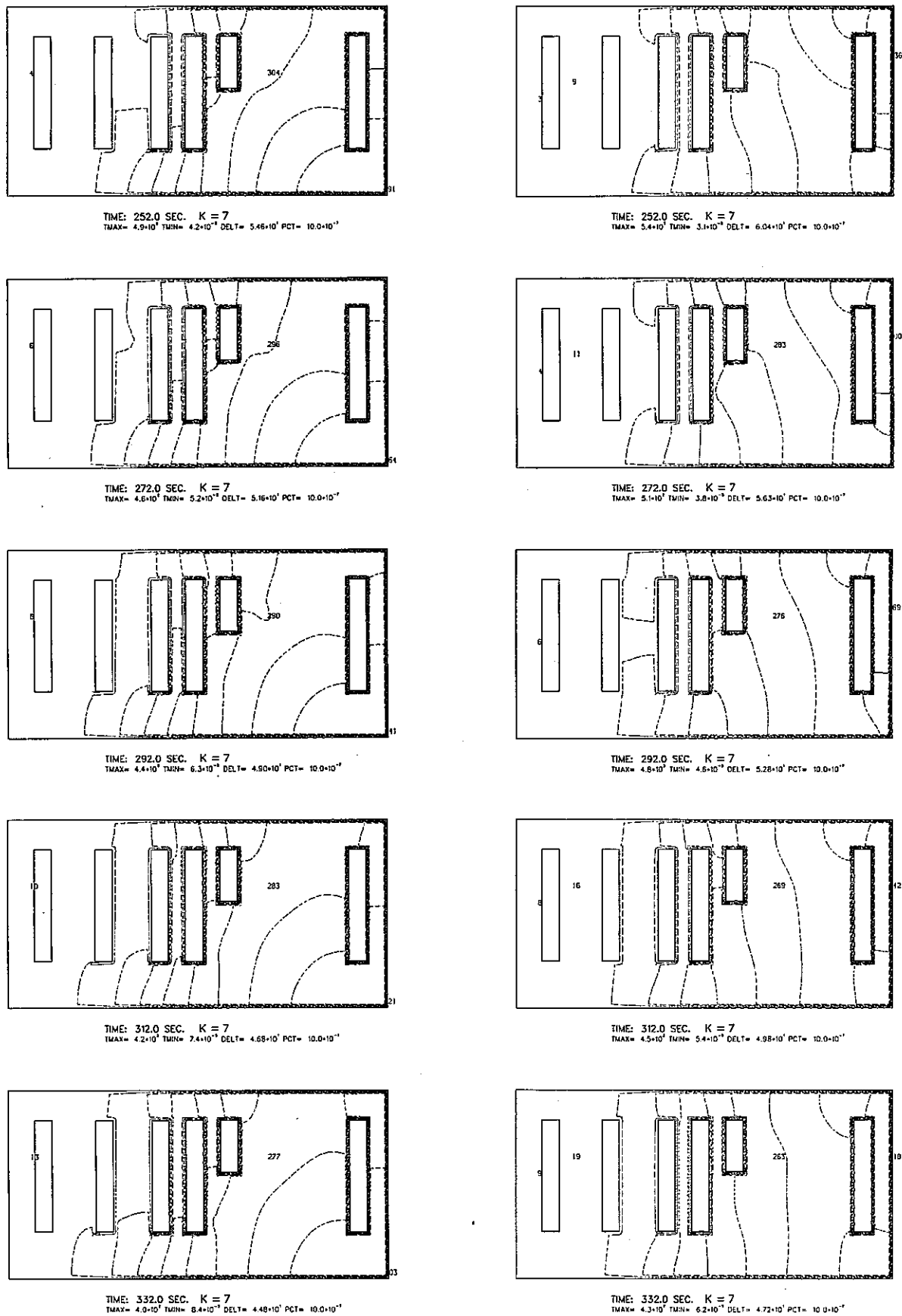
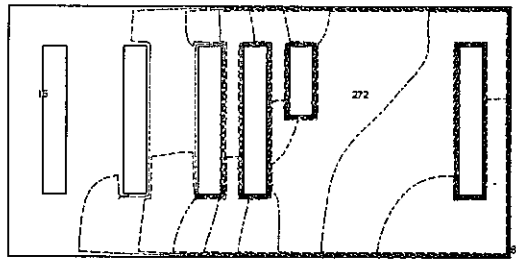
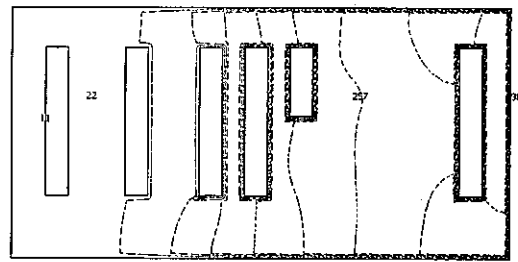


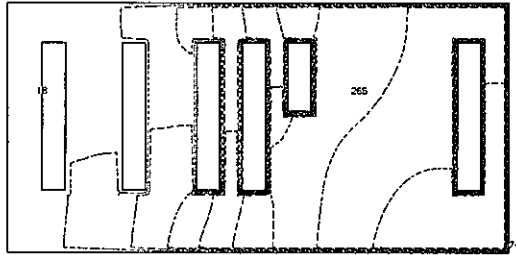
図3.24 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, K=7 断面)



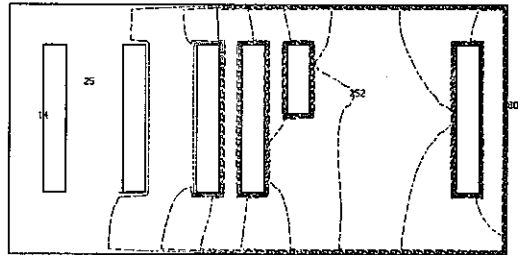
TIME: 352.0 SEC. K = 7  
 TMAX= 3.9\*10<sup>-7</sup> TMIN= 9.5\*10<sup>-11</sup> DELT= 4.31\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



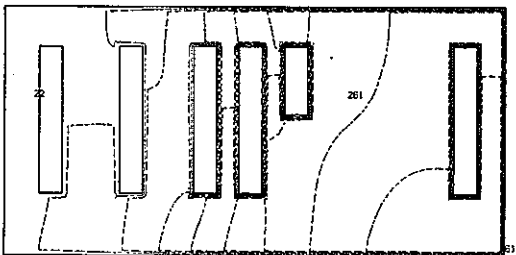
TIME: 352.0 SEC. K = 7  
 TMAX= 4.0\*10<sup>-7</sup> TMIN= 7.0\*10<sup>-11</sup> DELT= 4.49\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



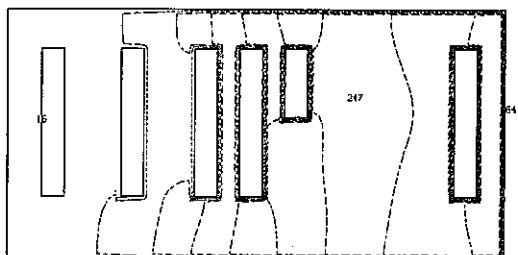
TIME: 372.0 SEC. K = 7  
 TMAX= 3.7\*10<sup>-7</sup> TMIN= 1.1\*10<sup>-11</sup> DELT= 4.15\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



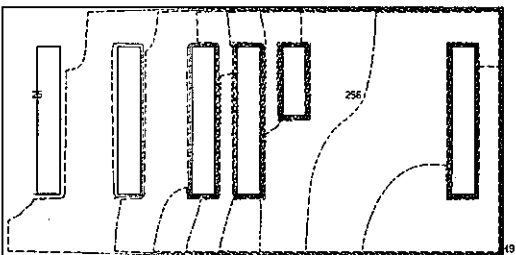
TIME: 372.0 SEC. K = 7  
 TMAX= 3.9\*10<sup>-7</sup> TMIN= 7.8\*10<sup>-11</sup> DELT= 4.23\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



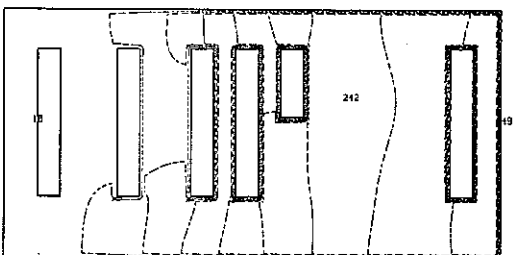
TIME: 392.0 SEC. K = 7  
 TMAX= 3.6\*10<sup>-7</sup> TMIN= 1.2\*10<sup>-11</sup> DELT= 4.01\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



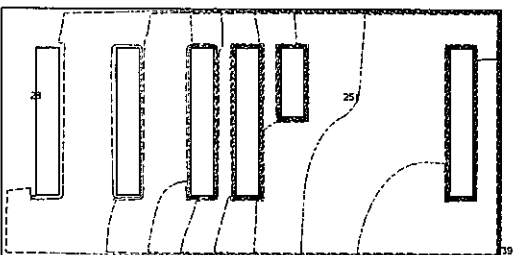
TIME: 392.0 SEC. K = 7  
 TMAX= 3.7\*10<sup>-7</sup> TMIN= 8.6\*10<sup>-11</sup> DELT= 4.10\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



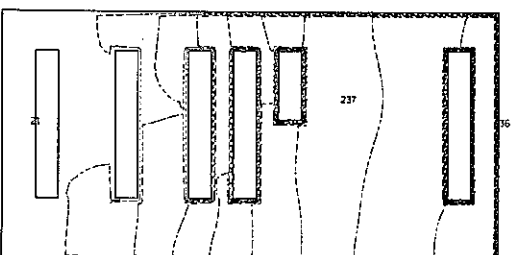
TIME: 412.0 SEC. K = 7  
 TMAX= 3.5\*10<sup>-7</sup> TMIN= 1.3\*10<sup>-11</sup> DELT= 3.88\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>



TIME: 412.0 SEC. K = 7  
 TMAX= 3.5\*10<sup>-7</sup> TMIN= 9.4\*10<sup>-11</sup> DELT= 3.94\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

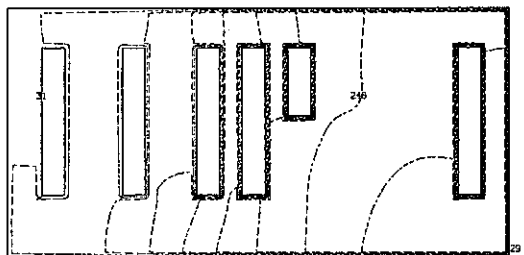


TIME: 432.0 SEC. K = 7  
 TMAX= 3.4\*10<sup>-7</sup> TMIN= 1.3\*10<sup>-11</sup> DELT= 3.76\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

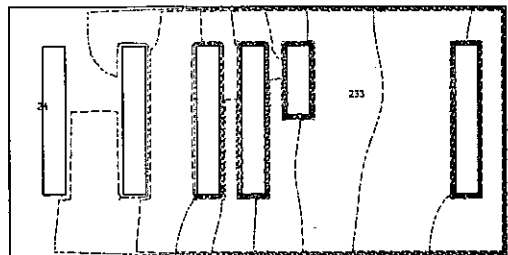


TIME: 432.0 SEC. K = 7  
 TMAX= 3.4\*10<sup>-7</sup> TMIN= 1.0\*10<sup>-11</sup> DELT= 3.79\*10<sup>-7</sup> PCT= 10.0\*10<sup>-7</sup>

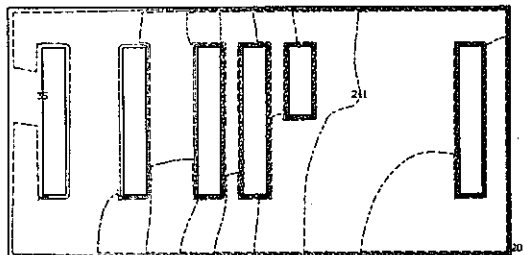
图3.24 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, K=7 断面)



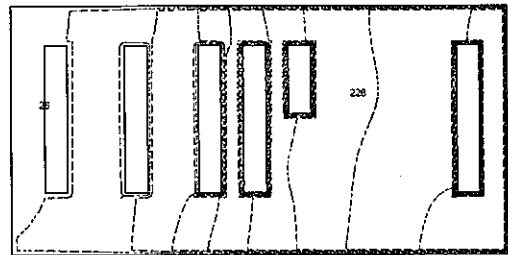
TIME: 452.0 SEC. K = 7  
 TMAX=  $3.3 \times 10^7$  TMIN=  $1.4 \times 10^7$  DELT=  $3.65 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



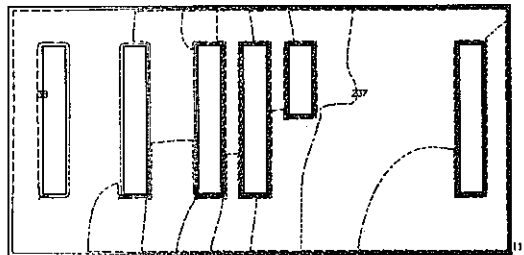
TIME: 452.0 SEC. K = 7  
 TMAX=  $3.3 \times 10^7$  TMIN=  $1.1 \times 10^7$  DELT=  $3.66 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



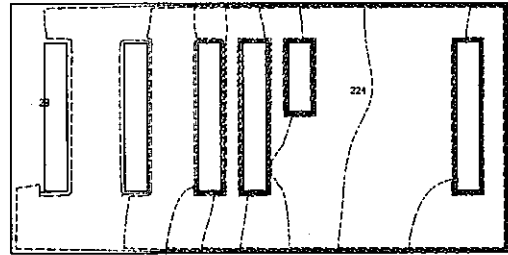
TIME: 472.0 SEC. K = 7  
 TMAX=  $3.2 \times 10^7$  TMIN=  $1.5 \times 10^7$  DELT=  $3.55 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



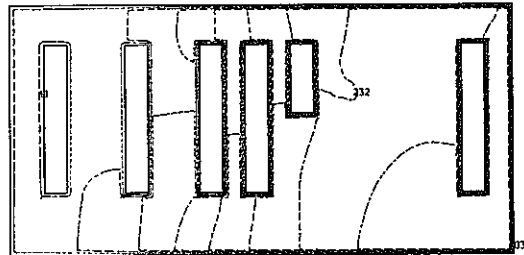
TIME: 472.0 SEC. K = 7  
 TMAX=  $3.2 \times 10^7$  TMIN=  $1.2 \times 10^7$  DELT=  $3.54 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



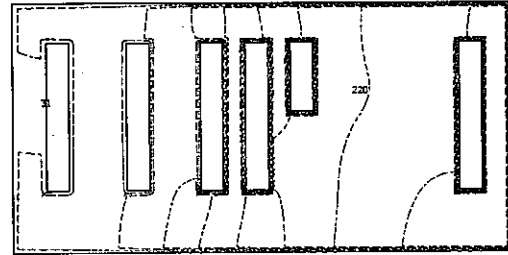
TIME: 492.0 SEC. K = 7  
 TMAX=  $3.1 \times 10^7$  TMIN=  $1.6 \times 10^7$  DELT=  $3.46 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



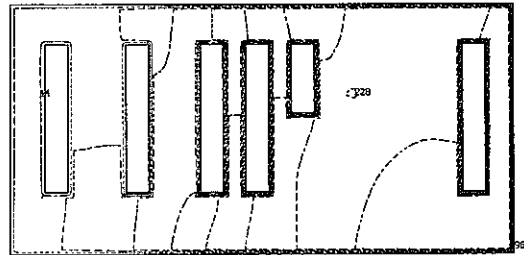
TIME: 492.0 SEC. K = 7  
 TMAX=  $3.1 \times 10^7$  TMIN=  $1.2 \times 10^7$  DELT=  $3.42 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



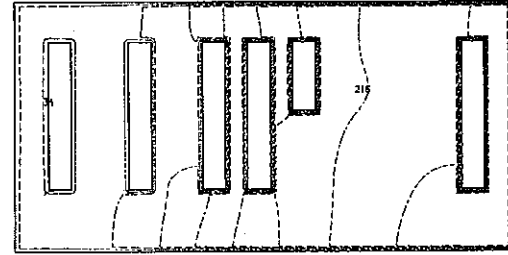
TIME: 512.0 SEC. K = 7  
 TMAX=  $3.0 \times 10^7$  TMIN=  $1.7 \times 10^7$  DELT=  $3.37 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



TIME: 512.0 SEC. K = 7  
 TMAX=  $3.0 \times 10^7$  TMIN=  $1.3 \times 10^7$  DELT=  $3.32 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



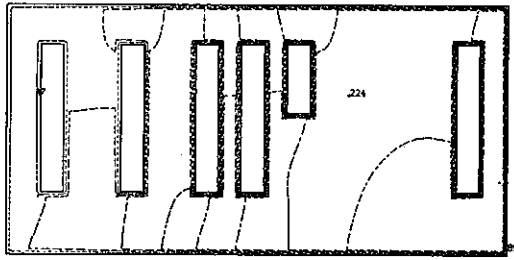
TIME: 532.0 SEC. K = 7  
 TMAX=  $3.0 \times 10^7$  TMIN=  $1.8 \times 10^7$  DELT=  $3.29 \times 10^7$  PCT=  $10.0 \times 10^{-7}$



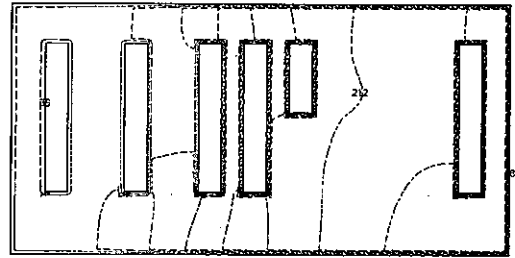
TIME: 532.0 SEC. K = 7  
 TMAX=  $2.5 \times 10^7$  TMIN=  $1.4 \times 10^7$  DELT=  $3.23 \times 10^7$  PCT=  $10.0 \times 10^{-7}$

图3.24 放射性物質漏洩時濃度過度分布 (破損箇所P15, P16, K=7 断面)

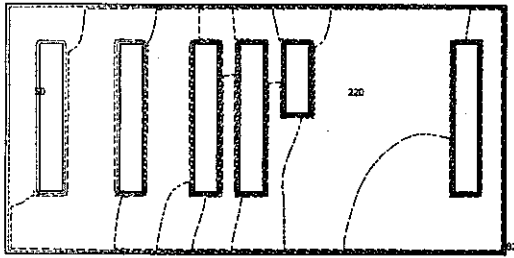




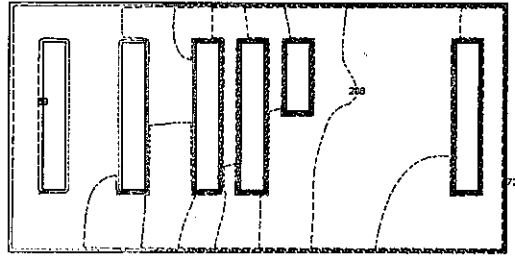
TIME: 552.0 SEC. K = 7  
 TMAX=  $2.9 \cdot 10^7$  TMIN=  $1.8 \cdot 10^{11}$  DELT=  $3.2 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



