Table 16. HET I Detector Description for Low Z Stopping Modes

```
 I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B
C
C       FILE NAME: IH1LOZ.DET
C
C     MODES      GAINS
C       4          2
C
C
C ELEM    NO. THICK AMP-AST  BST   PEN THRESHOLDS SPACING  RADIUS CURV
C            0    16     7    7     7                 0   16156    1
C     A1     1   148     1    7     7   .63    .13 68478   16156    1
C     A2     2   151     2    7     7   .62    .12  2600   16156    1
C     C1     3  2920     3    6     2   2.5     .5     0   17131    1
C            0    81     7    7     7                1800  17131    1
C     C2     4  2925     4    5     5  4.68    .92   550   17131    1
C            0   171     7    7     7                 550  17131    1
C     C2     4  2900     4    5     5  4.68    .92  1750   17131    1
C     C3     5  2890     5    4     4  4.66    .92   560   17131    1
C            0   143     7    7     7                 560  17131    1
C     C3     5  2870     5    4     4  4.66    .92  1770   17131    1
C     C4     6  2925     6    3     3  4.69    .92   560   17131    1
C            0   140     7    7     7                 560  17131    1
C     C4     6  2935     6    3     3  4.69    .92  2550   17131    1
C            0    68     7    7     7                   0  16156    2
C     B2     7  2150     7    2     7  2.13     .3 55400   16156    2
C     B1     8  2300     7    1     1  1.02     .3     0   16156    3
C            0    84     7    7     7                   0  16156    3
C            0    33     7    7     7                   0  16156    1
C
C                LOW GAIN                HIGH GAIN
CHANNLS      OFFSET      FSMEV       OFFSET      FSMEV
   4096        1.60       953.          0.       200.      AST   A1
   4096        -.51       931.          0.      197.1      AST   A2
   4096         .94     17833.          .5      3533.      AST   C1
   4096         .33     17992.          0.      3603.      AST   C2
   4096         .12     17999.          0.      3680.      AST   C3
   4096        1.35      2494.         1.5       747.      PEN & BST  B1
   4096         .64      4910.          1.       755.      BST   B2
   4096        1.78     17984.        1.87      3646.      PEN & BST  C4
   4096         .07     17859.          0.      3683.      PEN & BST  C3
   4096         .05     18128.          0.      3615.      PEN & BST  C2
   4096        1.19      5143.        1.76      1016.      PEN   C1
C
C
C                          SLANT 1                    SLANT 2
C   1     2 BOTH  GN    CH1    CH2    CH3    SUM    CH1    CH2    CH3    SUM
  SA1   SA2   SA   1     1.      .6   .375   -39.     1.     .6   5.43  -105.
        SB    SB   2                                 1.     1.     1.   -60.
        SB    SB   2                                 1.     1.     1.   -60.
C
C            NUMBER OF SPECIES
C     MODES  LO GAIN    HI GAIN
C       2        12          4
C
C
C   LOW GAIN:
C NAME      Z          A
  HE3-      2     3.0149
  HE4-      2     4.0015
  LI6-      3       6.00
  BE9-      4       9.00
  B11-      5      11.00
  C12-      6      12.00
  N14-      7      14.00
  O16-      8      15.99
  F19-      9      18.99
  NE20     10      19.99
  NA23     11      22.99
  MG24     12      23.99
C
C   HIGH GAIN:
  PROT      1     1.0073
  DEUT      1     2.0136
  HE3-      2     3.0149
  HE4-      2     4.0015
```

Table 17. HET II Detector Description for Low Z Stopping Modes

```
II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B
C
C       FILE NAME: IH2LOZ.DET
C
C     MODES      GAINS
C       4          2
C
C
C ELEM    NO.  THICK  AMP-AST   BST    PEN  THRESHOLDS  SPACING   RADIUS  CURV
C            0     16      7      7      7                    0    16156     1
C      A1    1    149      1      7      7     .63    .13   66478    16156     1
C      A2    2    153      2      7      7     .62    .12    2600    16156     1
C      C1    3   2915      3      6      2    2.49    .75       0    17131     1
C            0     84      7      7      7                 1800    17131     1
C      C2    4   2930      4      5      5    4.65    .92     550    17131     1
C            0    171      7      7      7                  550    17131     1
C      C2    4   2900      4      5      5    4.65    .92    1750    17131     1
C      C3    5   2930      5      4      4    4.68    .92     560    17131     1
C            0    142      7      7      7                  560    17131     1
C      C3    5   2930      5      4      4    4.68    .92    1770    17131     1
C      C4    6   2920      6      3      3    4.69    .92     560    17131     1
C            0    148      7      7      7                  560    17131     1
C      C4    6   2930      6      3      3    4.69    .92    2550    17131     1
C            0     74      7      7      7                    0    16156     2
C      B2    7   2225      7      2      7    2.04     .3   55400    16156     2
C      B1    8   2125      7      1      1    1.00     .3       0    16156     3
C            0     61      7      7      7                    0    16156     3
C            0     33      7      7      7                    0    16156     1
C
C                LOW GAIN                    HIGH GAIN
CHANNLS     OFFSET     FSMEV        OFFSET     FSMEV
   4096       1.70       958.          .60     202.1   .0488  AST A1
   4096       -.27       938.         -.20     195.6          AST A2
   4096        .94     18128.           .2      3687.  .8909  AST C1
   4096       -.04     18243.          .08      3712.          AST C2
   4096        .13     17630.          .30      3548.          AST C3
   4096       1.68      2542.         1.00       785.  .1933  PEN & BST B1
   4096       1.07      4998.          .96       800.          BST B2
   4096       1.57     17938.         1.89      3619.          PEN & BST C4
   4096       -.03     17375.          .08      3517.  .8800  PEN & BST C3
   4096       -.05     18068.         -.31      3677.          PEN & BST C2
   4096       1.09      5150.         1.43      1053.          PEN C1
C
C
C                          SLANT 1                        SLANT 2
C    1     2  BOTH   GN    CH1    CH2    CH3    SUM      CH1    CH2    CH3    SUM
C  SA1   SA2    SA    1      1.     .6   .375   -39.       1.     .6   5.43  -105.
C          SB    SB    2                                 1.     1.     1.    -60.
C          SB    SB    2                                 1.     1.     1.    -60.
C
C              NUMBER OF SPECIES
C    MODES     LO GAIN    HI GAIN
C      2           12          4
C
C   LOW GAIN:
C  NAME        Z          A
C  HE3-        2     3.0149
C  HE4-        2     4.0015
C  LI7-        3       7.00
C  BE9-        4       9.00
C  B11-        5      11.00
C  C12-        6      12.00
C  N14-        7      14.00
C  O16-        8      15.99
C  F19-        9      18.99
C  NE20       10      19.99
C  NA23       11      22.99
C  MG24       12      23.99
C
C   HIGH GAIN:
C  PROT        1     1.0073
C  DEUT        1     2.0136
C  HE3-        2     3.0149
C  HE4-        2     4.0015
```

Table 18. HET I Detector Description for High Z Stopping Modes

```
 I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B
C
CCC      FILE NAME: IH1HIZ.DET
CCC
C     MODES      GAINS
            4          2
C
CCC
C ELEM    NO.  THICK  AMP-AST   BST    PEN  THRESHOLDS  SPACING   RADIUS  CURV
              0     16       7     7      7                    0    16156     1
     A1       1    148       1     7      7     .63     .13  68478    16156     1
     A2       2    151       2     7      7     .62     .12   2600    16156     1
     C1       3   2920       3     6      2     2.5      .5      0    17131     1
              0     81       7     7      7                 1800    17131     1
     C2       4   2925       4     5      5    4.68     .92    550    17131     1
              0    171       7     7      7                    0    17131     1
     C2       4   2900       4     5      5    4.68     .92   1750    17131     1
     C3       5   2890       5     4      4    4.66     .92    560    17131     1
              0    143       7     7      7                    0    17131     1
     C3       5   2870       5     4      4    4.66     .92   1770    17131     1
     C4       6   2925       6     3      3    4.69     .92    560    17131     1
              0    140       7     7      7                    0    17131     1
     C4       6   2935       6     3      3    4.69     .92   2550    17131     1
              0     68       7     7      7                    0    16156     2
     B2       7   2150       7     2      7    2.13      .3  55400    16156     2
     B1       8   2300       7     1      1    1.02      .3      0    16156     3
              0     84       7     7      7                    0    16156     3
              0     33       7     7      7                    0    16156     1
C
C                LOW GAIN                    HIGH GAIN
CHANNLS     OFFSET      FSMEV       OFFSET      FSMEV
   4096       1.60       953.          0.       200.       AST  A1
   4096       -.51       931.          0.     197.1        AST  A2
   4096        .94     17833.         .5      3533.       AST  C1
   4096        .33     17992.          0.     3603.       AST  C2
   4096        .12     17999.          0.     3680.       AST  C3
   4096       1.35      2494.        1.5       747.       PEN & BST B1
   4096        .64      4910.          1.      755.       BST  B2
   4096       1.78     17984.       1.87      3646.       PEN & BST C4
   4096        .07     17859.          0.     3683.       PEN & BST C3
   4096        .05     18128.          0.     3615.       PEN & BST C2
   4096       1.19      5143.       1.76      1016.       PEN  C1
CCC
CCC                          SLANT 1                     SLANT 2
C    1     2 BOTH  GN    CH1    CH2    CH3    SUM    CH1    CH2    CH3    SUM
  SA1   SA2    SA    1     1.     .6   .375   -39.     1.     .6   5.43   -105.
        SB     SB    2                              1.     1.     1.    -60.
        SB     SB    2                              1.     1.     1.    -60.
C
CCC          NUMBER OF SPECIES
C     MODES   LO GAIN    HI GAIN
            2        10          1
C
CCC   LOW GAIN:
C  NAME      Z          A
   AL27     13      26.98
   SI28     14      27.98
   S32-     16      31.98
   AR36     18      35.97
   CA40     20      39.96
   TI48     22      47.95
   CR52     24      51.94
   FE56     26      55.93
   NI58     28      57.94
   ZN64     30      63.93
   ZR90     40      89.90
CCC I127    53      127.
C    HIGH GAIN:
   PROT      1        1.0
```

Table 19. HET II Detector Description for High Z Stopping Modes

```
II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B
C
CCCC      FILE NAME: IH2HIZ.DET
C    MODES      GAINS
C       4          2
C
CCC
C ELEM    NO. THICK AMP-AST  BST   PEN THRESHOLDS SPACING  RADIUS CURV
          0    16      7     7     7                0    16156    1
    A1    1   149      1     7     7    .63   .13  68478    16156    1
    A2    2   153      2     7     7    .62   .12   2600    16156    1
    C1    3  2915      3     6     2   2.49   .75      0    17131    1
          0    84      7     7     7                1800    17131    1
    C2    4  2930      4     5     5   4.65   .92    550    17131    1
          0   171      7     7     7                550    17131    1
    C2    4  2900      4     5     5   4.65   .92   1750    17131    1
    C3    5  2930      5     4     4   4.68   .92    560    17131    1
          0   142      7     7     7                560    17131    1
    C3    5  2930      5     4     4   4.68   .92   1770    17131    1
    C4    6  2920      6     3     3   4.69   .92    560    17131    1
          0   148      7     7     7                560    17131    1
    C4    6  2930      6     3     3   4.69   .92   2550    17131    1
          0    74      7     7     7                0    16156    2
    B2    7  2225      7     2     7   2.04    .3  55400    16156    2
    B1    8  2125      7     1     1   1.00    .3      0    16156    3
          0    61      7     7     7                0    16156    3
          0    33      7     7     7                0    16156    1
C
C              LOW GAIN              HIGH GAIN
CHANNLS     OFFSET     FSMEV      OFFSET     FSMEV
   4096       1.70       958.       .60      202.1      AST A1
   4096       -.27       938.      -.20      195.6      AST A2
   4096       -.94     18128.        .2       3687.     AST C1
   4096       -.04     18243.       .08       3712.     AST C2
   4096        .13     17630.       .30       3548.     AST C3
   4096       1.68      2542.      1.00        785.     PEN & BST B1
   4096       1.07      4998.       .96        800.     BST B2
   4096       1.57     17938.      1.89       3619.     PEN & BST C4
   4096       -.03     17375.       .08       3517.     PEN & BST C3
   4096       -.05     18068.      -.31       3677.     PEN & BST C2
   4096       1.09      5150.      1.43       1053.     PEN C1
C
CCC
C                        SLANT 1                    SLANT 2
C   1     2 BOTH   GN    CH1   CH2   CH3   SUM     CH1   CH2   CH3    SUM
  SA1   SA2   SA    1     1.     .6  .375  -39.      1.    .6  5.43  -105.
        SB    SB    2                              1.    1.    1.    -60.
        SB    SB    2                              1.    1.    1.    -60.
C
CCC           NUMBER OF SPECIES
C    MODES    LO GAIN    HI GAIN
C       2          10          1
C
C   LOW GAIN:
C NAME      Z          A
  AL27     13      26.98
  SI28     14      27.98
  S32-     16      31.98
  AR36     18      35.97
  CA40     20      39.96
  TI48     22      47.95
  CR52     24      51.94
  FE56     26      55.93
  NI58     28      57.94
  ZN64     30      63.93
C ZR90     40      89.90
C I127     53      127.
C   HIGH GAIN:
  PROT      1       1.0
```

Table 20. HET I Detector Description for 2-Dimensional Stopping Modes: special run

```
 I  ISEE  HET1  CALIB (3/7/81) A2,B2 ABOVE CH 12 IN HG TO CUT HKG
C
CCCC       FILE NAME: IH1HG2D.DET
C
C     MODES      GAINS
C        4          2
C
CCC
C ELEM    NO. THICK AMP-AST  BST   PEN THRESHOLDS SPACING  RADIUS CURV
                0    16      7     7                    0   16156    1
     A1         1   148      1     7     7    .63    .13  68478   16156    1
     A2         2   151      2     7     7    .62    .60   2600   16156    1
     C1         3  2920      3     6     2   2.5     .5      0   17131    1
                0    81      7     7     7                1800   17131    1
     C2         4  2925      4     5     5   4.68    .92    550   17131    1
                0   171      7     7     7                 550   17131    1
     C2         4  2900      4     5     5   4.68    .92   1750   17131    1
     C3         5  2890      5     4     4   4.66    .92    560   17131    1
                0   143      7     7     7                 560   17131    1
     C3         5  2870      5     4     4   4.66    .92   1770   17131    1
     C4         6  2925      6     3     3   4.69    .92    560   17131    1
                0   140      7     7     7                 560   17131    1
     C4         6  2935      6     3     3   4.69    .92   2550   17131    1
                0    68      7     7     7                    0   16156    2
     B2         7  2150      7     2     7   2.13    2.1  55400   16156    2
     B1         8  2300      7     1     1   1.02     .3      0   16156    3
                0    84      7     7     7                    0   16156    3
                0    33      7     7     7                    0   16156    1
C
CC                LOW GAIN                    HIGH GAIN
CHANNLS      OFFSET      FSMEV        OFFSET      FSMEV
   4096        1.60        953.          0.        200.       AST  A1
   4096        -.51        931.          0.      197.1        AST  A2
   4096         .94      17833.          .5     3533.        AST  C1
   4096         .33      17992.          0.     3603.        AST  C2
   4096         .12      17999.          0.     3680.        AST  C3
   4096        1.35       2494.         1.5      747.        PEN & BST B1
   4096         .64       4910.          1.      755.        BST  B2
   4096        1.78      17984.        1.87     3646.        PEN & BST C4
   4096         .07      17859.          0.     3683.        PEN & BST C3
   4096         .05      18128.          0.     3615.        PEN & BST C2
   4096        1.19       5143.        1.76     1016.        PEN  C1
C
CCC
C                    SLANT 1                          SLANT 2
  1    2 BOTH  GN    CH1    CH2    CH3    SUM    CH1    CH2    CH3    SUM
 SA1  SA2   SA   1     1.      .6   .375   -39.     1.      .6   5.43  -105.
      SB    SB   2                                 1.      1.     1.   -60.
C                                                   1.      1.     1.   -60.
CCC
C     NUMBER OF SPECIES
C  MODES  LO GAIN   HI GAIN
C    2         1         4
CCC
C   LOW GAIN:
C NAME      Z          A
  HE4-      2     4.0015
C
C  HIGH GAIN:
  PROT      1     1.0073
  DEUT      1     2.0136
  HE3-      2     3.0149
  HE4-      2     4.0015
```