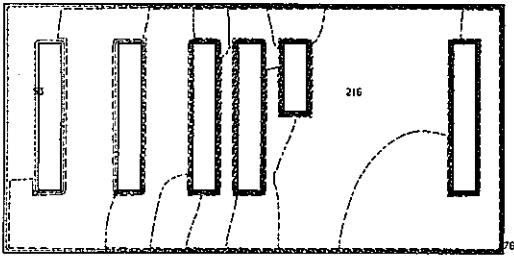
TIME: 552.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^7$  TMIN=  $1.4 \cdot 10^{11}$  DELT=  $3.14 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



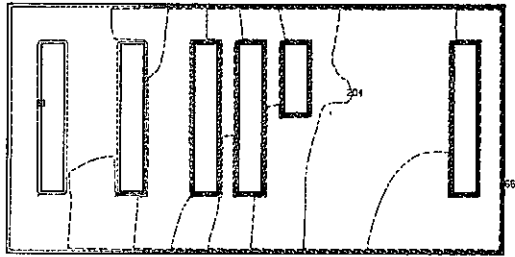
TIME: 572.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^7$  TMIN=  $1.9 \cdot 10^{11}$  DELT=  $3.13 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



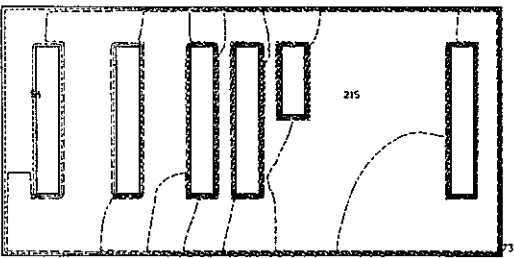
TIME: 572.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^7$  TMIN=  $1.5 \cdot 10^{11}$  DELT=  $3.05 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



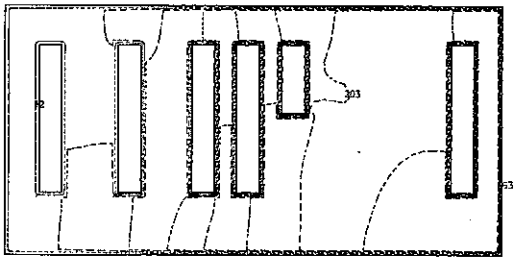
TIME: 592.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^7$  TMIN=  $2.0 \cdot 10^{11}$  DELT=  $3.06 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 592.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^7$  TMIN=  $1.6 \cdot 10^{11}$  DELT=  $2.97 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$



TIME: 601.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^7$  TMIN=  $2.0 \cdot 10^{11}$  DELT=  $3.03 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

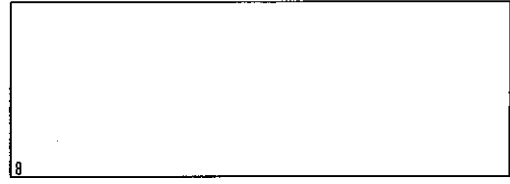
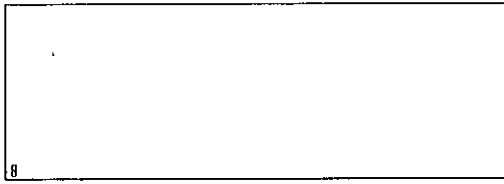


TIME: 601.0 SEC. K = 7  
 TMAX=  $2.6 \cdot 10^7$  TMIN=  $1.6 \cdot 10^{11}$  DELT=  $2.94 \cdot 10^7$  PCT=  $10.0 \cdot 10^{-7}$

图3.24 放射性物质漏洩时浓度过度分布 (破损箇所P15, P16, K=7 断面)

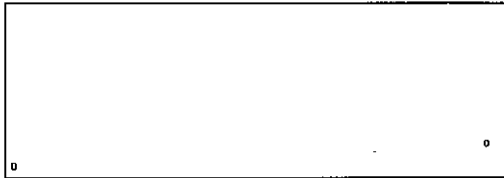
P17

P18



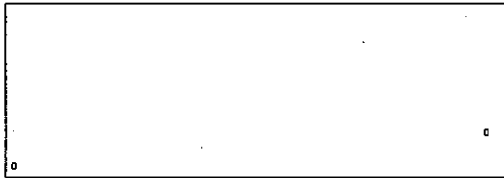
TIME: 0.0 SEC. J = 23  
 TMAX= 10.0·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.11·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 0.0 SEC. J = 23  
 TMAX= 10.0·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.11·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>



TIME: 1.0 SEC. J = 23  
 TMAX= 9.8·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.08·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 1.0 SEC. J = 23  
 TMAX= 9.8·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.09·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>



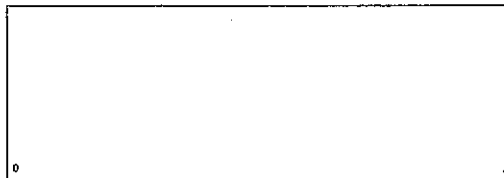
TIME: 2.0 SEC. J = 23  
 TMAX= 3.3·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 3.87·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 2.0 SEC. J = 23  
 TMAX= 3.3·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 3.88·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>



TIME: 12.0 SEC. J = 23  
 TMAX= 3.9·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 4.38·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 12.0 SEC. J = 23  
 TMAX= 3.8·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 4.21·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>



TIME: 32.0 SEC. J = 23  
 TMAX= 1.7·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.91·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 32.0 SEC. J = 23  
 TMAX= 1.7·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.87·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>



TIME: 52.0 SEC. J = 23  
 TMAX= 9.2·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.03·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

TIME: 52.0 SEC. J = 23  
 TMAX= 1.0·10<sup>-7</sup> TMIN= 10.0·10<sup>-7</sup> DELT= 1.11·10<sup>-7</sup> PCT= 10.0·10<sup>-7</sup>

图3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)

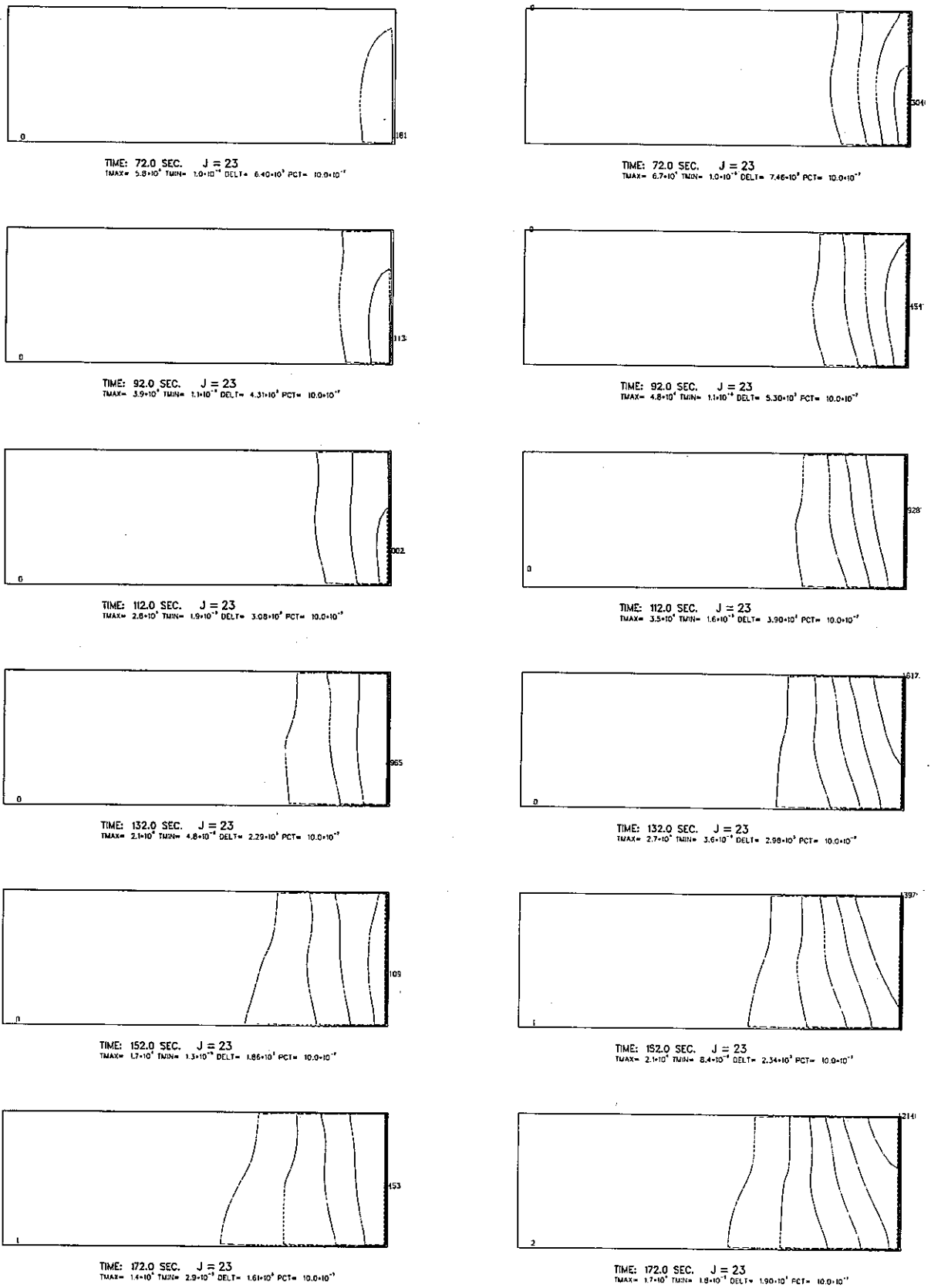


图3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)

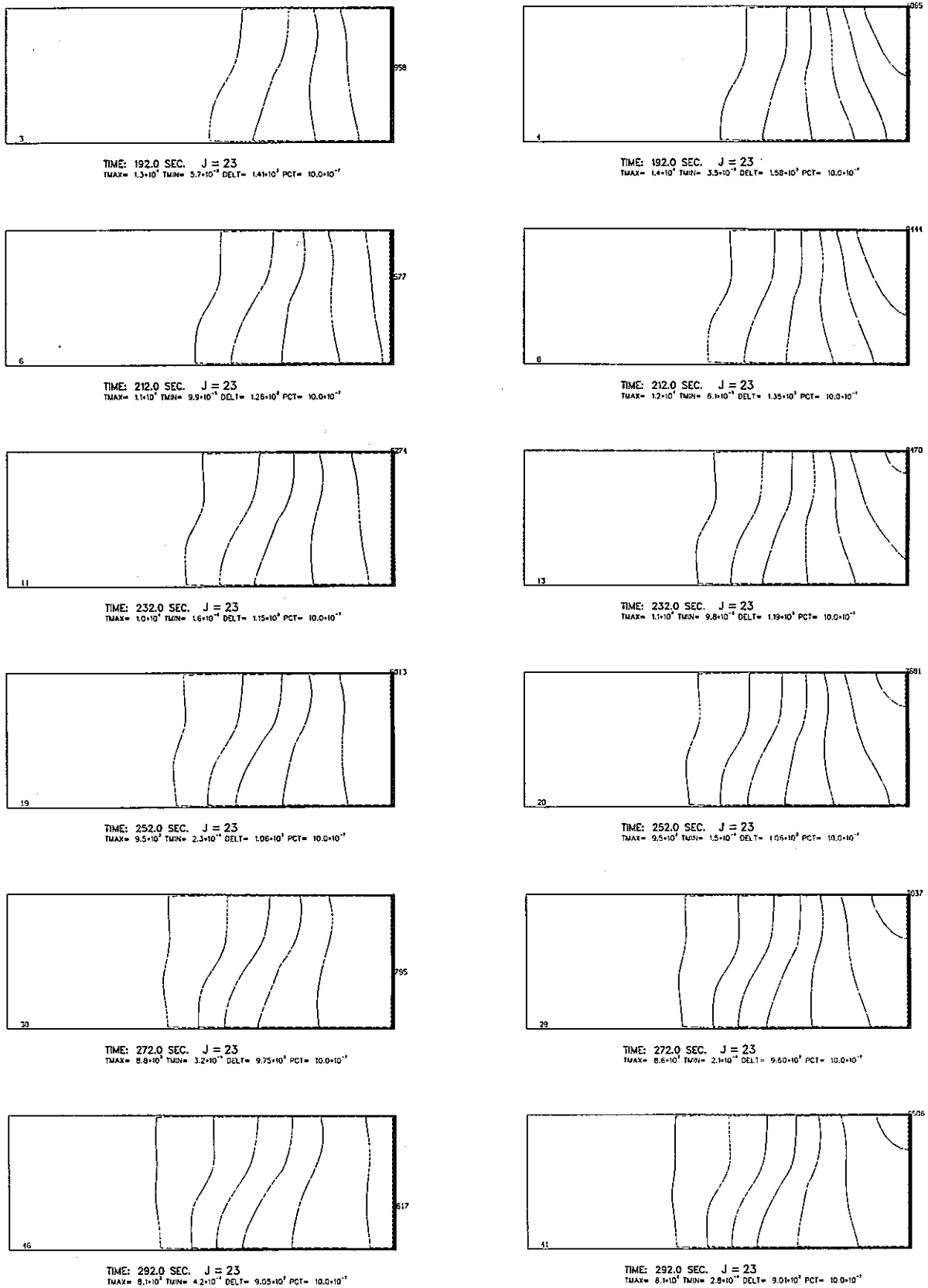
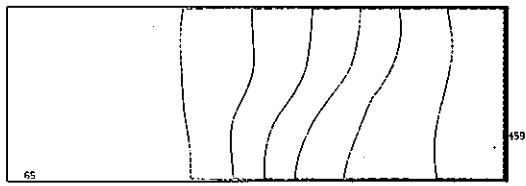
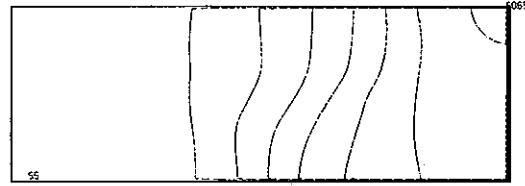


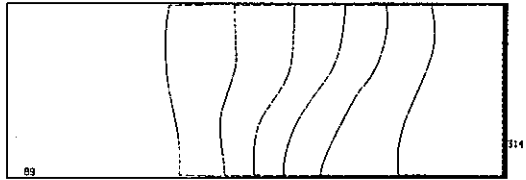
図3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)



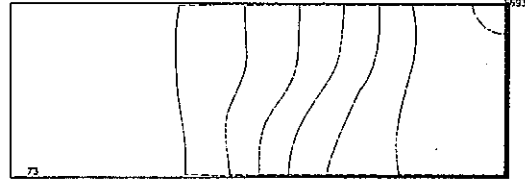
TIME: 312.0 SEC. J = 23  
 TMAX=  $7.6 \times 10^3$  TMIN=  $5.3 \times 10^{-1}$  DELT=  $8.43 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



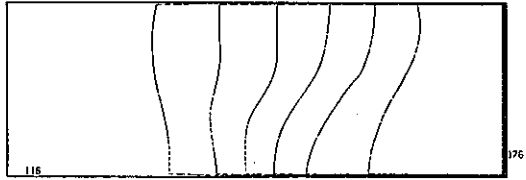
TIME: 312.0 SEC. J = 23  
 TMAX=  $7.6 \times 10^3$  TMIN=  $3.6 \times 10^{-1}$  DELT=  $8.49 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



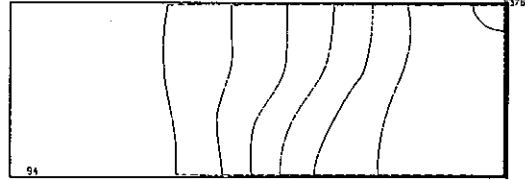
TIME: 332.0 SEC. J = 23  
 TMAX=  $7.1 \times 10^3$  TMIN=  $6.5 \times 10^{-1}$  DELT=  $7.92 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



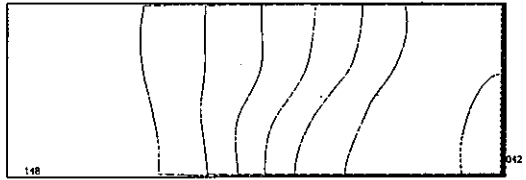
TIME: 332.0 SEC. J = 23  
 TMAX=  $7.2 \times 10^3$  TMIN=  $4.6 \times 10^{-1}$  DELT=  $8.02 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



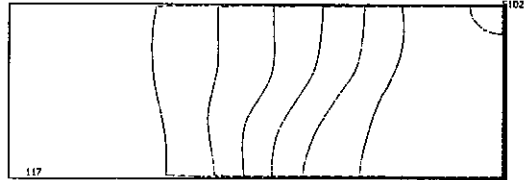
TIME: 352.0 SEC. J = 23  
 TMAX=  $6.7 \times 10^3$  TMIN=  $7.8 \times 10^{-1}$  DELT=  $7.47 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



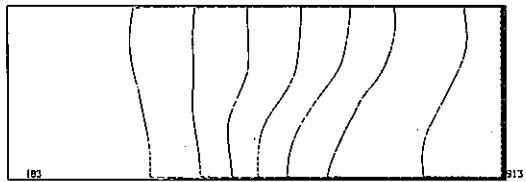
TIME: 352.0 SEC. J = 23  
 TMAX=  $6.8 \times 10^3$  TMIN=  $3.6 \times 10^{-1}$  DELT=  $7.60 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



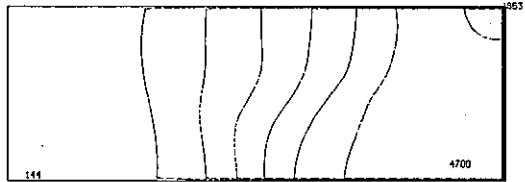
TIME: 372.0 SEC. J = 23  
 TMAX=  $6.4 \times 10^3$  TMIN=  $9.1 \times 10^{-1}$  DELT=  $7.06 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



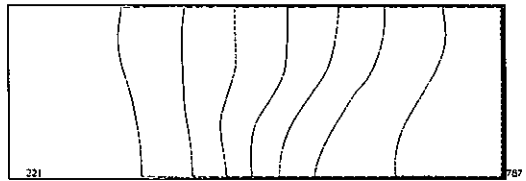
TIME: 372.0 SEC. J = 23  
 TMAX=  $6.5 \times 10^3$  TMIN=  $6.7 \times 10^{-1}$  DELT=  $7.2 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



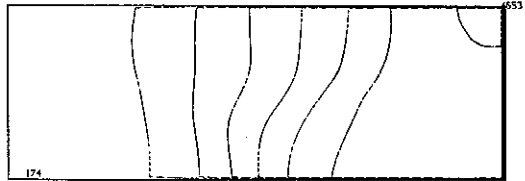
TIME: 392.0 SEC. J = 23  
 TMAX=  $6.0 \times 10^3$  TMIN=  $1.0 \times 10^{-1}$  DELT=  $6.70 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 392.0 SEC. J = 23  
 TMAX=  $6.2 \times 10^3$  TMIN=  $7.8 \times 10^{-1}$  DELT=  $6.87 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $5.7 \times 10^3$  TMIN=  $1.2 \times 10^{-1}$  DELT=  $6.38 \times 10^1$  PCT=  $10.0 \times 10^{-1}$



TIME: 412.0 SEC. J = 23  
 TMAX=  $5.9 \times 10^3$  TMIN=  $9.0 \times 10^{-1}$  DELT=  $6.55 \times 10^1$  PCT=  $10.0 \times 10^{-1}$

图 3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)



図3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)

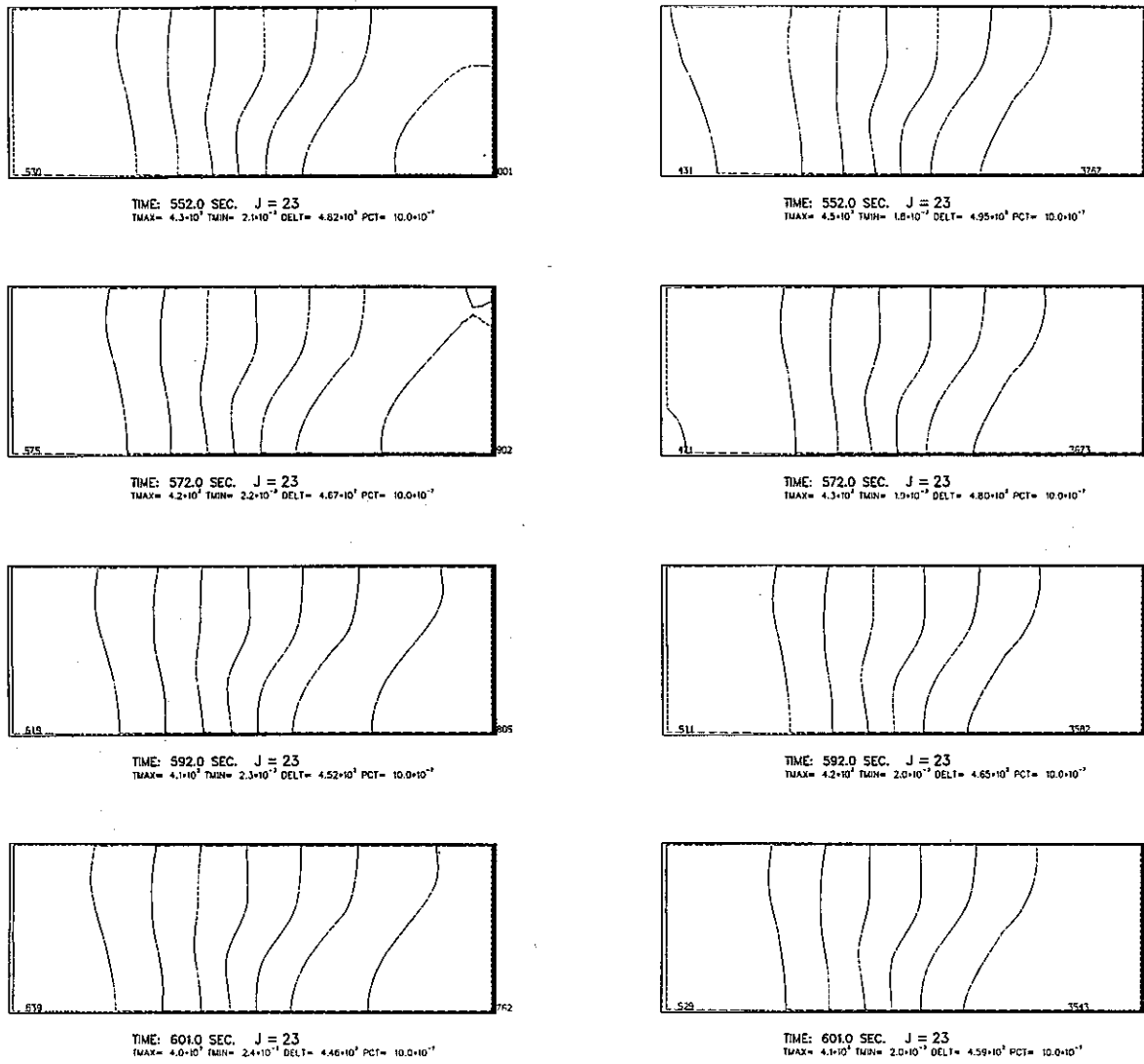


图3.25 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, J=23断面)

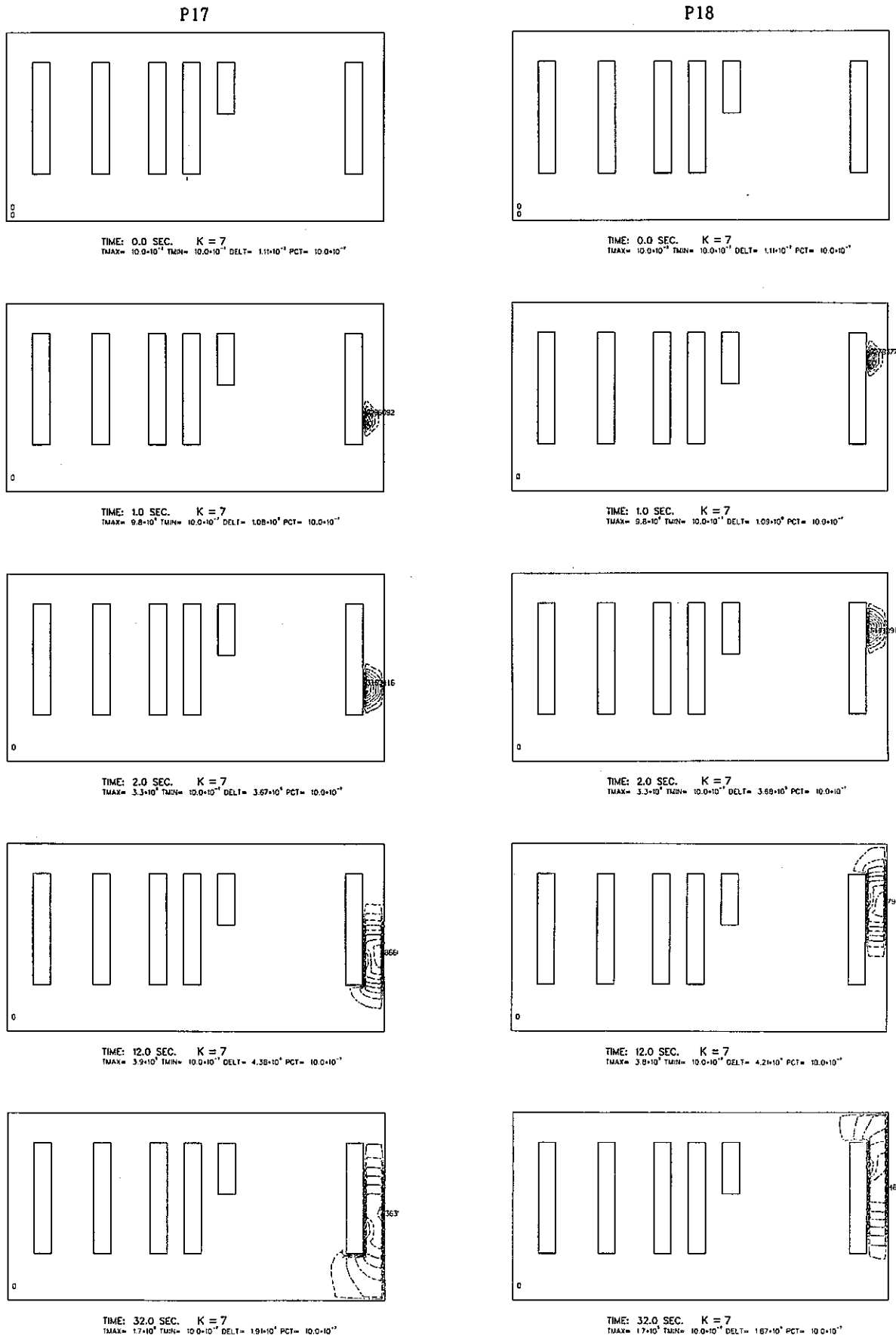
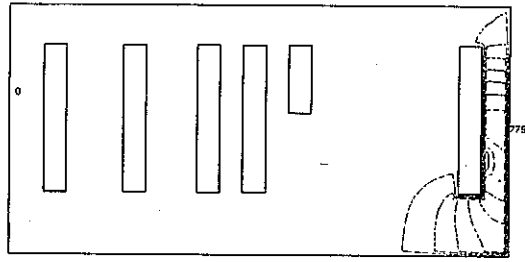
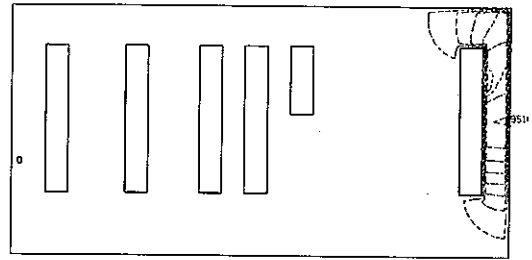


图 3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)

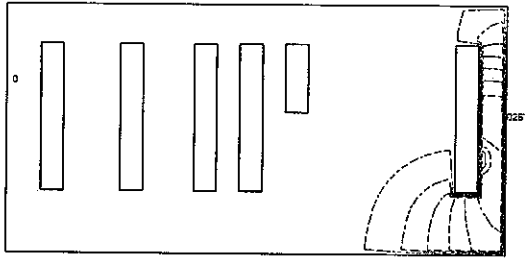




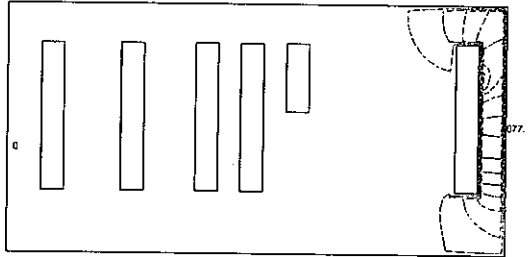
TIME: 52.0 SEC. K = 7  
 TMAX=  $9.2 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $1.03 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



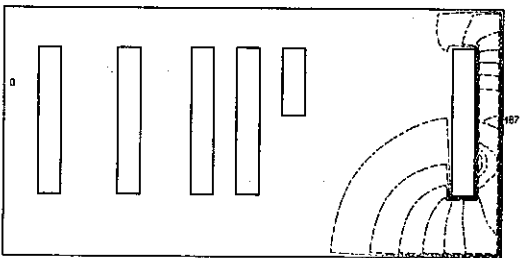
TIME: 52.0 SEC. K = 7  
 TMAX=  $1.0 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $1.11 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



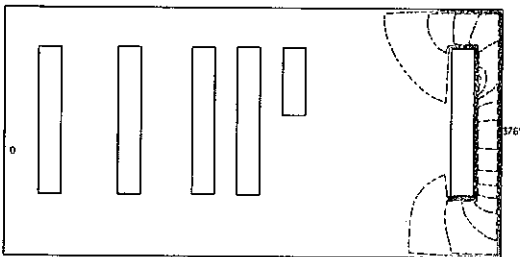
TIME: 72.0 SEC. K = 7  
 TMAX=  $5.8 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $5.40 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



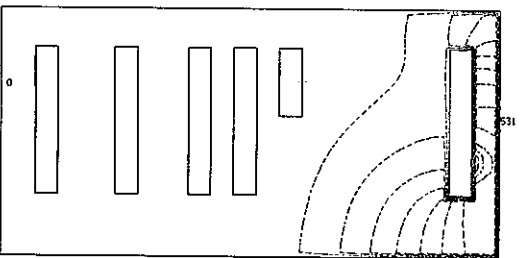
TIME: 72.0 SEC. K = 7  
 TMAX=  $6.7 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $7.46 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



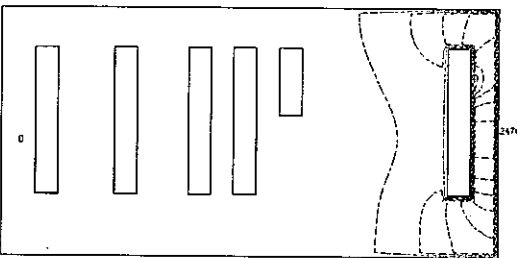
TIME: 92.0 SEC. K = 7  
 TMAX=  $3.9 \cdot 10^3$  TMIN=  $1.1 \cdot 10^{-1}$  DELT=  $4.31 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



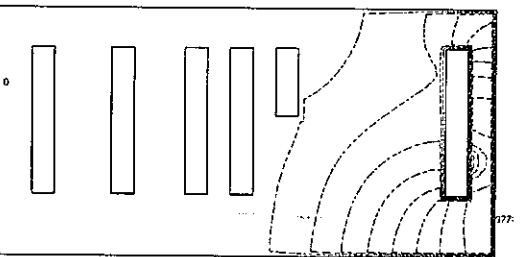
TIME: 92.0 SEC. K = 7  
 TMAX=  $4.8 \cdot 10^3$  TMIN=  $1.1 \cdot 10^{-1}$  DELT=  $5.30 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



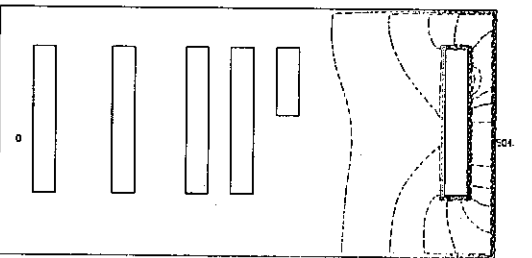
TIME: 112.0 SEC. K = 7  
 TMAX=  $2.8 \cdot 10^3$  TMIN=  $1.9 \cdot 10^{-1}$  DELT=  $3.08 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 112.0 SEC. K = 7  
 TMAX=  $3.5 \cdot 10^3$  TMIN=  $1.6 \cdot 10^{-1}$  DELT=  $3.90 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 132.0 SEC. K = 7  
 TMAX=  $2.1 \cdot 10^3$  TMIN=  $4.8 \cdot 10^{-1}$  DELT=  $2.25 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 132.0 SEC. K = 7  
 TMAX=  $2.7 \cdot 10^3$  TMIN=  $3.6 \cdot 10^{-1}$  DELT=  $2.98 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

図3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)

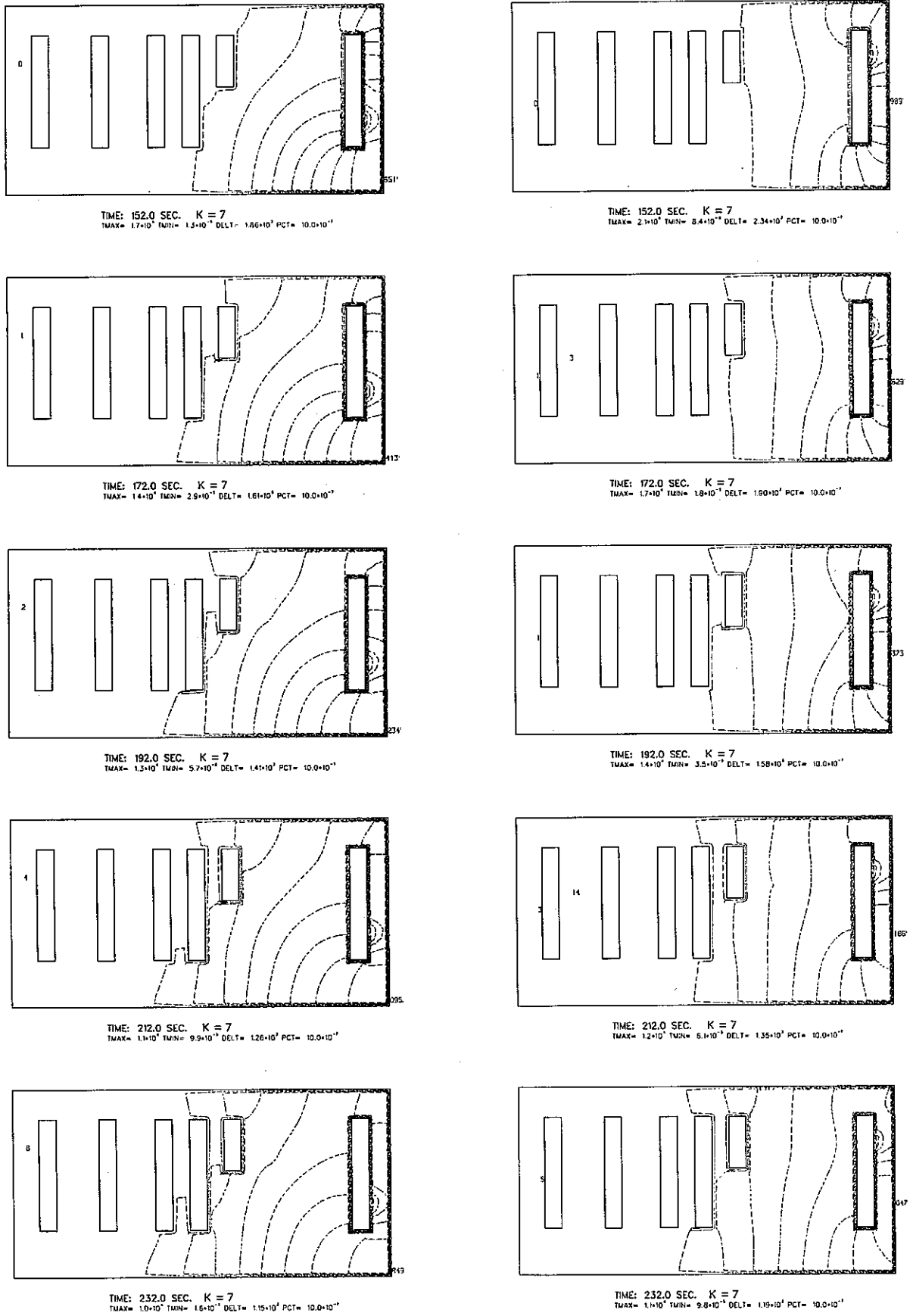


图3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)