Table 21. HET II Detector Description for 2-Dimensional Stopping Modes: special run

```
II ISEE  HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG TO CUT BKG
CCCC
CCCC      FILE NAME: IH2HG2D.DET
CCC     MODES      GAINS
C            4          2
C
CCC
C ELEM    NO.  THICK  AMP-AST   BST    PEN  THRESHOLDS  SPACING   RADIUS  CURV
                0     16        7      7     7                        0   16156     1
     A1         1    149        1      7     7      .63     .13    68478   16156     1
     A2         2    153        2      7     7      .62     .60     2600   16156     1
     C1         3   2915        3      6     2     2.49     .75        0   17131     1
                0     84        7      7     7                     1800   17131     1
     C2         4   2930        4      5     5     4.65     .92      550   17131     1
                0    171        7      7     7                      550   17131     1
     C2         4   2900        4      5     5     4.65     .92     1750   17131     1
     C3         5   2930        5      4     4     4.68     .92      560   17131     1
                0    142        7      7     7                      560   17131     1
     C3         5   2930        5      4     4     4.68     .92     1770   17131     1
     C4         6   2920        6      3     3     4.69     .92      560   17131     1
                0    148        7      7     7                      560   17131     1
     C4         6   2930        6      3     3     4.69     .92     2550   17131     1
                0     74        7      7     7                        0   16156     2
     B2         7   2225        7      2     7     2.04     2.2   55400   16156     2
     B1         8   2125        7      1     1     1.00      .3        0   16156     3
                0     61        7      7     7                        0   16156     3
                0     33        7      7     7                        0   16156     1
C
C              LOW GAIN                    HIGH GAIN
CHANNLS     OFFSET      FSMEV        OFFSET      FSMEV
   4096       1.70       958.          .60      202.1        AST A1
   4096       -.27       938.         -.20      195.6        AST A2
   4096        .94     18128.           .2       3667.       AST C1
   4096       -.04     18243.          .08       3712.       AST C2
   4096        .13     17630.          .30       3548.       AST C3
   4096       1.68      2542.         1.00        785.       PEN & BST B1
   4096       1.07      4998.          .96        800.       BST B2
   4096       1.57     17938.         1.89       3619.       PEN & BST C4
   4096       -.03     17375.          .08       3517.       PEN & BST C3
   4096       -.05     18068.         -.31       3677.       PEN & BST C2
   4096       1.09      5150.         1.43       1053.       PEN C1
C
CCCC
C                                SLANT 1                          SLANT 2
  1     2  BOTH   GN    CH1    CH2    CH3    SUM     CH1    CH2    CH3    SUM
 SA1   SA2    SA    1     1.     .6   .375   -39.      1.     .6   5.43  -105.
       SB     SB    2                                 1.     1.     1.   -60.
       SB     SB    2                                 1.     1.     1.   -60.
C
CCC
C     MODES    NUMBER OF SPECIES
                LO GAIN    HI GAIN
C        2          1          4
C
CC    LOW GAIN:
C NAME      Z          A
 HE4-       2     4.0015
C
C   HIGH GAIN:
 PROT       1     1.0073
 DEUT       1     2.0136
 HE3-       2     3.0149
 HE4-       2     4.0015
```

corresponding ones shown in Table 23 : a special run was made using the detector descriptions shown in Tables 20 and 21 to change those responses somewhat. In Tables 22 through 24 the MAXE column refers to the maximum energy which might be possible for events falling on that particular mass line; that energy is not the same as the 'ceiling' response energy as discussed in the main document.

Figure 28 illustrates the effect of the overlay priority parameter in the TRACK definition. The use of this parameter is intended as an aid in determining the number of counts to assign to a particle. Alternatively, a correction to calculated fluxes using full TRACKS might be made, since the relative abundances of the overlapping species may not be well known. The BOXGEN default overlay priority (= 0) causes a full TRACK to be generated for each mass line species as though no other mass lines overlapped that mass lines' data.

Portions of the job printouts from INSTALC runs for the data of Tables 22 - 24 is included in Tables 25 - 27. They show the exact overlay priority used for each of the current stopping modes. Where no overlay priority is indicated, the BOXGEN default value has been used. Complete INSTALC job printout is included in Calibration Book II mentioned above. Figures 29 - 32 show the computer TRACKS for a few of the stopping modes. Complete plots for all modes are also available in Book II.

Table 22. BOXGEN Summary of Special 2-dimensional Stopping Mode Responses

BOXGEN TABLE TAPE 12 WRITTEN 07-MAR-81

ISEE FILE	HET1 MODE	CALIB PART	(3/7/81) A2,B2 ABOVE CH 12 IN HGREDRCUTH1HG2D.DET RECS	SCALE	ENDCH	MAX1	SPREADS		MIN E	MAX E	
1	IA2H+	PROT	59	1	136	82	0.98	1.05	4.43	6.76	P1
2	IA2H+	DEUT	80	1	183	112	0.98	1.05	2.93	4.51	P1
3	IA2H+	HE3-	102	2	481	313	0.98	1.04	5.13	7.91	P1
4	IA2H+	HE4-	112	2	536	354	0.98	1.04	4.35	6.71	P1
5	IB2H+	PROT	64	1	163	104	0.96	1.03	20.36	29.69	P1
6	IB2H+	DEUT	84	1	220	144	0.96	1.03	13.73	20.13	P1
7	IB2H+	HE3-	107	2	567	391	0.96	1.03	23.73	34.70	P1
8	IB2H+	HE4-	121	2	642	443	0.96	1.03	20.24	29.76	P1

ISEE FILE	HET2 MODE	CALIB PART	(2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUTIH2HG2D.DET RECS	SCALE	ENDCH	MAX1	SPREADS		MIN E	MAX E	
9	IIA2H+	PROT	60	1	137	82	0.98	1.05	4.45	6.85	P1
10	IIA2H+	DEUT	79	1	182	112	0.98	1.05	2.94	4.56	P1
11	IIA2H+	HE3-	105	2	484	312	0.98	1.04	5.15	7.96	P1
12	IIA2H+	HE4-	114	2	539	353	0.98	1.04	4.36	6.76	P1
13	IIB2H+	PROT	62	1	151	93	0.96	1.03	19.44	29.27	P1
14	IIB2H+	DEUT	82	1	205	130	0.96	1.03	13.10	19.84	P1
15	IIB2H+	HE3-	105	2	529	354	0.96	1.03	22.62	34.18	P1
16	IIB2H+	HE4-	118	2	599	402	0.96	1.03	19.29	29.34	P1

Table 23. BOXGEN Summary of 2-dimensional Stopping Mode Responses

BOXGEN TABLE TAPE 10 WRITTEN 13-FEB-81

ISEE FILE	HET1 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH1LOZ.DET MIN E	MAX E	
1	IA2H+	PROT	62	1	136	90	0.98	1.05	4.34	6.76	P1
2	IA2H+	DEUT	79	1	180	121	0.98	1.05	2.88	4.51	P1
3	IA2H+	HE3-	103	2	481	321	0.98	1.05	5.10	7.91	P1
4	IA2H+	HE4-	115	2	543	367	0.98	1.05	4.35	6.71	P1
5	IB2H+	PROT	65	1	163	113	0.96	1.03	20.15	29.69	P1
6	IB2H+	DEUT	85	1	220	153	0.96	1.03	13.64	20.13	P1
7	IB2H+	HE3-	107	2	567	400	0.96	1.03	23.69	34.70	P1
8	IB2H+	HE4-	121	2	642	453	0.96	1.03	20.21	29.76	P1
9	IA2L+	LI6-	29	4	212	141	0.98	1.02	5.44	8.50	P0
10	IA2L+	BE9-	44	4	352	231	0.98	1.02	5.91	9.28	P0
11	IA2L+	B11-	57	4	490	322	0.98	1.02	6.72	10.60	P0
12	IA2L+	C12-	71	4	625	409	0.98	1.02	7.82	12.35	P0
13	IA2L+	N14-	89	4	793	517	0.98	1.02	8.47	13.40	P0
14	IA2L+	O16-	108	4	974	633	0.98	1.02	9.06	14.39	P0
15	IA2L+	F19-	70	8	1184	767	0.98	1.02	9.25	14.79	P0
16	IA2L+	NE20	79	8	1361	880	0.98	1.02	10.08	16.13	P0
17	IA2L+	NA23	92	8	1601	1030	0.98	1.02	10.25	16.48	P0
18	IA2L+	MG24	104	8	1792	1143	0.98	1.02	10.90	17.62	P0

ISEE FILE	HET1 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH1HIZ.DET MIN E	MAX E	
19	IA2L+	AL27	63	16	2049	1281	0.98	1.02	11.03	17.91	P1
20	IA2L+	SI28	69	16	2256	1430	0.98	1.02	11.69	19.02	P2
21	IA2L+	S32-	83	16	2762	1743	0.98	1.02	12.47	20.36	P1
22	IA2L+	AR36	98	16	3282	2062	0.98	1.02	13.11	21.54	P1
23	IA2L+	CA40	114	16	3845	2408	0.98	1.02	13.77	22.71	P2
24	IA2L+	TI48	72	32	4560	2827	0.98	1.02	13.44	22.43	P1
25	IA2L+	CR52	80	32	5142	3154	0.98	1.02	13.90	23.36	P2
26	IA2L+	FE56	89	32	5754	3536	0.98	1.02	14.37	24.29	P3
27	IA2L+	NI58	94	32	6303	3863	0.98	1.02	15.59	25.68	P2
28	IA2L+	ZN64	107	32	7017	4273	0.98	1.02	15.44	25.92	P1

ISEE FILE	HET2 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH2LOZ.DET MIN E	MAX E	
29	IIA2H+	PROT	63	1	137	91	0.98	1.05	4.35	6.85	P1
30	IIA2H+	DEUT	83	1	184	121	0.98	1.05	2.89	4.56	P1
31	IIA2H+	HE3-	108	2	488	320	0.98	1.05	5.11	7.96	P1
32	IIA2H+	HE4-	119	2	550	365	0.98	1.05	4.38	6.76	P1
33	IIB2H+	PROT	63	1	151	103	0.96	1.03	19.20	29.27	P1
34	IIB2H+	DEUT	84	1	205	139	0.96	1.03	12.99	19.84	P1
35	IIB2H+	HE3-	105	2	529	364	0.96	1.03	22.58	34.18	P1
36	IIB2H+	HE4-	118	2	599	412	0.96	1.03	19.26	29.34	P1
37	IIA2L+	LI7-	30	4	227	150	0.98	1.02	4.98	7.81	P0
38	IIA2L+	BE9-	43	4	351	231	0.98	1.02	5.94	9.33	P0
39	IIA2L+	B11-	57	4	489	322	0.98	1.02	6.75	10.66	P0
40	IIA2L+	C12-	71	4	627	409	0.98	1.02	7.85	12.41	P0
41	IIA2L+	N14-	89	4	795	517	0.98	1.02	8.50	13.48	P0
42	IIA2L+	O16-	108	4	975	632	0.98	1.02	9.10	14.47	P0
43	IIA2L+	F19-	70	8	1184	767	0.98	1.02	9.29	14.87	P0
44	IIA2L+	NE20	79	8	1361	880	0.98	1.02	10.12	16.22	P0
45	IIA2L+	NA23	92	8	1601	1029	0.98	1.02	10.29	16.58	P0
46	IIA2L+	MG24	104	8	1792	1142	0.98	1.02	10.95	17.72	P0

ISEE FILE	HET2 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH2HIZ.DET MIN E	MAX E	
47	IIA2L+	AL27	63	16	2048	1280	0.98	1.02	11.07	18.02	P1
48	IIA2L+	SI28	68	16	2255	1429	0.98	1.02	11.74	19.13	P2
49	IIA2L+	S32-	83	16	2759	1742	0.98	1.02	12.52	20.48	P1
50	IIA2L+	AR36	98	16	3281	2061	0.98	1.02	13.16	21.67	P1
51	IIA2L+	CA40	114	16	3844	2406	0.98	1.02	13.82	22.84	P2
52	IIA2L+	TI48	72	32	4557	2827	0.96	1.02	13.50	22.57	P1
53	IIA2L+	CR52	80	32	5141	3153	0.98	1.02	13.96	23.51	P2
54	IIA2L+	FE56	89	32	5754	3535	0.98	1.02	14.44	24.44	P3
55	IIA2L+	NI58	96	32	6304	3862	0.98	1.02	15.58	25.64	P2
56	IIA2L+	ZN64	107	32	7018	4272	0.98	1.02	15.51	26.08	P1

Table 24. BOXGEN Summary of 3-dimensional Stopping Mode Responses (1 of 2)

BOXGEN TABLE TAPE 11 WRITTEN 13-FEB-81

ISEE FILE	HET1 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH1L0Z.DET MIN E	MAX E	
1	IA3H	PROT	70	1	63	45	0.98	1.05	6.39	58.36	P1
2	IA3H	DEUT	93	1	86	62	0.98	1.05	4.26	39.59	P1
3	IA3H	HE3-	120	2	224	160	0.98	1.05	7.47	68.65	P1
4	IA3H	HE4-	135	2	254	184	0.98	1.05	6.39	58.56	P1
5	IB3H	PROT	76	1	70	56	0.96	1.03	29.05	70.82	P1
6	IB3H	DEUT	100	1	94	75	0.96	1.03	19.69	48.02	P1
7	IB3H	HE3-	128	2	243	193	0.96	1.03	34.12	83.38	P1
8	IB3H	HE4-	144	2	275	219	0.96	1.03	29.12	71.08	P1
9	IA3L	LI6-	32	4	97	71	0.98	1.02	8.02	73.57	P0
10	IA3L	BE9-	48	4	160	118	0.98	1.02	8.76	80.94	P0
11	IA3L	B11-	64	4	225	166	0.98	1.02	10.00	92.97	P0
12	IA3L	C12-	79	4	287	212	0.98	1.02	11.65	108.83	P0
13	IA3L	N14-	99	4	366	270	0.98	1.02	12.64	118.81	P0
14	IA3L	O16-	120	4	451	332	0.98	1.02	13.57	128.26	P0
15	IA3L	F19-	77	8	556	410	0.98	1.02	13.93	133.00	P1
16	IA3L	NE20	88	8	641	472	0.98	1.02	15.20	145.75	P2
17	IA3L	NA23	102	8	759	559	0.98	1.02	15.52	150.06	P1
18	IA3L	MG24	114	8	854	629	0.98	1.02	16.58	161.88	P2
19	IL3L	HE3-	32	2	50	58	0.98	1.02	34.21	83.39	P1
20	IL3L	HE4-	35	2	57	65	0.98	1.02	29.19	71.10	P1
21	IB3L	LI6-	34	4	105	122	0.98	1.02	36.57	89.37	P0
22	IB3L	BE9-	51	4	173	201	0.98	1.02	40.18	98.38	P0
23	IB3L	B11-	68	4	242	282	0.98	1.02	46.07	113.11	P0
24	IB3L	C12-	85	4	309	360	0.98	1.02	53.79	132.56	P0
25	IB3L	N14-	106	4	393	458	0.98	1.02	58.62	144.83	P0
26	IB3L	O16-	129	4	485	564	0.98	1.02	63.18	156.48	P0
27	IB3L	F19-	82	8	596	695	0.98	1.02	65.43	162.33	P1
28	IB3L	NE20	94	8	688	801	0.98	1.02	71.54	178.08	P2
29	IB3L	NA23	109	8	815	948	0.98	1.02	73.57	183.41	P1
30	IB3L	MG24	122	8	917	1067	0.98	1.02	79.16	198.05	P2

ISEE FILE	HET1 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH1HIZ.DET MIN E	MAX E	
31	IA3L	AL27	69	16	984	698	0.98	1.02	16.85	165.89	P1
32	IA3L	SI28	76	16	1089	801	0.98	1.02	17.88	177.02	P2
33	IA3L	S32-	92	16	1346	987	0.98	1.02	19.14	191.33	P1
34	IA3L	AR36	109	16	1622	1186	0.98	1.02	20.23	204.98	P1
35	IA3L	CA40	127	16	1916	1397	0.98	1.02	21.32	218.10	P2
36	IA3L	TI46	80	32	2309	1666	0.98	1.02	21.04	219.03	P1
37	IA3L	CR52	90	32	2643	1886	0.98	1.02	21.89	231.47	P2
38	IA3L	FE56	101	32	2995	2168	0.98	1.02	22.75	243.53	P3
39	IA3L	NI58	111	32	3317	2388	0.98	1.02	24.80	260.45	P2
40	IA3L	ZN64	125	32	3746	2689	0.98	1.02	24.58	266.55	P1
41	IB3L	AL27	74	16	1057	1231	0.98	1.02	81.03	203.04	P1
42	IB3L	SI28	81	16	1170	1361	0.98	1.02	86.28	216.87	P2
43	IB3L	S32-	98	16	1445	1680	0.98	1.02	92.97	234.68	P1
44	IB3L	AR36	116	16	1742	2025	0.98	1.02	99.29	251.73	P1
45	IB3L	CA40	136	16	2059	2393	0.98	1.02	105.34	268.14	P2
46	IB3L	TI48	85	32	2481	2889	0.98	1.02	105.62	269.36	P1
47	IB3L	CR52	96	32	2941	3309	0.98	1.02	111.24	284.99	P2
48	IB3L	FE56	108	32	3219	3749	0.98	1.02	116.68	300.17	P3
49	IB3L	NI58	119	32	3568	4094	0.98	1.02	124.31	321.45	P2
50	IB3L	ZN64	128	32	4029	4094	0.98	1.02	128.63	329.24	P1

ISEE FILE	HET2 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK B ENDCH	MAX1	RE R SPREADS		IH2L0Z.DET MIN E	MAX E	
51	IIA3H	PROT	71	1	64	45	0.98	1.05	6.47	56.58	P1
52	IIA3H	DEUT	94	1	87	61	0.98	1.05	4.31	39.74	P1
53	IIA3H	HE3-	121	2	227	159	0.98	1.05	7.52	68.91	P1
54	IIA3H	HE4-	136	2	257	182	0.98	1.05	6.44	58.78	P1
55	IIB3H	PROT	76	1	70	48	0.96	1.03	28.64	70.79	P1
56	IIB3H	DEUT	101	1	95	66	0.96	1.03	19.41	48.00	P1
57	IIB3H	HE3-	129	2	244	169	0.96	1.03	33.64	83.34	P1
58	IIB3H	HE4-	145	2	276	192	0.96	1.03	28.71	71.05	P1
59	IIA3L	LI7-	34	4	104	76	0.98	1.02	7.37	67.71	P0
60	IIA3L	BE9-	48	4	161	118	0.98	1.02	8.81	81.25	P0
61	IIA3L	B11-	64	4	227	166	0.98	1.02	10.05	93.33	P0
62	IIA3L	C12-	80	4	290	211	0.98	1.02	11.71	109.25	P0
63	IIA3L	N14-	100	4	369	269	0.98	1.02	12.71	119.27	P0
64	IIA3L	O16-	122	4	456	331	0.98	1.02	13.64	128.70	P0
65	IIA3L	F19-	78	8	561	409	0.98	1.02	14.01	133.52	P1

Table 24. BOXGEN Summary of 3-dimensional Stopping Mode Responses (2 of 2)

66	IIA3L	NE20	88	8	647	471	0.98	1.02	15.28	146.32	P2
67	IIA3L	NA23	103	8	766	557	0.98	1.02	15.61	150.65	P1
68	IIA3L	MG24	115	8	863	627	0.98	1.02	16.68	162.51	P2
69	IIL3L	HE3-	32	2	50	53	0.98	1.02	33.73	83.36	P1
70	IIL3L	HE4-	35	2	57	60	0.98	1.02	28.77	71.07	P1
71	IIB3L	LI7-	36	4	113	119	0.98	1.02	33.07	81.88	P0
72	IIB3L	BE9-	51	4	175	183	0.98	1.02	39.61	98.34	P0
73	IIB3L	B11-	69	4	245	256	0.98	1.02	45.41	113.06	P0
74	IIB3L	C12-	86	4	312	326	0.98	1.02	53.03	132.50	P0
75	IIB3L	N14-	107	4	398	415	0.98	1.02	57.79	144.77	P0
76	IIB3L	O16-	130	4	490	511	0.98	1.02	62.28	156.41	P0
77	IIB3L	F19-	83	8	604	630	0.98	1.02	64.49	162.26	P1
78	IIB3L	NE20	95	8	696	725	0.98	1.02	70.52	178.00	P2
79	IIB3L	NA23	111	8	825	859	0.98	1.02	72.51	183.33	P1
80	IIB3L	MG24	124	8	928	967	0.98	1.02	78.02	197.97	P2

ISEE FILE	HET2 MODE	CALIB PART	(ENTERED 2/9/81) RECS	SCALE	THK R ENDCH	MAX1	RE R SPREADS		IH2HIZ.DET MIN E	MAX E	
81	IIA3L	AL27	70	16	994	696	0.98	1.02	16.95	166.54	P1
82	IIA3L	SI28	76	16	1100	798	0.98	1.02	17.99	177.72	P2
83	IIA3L	S32-	92	16	1359	983	0.98	1.02	19.25	192.09	P1
84	IIA3L	AR36	110	16	1638	1181	0.98	1.02	20.36	205.80	P1
85	IIA3L	CA40	129	16	1936	1392	0.98	1.02	21.45	218.97	P2
86	IIA3L	TI48	80	32	2333	1660	0.98	1.02	21.17	219.91	P1
87	IIA3L	CR52	91	32	2671	1879	0.98	1.02	22.03	232.41	P2
88	IIA3L	FE56	102	32	3025	2161	0.98	1.02	22.89	244.52	P3
89	IIA3L	NI58	112	32	3351	2380	0.98	1.02	24.97	261.52	P2
90	IIA3L	ZN64	126	32	3784	2680	0.98	1.02	24.73	267.64	P1
91	IIB3L	AL27	74	16	1070	1115	0.98	1.02	79.86	202.96	P1
92	IIB3L	SI28	82	16	1184	1233	0.98	1.02	85.03	216.77	P2
93	IIB3L	S32-	99	16	1463	1522	0.98	1.02	91.62	234.58	P1
94	IIB3L	AR36	118	16	1764	1834	0.98	1.02	97.84	251.62	P1
95	IIB3L	CA40	138	16	2085	2167	0.98	1.02	103.79	268.02	P2
96	IIB3L	TI48	86	32	2513	2616	0.98	1.02	104.07	269.24	P1
97	IIB3L	CR52	97	32	2877	2996	0.98	1.02	109.60	284.86	P2
98	IIB3L	FE56	109	32	3261	3395	0.98	1.02	114.95	300.03	P3
99	IIB3L	NI58	120	32	3614	3760	0.98	1.02	122.46	321.35	P2
100	IIB3L	ZN64	135	32	4082	4094	0.98	1.02	125.02	329.09	P1

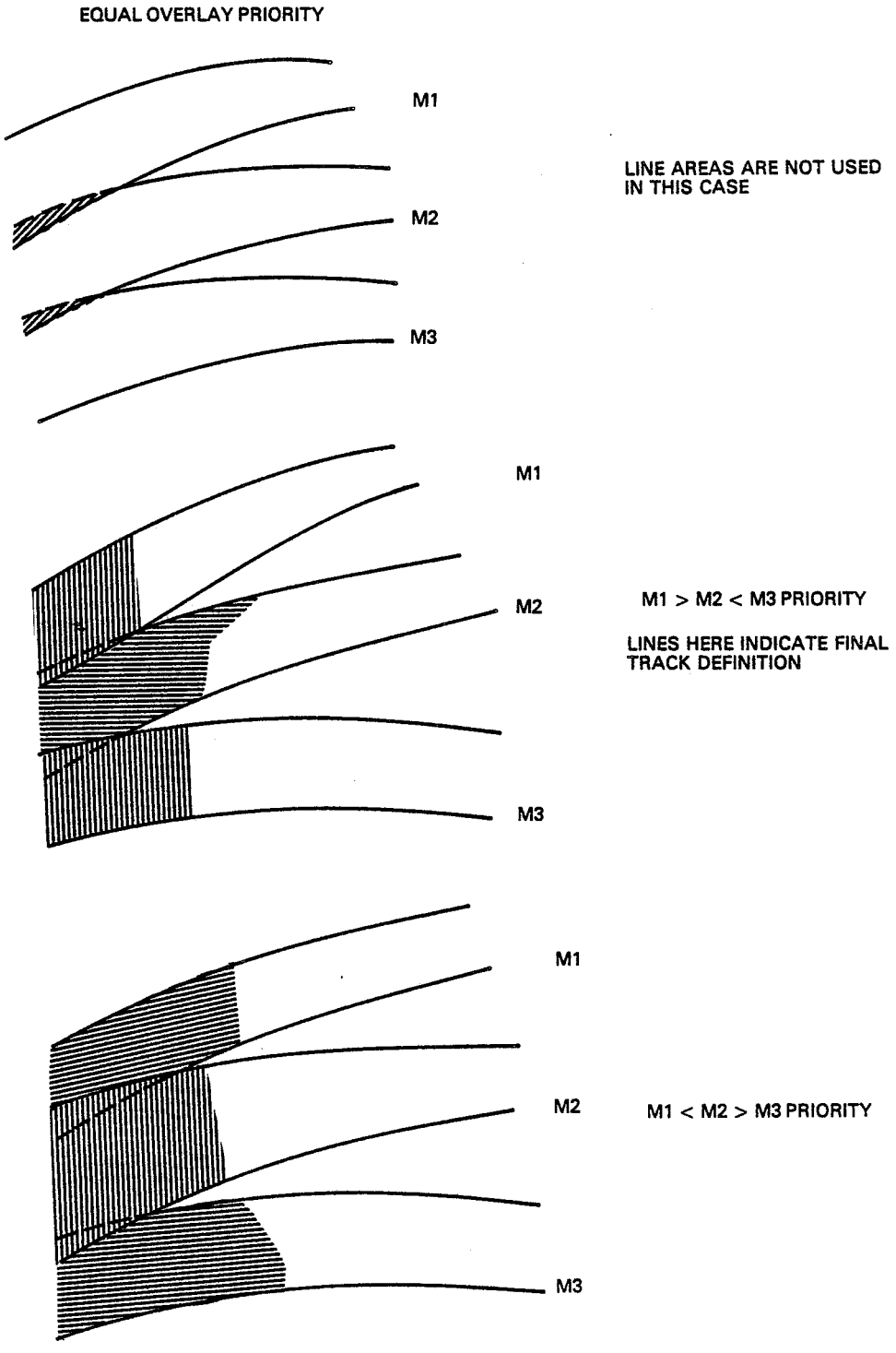

Figure 28. Examples of the Effect of the Overlay Priority Parameters

Table 25. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 22 (1 of 2)

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ISEE-3 RESPONSE INSTALLATION
FROM FILE   1- 16 MULTIPLICATION FACTORS=          1.00000          1.00000
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET                ,TRACK FILE IH1HG2D.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IA2 H    PROT          1     1.007            4.432     6.759    16 3810
     52          1          85         136          3
NEW TABLE FOR IA2   IN RECORDS    2386  2389
THRESHOLD=      4.43200  CEILING=        6.62700
REPLACING MODE IA2  FOR PROTON
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IA2 H    DEUT          1     2.014            2.926     4.512    16 3810
     73          1         111         183          3
NEW TABLE FOR IA2   IN RECORDS    2390  2394
THRESHOLD=      2.92600  CEILING=        4.46100
REPLACING MODE IA2  FOR DEUTRON
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.040  OVERLAY PRIORITY  1
IA2 H    HE3           2     3.015            5.127     7.908    16 3810
     95          2         292         481          3
NEW TABLE FOR IA2   IN RECORDS    2395  2400
THRESHOLD=      5.12700  CEILING=        7.86200
REPLACING MODE IA2  FOR HE3
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.040  OVERLAY PRIORITY  1
IA2 H    HE4           2     4.002            4.350     6.714    16 3810
    105          2         328         536          3
NEW TABLE FOR IA2   IN RECORDS    2401  2406
THRESHOLD=      4.35000  CEILING=        6.59800
REPLACING MODE IA2  FOR HE4
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IB2 H    PROT          1     1.007           20.360    29.691   274 3808
     57          1         107         163          4
NEW TABLE FOR IB2   IN RECORDS    2407  2410
THRESHOLD=     20.35999  CEILING=       29.40199
REPLACING MODE IB2  FOR PROTON
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IB2 H    DEUT          1     2.014           13.731    20.129   274 3808
     77          1         144         220          4
NEW TABLE FOR IB2   IN RECORDS    2411  2415
THRESHOLD=     13.73100  CEILING=       19.93999
REPLACING MODE IB2  FOR DEUTRON
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IB2 H    HE3           2     3.015           23.728    34.700   274 3808
    100          2         369         567          4
NEW TABLE FOR IB2   IN RECORDS    2416  2422
THRESHOLD=     23.72800  CEILING=       34.57999
REPLACING MODE IB2  FOR HE3
C     I  ISEE  HET1  CALIB (3/7/81) A2.B2 ABOVE CH 12 IN HGREORCU
C     DETECTOR FILE IH1HG2D.DET          ,TRACK FILE IH1HG2D.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IB2 H    HE4           2     4.002           20.238    29.764   274 3808
    114          2         417         642          4
NEW TABLE FOR IB2   IN RECORDS    2423  2430
```

Table 25. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 22 (2 of 2)