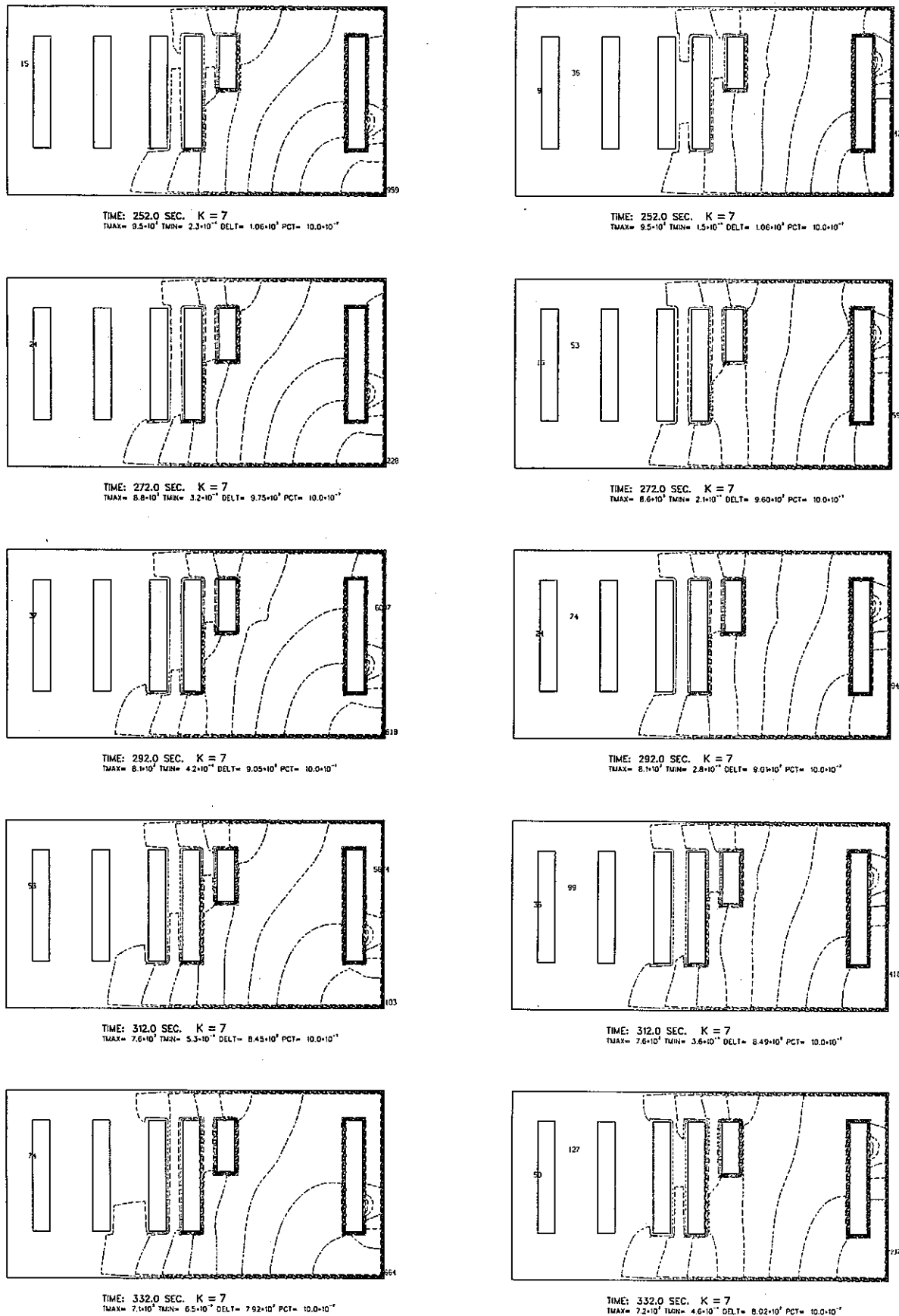
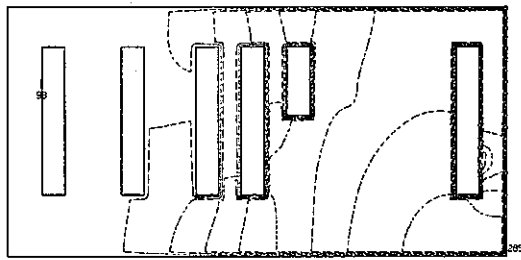
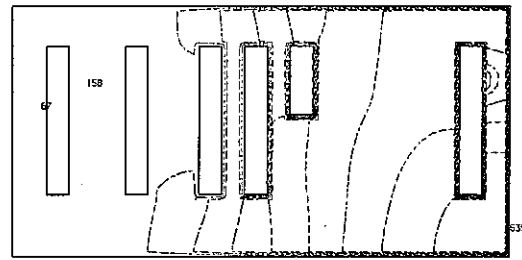


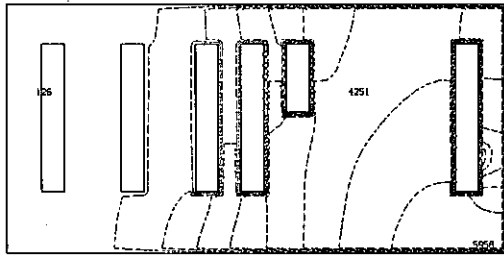
图3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)



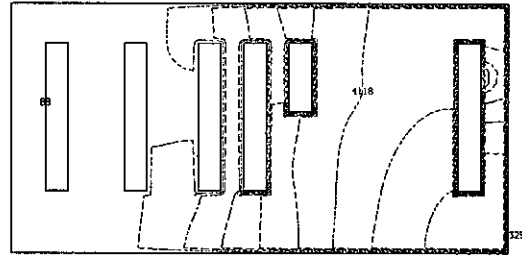
TIME: 352.0 SEC. K = 7  
 TMAX=  $6.7 \cdot 10^3$  TMIN=  $7.8 \cdot 10^{-1}$  DELT=  $7.47 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



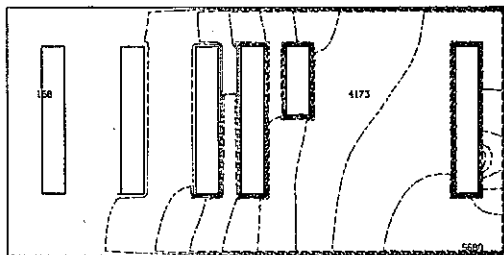
TIME: 352.0 SEC. K = 7  
 TMAX=  $6.8 \cdot 10^3$  TMIN=  $5.6 \cdot 10^{-1}$  DELT=  $7.60 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



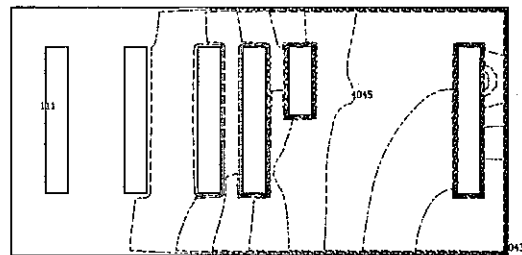
TIME: 372.0 SEC. K = 7  
 TMAX=  $6.4 \cdot 10^3$  TMIN=  $9.1 \cdot 10^{-1}$  DELT=  $7.06 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



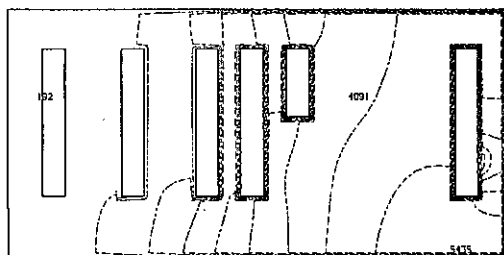
TIME: 372.0 SEC. K = 7  
 TMAX=  $6.5 \cdot 10^3$  TMIN=  $6.7 \cdot 10^{-1}$  DELT=  $7.21 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



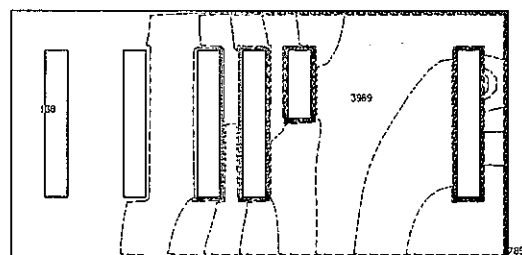
TIME: 392.0 SEC. K = 7  
 TMAX=  $6.0 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $6.70 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



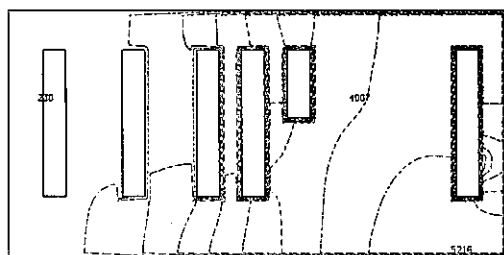
TIME: 392.0 SEC. K = 7  
 TMAX=  $6.2 \cdot 10^3$  TMIN=  $7.8 \cdot 10^{-1}$  DELT=  $6.87 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



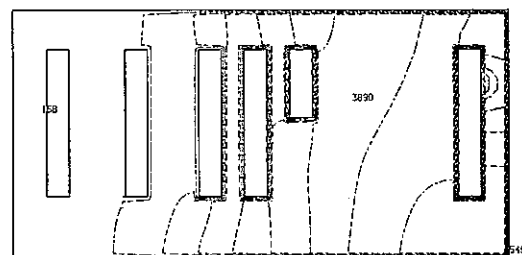
TIME: 412.0 SEC. K = 7  
 TMAX=  $5.7 \cdot 10^3$  TMIN=  $1.2 \cdot 10^{-1}$  DELT=  $6.38 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$



TIME: 412.0 SEC. K = 7  
 TMAX=  $5.9 \cdot 10^3$  TMIN=  $9.0 \cdot 10^{-1}$  DELT=  $6.55 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

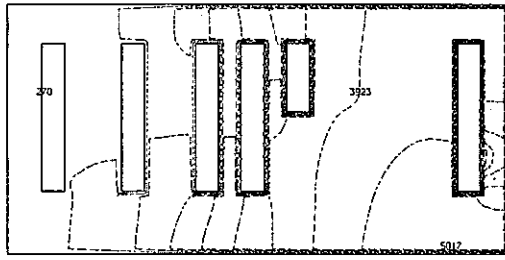


TIME: 432.0 SEC. K = 7  
 TMAX=  $5.5 \cdot 10^3$  TMIN=  $1.3 \cdot 10^{-1}$  DELT=  $6.09 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

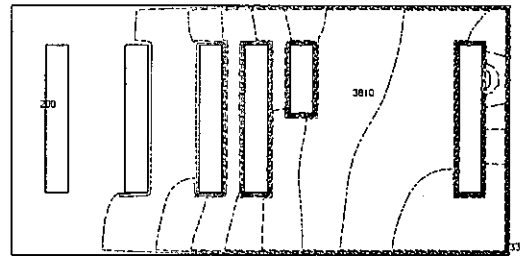


TIME: 432.0 SEC. K = 7  
 TMAX=  $5.6 \cdot 10^3$  TMIN=  $1.0 \cdot 10^{-1}$  DELT=  $6.26 \cdot 10^3$  PCT=  $10.0 \cdot 10^{-1}$

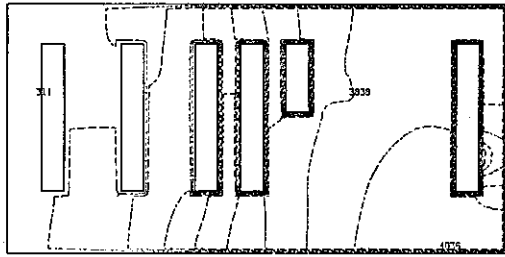
图 3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)



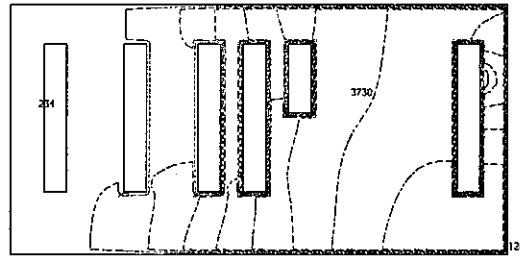
TIME: 452.0 SEC. K = 7  
 TMAX=  $5.2 \times 10^3$  TMIN=  $1.5 \times 10^{-3}$  DELT=  $5.83 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



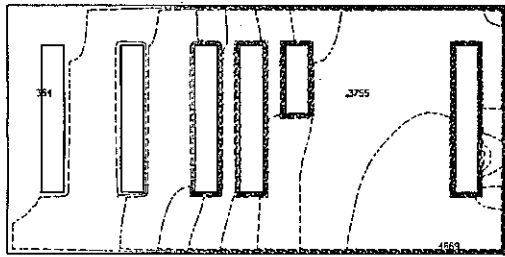
TIME: 452.0 SEC. K = 7  
 TMAX=  $5.4 \times 10^3$  TMIN=  $1.1 \times 10^{-3}$  DELT=  $6.00 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



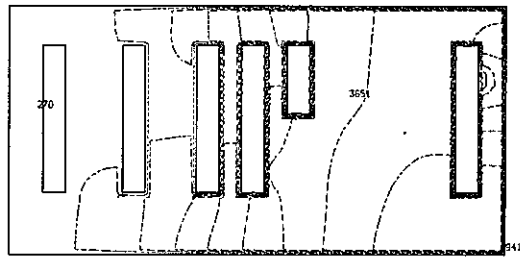
TIME: 472.0 SEC. K = 7  
 TMAX=  $5.0 \times 10^3$  TMIN=  $1.6 \times 10^{-3}$  DELT=  $5.59 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



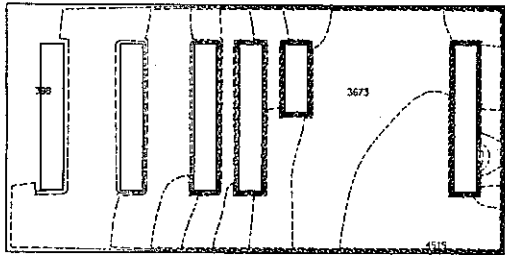
TIME: 472.0 SEC. K = 7  
 TMAX=  $5.2 \times 10^3$  TMIN=  $1.3 \times 10^{-3}$  DELT=  $5.75 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



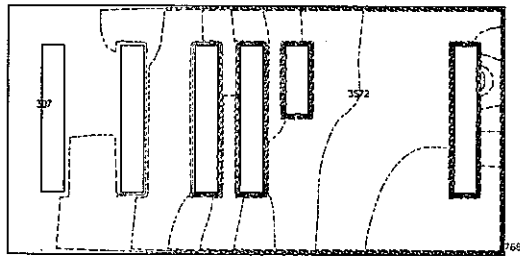
TIME: 492.0 SEC. K = 7  
 TMAX=  $4.8 \times 10^3$  TMIN=  $1.7 \times 10^{-3}$  DELT=  $5.37 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



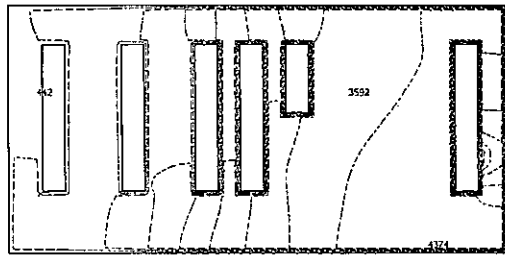
TIME: 492.0 SEC. K = 7  
 TMAX=  $5.0 \times 10^3$  TMIN=  $1.4 \times 10^{-3}$  DELT=  $5.53 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



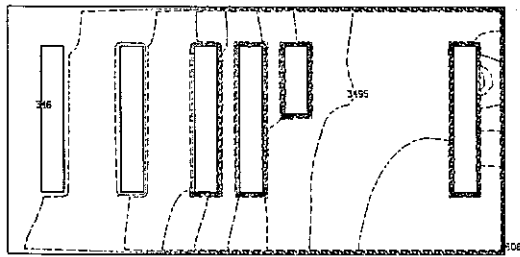
TIME: 512.0 SEC. K = 7  
 TMAX=  $4.7 \times 10^3$  TMIN=  $1.9 \times 10^{-3}$  DELT=  $5.18 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



TIME: 512.0 SEC. K = 7  
 TMAX=  $4.8 \times 10^3$  TMIN=  $1.5 \times 10^{-3}$  DELT=  $5.32 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



TIME: 532.0 SEC. K = 7  
 TMAX=  $4.5 \times 10^3$  TMIN=  $2.0 \times 10^{-3}$  DELT=  $4.99 \times 10^3$  PCT=  $10.0 \times 10^{-3}$



TIME: 532.0 SEC. K = 7  
 TMAX=  $4.6 \times 10^3$  TMIN=  $1.6 \times 10^{-3}$  DELT=  $5.13 \times 10^3$  PCT=  $10.0 \times 10^{-3}$

图3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)

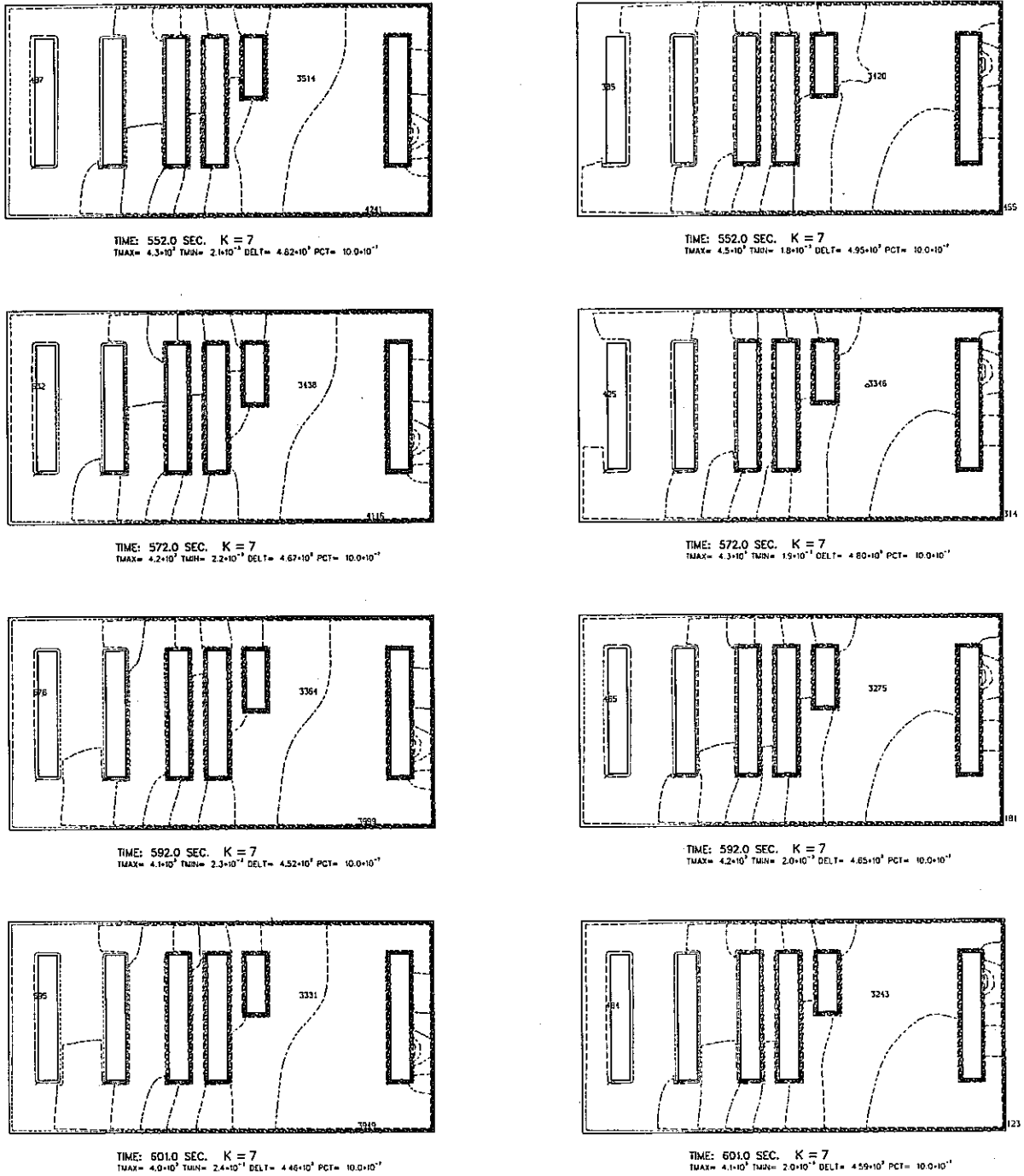
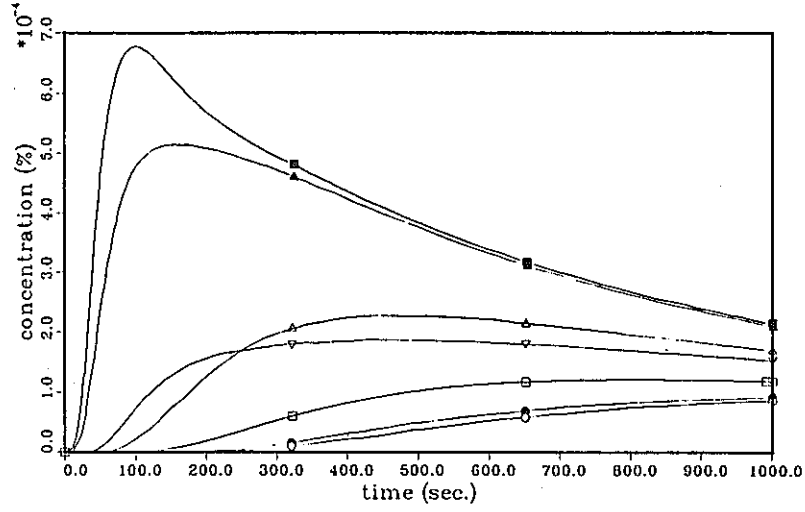
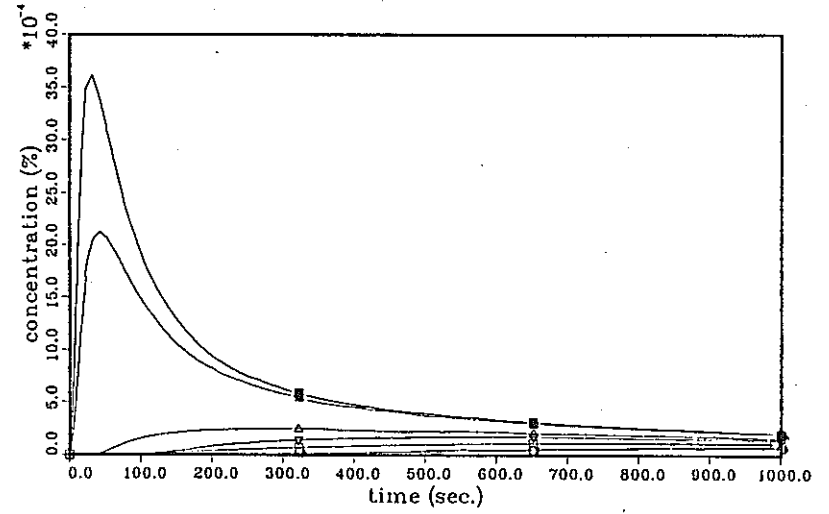