```
THRESHOLD=      20.23799  CEILING=      29.50800
REPLACING MODE IB2  FOR HE4
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     A-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IIA2H    PROT          1      1.007          4.447      6.847    48 3602
     53        1        85      137          3
NEW TABLE FOR IIA2 IN RECORDS    2431  2434
THRESHOLD=      4.44700  CEILING=       6.65200
REPLACING MODE IIA2 FOR PROTON
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     A-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IIA2H    DEUT          1      2.014          2.936      4.561    48 3602
     72        1       111      182          3
NEW TABLE FOR IIA2 IN RECORDS    2435  2439
THRESHOLD=      2.93600  CEILING=       4.43300
REPLACING MODE IIA2 FOR DEUTRON
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     A-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.040  OVERLAY PRIORITY  1
IIA2H    HE3           2      3.015          5.145      7.963    48 3602
     98        2       291      484          3
NEW TABLE FOR IIA2 IN RECORDS    2440  2445
THRESHOLD=      5.14500  CEILING=       7.88200
REPLACING MODE IIA2 FOR HE3
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     A-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.040  OVERLAY PRIORITY  1
IIA2H    HE4           2      4.002          4.362      6.761    48 3602
    107        2       326      539          3
NEW TABLE FOR IIA2 IN RECORDS    2446  2451
THRESHOLD=      4.36200  CEILING=       6.64900
REPLACING MODE IIA2 FOR HE4
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     B-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB2H    PROT          1      1.007         19.443     29.270   306 3776
     55        1        97      151          3
NEW TABLE FOR IIB2 IN RECORDS    2452  2455
THRESHOLD=     19.44299  CEILING=      28.96700
REPLACING MODE IIB2 FOR PROTON
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     B-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB2H    DEUT          1      2.014         13.100     19.842   306 3776
     75        1       131      205          3
NEW TABLE FOR IIB2 IN RECORDS    2456  2460
THRESHOLD=     13.10000  CEILING=      19.63599
REPLACING MODE IIB2 FOR DEUTRON
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     B-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB2H    HE3           2      3.015         22.623     34.177   306 3776
     98        2       335      529          3
NEW TABLE FOR IIB2 IN RECORDS    2461  2466
THRESHOLD=     22.62299  CEILING=      34.05600
REPLACING MODE IIB2 FOR HE3
C    II ISEE   HET2  CALIB (2/9/81) A2,B2 ABOVE CH 12 IN HG RE RUT
C     DETECTOR FILE IH2HG2D.DET          ,TRACK FILE IH2HG2D.TRK
C     B-STOPPING                       HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB2H    HE4           2      4.002         19.293     29.341   306 3776
    111        2       379      599          3
NEW TABLE FOR IIB2 IN RECORDS    2467  2473
THRESHOLD=     19.29300  CEILING=      29.06299


REPLACING MODE IIB2 FOR HE4
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (1 of 7)

```
ISEE-3 RESPONSE INSTALLATION
FROM FILE   1- 56 MULTIPLICATION FACTORS=          1.00000          1.00000
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IA2 H    PROT          1     1.007          4.339     6.759   16 3810
     55        1       82      136        3
NEW TABLE FOR IA2  IN RECORDS   1881  1884
THRESHOLD=     4.33900   CEILING=      6.64300
REPLACING MODE IA2  FOR PROTON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IA2 H    DEUT          1     2.014          2.878     4.512   16 3810
     72        1      109      180        3
NEW TABLE FOR IA2  IN RECORDS   1885  1889
THRESHOLD=     2.87800   CEILING=      4.42600
REPLACING MODE IA2  FOR DEUTRON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IA2 H    HE3           2     3.015          5.095     7.908   16 3810
     95        2      290      481        3
NEW TABLE FOR IA2  IN RECORDS   1890  1895
THRESHOLD=     5.09500   CEILING=      7.89900
REPLACING MODE IA2  FOR HE3
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IA2 H    HE4           2     4.002          4.354     6.714   16 3810
    109        2      328      543        3
NEW TABLE FOR IA2  IN RECORDS   1896  1902
THRESHOLD=     4.35400   CEILING=      6.70500
REPLACING MODE IA2  FOR HE4
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960   1.030  OVERLAY PRIORITY  1
IB2 H    PROT          1     1.007         20.148    29.691  274 3808
     58        1      106      163        4
NEW TABLE FOR IB2  IN RECORDS   1903  1906
THRESHOLD=    20.14799   CEILING=     29.40199
REPLACING MODE IB2  FOR PROTON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960   1.030  OVERLAY PRIORITY  1
IB2 H    DEUT          1     2.014         13.636    20.129  274 3808
     78        1      143      220        4
NEW TABLE FOR IB2  IN RECORDS   1907  1911
THRESHOLD=    13.63600   CEILING=     19.93999
REPLACING MODE IB2  FOR DEUTRON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960   1.030  OVERLAY PRIORITY  1
IB2 H    HE3           2     3.015         23.690    34.700  274 3808
    100        2      368      567        4
NEW TABLE FOR IB2  IN RECORDS   1912  1918
THRESHOLD=    23.68999   CEILING=     34.57999
REPLACING MODE IB2  FOR HE3
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH1LOZ.DET                  ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960   1.030  OVERLAY PRIORITY  1
IB2 H    HE4           2     4.002         20.207    29.764  274 3808
    114        2      416      642        4
NEW TABLE FOR IB2  IN RECORDS   1919  1926
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (2 of 7)

```
 THRESHOLD=      20.20699  CEILING=      29.50800
 REPLACING MODE IB2  FOR HE4
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A=STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   LI6          3     6.000          5.438     8.497  256 3634
       22       4       130      212       4
 NEW TABLE FOR IA2  IN RECORDS   1927  1928
 THRESHOLD=       5.43900  CEILING=       8.37200
 REPLACING MODE IA2  FOR LI6
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   BE9          4     9.000          5.914     9.284  256 3634
       37       4       211      352       4
 NEW TABLE FOR IA2  IN RECORDS   1929  1931
 THRESHOLD=       5.91400  CEILING=       9.15700
 REPLACING MODE IA2  FOR BE9
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   B11          5    11.000          6.723    10.598  256 3634
       50       4       293      490       4
 NEW TABLE FOR IA2  IN RECORDS   1932  1934
 THRESHOLD=       6.72300  CEILING=      10.53000
 REPLACING MODE IA2  FOR B11
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   C12          6    12.000          7.822    12.346  256 3634
       64       4       372      625       4
 NEW TABLE FOR IA2  IN RECORDS   1935  1938
 THRESHOLD=       7.82200  CEILING=      12.33000
 REPLACING MODE IA2  FOR C12
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   N14          7    14.000          8.468    13.404  256 3634
       82       4       469      793       4
 NEW TABLE FOR IA2  IN RECORDS   1939  1943
 THRESHOLD=       8.46300  CEILING=      13.38900
 REPLACING MODE IA2  FOR N14
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   O16          8    15.990          9.062    14.389  256 3634
      101       4       573      974       4
 NEW TABLE FOR IA2  IN RECORDS   1944  1949
 THRESHOLD=       9.06200  CEILING=      14.37600
 REPLACING MODE IA2  FOR O16
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   F19          9    18.990          9.252    14.790  256 3634
      63       8       693     1184       4
 NEW TABLE FOR IA2  IN RECORDS   1950  1953
 THRESHOLD=       9.25200  CEILING=      14.79000
 REPLACING MODE IA2  FOR F19
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   NE20        10    19.990         10.081    16.132  256 3634
       72       8       795     1361       4
 NEW TABLE FOR IA2  IN RECORDS   1954  1957
 THRESHOLD=      10.08100  CEILING=      16.13199
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (3 of 7)

```
REPLACING MODE IA2  FOR NE20
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   NA23          11     22.990          10.247    16.485   256 3634
       85       9     928     1601      4
NEW TABLE FOR IA2  IN RECORDS   1958  1962
THRESHOLD=     10.24700  CEILING=     16.48499
REPLACING MODE IA2  FOR NA23
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IA2 L   MG24          12     23.990          10.902    17.619   256 3634
       97       9    1030     1792      4
NEW TABLE FOR IA2  IN RECORDS   1963  1969
THRESHOLD=     10.90200  CEILING=     17.59698
REPLACING MODE IA2  FOR MG24
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA2 L   AL27          13     26.980          11.025    17.814   255 3634
       56      15    1170     2049      4
NEW TABLE FOR IA2  IN RECORDS   1969  1971
THRESHOLD=     11.02500  CEILING=     17.39699
REPLACING MODE IA2  FOR AL27
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IA2 L   SI28          14     27.980          11.687    19.016   256 3634
       62      15    1286     2256      4
NEW TABLE FOR IA2  IN RECORDS   1972  1975
THRESHOLD=     11.53700  CEILING=     18.99300
REPLACING MODE IA2  FOR SI28
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA2 L    S32          16     31.980          12.466    20.361   256 3634
       75      15    1565     2762      4
NEW TABLE FOR IA2  IN RECORDS   1976  1979
THRESHOLD=     12.46600  CEILING=     20.36099
REPLACING MODE IA2  FOR S32
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA2 L   AR36          18     35.970          13.106    21.539   256 3634
       91      15    1850     3282      4
NEW TABLE FOR IA2  IN RECORDS   1980  1984
THRESHOLD=     13.10600  CEILING=     21.53899
REPLACING MODE IA2  FOR AR36
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IA2 L   CA40          20     39.960          13.765    22.707   256 3634
      107      15    2157     3845      4
NEW TABLE FOR IA2  IN RECORDS   1985  1990
THRESHOLD=     13.76500  CEILING=     22.70699
REPLACING MODE IA2  FOR CA40
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B          RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA2 L   TI48          22     47.950          13.444    22.433   256 3634
       65      32    2522     4560      4
NEW TABLE FOR IA2  IN RECORDS   1991  1994
THRESHOLD=     13.44400  CEILING=     22.43300
REPLACING MODE IA2  FOR TI48
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (4 of 7)

```
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IA2 L   CR52        24     51.940          13.901     23.361   256 3634
        73      32     2822     5142        4
NEW TABLE FOR IA2  IN RECORDS   1995  1998
THRESHOLD=    13.99100  CEILING=     23.36099
REPLACING MODE IA2  FOR CR52
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  3
IA2 L   FE56        26     55.930          14.375     24.286   256 3634
        82      32     3139     5754        4
NEW TABLE FOR IA2  IN RECORDS   1999  2003
THRESHOLD=    14.37500  CEILING=     24.28600
REPLACING MODE IA2  FOR FE56
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IA2 L   NI58        28     57.940          15.587     25.681   256 3634
        87      32     3520     6303        4
NEW TABLE FOR IA2  IN RECORDS   2004  2008
THRESHOLD=    15.58700  CEILING=     25.68100
REPLACING MODE IA2  FOR NI58
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA2 L   ZN64        30     63.930          15.443     25.919   256 3634
        100     32     3840     7017        4
NEW TABLE FOR IA2  IN RECORDS   2009  2013
THRESHOLD=    15.44300  CEILING=     25.91899
REPLACING MODE IA2  FOR ZN64
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2LOZ.DET          ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                    HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IIA2H   PROT        1      1.007           4.354      6.847    48 3602
        56      1      82      137        3
NEW TABLE FOR IIA2 IN RECORDS   2014  2017
THRESHOLD=     4.35400  CEILING=      6.66900
REPLACING MODE IIA2 FOR PROTON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2LOZ.DET          ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                    HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IIA2H   DEUT        1      2.014           2.888      4.561    48 3602
        76      1      109      184        3
NEW TABLE FOR IIA2 IN RECORDS   2018  2022
THRESHOLD=     2.88800  CEILING=      4.50800
REPLACING MODE IIA2 FOR DEUTRON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2LOZ.DET          ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                    HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IIA2H   HE3         2      3.015           5.114      7.963    48 3602
        101     2      285      488        3
NEW TABLE FOR IIA2 IN RECORDS   2023  2028
THRESHOLD=     5.11400  CEILING=      7.92500
REPLACING MODE IIA2 FOR HE3
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2LOZ.DET          ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                    HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.050  OVERLAY PRIORITY  1
IIA2H   HE4         2      4.002           4.382      6.761    48 3602
        112     2      328      550        3
NEW TABLE FOR IIA2 IN RECORDS   2029  2035
THRESHOLD=     4.39200  CEILING=      6.72700
REPLACING MODE IIA2 FOR HE4
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (5 of 7)

```
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                            HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030   OVERLAY PRIORITY  1
IIB2H   PROT          1      1.007            19.204    29.270   306 3776
      56     1       96      151         3
 NEW TABLE FOR IIB2 IN RECORDS    2036  2039
 THRESHOLD=       19.20399   CEILING=      28.96700
 REPLACING MODE IIB2 FOR PROTON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                            HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030   OVERLAY PRIORITY  1
IIB2H   DEUT          1      2.014            12.993    19.842   306 3776
      77     1      129      205         3
 NEW TABLE FOR IIB2 IN RECORDS    2040  2044
 THRESHOLD=       12.99300   CEILING=      19.63599
 REPLACING MODE IIB2 FOR DEUTRON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                            HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030   OVERLAY PRIORITY  1
IIB2H   HE3           2      3.015            22.580    34.177   306 3776
      98     2      334      529         3
 NEW TABLE FOR IIB2 IN RECORDS    2045  2050
 THRESHOLD=       22.57999   CEILING=      34.05600
 REPLACING MODE IIB2 FOR HE3
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                            HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030   OVERLAY PRIORITY  1
IIB2H   HE4           2      4.002            19.259    29.341   306 3776
     111     2      378      599         3
 NEW TABLE FOR IIB2 IN RECORDS    2051  2057
 THRESHOLD=       19.25899   CEILING=      29.06299
 REPLACING MODE IIB2 FOR HE4
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L   LI7           3      7.000             4.975     7.811   288 3602
      23     4      138      227         4
 NEW TABLE FOR IIA2 IN RECORDS    2058  2059
 THRESHOLD=        4.97500   CEILING=       7.79300
 REPLACING MODE IIA2 FOR LI7
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L   BE9           4      9.000             5.936     9.334   288 3602
      35     4      211      351         4
 NEW TABLE FOR IIA2 IN RECORDS    2060  2061
 THRESHOLD=        5.93600   CEILING=       9.26500
 REPLACING MODE IIA2 FOR BE9
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L   B11           5     11.000             6.748    10.656   288 3602
      50     4      293      489         4
 NEW TABLE FOR IIA2 IN RECORDS    2062  2064
 THRESHOLD=        6.74800   CEILING=      10.55900
 REPLACING MODE IIA2 FOR B11
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L   C12           6     12.000             7.851    12.415   288 3602
      64     4      372      627         4
 NEW TABLE FOR IIA2 IN RECORDS    2065  2068
 THRESHOLD=        7.85100   CEILING=      12.39000
 REPLACING MODE IIA2 FOR C12
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B             RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (6 of 7)

```
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    N14          7     14.000          8.500     13.479   288 3602
      82        4      469      795          4
NEW TABLE FOR IIA2 IN RECORDS    2069   2073
THRESHOLD=      8.50000   CEILING=      13.45300
REPLACING MODE IIA2 FOR N14
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    O16          8     15.990          9.097     14.470   288 3602
     101        4      572      975          4
NEW TABLE FOR IIA2 IN RECORDS    2074   2079
THRESHOLD=      9.09700   CEILING=      14.44500
REPLACING MODE IIA2 FOR O16
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    F19          9     18.990          9.288     14.874   288 3602
      63        5      693     1184          4
NEW TABLE FOR IIA2 IN RECORDS    2080   2083
THRESHOLD=      9.29800   CEILING=      14.87400
REPLACING MODE IIA2 FOR F19
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    NE20        10     19.990         10.121     16.223   288 3602
      72        5      795     1361          4
NEW TABLE FOR IIA2 IN RECORDS    2084   2087
THRESHOLD=     10.12103   CEILING=      16.22299
REPLACING MODE IIA2 FOR NE20
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    NA23        11     22.990         10.288     16.579   288 3602
      85        6      928     1601          4
NEW TABLE FOR IIA2 IN RECORDS    2088   2092
THRESHOLD=     10.23800   CEILING=      16.57899
REPLACING MODE IIA2 FOR NA23
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA2L    MG24        12     23.990         10.946     17.721   288 3602
      97        8     1029     1792          4
NEW TABLE FOR IIA2 IN RECORDS    2093   2098
THRESHOLD=     10.94600   CEILING=      17.66399
REPLACING MODE IIA2 FOR MG24
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIA2L    AL27        13     26.980         11.070     18.019   288 3602
      56       16     1169     2048          4
NEW TABLE FOR IIA2 IN RECORDS    2099   2101
THRESHOLD=     11.07000   CEILING=      17.96700
REPLACING MODE IIA2 FOR AL27
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIA2L    SI28        14     27.980         11.735     19.127   288 3602
      61       15     1285     2255          4
NEW TABLE FOR IIA2 IN RECORDS    2102   2105
THRESHOLD=     11.73500   CEILING=      19.12700
REPLACING MODE IIA2 FOR SI28
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THR B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                          LOW GAIN
```

Table 26. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 23 (7 of 7)

```
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIA2L   S32          16     31.980          12.517    20.481   288 3602
       75        16     1566     2759          4
NEW TABLE FOR IIA2 IN RECORDS    2106  2109
THRESHOLD=     12.51700  CEILING=      20.48099
REPLACING MODE IIA2 FOR S32
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIA2L   AR36         18     35.970          13.161    21.668   288 3602
       91        16     1849     3281          4
NEW TABLE FOR IIA2 IN RECORDS    2110  2114
THRESHOLD=     13.15100  CEILING=      21.66800
REPLACING MODE IIA2 FOR AR36
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIA2L   CA40         20     39.960          13.824    22.844   288 3602
      107        16     2156     3844          4
NEW TABLE FOR IIA2 IN RECORDS    2115  2120
THRESHOLD=     13.82400  CEILING=      22.84399
REPLACING MODE IIA2 FOR CA40
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIA2L   TI48         22     47.950          13.502    22.570   288 3602
       65        32     2522     4557          4
NEW TABLE FOR IIA2 IN RECORDS    2121  2124
THRESHOLD=     13.50200  CEILING=      22.56999
REPLACING MODE IIA2 FOR TI48
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIA2L   CR52         24     51.940          13.963    23.506   288 3602
       73        32     2821     5141          4
NEW TABLE FOR IIA2 IN RECORDS    2125  2128
THRESHOLD=     13.96300  CEILING=      23.50600
REPLACING MODE IIA2 FOR CR52
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  3
IIA2L   FE56         26     55.930          14.439    24.437   288 3602
       82        32     3139     5754          4
NEW TABLE FOR IIA2 IN RECORDS    2129  2133
THRESHOLD=     14.43900  CEILING=      24.43700
REPLACING MODE IIA2 FOR FE56
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIA2L   NI58         28     57.940          15.579    25.843   288 3602
       89        32     3488     6304          4
NEW TABLE FOR IIA2 IN RECORDS    2134  2138
THRESHOLD=     15.57900  CEILING=      25.84299
REPLACING MODE IIA2 FOR NI58
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIA2L   ZN64         30     63.930          15.514    26.084   288 3602
      100        32     3840     7018          4
NEW TABLE FOR IIA2 IN RECORDS    2139  2143
THRESHOLD=     15.51400  CEILING=      26.08400
REPLACING MODE IIA2 FOR ZN64
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (1 of 12)

```
ISEE-3 RESPONSE INSTALLATION
FROM FILE   1-100 MULTIPLICATION FACTORS=        1.00000          1.00000
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.050  OVERLAY PRIORITY  1
IA3 H   PROT          1     1.007            6.386    58.356  528  226
     63        1        1       63        3
NEW TABLE FOR IA3  IN RECORDS   2144  2145
THRESHOLD=      6.38600  CEILING=      58.35599
REPLACING MODE IA3  FOR PROTON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.050  OVERLAY PRIORITY  1
IA3 H   DEUT          1     2.014            4.259    39.591  529  226
     86        1        1       86        3
NEW TABLE FOR IA3  IN RECORDS   2146  2147
THRESHOLD=      4.25900  CEILING=      39.59099
REPLACING MODE IA3  FOR DEUTRON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.050  OVERLAY PRIORITY  1
IA3 H   HE3           2     3.015            7.471    68.648  528  226
    113        2        1      224        3
NEW TABLE FOR IA3  IN RECORDS   2148  2150
THRESHOLD=      7.47100  CEILING=      68.64799
REPLACING MODE IA3  FOR HE3
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     A-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.050  OVERLAY PRIORITY  1
IA3 H   HE4           2     4.002            6.390    59.558  528  226
    129        2        1      254        3
NEW TABLE FOR IA3  IN RECORDS   2151  2153
THRESHOLD=      6.39000  CEILING=      58.55800
REPLACING MODE IA3  FOR HE4
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960    1.030  OVERLAY PRIORITY  1
IB3 H   PROT          1     1.007           29.052    70.815  274  736
     69        1        2       70        4
NEW TABLE FOR IB3  IN RECORDS   2154  2155
THRESHOLD=     29.05199  CEILING=      70.67499
REPLACING MODE IB3  FOR PROTON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960    1.030  OVERLAY PRIORITY  1
IB3 H   DEUT          1     2.014           19.694    49.015  274  736
     97        1        2       94        4
NEW TABLE FOR IB3  IN RECORDS   2156  2158
THRESHOLD=     19.69399  CEILING=      47.92599
REPLACING MODE IB3  FOR DEUTRON
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960    1.030  OVERLAY PRIORITY  1
IB3 H   HE3           2     3.015           34.123    83.376  274  736
    121        2        2      243        4
NEW TABLE FOR IB3  IN RECORDS   2159  2161
THRESHOLD=     34.12299  CEILING=      83.21700
REPLACING MODE IB3  FOR HE3
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET                 .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.960    1.030  OVERLAY PRIORITY  1
IB3 H   HE4           2     4.002           39.122    71.082  274  736
    137        2        2      275        4
NEW TABLE FOR IB3  IN RECORDS   2162  2165
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (2 of 12)

```
THRESHOLD=      23.12190  CEILING=       70.94398
REPLACING MODE IB3   FOR HE4
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK 3             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    LI5        3       6.000             8.024      73.567   768    50
    25        4        1       97          4
NEW TABLE FOR  IA3   IN RECORDS    2166  2166
THRESHOLD=        3.02400  CEILING=       73.56699
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    BE9        4       9.000             8.763      80.939   768    50
    41        4        1      160          4
NEW TABLE FOR  IA3   IN RECORDS    2167  2167
THRESHOLD=        8.76300  CEILING=       80.93900
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    B11        5      11.000             9.999      92.972   768    50
    57        4        1      225          4
NEW TABLE FOR  IA3   IN RECORDS    2168  2169
THRESHOLD=        9.99900  CEILING=       92.97198
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    C12        6      12.000            11.647     108.826   768    50
    72        4        1      287          4
NEW TABLE FOR  IA3   IN RECORDS    2170  2171
THRESHOLD=       11.64700  CEILING=      108.82599
REPLACING MODE IA3   FOR C12
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    N14        7      14.000            12.641     118.807   768    50
    92        4        1      366          4
NEW TABLE FOR  IA3   IN RECORDS    2172  2174
THRESHOLD=       12.64100  CEILING=      118.80699
REPLACING MODE IA3   FOR N14
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020
IA3 L    O16        8      15.990            13.566     128.265   768    50
   113        4        1      451          4
NEW TABLE FOR  IA3   IN RECORDS    2175  2177
THRESHOLD=       13.56600  CEILING=      128.26500
REPLACING MODE IA3   FOR O16
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IA3 L    F19        9      18.990            13.934     133.000   768    50
    79        8        1      556          4
NEW TABLE FOR  IA3   IN RECORDS    2178  2179
THRESHOLD=       13.93400  CEILING=      133.00000
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
C
C      BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IA3 L    NE20      10      19.990            15.196     145.755   768    50
    91        8        1      641          4
NEW TABLE FOR  IA3   IN RECORDS    2180  2181
THRESHOLD=       15.19600  CEILING=      145.75499
REPLACING MODE IA3   FOR NE20
C      I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R             FE R
C      DETECTOR FILE IHILOZ.DET                 .TRACK FILE IHILOZ.TRK
C      A-STOPPING                            LOW GAIN
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (3 of 12)

```
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IA3 L    NA23          11     22.990          15.521    150.059  768     50
     95       9        1       759            4
NEW TABLE FOR IA3   IN RECORDS    2182  2184
THRESHOLD=      15.52100  CEILING=    150.05899
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   2
IA3 L    MG24          12     23.990          16.581    161.877  768     50
     107      8        1       854            4
NEW TABLE FOR IA3   IN RECORDS    2185  2187
THRESHOLD=      16.58099  CEILING=    161.87700
REPLACING MODE IA3  FOR MG24
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IL3 L    HE3            2      3.015          34.211     83.394  258    560
     25       2        2        50            4
NEW TABLE FOR IL3   IN RECORDS    2188  2188
THRESHOLD=      34.21100  CEILING=     83.23700
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IL3 L    HE4            2      4.002          29.186     71.095  258    560
     29       2        2        57            4
NEW TABLE FOR IL3   IN RECORDS    2189  2189
THRESHOLD=      29.18599  CEILING=     70.97899
REPLACING MODE IL3  FOR HE4
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IB3 L    LI6            3      6.000          36.567     89.366  258    560
     27       4        2       105            4
NEW TABLE FOR IB3   IN RECORDS    2190  2190
THRESHOLD=      36.56699  CEILING=     89.22299
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IB3 L    BE9            4      9.000          40.179     98.380  258    560
     41       4        2       173            4
NEW TABLE FOR IB3   IN RECORDS    2191  2192
THRESHOLD=      40.17899  CEILING=     98.19600
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IB3 L    B11            5     11.000          46.069    113.108  258    560
     61       4        2       242            4
NEW TABLE FOR IB3   IN RECORDS    2193  2194
THRESHOLD=      46.05899  CEILING=    112.91299
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IB3 L    C12            6     12.000          53.795    132.556  258    560
     78       4        2       309            4
NEW TABLE FOR IB3   IN RECORDS    2195  2196
THRESHOLD=      53.79599  CEILING=    132.29599
REPLACING MODE IB3  FOR C12
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B               RE R
C     DETECTOR FILE IH1LOZ.DET              .TRACK FILE IH1LOZ.TRK
C     B-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IB3 L    N14            7     14.000          58.635    144.928  258    560
     99       4        2       393            4
NEW TABLE FOR IB3   IN RECORDS    2197  2199
THRESHOLD=      58.62500  CEILING=    144.54300
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (4 of 12)

```
REPLACING MODE IB3  FOR N14
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020
IB3 L    O16          8     15.990          63.181   156.478   258   560
     122          4       2      485          4
NEW TABLE FOR IB3  IN RECORDS   2200  2202
THRESHOLD=     63.18100  CEILING=    156.15799
REPLACING MODE IB3  FOR O16
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IB3 L    F19          9     18.990          65.430   162.326   258   560
     75           3       2      596          4
NEW TABLE FOR IB3  IN RECORDS   2203  2204
THRESHOLD=     65.42999  CEILING=    162.03699
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IB3 L    NE20         10    19.990          71.543   178.077   258   560
     97           8       2      688          4
NEW TABLE FOR IB3  IN RECORDS   2205  2206
THRESHOLD=     71.54300  CEILING=    177.70099
REPLACING MODE IB3  FOR NE20
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IB3 L    NA23         11    22.990          73.569   183.409   258   560
     102          3       2      815          4
NEW TABLE FOR IB3  IN RECORDS   2207  2209
THRESHOLD=     73.56898  CEILING=    183.08803
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1LOZ.DET              ,TRACK FILE IH1LOZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IB3 L    MG24         12    23.990          79.163   198.053   258   560.
     115          8       2      917          4
NEW TABLE FOR IB3  IN RECORDS   2210  2212
THRESHOLD=     79.16299  CEILING=    197.68300
REPLACING MODE IB3  FOR MG24
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA3 L    AL27         13    26.980          16.849   165.891   768    50
     62          15       1      984          4
NEW TABLE FOR IA3  IN RECORDS   2213  2214
THRESHOLD=     16.84900  CEILING=    165.89099
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IA3 L    SI28         14    27.980          17.842   177.020   768    50
     69          15       1     1089          4
NEW TABLE FOR IA3  IN RECORDS   2215  2216
THRESHOLD=     17.83199  CEILING=    177.01999
REPLACING MODE IA3  FOR SI28
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IA3 L    S32          16    31.980          19.139   191.330   768    50
     85          16       1     1340          4
NEW TABLE FOR IA3  IN RECORDS   2217  2219
THRESHOLD=     19.13399  CEILING=    191.32999
REPLACING MODE IA3  FOR S32
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH1HIZ.DET              ,TRACK FILE IH1HIZ.TRK
C     A-STOPPING                        LOW GAIN
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (5 of 12)

```
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IA3 L    AR36         18     35.970            20.233    204.983   768     50
    103        15        1     1622              4
NEW TABLE FOR IA3   IN RECORDS    2219  2221
THRESHOLD=      20.23299   CEILING=     204.98199
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   2
IA3 L    CA40         20     39.960            21.322    218.097   758     50
    120        15        1     1916              4
NEW TABLE FOR IA3   IN RECORDS    2222  2224
THRESHOLD=      21.32199   CEILING=     218.09698
REPLACING MODE IA3   FOR CA40
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IA3 L    TI48         22     47.950            21.039    219.031   768     50
    73         32        1     2309              4
NEW TABLE FOR IA3   IN RECORDS    2225  2226
THRESHOLD=      21.03899   CEILING=     219.03099
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   2
IA3 L    CR52         24     51.940            21.893    231.470   768     50
    93         32        1     2643              4
NEW TABLE FOR IA3   IN RECORDS    2227  2228
THRESHOLD=      21.89299   CEILING=     231.46999
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   3
IA3 L    FE56         26     55.930            22.745    243.531   768     50
    94         32        1     2995              4
NEW TABLE FOR IA3   IN RECORDS    2229  2231
THRESHOLD=      22.74500   CEILING=     243.53099
REPLACING MODE IA3   FOR FE56
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   2
IA3 L    NI58         28     57.940            24.801    260.451   768     50
    104        32        1     3317              4
NEW TABLE FOR IA3   IN RECORDS    2232  2234
THRESHOLD=      24.80099   CEILING=     260.45093
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     A-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IA3 L    ZN64         30     63.930            24.575    266.545   768     50
    118        32        1     3746              4
NEW TABLE FOR IA3   IN RECORDS    2235  2237
THRESHOLD=      24.57500   CEILING=     266.54492
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     B-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   1
IB3 L    AL27         13     26.980            81.027    203.044   258    560
    67         15        2     1057              4
NEW TABLE FOR IB3   IN RECORDS    2238  2239
THRESHOLD=      81.02699   CEILING=     203.61699
C     I  ISEE  HET1  CAL IB (ENTERED 2/9/81) THK B                  RE R
C     DETECTOR FILE IH1HIZ.DET                 .TRACK FILE IH1HIZ.TRK
C     B-STOPPING                            LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY   2
IB3 L    SI28         14     27.980            86.276    216.366   258    560
    71         15        2     1170              4
NEW TABLE FOR IB3   IN RECORDS    2240  2241
THRESHOLD=      86.27599   CEILING=     216.41499
REPLACING MODE IB3   FOR SI28
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (6 of 12)