图 3.26 放射性物質漏洩時濃度過度分布 (破損箇所P17, P18, K=7 断面)

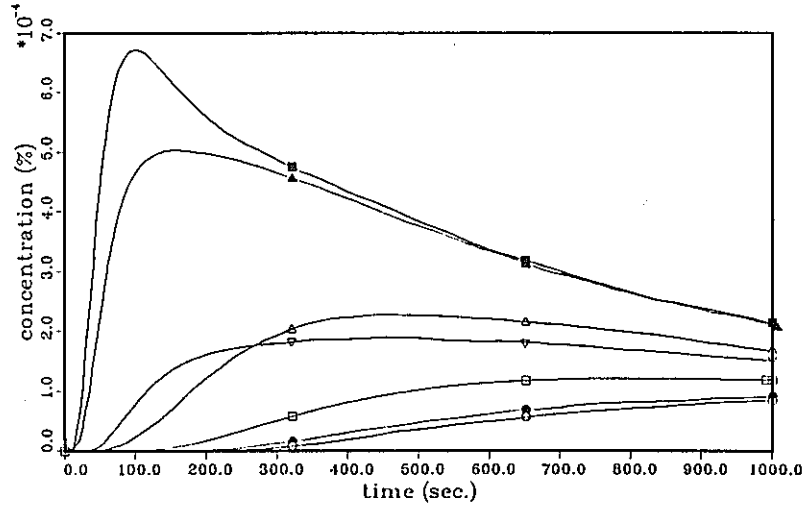
Concentration ( P 1 )



Concentration ( P 2 )



Concentration ( P 1' )



- : MONITOR    ■ : SI-48    ○ : SI-49    ● : SI-50
- △ : SI-51    ▲ : SI-52    ▽ : SI-53

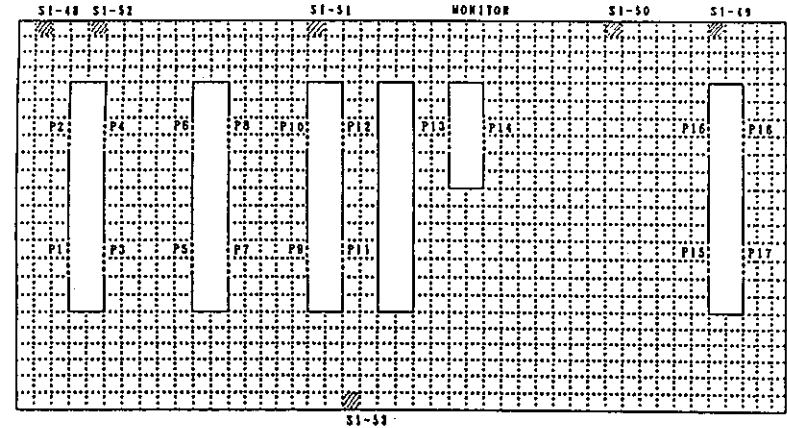
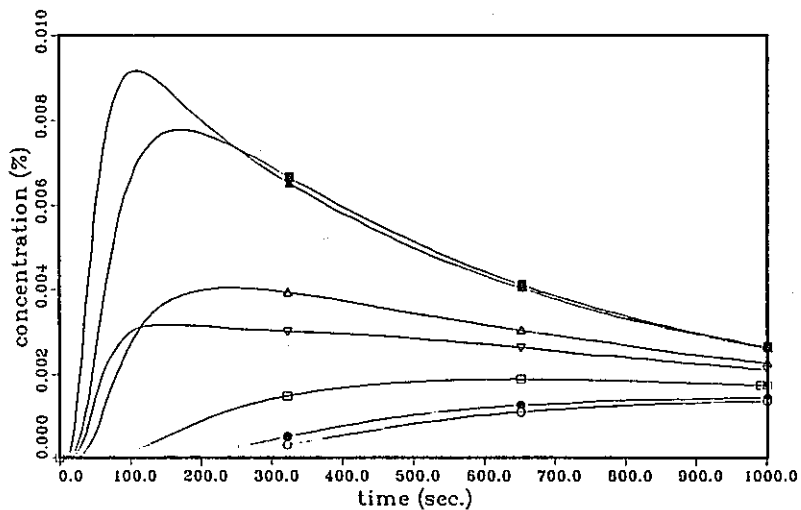
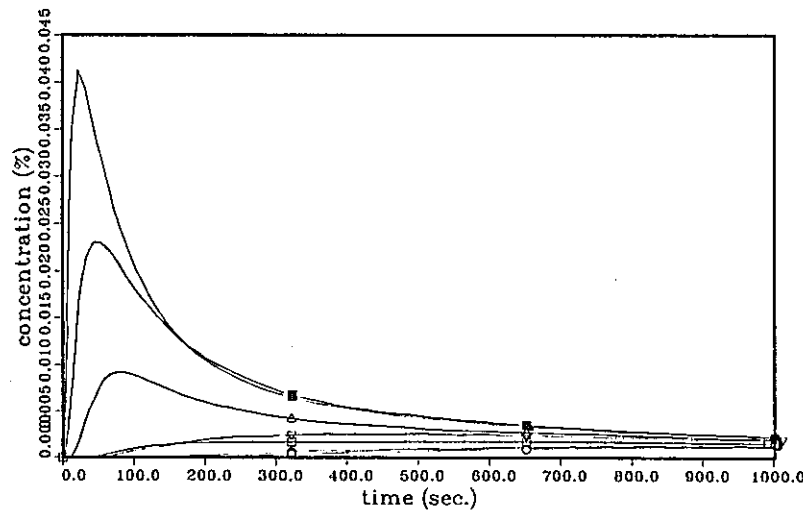


図3.27 破損位置P1およびP2条件時の検出器時間応答

Concentration ( P 3 )



Concentration ( P 4 )



□ : MONITOR    ■ : SI-48    ○ : SI-49    ● : SI-50  
 △ : SI-51    ▲ : SI-52    ▽ : SI-53

Concentration ( P 3' )

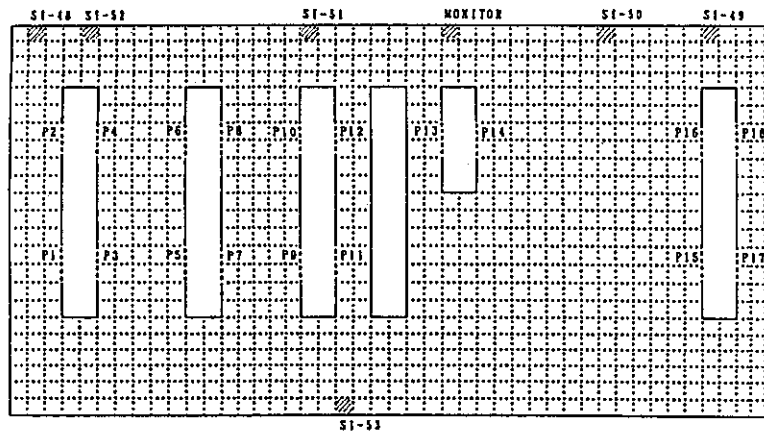
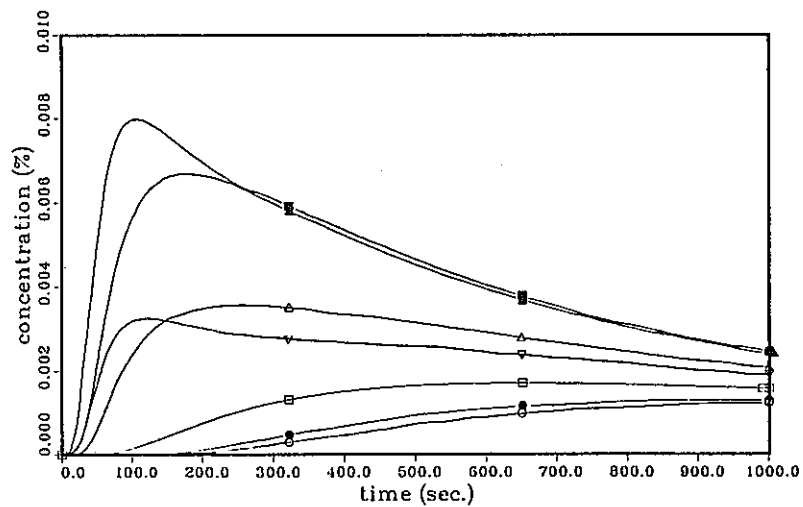
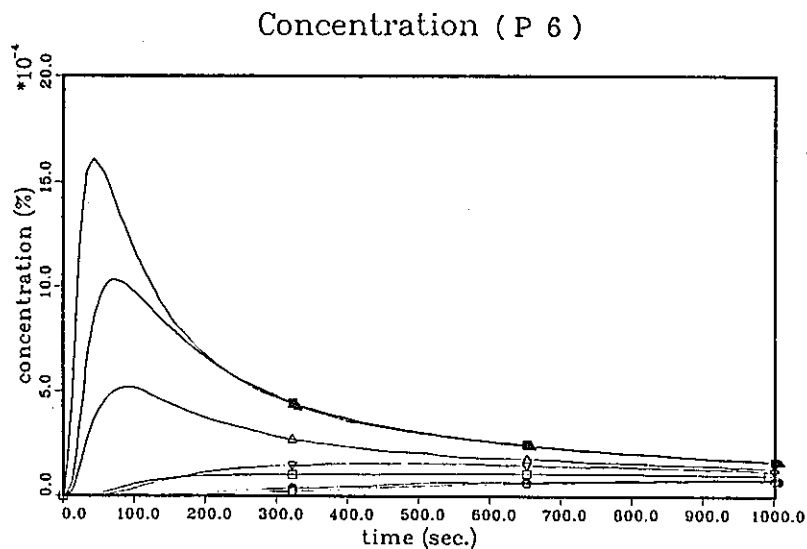
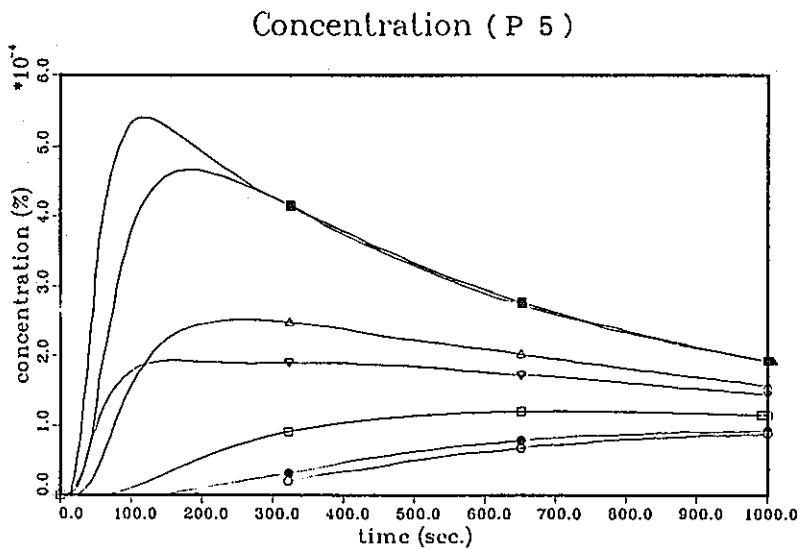


図3.28 破損位置P3およびP4条件時の検出器時間応答





□:MONITOR    ■:SI-48    ○:SI-49    ●:SI-50  
 △:SI-51    ▲:SI-52    ▽:SI-53

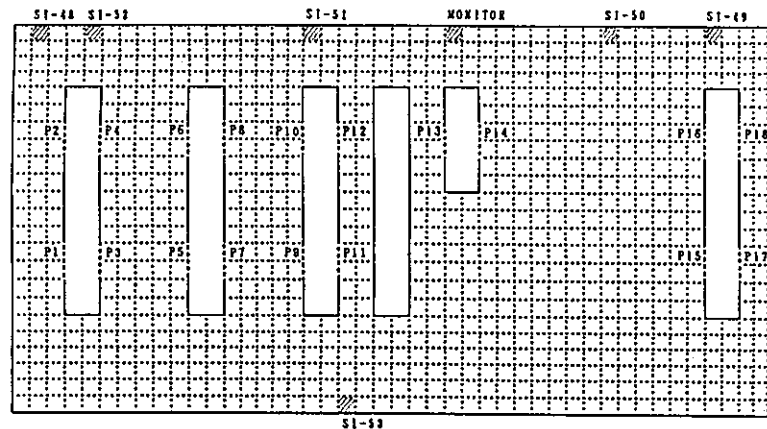
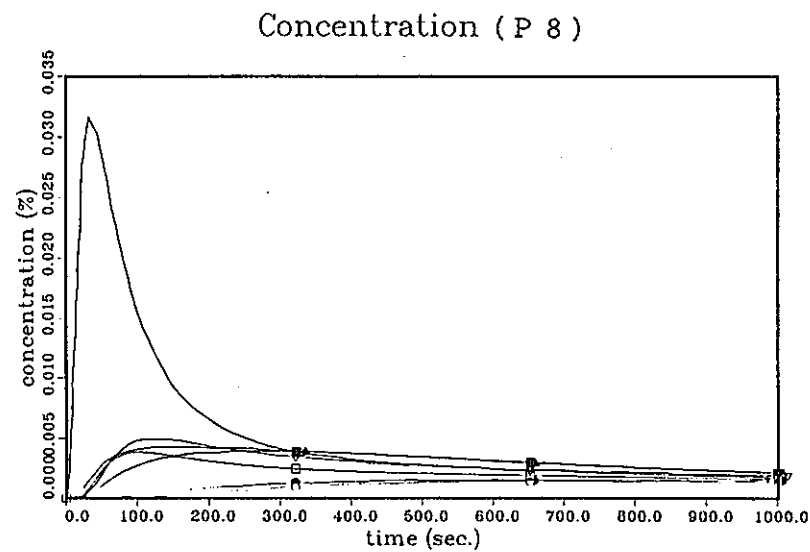
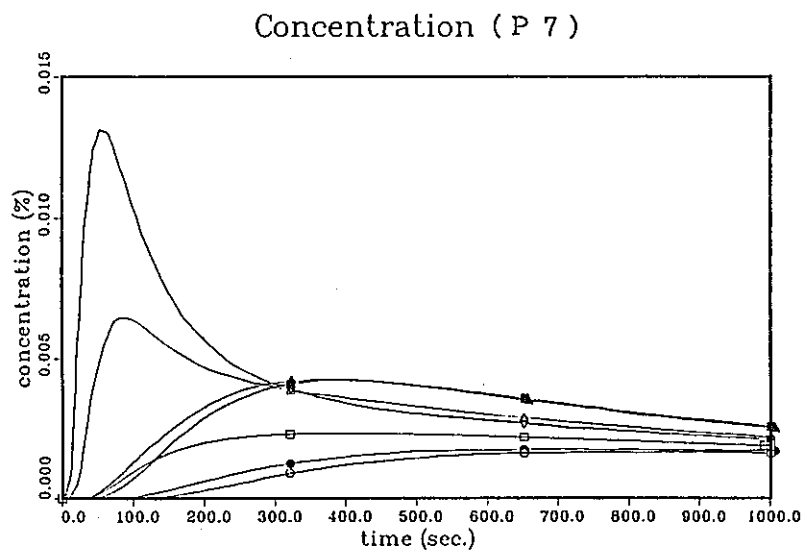