```
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IB3 L    S32          16     31.980          92.971   234.683  258  560
     91        15        2      1445          4
NEW TABLE FOR IB3  IN RECORDS    2242  2244
THRESHOLD=     92.97099   CEILING=     234.21999
REPLACING MODE IB3  FOR S32
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IB3 L    AR36         18     35.970          99.285   251.732  258  560
     100       15        2      1742          4
NEW TABLE FOR IB3  IN RECORDS    2245  2247
THRESHOLD=     99.28499   CEILING=     251.29500
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IB3 L    CA40         20     39.960         105.335   268.139  258  560
     120       15        2      2059          4
NEW TABLE FOR IB3  IN RECORDS    2248  2250
THRESHOLD=    105.33499   CEILING=     267.63696
REPLACING MODE IB3  FOR CA40
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IB3 L    TI48         22     47.950         105.617   269.359  258  560
     78        32        2      2481          4
NEW TABLE FOR IB3  IN RECORDS    2251  2252
THRESHOLD=    105.61599   CEILING=     268.88989
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IB3 L    CR52         24     51.940         111.241   284.987  258  560
     89        32        2      2841          4
NEW TABLE FOR IB3  IN RECORDS    2253  2255
THRESHOLD=    111.24100   CEILING=     284.53198
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  3
IB3 L    FE56         26     55.930         116.678   300.166  258  560
     101       32        2      3219          4
NEW TABLE FOR IB3  IN RECORDS    2256  2258
THRESHOLD=    116.67799   CEILING=     299.63281
REPLACING MODE IB3  FOR FE56
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IB3 L    NI58         28     57.940         124.310   321.490  258  560
     112       32        2      3568          4
NEW TABLE FOR IB3  IN RECORDS    2259  2261
THRESHOLD=    124.31000   CEILING=     320.88281
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH1HIZ.DET          ,TRACK FILE IH1HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IB3 L    ZN64         30     63.930         124.627   329.236  258  560
     121       32        2      4029          4
NEW TABLE FOR IB3  IN RECORDS    2262  2264
THRESHOLD=    128.62700   CEILING=     328.60580
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK R          RE R
C     DETECTOR FILE IH2LOZ.DET          ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                    HIGH GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIA3H    PROT          1      1.007           6.469    58.577  560  194
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (7 of 12)

```
     64          1          1          64          3
NEW TABLE FOR IIA3 IN RECORDS    2265  2266
THRESHOLD=      6.46900  CEILING=      58.57700
REPLACING MODE IIA3 FOR PROTON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IIA3H   DEUT          1      2.014            4.305    39.741   560   194
     97          1          1          87          3
NEW TABLE FOR IIA3 IN RECORDS    2267  2268
THRESHOLD=      4.30500  CEILING=      39.74100
REPLACING MODE IIA3 FOR DEUTRON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IIA3H   HE3           2      3.015            7.523    68.909   560   194
    114          2          1         227          3
NEW TABLE FOR IIA3 IN RECORDS    2269  2271
THRESHOLD=      7.52300  CEILING=      68.90900
REPLACING MODE IIA3 FOR HE3
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.050  OVERLAY PRIORITY  1
IIA3H   HE4           2      4.002            6.438    58.780   560   194
    129          2          1         257          3
NEW TABLE FOR IIA3 IN RECORDS    2272  2274
THRESHOLD=      6.43800  CEILING=      58.78000
REPLACING MODE IIA3 FOR HE4
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB3H   PROT          1      1.007           28.641    70.794   306   704
     69          1          2          70          3
NEW TABLE FOR IIB3 IN RECORDS    2275  2276
THRESHOLD=     28.64099  CEILING=      70.65099
REPLACING MODE IIB3 FOR PROTON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB3H   DEUT          1      2.014           19.414    47.999   306   704
     94          1          2          95          3
NEW TABLE FOR IIB3 IN RECORDS    2277  2279
THRESHOLD=     19.41399  CEILING=      47.89499
REPLACING MODE IIB3 FOR DEUTRON
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB3H   HE3           2      3.015           33.639    83.344   306   704
    122          2          2         244          3
NEW TABLE FOR IIB3 IN RECORDS    2280  2282
THRESHOLD=     33.63899  CEILING=      83.17200
REPLACING MODE IIB3 FOR HE3
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                          HIGH GAIN
C
C     BOX SPREAD FACTORS=    0.960    1.030  OVERLAY PRIORITY  1
IIB3H   HE4           2      4.002           28.708    71.054   306   704
    138          2          2         276          3
NEW TABLE FOR IIB3 IN RECORDS    2283  2286
THRESHOLD=     28.70799  CEILING=      70.90799
REPLACING MODE IIB3 FOR HE4
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 5              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                          LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L   _17           3      7.000            7.375    67.711   900    18
     37          3          1         104          4
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24
(8 of 12)

```
NEW TABLE FOR IIA3 IN RECORDS    2287  2287
THRESHOLD=        7.37500   CEILING=        67.71100
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 5              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L    BE9              4     9.000              8.811     81.248  800    18
      41        4         1      161         4
NEW TABLE FOR IIA3 IN RECORDS    2288  2288
THRESHOLD=        8.81100   CEILING=        81.24799
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L    B11              5    11.000             10.054     93.329  800    18
      57        4         1      227         4
NEW TABLE FOR IIA3 IN RECORDS    2289  2290
THRESHOLD=       10.05400   CEILING=        93.32899
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L    C12              6    12.000             11.712    109.246  800    18
      77        4         1      290         4
NEW TABLE FOR IIA3 IN RECORDS    2291  2292
THRESHOLD=       11.71200   CEILING=       109.24599
REPLACING MODE IIA3 FOR C12
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L    N14              7    14.000             12.712    119.266  800    18
      93        4         1      369         4
NEW TABLE FOR IIA3 IN RECORDS    2293  2295
THRESHOLD=       12.71200   CEILING=       119.26599
REPLACING MODE IIA3 FOR N14
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020
IIA3L    O16              8    15.990             13.642    128.762  800    18
     115        4         1      456         4
NEW TABLE FOR IIA3 IN RECORDS    2296  2298
THRESHOLD=       13.64200   CEILING=       128.76199
REPLACING MODE IIA3 FOR O16
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIA3L    F19              9    18.990             14.014    133.517  800    18
      71        8         1      561         4
NEW TABLE FOR IIA3 IN RECORDS    2299  2300
THRESHOLD=       14.01400   CEILING=       133.51700
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIA3L    NE20            10    19.990             15.283    146.324  800    18
      81        8         1      647         4
NEW TABLE FOR IIA3 IN RECORDS    2301  2302
THRESHOLD=       15.28300   CEILING=       146.32399
REPLACING MODE IIA3 FOR NE20
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIA3L    NA23            11    22.990             15.610    150.646  800    18
      95        8         1      766         4
NEW TABLE FOR IIA3 IN RECORDS    2303  2305
THRESHOLD=       15.61000   CEILING=       150.64600
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK 8              RE R
C     DETECTOR FILE IH2LOZ.DET               ,TRACK FILE IH2LOZ.TRK
C     A-STOPPING                         LOW GAIN
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (9 of 12)

```
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IIA3L   MG24          12    23.990          16.677    162.513  900   18
      109       8       1       863       4
NEW TABLE FOR IIA3 IN RECORDS    2306  2308
THRESHOLD=      16.67699  CEILING=     162.51299
REPLACING MODE IIA3 FOR MG24
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIL3L   HE3           2     3.015          33.727     83.359  290  528
      25        2       2        50       4
NEW TABLE FOR IIL3 IN RECORDS    2309  2309
THRESHOLD=      33.72699  CEILING=      83.20799
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIL3L   HE4           2     4.002          28.773     71.066  290  528
      28        2       2        57       4
NEW TABLE FOR IIL3 IN RECORDS    2310  2310
THRESHOLD=      28.77299  CEILING=      70.95699
REPLACING MODE IIL3 FOR HE4
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   LI7           3     7.000          33.066     81.978  290  528
      29        4       2       113       4
NEW TABLE FOR IIB3 IN RECORDS    2311  2311
THRESHOLD=      33.06599  CEILING=      81.74500
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   BE9           4     9.000          39.608     98.339  290  528
      44        4       2       175       4
NEW TABLE FOR IIB3 IN RECORDS    2312  2313
THRESHOLD=      39.60799  CEILING=      98.18399
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   B11           5    11.000          45.413    113.051  290  528
      62        4       2       245       4
NEW TABLE FOR IIB3 IN RECORDS    2314  2315
THRESHOLD=      45.41299  CEILING=     112.83400
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   C12           6    12.000          53.028    132.500  290  528
      79        4       2       312       4
NEW TABLE FOR IIB3 IN RECORDS    2316  2317
THRESHOLD=      53.02899  CEILING=     132.22198
REPLACING MODE IIB3 FOR C12
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   N14           7    14.000          57.787    144.767  290  528
      102       4       2       398       4
NEW TABLE FOR IIB3 IN RECORDS    2318  2320
THRESHOLD=      57.78699  CEILING=     144.47899
REPLACING MODE IIB3 FOR N14
C     II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2LOZ.DET              .TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020
IIB3L   O16           8    15.990          62.277    156.412  290  528
      127       4       2       490       4
NEW TABLE FOR IIB3 IN RECORDS    2321  2323
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (10 of 12)

```
THRESHOLD=      62.27699   CEILING=     156.10300
REPLACING MODE IIB3 FOR Q16
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIB3L   F19          9     18.990          64.492   162.257  290   528
     75        8        2       504        4
NEW TABLE FOR IIB3 IN RECORDS    2324  2325
THRESHOLD=      64.49199   CEILING=     161.94600
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IIB3L   NE20         10     19.990          70.515   178.001  290   528
     98        8        2       696        4
NEW TABLE FOR IIB3 IN RECORDS    2326  2327
THRESHOLD=      70.51500   CEILING=     177.61600
REPLACING MODE IIB3 FOR NE20
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIB3L   NA23         11     22.990          72.510   183.330  290   528
    104        8        2       825        4
NEW TABLE FOR IIB3 IN RECORDS    2328  2330
THRESHOLD=      72.50999   CEILING=     182.93300
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2LOZ.DET              ,TRACK FILE IH2LOZ.TRK
C     B-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IIB3L   MG24         12     23.990          78.021   197.968  290   528
    117        8        2       928        4
NEW TABLE FOR IIB3 IN RECORDS    2331  2333
THRESHOLD=      78.02100   CEILING=     197.53400
REPLACING MODE IIB3 FOR MG24
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIA3L   AL27         13     26.980          16.948   166.545  800    18
     63       15        1       994        4
NEW TABLE FOR IIA3 IN RECORDS    2334  2335
THRESHOLD=      16.94800   CEILING=     166.54500
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  2
IIA3L   SI28         14     27.980          17.988   177.720  800    18
     69       15        1      1100        4
NEW TABLE FOR IIA3 IN RECORDS    2336  2337
THRESHOLD=      17.99799   CEILING=     177.71999
REPLACING MODE IIA3 FOR SI28
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIA3L   S32          16     31.980          19.253   192.091  800    19
     85       15        1      1359        4
NEW TABLE FOR IIA3 IN RECORDS    2338  2339
THRESHOLD=      19.25299   CEILING=     192.09099
REPLACING MODE IIA3 FOR S32
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980    1.020  OVERLAY PRIORITY  1
IIA3L   AR36         18     35.970          20.355   205.802  800    18
    103       15        1      1638        4
NEW TABLE FOR IIA3 IN RECORDS    2340  2342
THRESHOLD=      20.35500   CEILING=     205.80199
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B              RE R
C     DETECTOR FILE IH2HIZ.DET              ,TRACK FILE IH2HIZ.TRK
C     A-STOPPING                      LOW GAIN
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (11 of 12)

```
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIA3L    CA40          20     39.960           21.451   219.973  800   18
     123        15          1     1936          4
NEW TABLE FOR IIA3 IN RECORDS    2343  2345
THRESHOLD=      21.45099  CEILING=     218.97299
REPLACING MODE IIA3 FOR CA40
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIA3L    TI48          22     47.950           21.169   219.912  800   18
     73         32          1     2333          4
NEW TABLE FOR IIA3 IN RECORDS    2346  2347
THRESHOLD=      21.15899  CEILING=     219.91199
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIA3L    CR52          24     51.940           22.030   232.406  800   18
     84         32          1     2671          4
NEW TABLE FOR IIA3 IN RECORDS    2348  2349
THRESHOLD=      22.03000  CEILING=     232.40599
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  3
IIA3L    FE56          26     55.930           22.889   244.522  800   18
     95         32          1     3025          4
NEW TABLE FOR IIA3 IN RECORDS    2350  2352
THRESHOLD=      22.88899  CEILING=     244.52199
REPLACING MODE IIA3 FOR FE56
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIA3L    NI58          28     57.940           24.968   261.516  800   18
     105        32          1     3351          4
NEW TABLE FOR IIA3 IN RECORDS    2353  2355
THRESHOLD=      24.96799  CEILING=     261.51587
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     A-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIA3L    ZN64          30     63.930           24.735   267.639  800   18
     115        32          1     3784          4
NEW TABLE FOR IIA3 IN RECORDS    2356  2358
THRESHOLD=      24.73499  CEILING=     267.63892
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIB3L    AL27          13     26.980           79.856   202.956  290  528
     67         16          2     1070          4
NEW TABLE FOR IIB3 IN RECORDS    2359  2360
THRESHOLD=      79.85599  CEILING=     202.64000
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  2
IIB3L    SI28          14     27.980           85.027   216.772  290  528
     75         16          2     1184          4
NEW TABLE FOR IIB3 IN RECORDS    2361  2362
THRESHOLD=      85.02599  CEILING=     216.29099
REPLACING MODE IIB3 FOR SI28
C    II ISEE HET2 CALIB (ENTERED 2/9/81) THK B            RE R
C     DETECTOR FILE IH2HIZ.DET          .TRACK FILE IH2HIZ.TRK
C     B-STOPPING                    LOW GAIN
C
C     BOX SPREAD FACTORS=    0.980    1.020  OVERLAY PRIORITY  1
IIB3L    S32           16     31.980           91.620   234.541  290  528
     93         16          2     1463          4
NEW TABLE FOR IIB3 IN RECORDS    2363  2365
THRESHOLD=      91.62000  CEILING=     234.11800
```

Table 27. INSTALC Summary Showing Overlay Priority for Particle Mass Lines - INSTALC output for Table 24 (12 of 12)

```
REPLACING MODE IIB3 FOR S32
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIB3L    AR36        18    35.970          97.837   251.621   290   528
     111       15       2     1764          4
NEW TABLE FOR IIB3 IN RECORDS   2366  2368
THRESHOLD=     97.83699  CEILING=     251.03400
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIB3L    CA40        20    39.960         103.794   268.020   290   528
     131       15       2     2085          4
NEW TABLE FOR IIB3 IN RECORDS   2369  2371
THRESHOLD=    103.79399  CEILING=     267.45288
REPLACING MODE IIB3 FOR CA40
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIB3L    TI48        22    47.950         104.066   269.240   290   528
     70        32       2     2513          4
NEW TABLE FOR IIB3 IN RECORDS   2372  2373
THRESHOLD=    104.06599  CEILING=     268.74683
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIB3L    CR52        24    51.940         109.600   284.860   290   528
     60        32       2     2877          4
NEW TABLE FOR IIB3 IN RECORDS   2374  2376
THRESHOLD=    109.59999  CEILING=     284.41187
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  3
IIB3L    FE56        26    55.930         114.951   300.032   290   528
     102       32       2     3261          4
NEW TABLE FOR IIB3 IN RECORDS   2377  2379
THRESHOLD=    114.95099  CEILING=     299.53784
REPLACING MODE IIB3 FOR FE56
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  2
IIB3L    NI58        28    57.940         122.462   321.345   290   528
     113       32       2     3614          4
NEW TABLE FOR IIB3 IN RECORDS   2380  2382
THRESHOLD=    122.46199  CEILING=     320.80786
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) THK B                RE R
C     DETECTOR FILE IH2HIZ.DET          ,TRACK FILE IH2HIZ.TRK
C     B-STOPPING                        LOW GAIN
C
C     BOX SPREAD FACTORS=   0.980   1.020  OVERLAY PRIORITY  1
IIB3L    ZN64        30    63.930         125.022   329.087   290   528
     129       32       2     4082          4
NEW TABLE FOR IIB3 IN RECORDS   2383  2385
THRESHOLD=    125.02199  CEILING=     328.44189
```