図3.29 破損位置P5およびP6条件時の検出器時間応答



□:MONITOR   ■:SI-48   ○:SI-49   ●:SI-50  
 △:SI-51   ▲:SI-52   ▽:SI-53

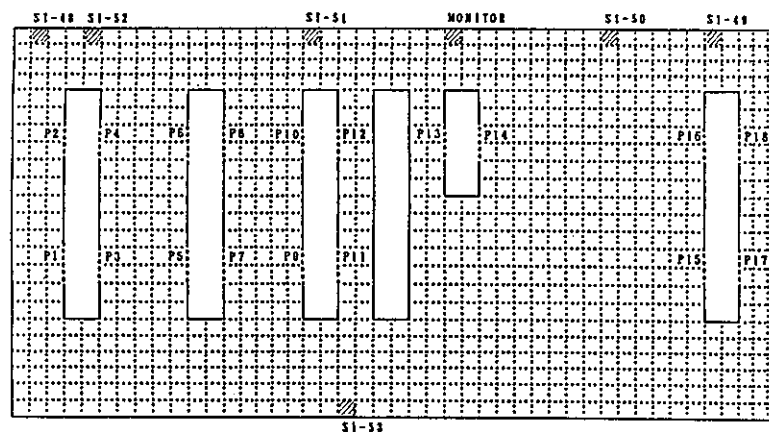
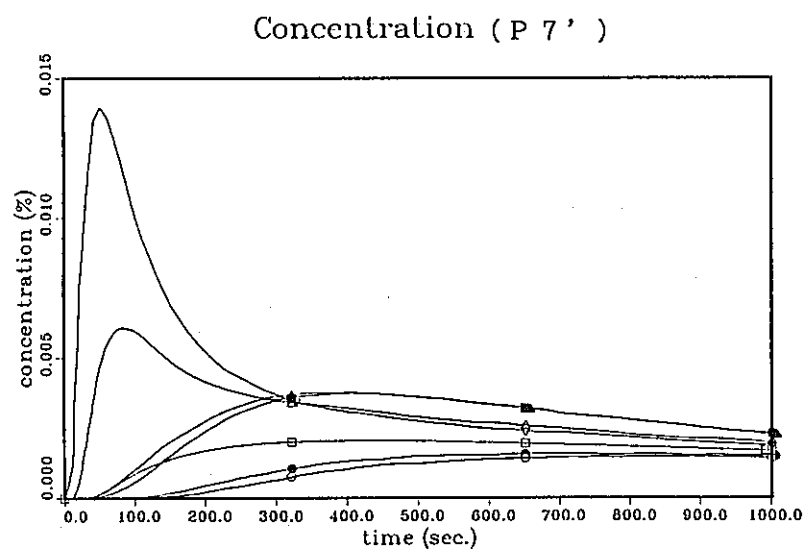
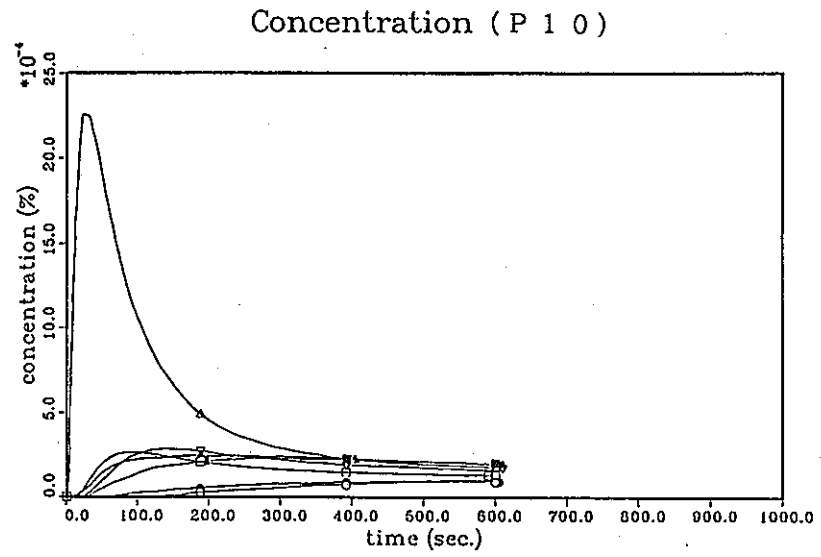
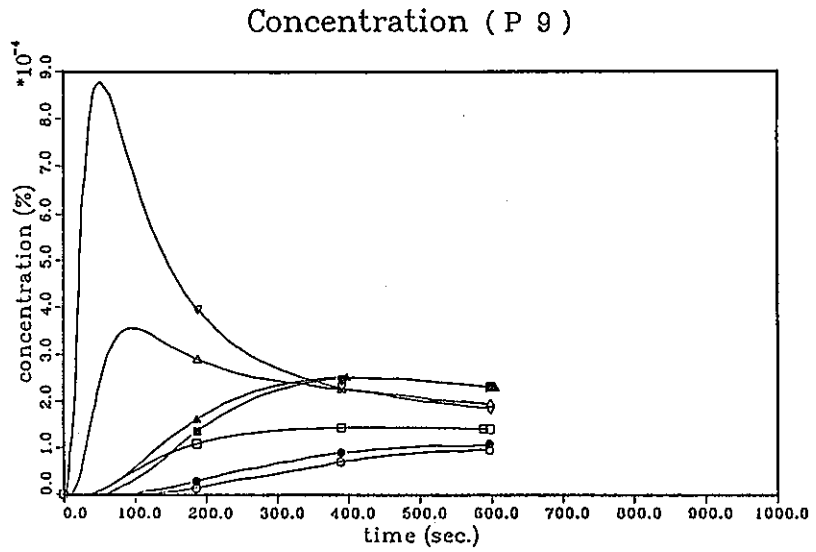


図3.30 破損位置P7およびP8条件時の検出器時間応答



□: MONITOR    ■: SI-48    ○: SI-49    ●: SI-50  
 △: SI-51    ▲: SI-52    ▽: SI-53

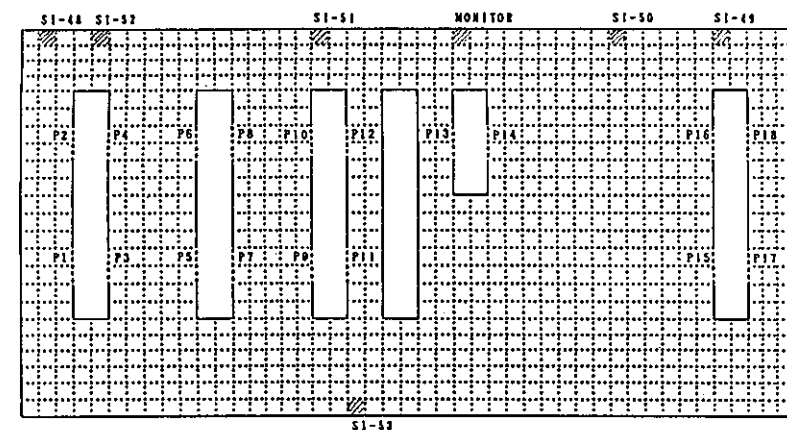
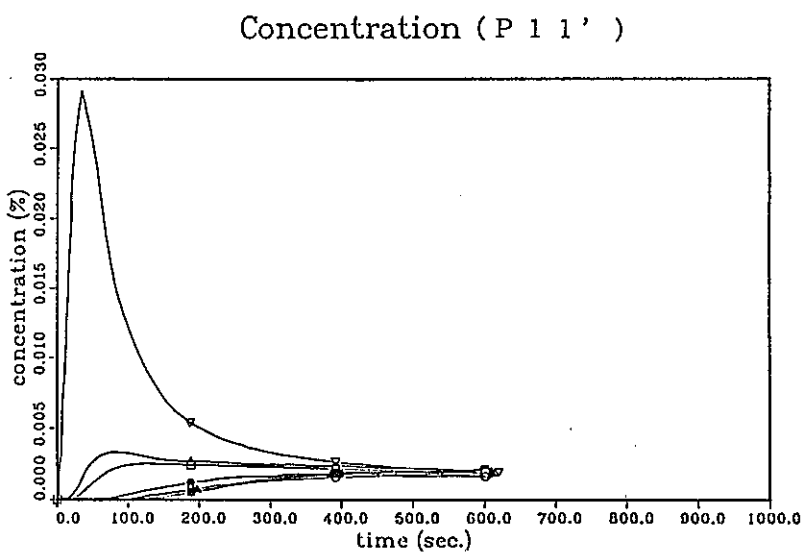
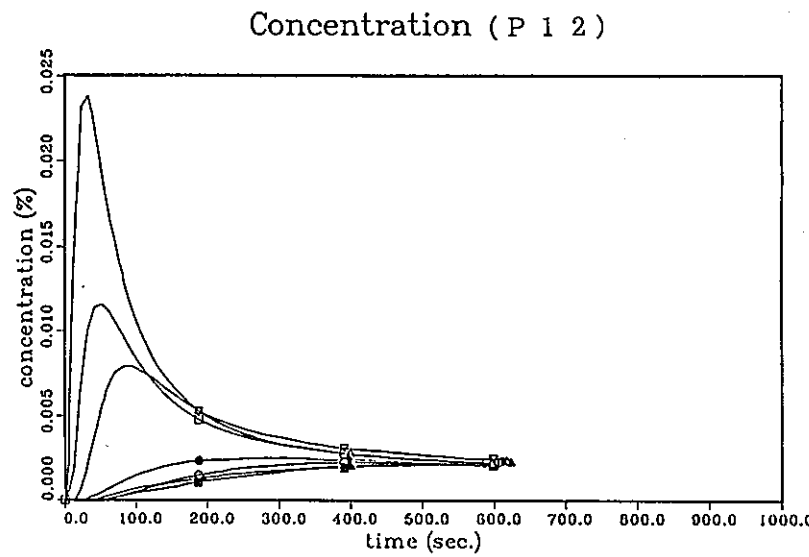
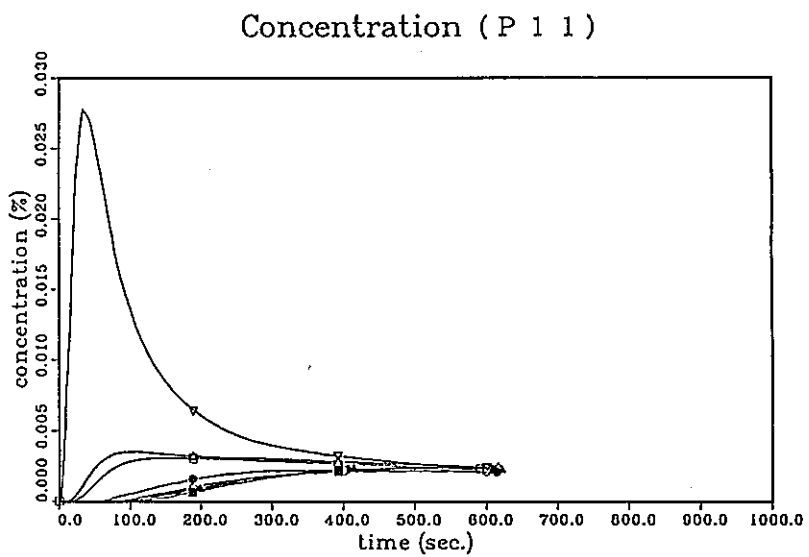


図3.31 破損位置P9およびP10条件時の検出器時間応答



□: MONITOR    ■: SI-48    ○: SI-49    ●: SI-50  
 △: SI-51    ▲: SI-52    ▽: SI-53

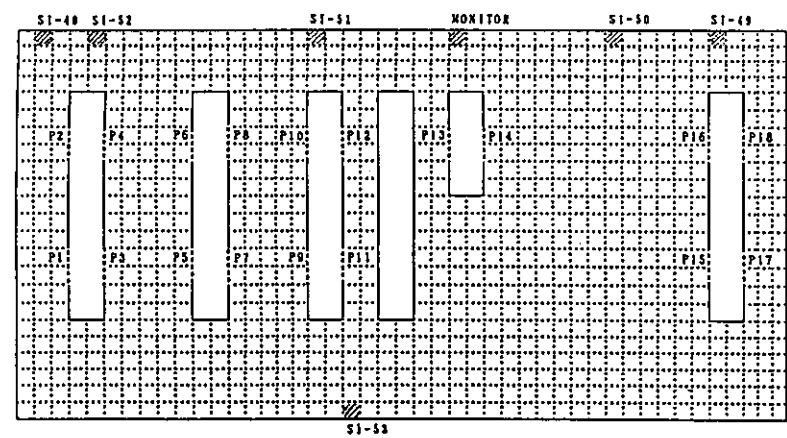
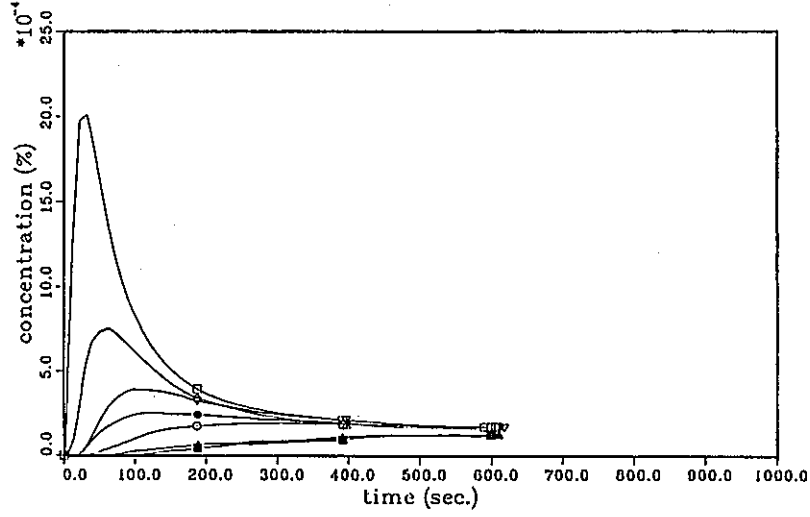
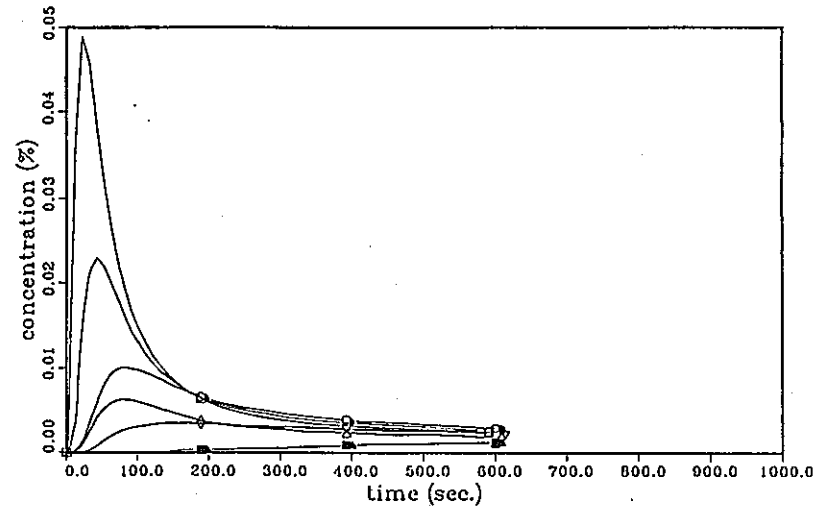


図3.32 破損位置P11およびP12条件時の検出器時間応答

Concentration ( P 1 3 )



Concentration ( P 1 4 )



□:MONITOR    ■:SI-48    ○:SI-49    ●:SI-50  
 △:SI-51    ▲:SI-52    ▼:SI-53

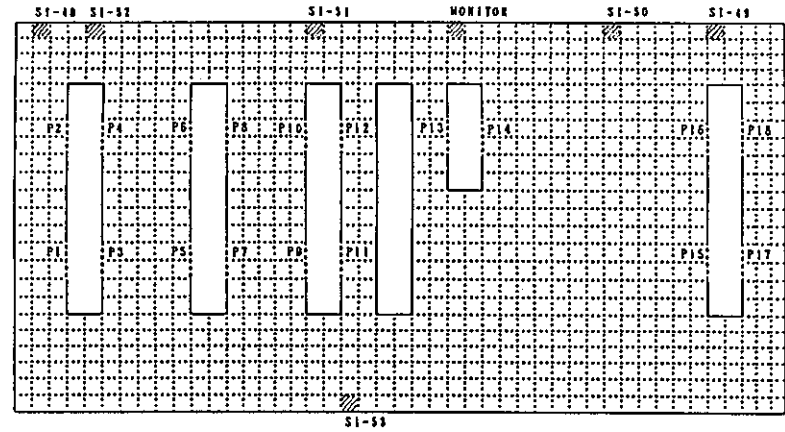
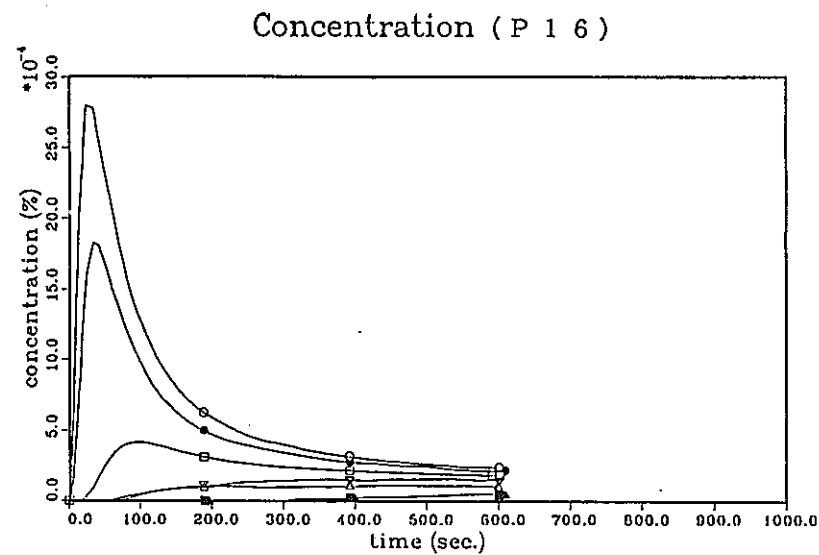
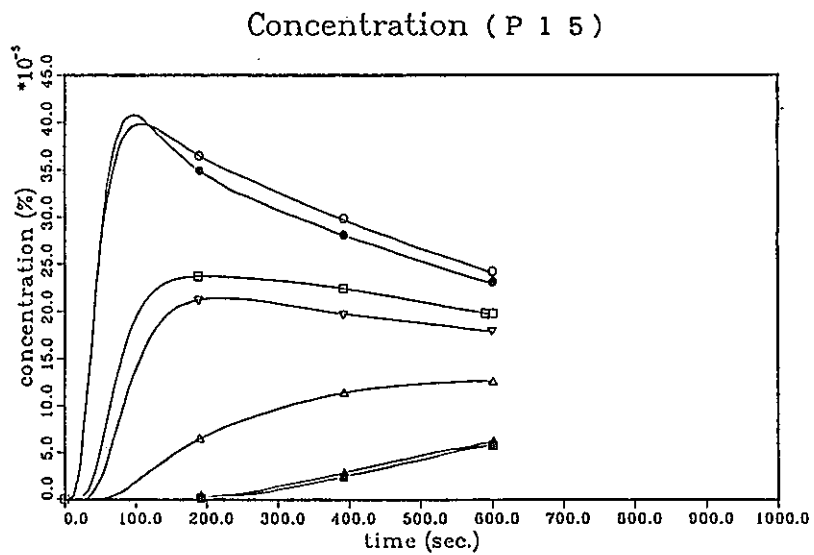


図3.33 破損位置P13およびP14条件時の検出器時間応答



□ : MONITOR    ■ : SI-48    ○ : SI-49    ● : SI-50  
 △ : SI-51    ▲ : SI-52    ▽ : SI-53

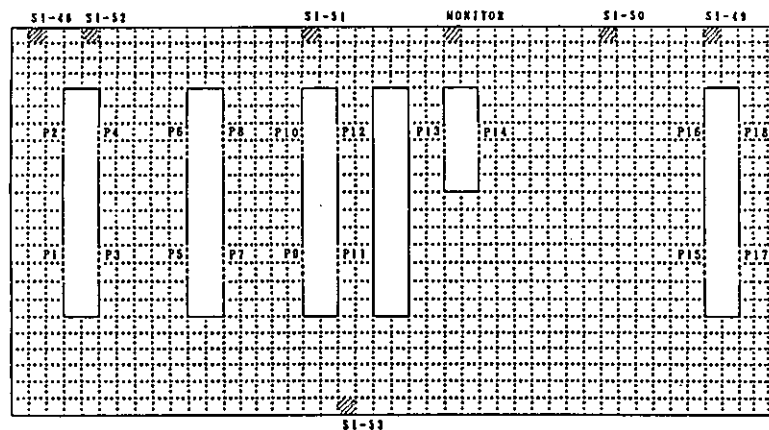
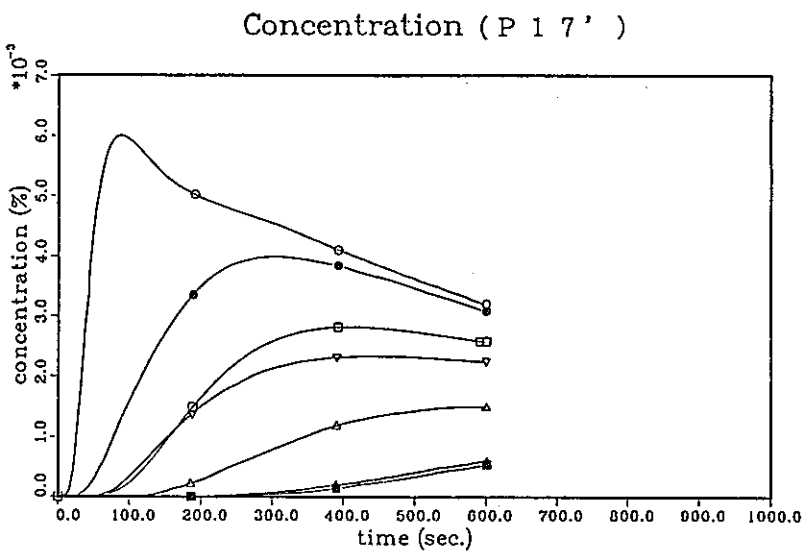
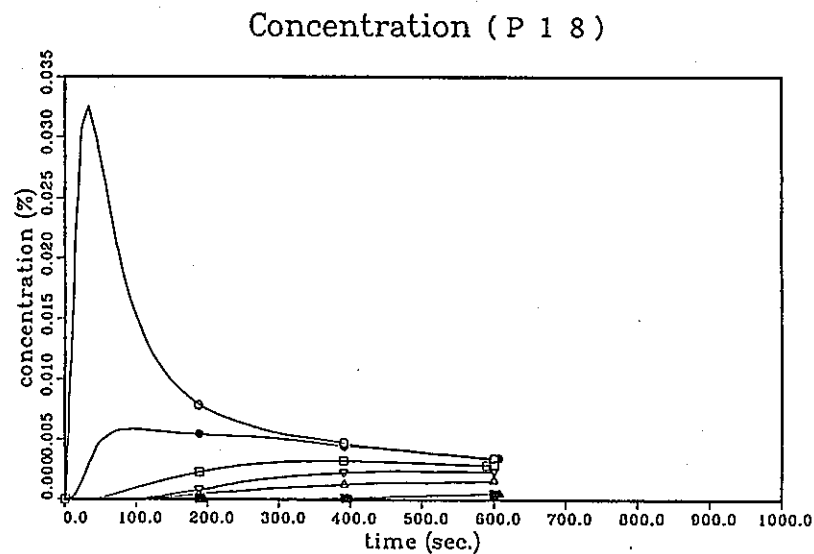
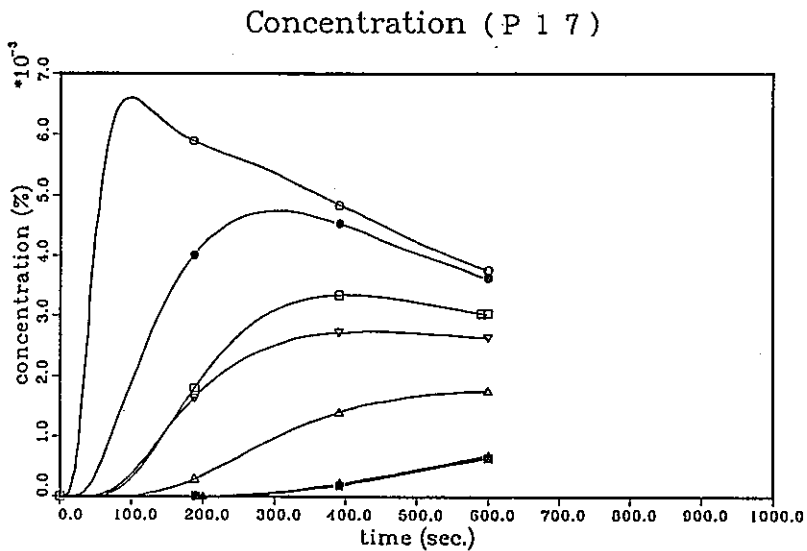


図3.34 破損位置P15およびP16条件時の検出器時間応答



□: MONITOR    ■: SI-48    ○: SI-49    ●: SI-50  
 △: SI-51    ▲: SI-52    ▽: SI-53

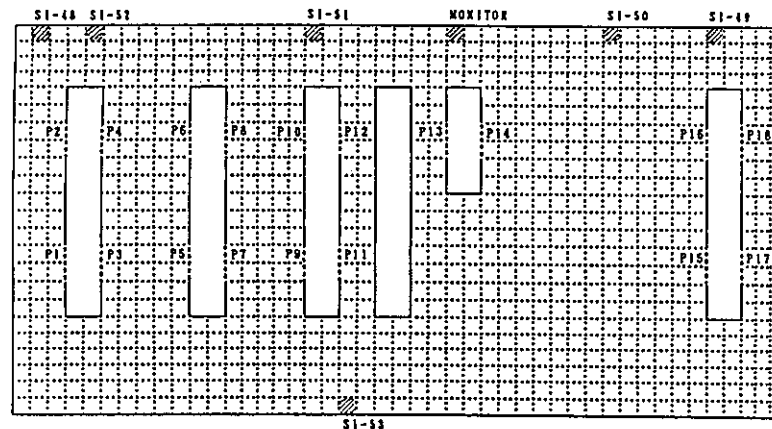
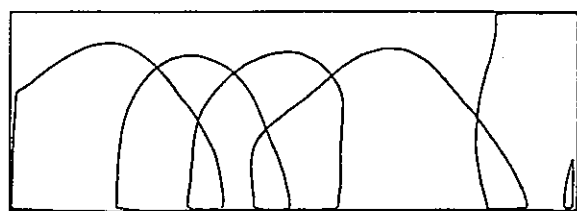
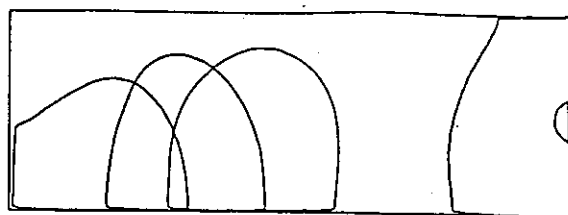


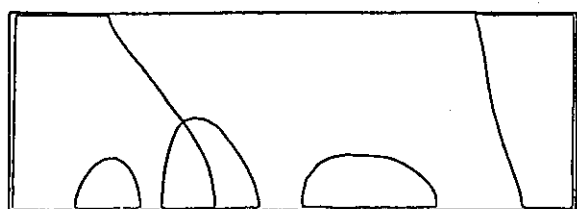
図3.35 破損位置P17およびP18条件時の検出器時間応答



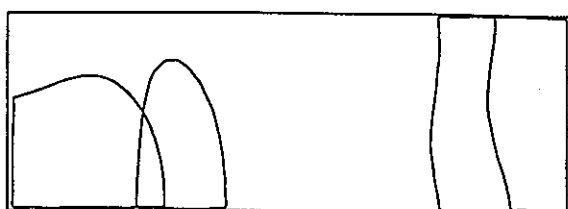
TIME: 52.0 SEC. J = 23



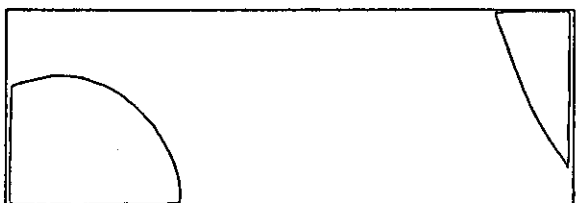
TIME: 52.0 SEC. J = 1



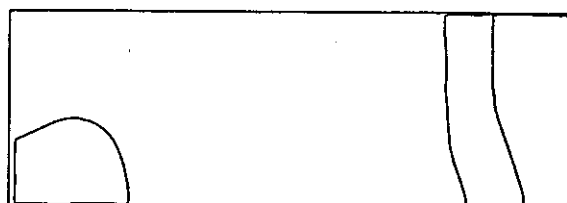
TIME: 132.0 SEC. J = 23



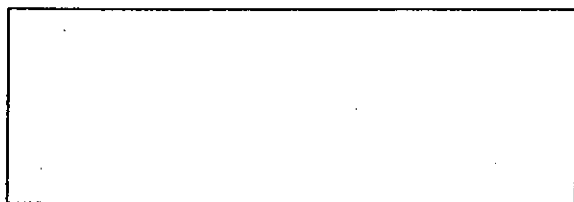
TIME: 132.0 SEC. J = 1



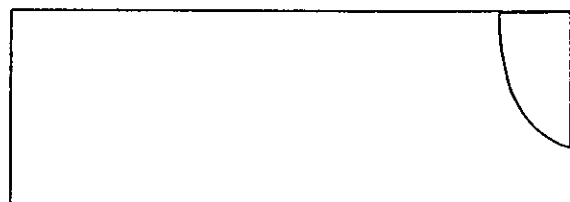
TIME: 172.0 SEC. J = 23



TIME: 172.0 SEC. J = 1



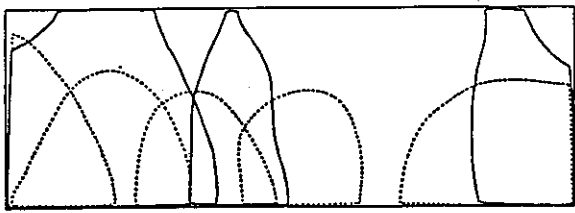
TIME: 232.0 SEC. J = 23



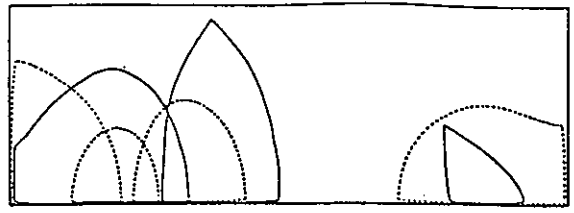
TIME: 232.0 SEC. J = 1

図3.36 指定濃度 $10^{-2}$ (%)に到達する領域の時間推移

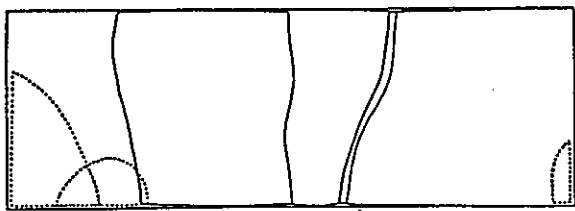




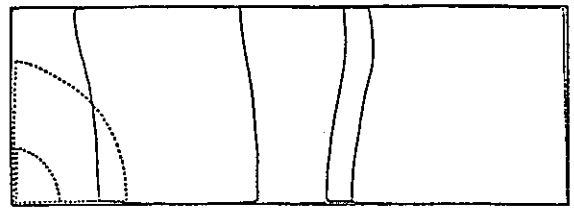
TIME: 52.0 SEC. J = 23



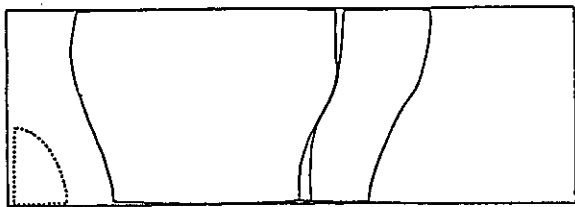
TIME: 52.0 SEC. J = 1



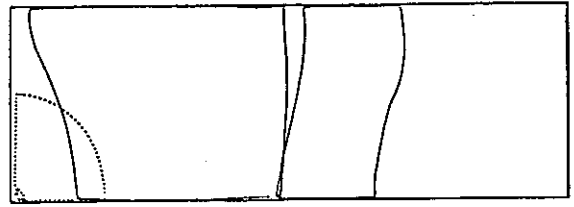
TIME: 132.0 SEC. J = 23



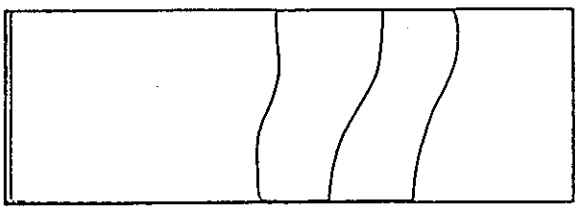
TIME: 132.0 SEC. J = 1



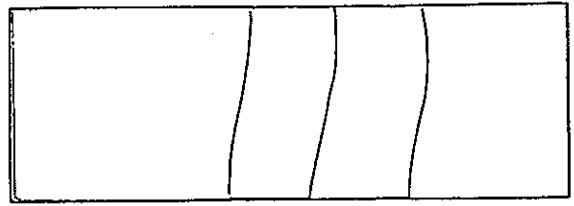
TIME: 172.0 SEC. J = 23



TIME: 172.0 SEC. J = 1

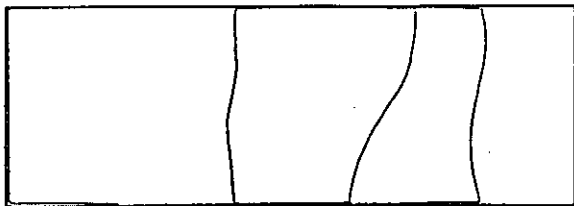


TIME: 232.0 SEC. J = 23

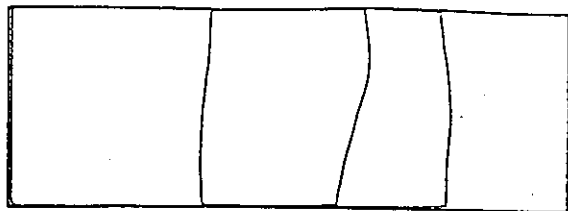


TIME: 232.0 SEC. J = 1

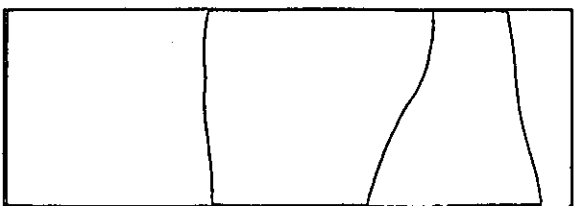
図3.37 指定濃度 $10^{-3}$ (%)に到達する領域の時間推移



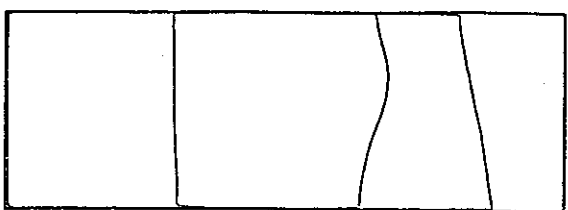
TIME: 292.0 SEC. J = 23



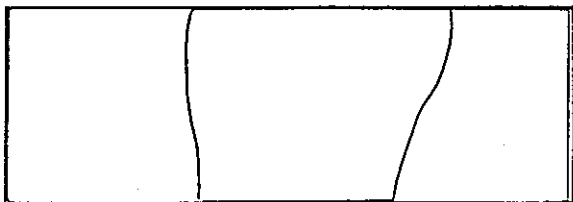
TIME: 292.0 SEC. J = 1



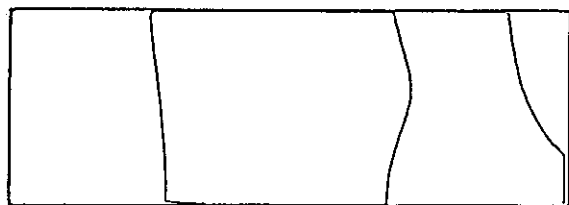
TIME: 352.0 SEC. J = 23



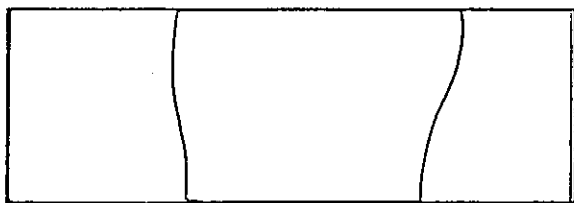
TIME: 352.0 SEC. J = 1



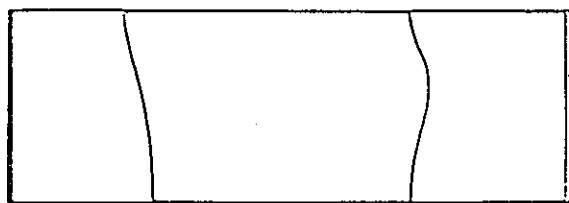
TIME: 412.0 SEC. J = 23



TIME: 412.0 SEC. J = 1



TIME: 472.0 SEC. J = 23

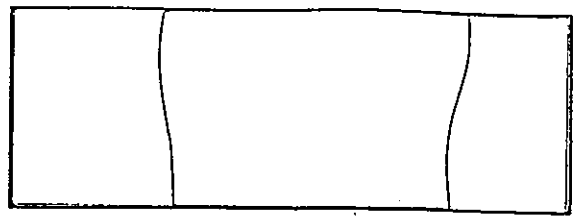


TIME: 472.0 SEC. J = 1

図3.37 指定濃度 $10^{-3}$ (%)に到達する領域の時間推移



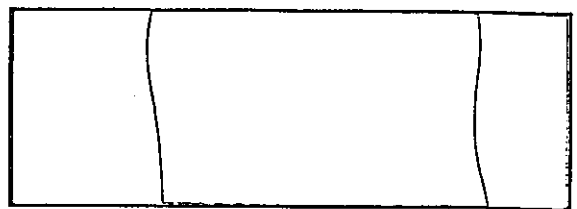
TIME: 532.0 SEC. J = 1



TIME: 532.0 SEC. J = 23

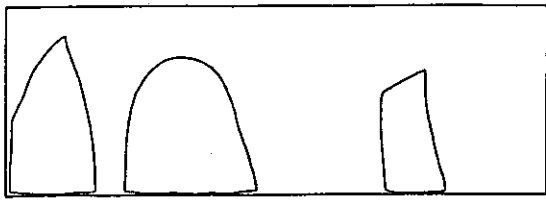


TIME: 592.0 SEC. J = 1

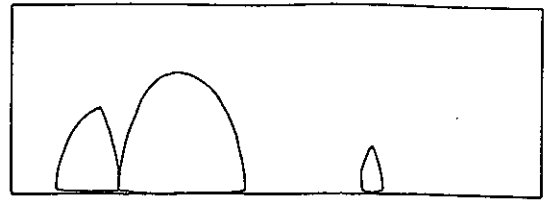


TIME: 592.0 SEC. J = 23

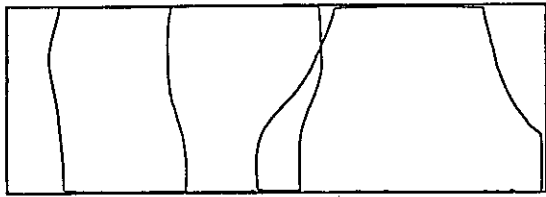
図3.37 指定濃度 $10^{-3}$ (%)に到達する領域の時間推移



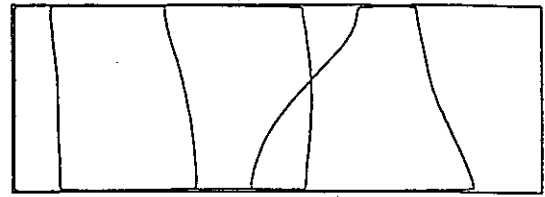
TIME: 52.0 SEC. J = 23



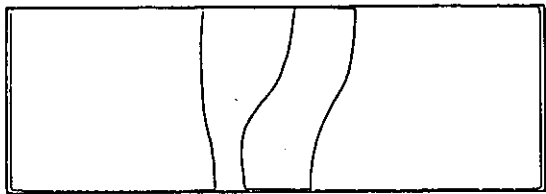
TIME: 52.0 SEC. J = 1



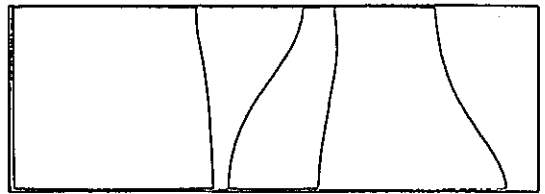
TIME: 132.0 SEC. J = 23



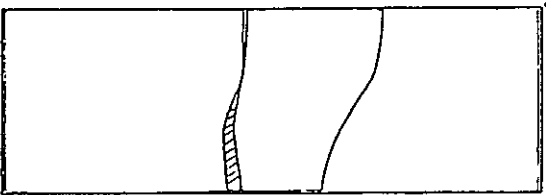
TIME: 132.0 SEC. J = 1



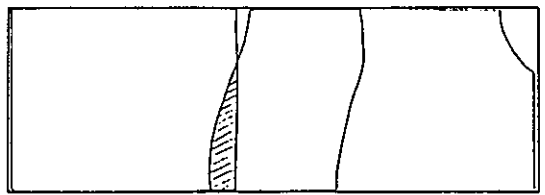
TIME: 172.0 SEC. J = 23



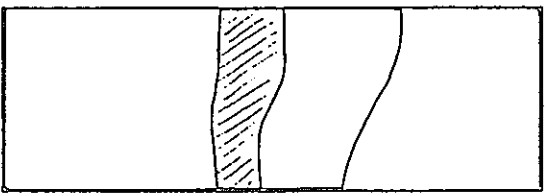
TIME: 172.0 SEC. J = 1



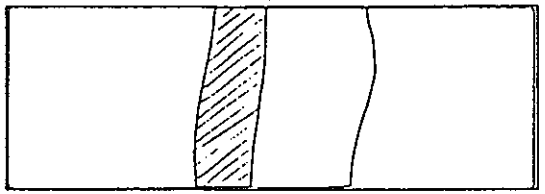
TIME: 232.0 SEC. J = 23



TIME: 232.0 SEC. J = 1

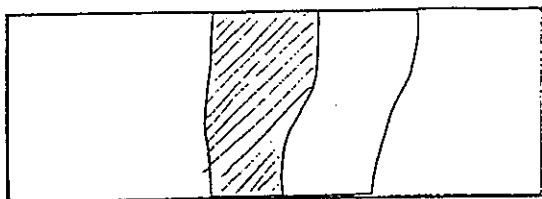


TIME: 292.0 SEC. J = 23

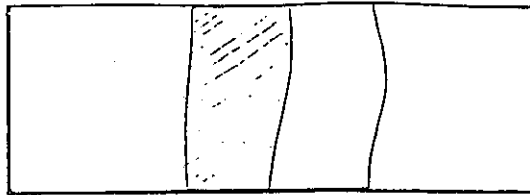


TIME: 292.0 SEC. J = 1

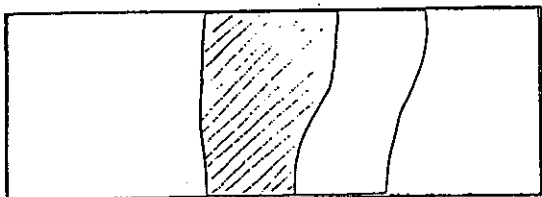
図3.38 指定濃度 $10^{-4}$ (%)に到達する領域の時間推移



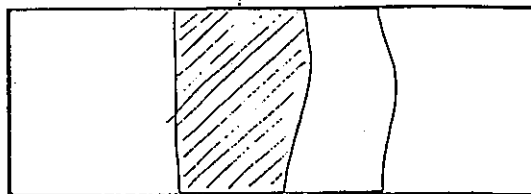
TIME: 352.0 SEC. J = 23



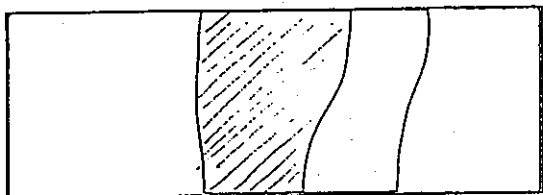
TIME: 352.0 SEC. J = 1



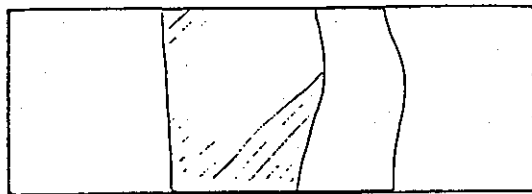
TIME: 412.0 SEC. J = 23



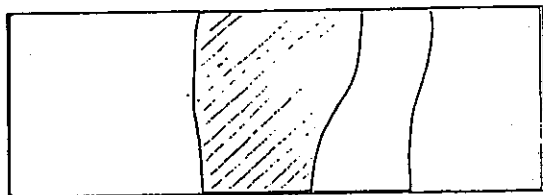
TIME: 412.0 SEC. J = 1



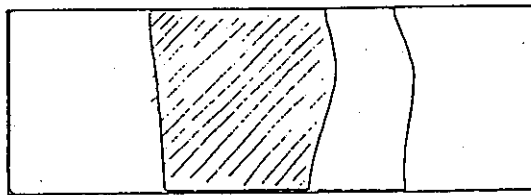
TIME: 472.0 SEC. J = 23



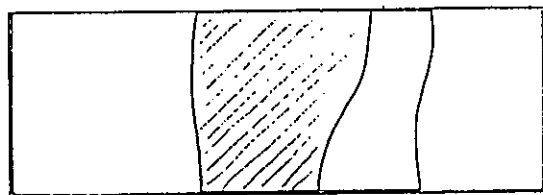
TIME: 472.0 SEC. J = 1



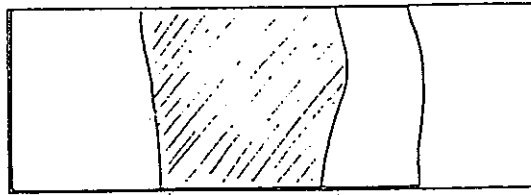
TIME: 532.0 SEC. J = 23



TIME: 532.0 SEC. J = 1

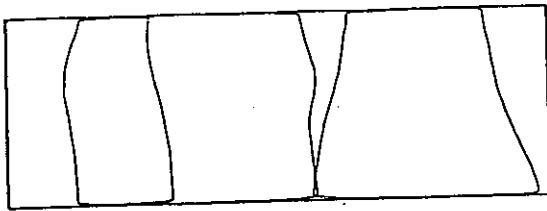


TIME: 592.0 SEC. J = 23

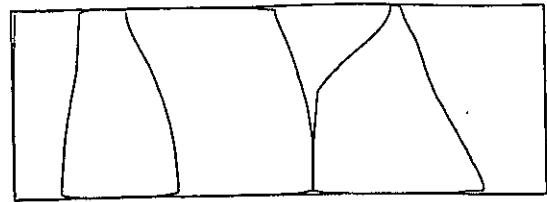


TIME: 592.0 SEC. J = 1

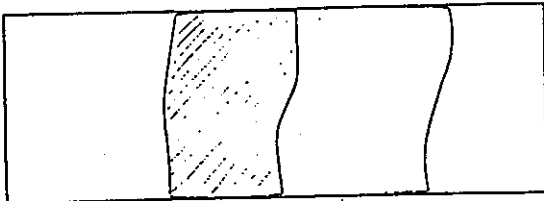
図3.38 指定濃度 $10^{-4}$ (%)に到達する領域の時間推移



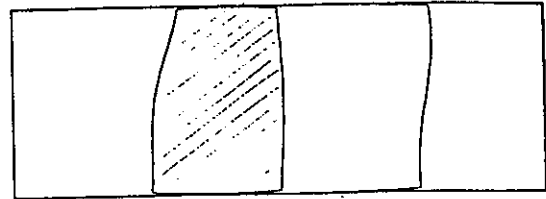
TIME: 52.0 SEC. J = 23



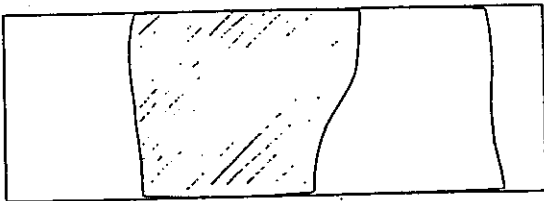
TIME: 52.0 SEC. J = 1



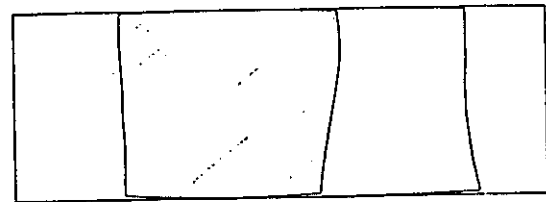
TIME: 132.0 SEC. J = 23



TIME: 132.0 SEC. J = 1



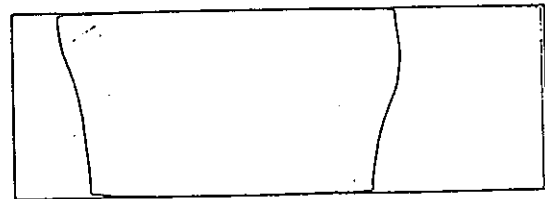
TIME: 172.0 SEC. J = 23



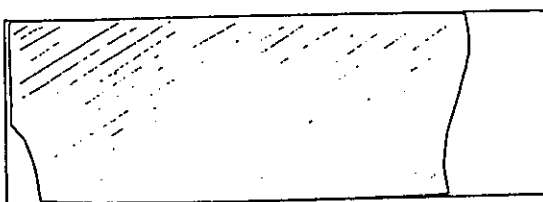
TIME: 172.0 SEC. J = 1



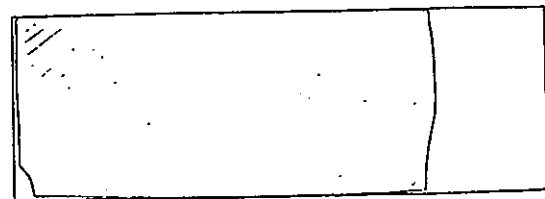
TIME: 232.0 SEC. J = 23



TIME: 232.0 SEC. J = 1

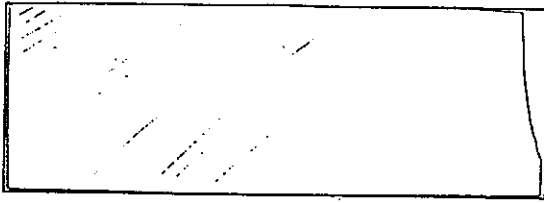


TIME: 292.0 SEC. J = 23

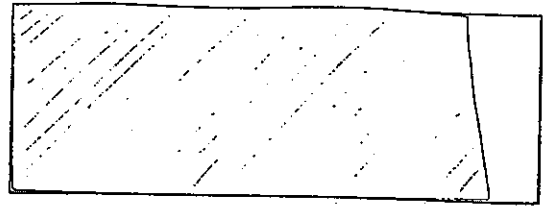


TIME: 292.0 SEC. J = 1

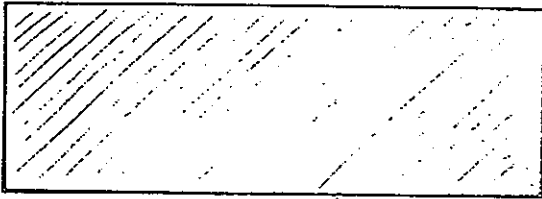
図3.39 指定濃度 $10^{-5}$ (%)に到達する領域の時間推移



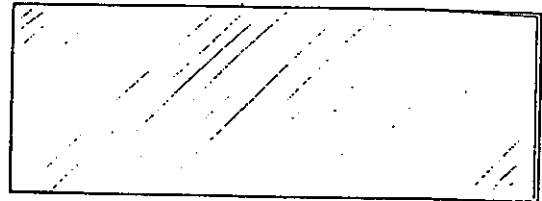
TIME: 352.0 SEC. J = 23



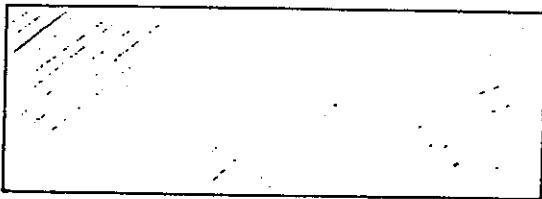
TIME: 352.0 SEC. J = 1



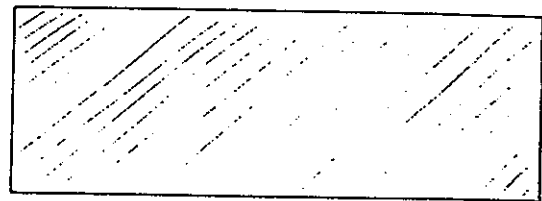
TIME: 412.0 SEC. J = 23



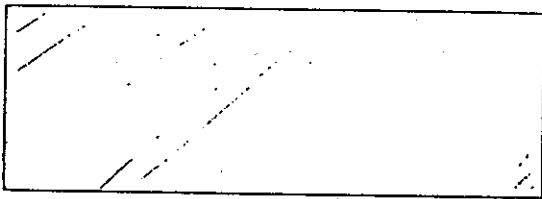
TIME: 412.0 SEC. J = 1



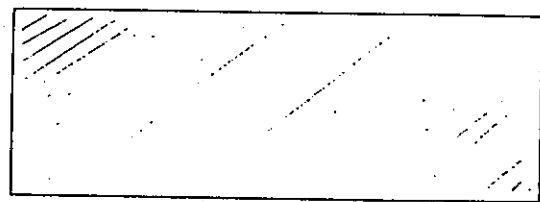
TIME: 472.0 SEC. J = 23



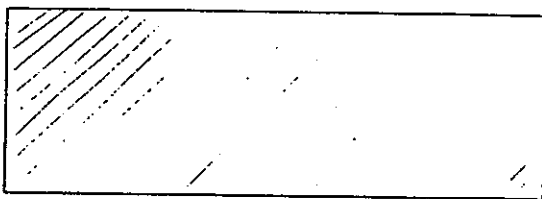
TIME: 472.0 SEC. J = 1



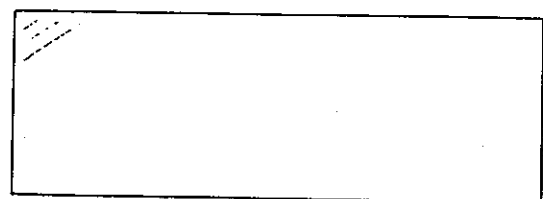
TIME: 532.0 SEC. J = 23



TIME: 532.0 SEC. J = 1



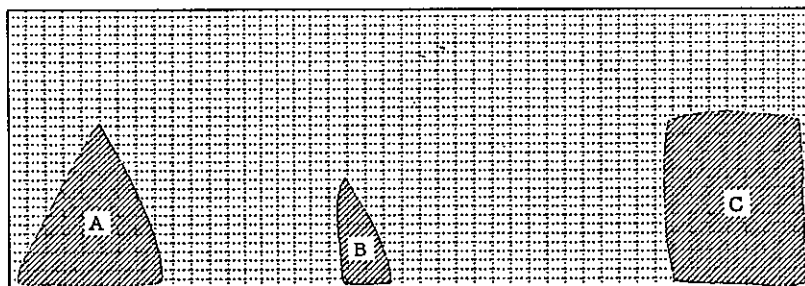
TIME: 592.0 SEC. J = 23



TIME: 592.0 SEC. J = 1

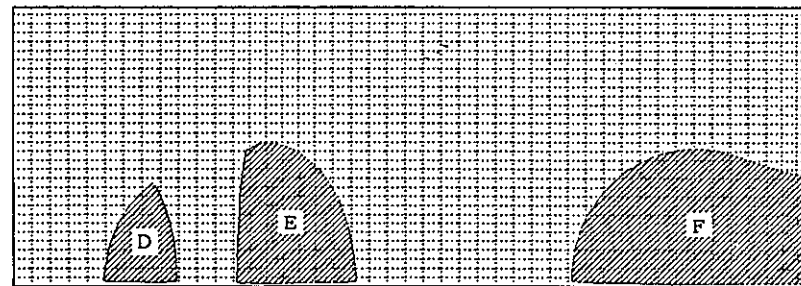
図3.39 指定濃度 $10^{-5}$ (%)に到達する領域の時間推移

[ $10^{-3}\%$ ]



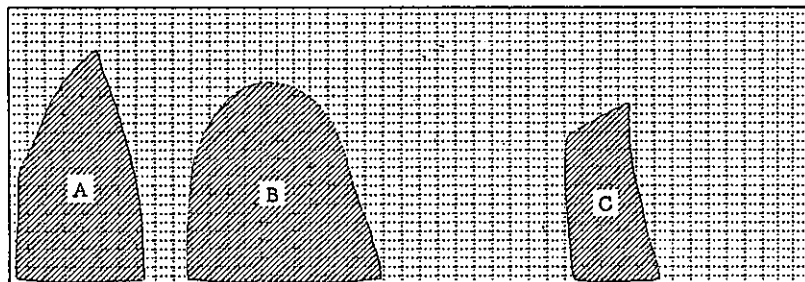
J = 23

[ $10^{-3}\%$ ]



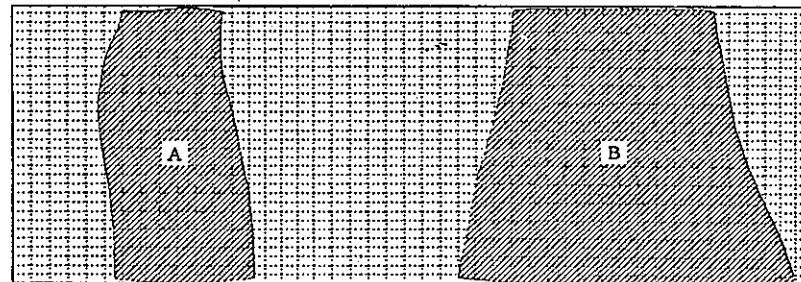
J = 1

[ $10^{-4}\%$ ]



J = 23

[ $10^{-5}\%$ ]



J = 23

図3.40 検出器最適設置位置領域