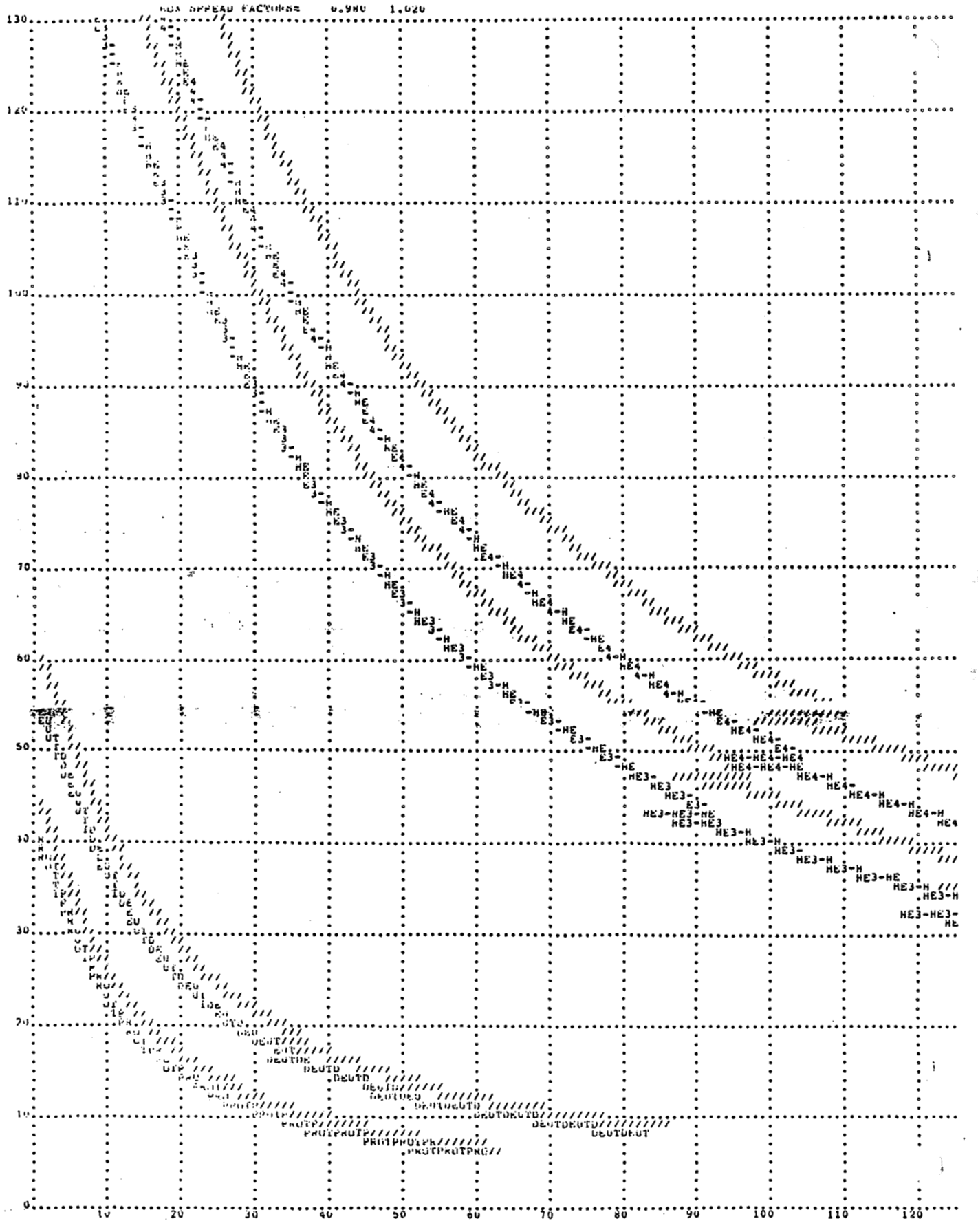


Figure 29. Computer Generated Track for A1 vs C123 High Gain, CMP=1

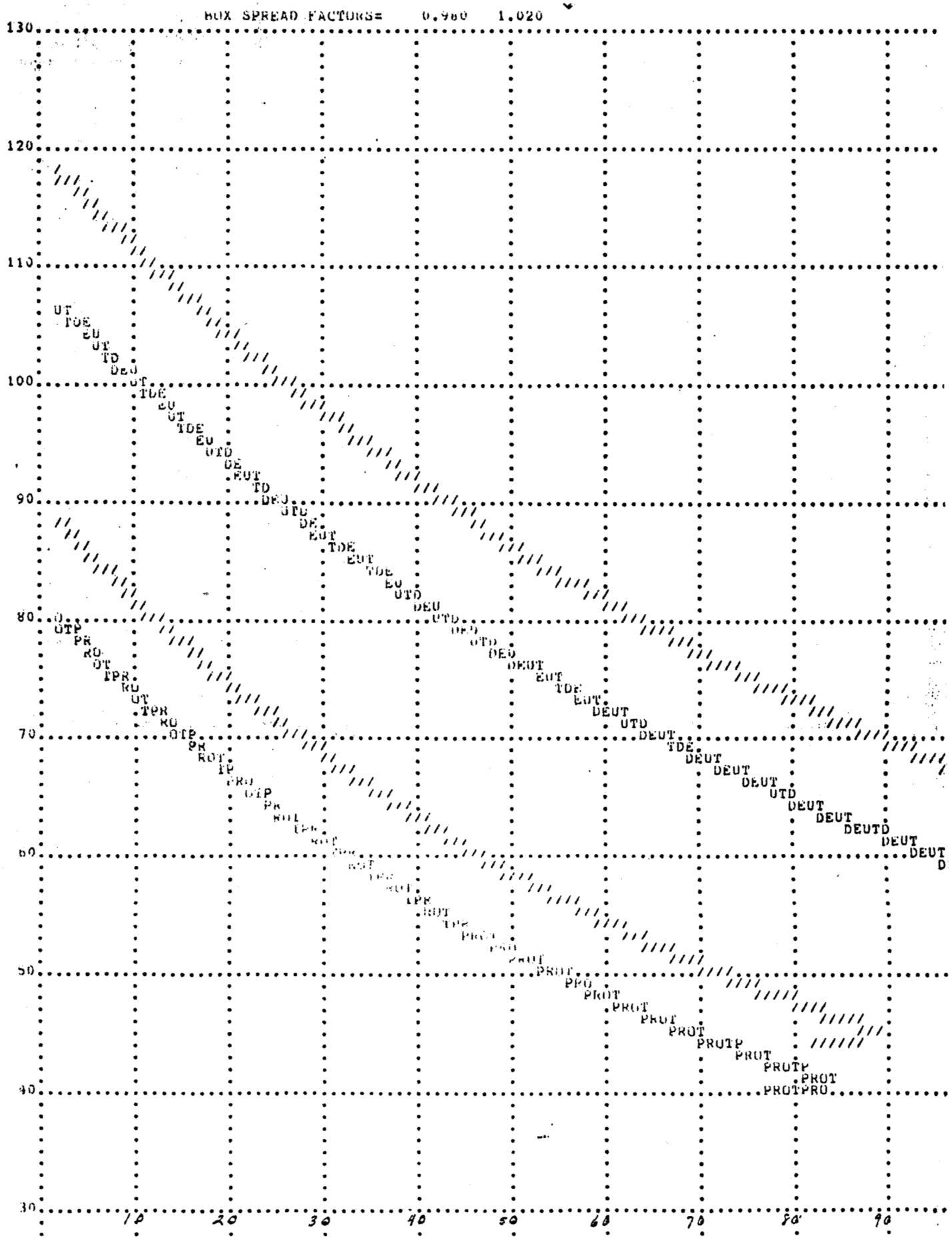


Figure 30. Computer Generated Track for Proton Mode IB2

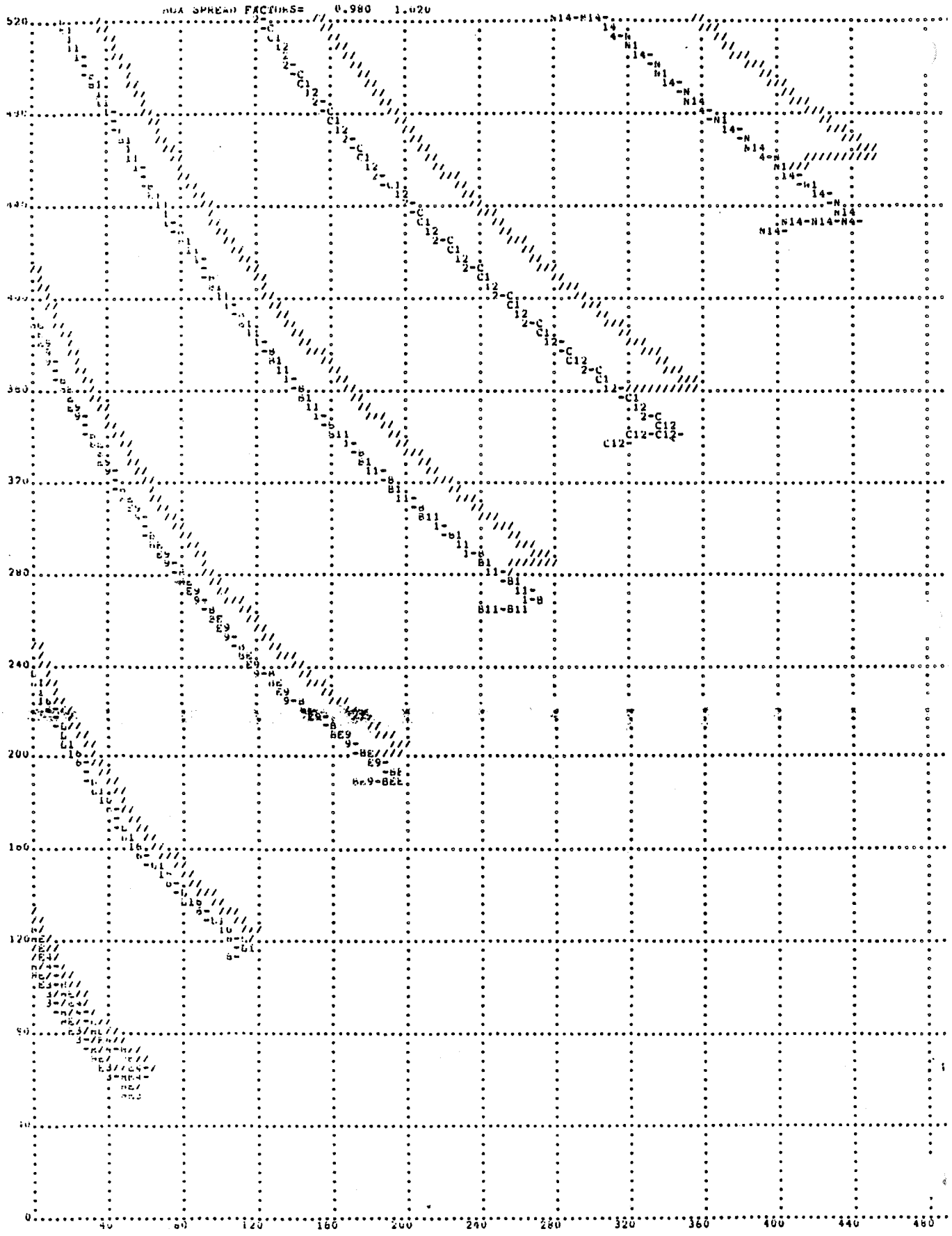


Figure 31. Computer Generated Track for B1 vs B2 Low Gain Modes

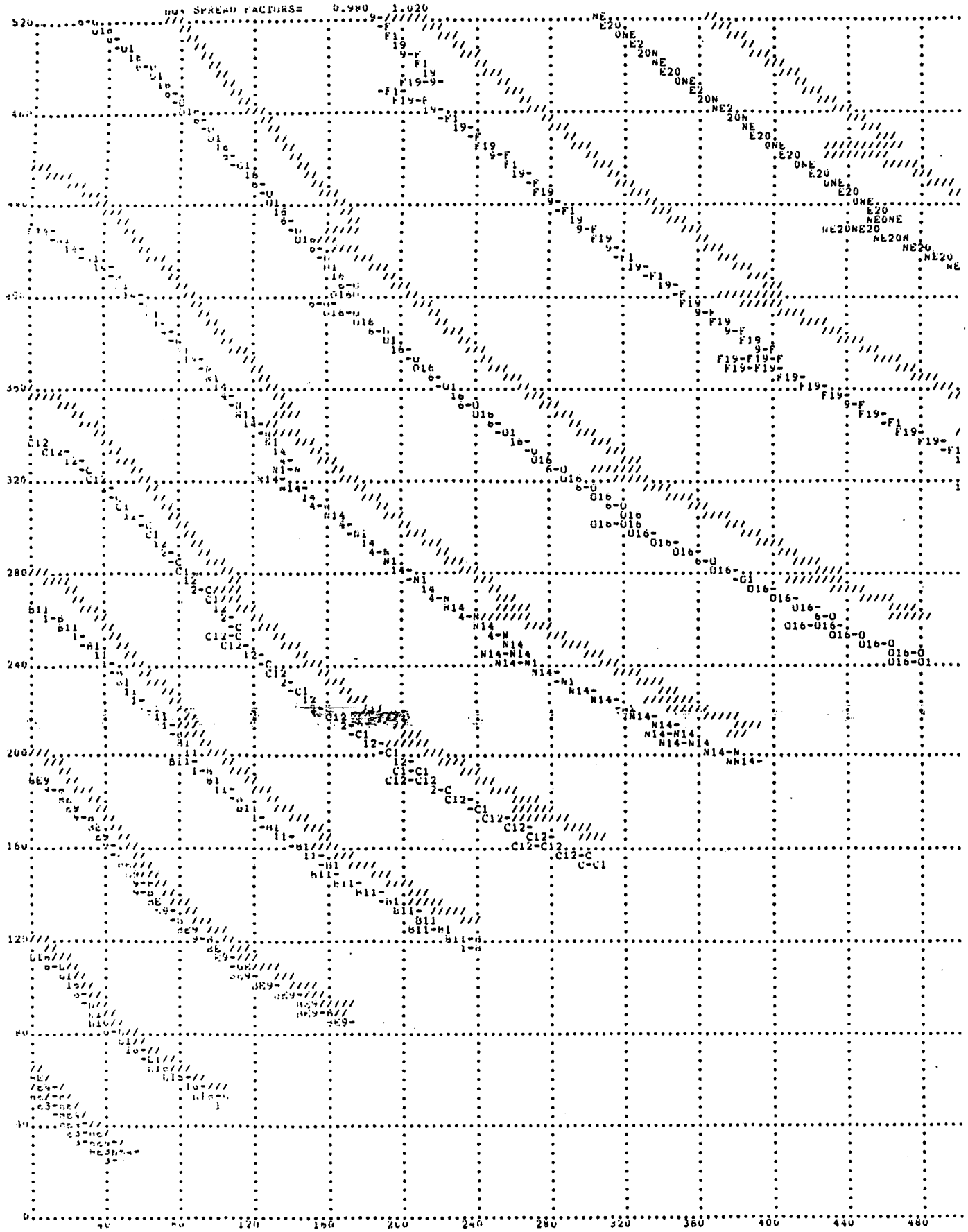
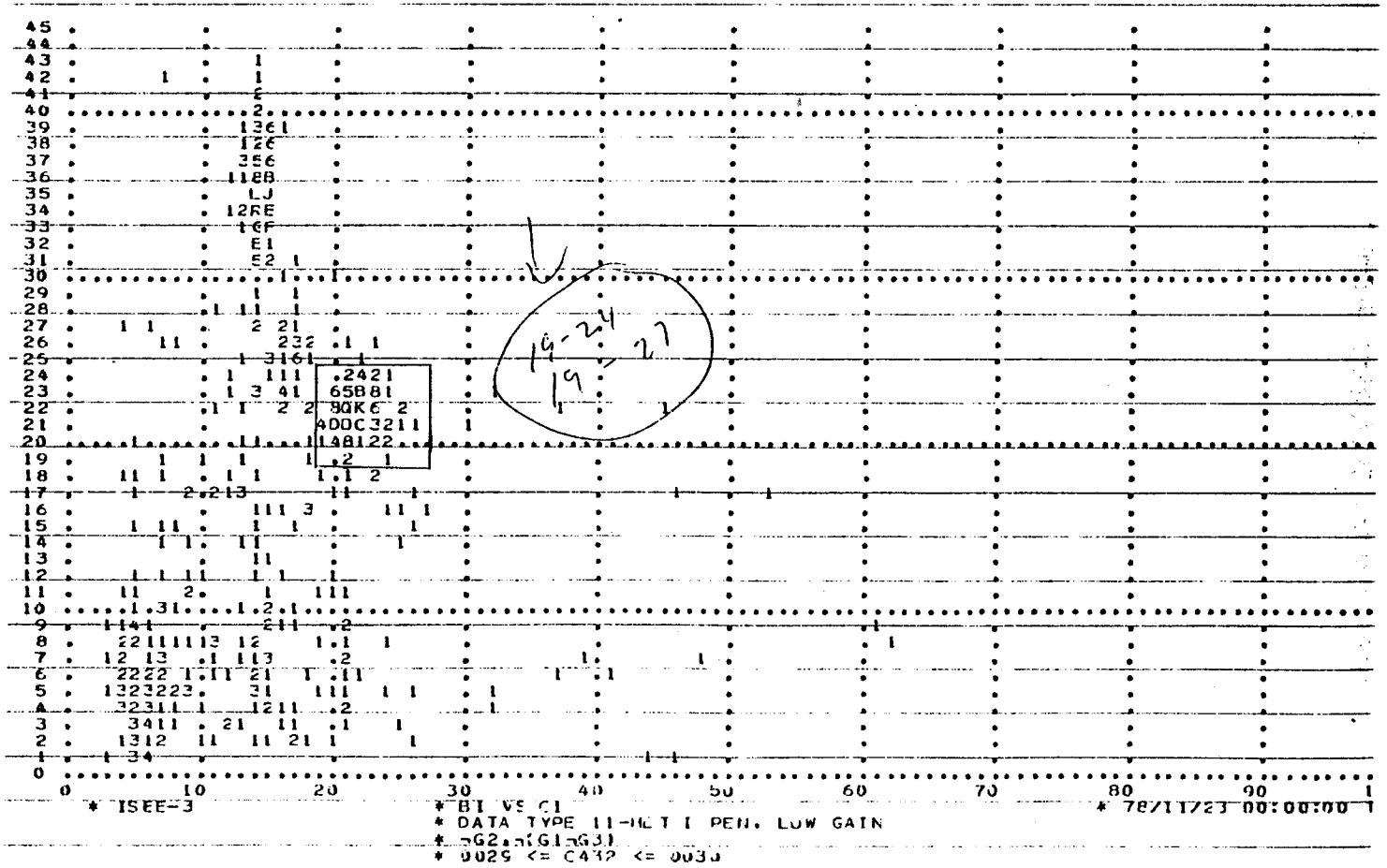
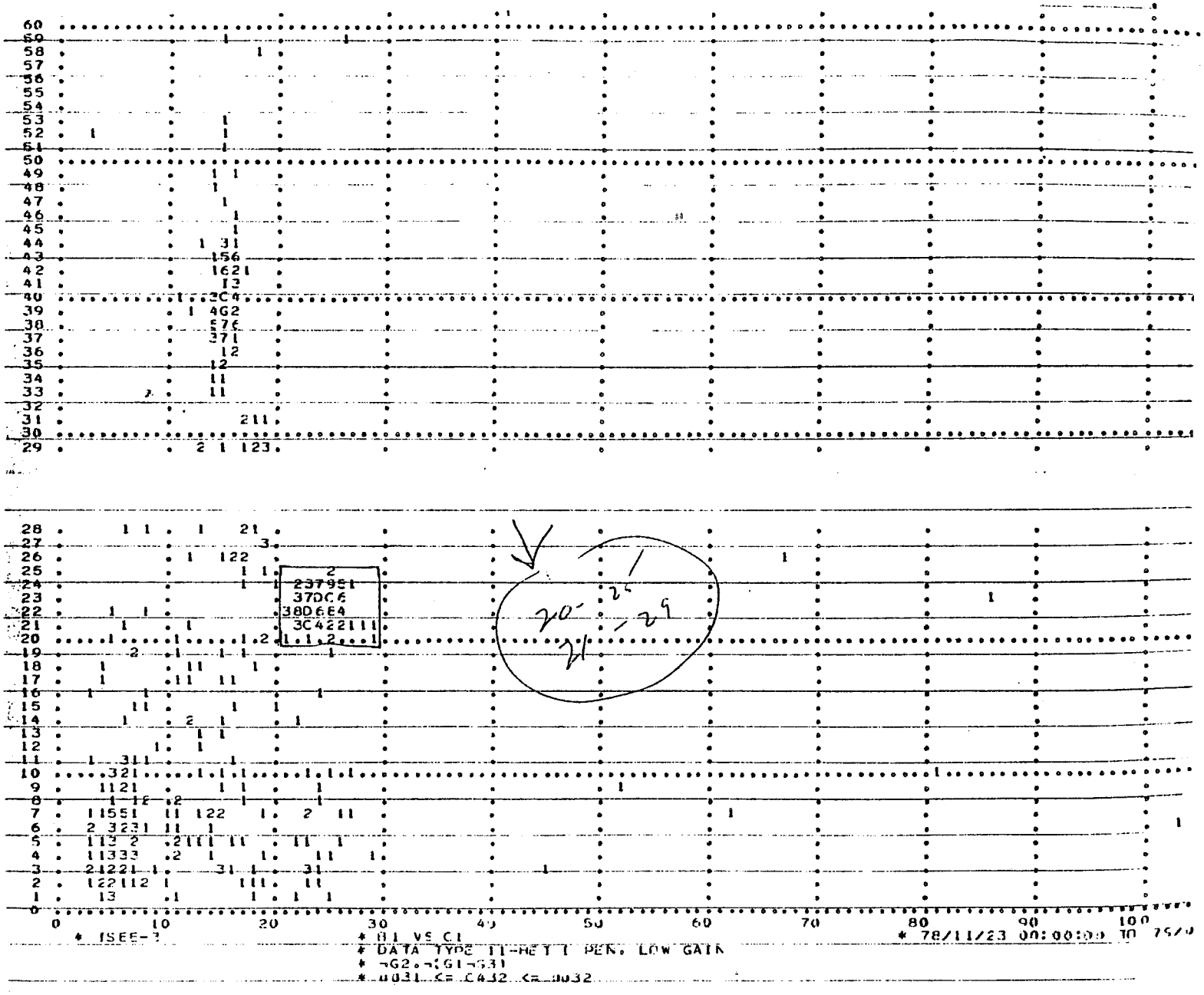


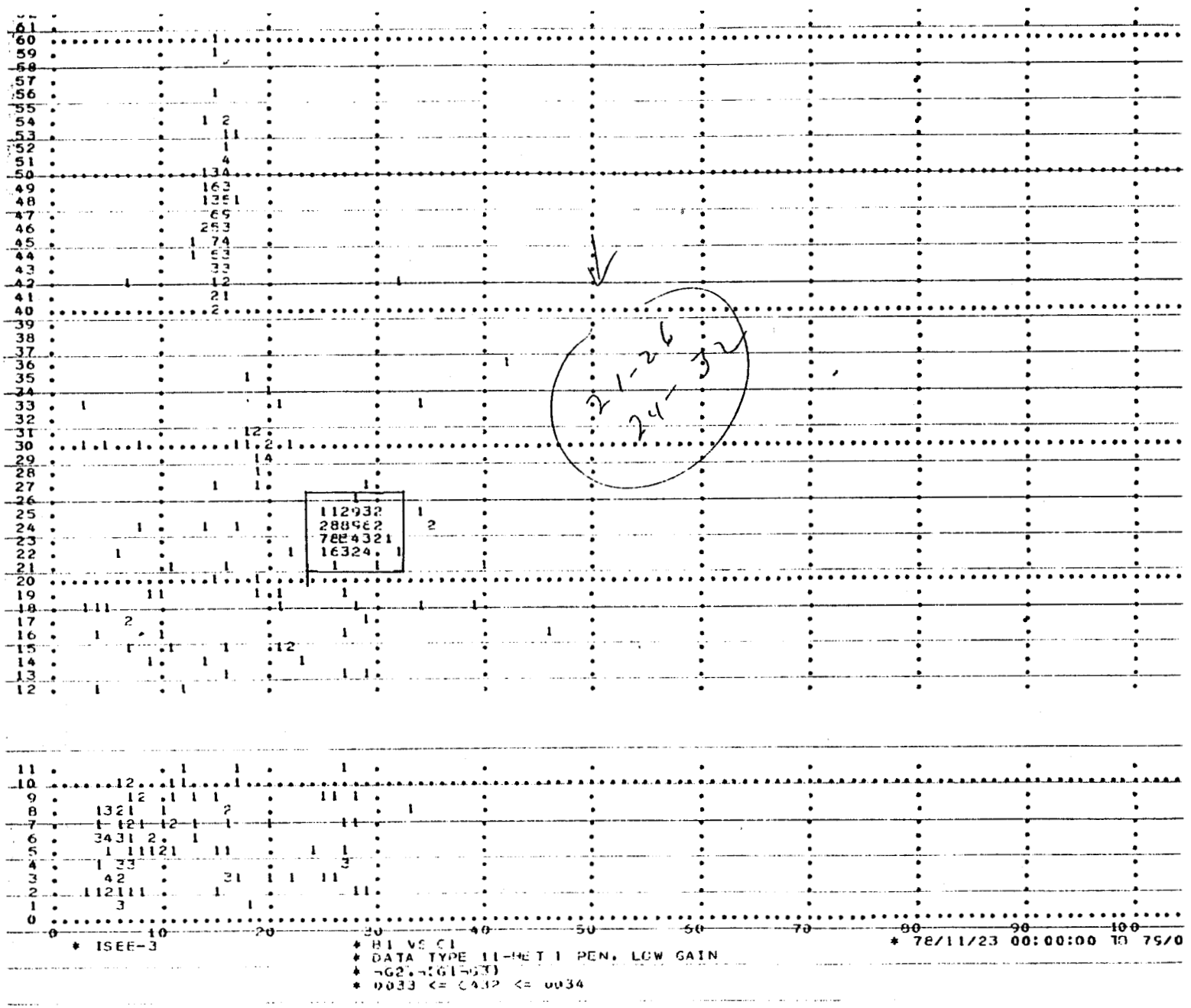
Figure 32. Computer Generated Track for B1 vs C432 Low Gain Modes

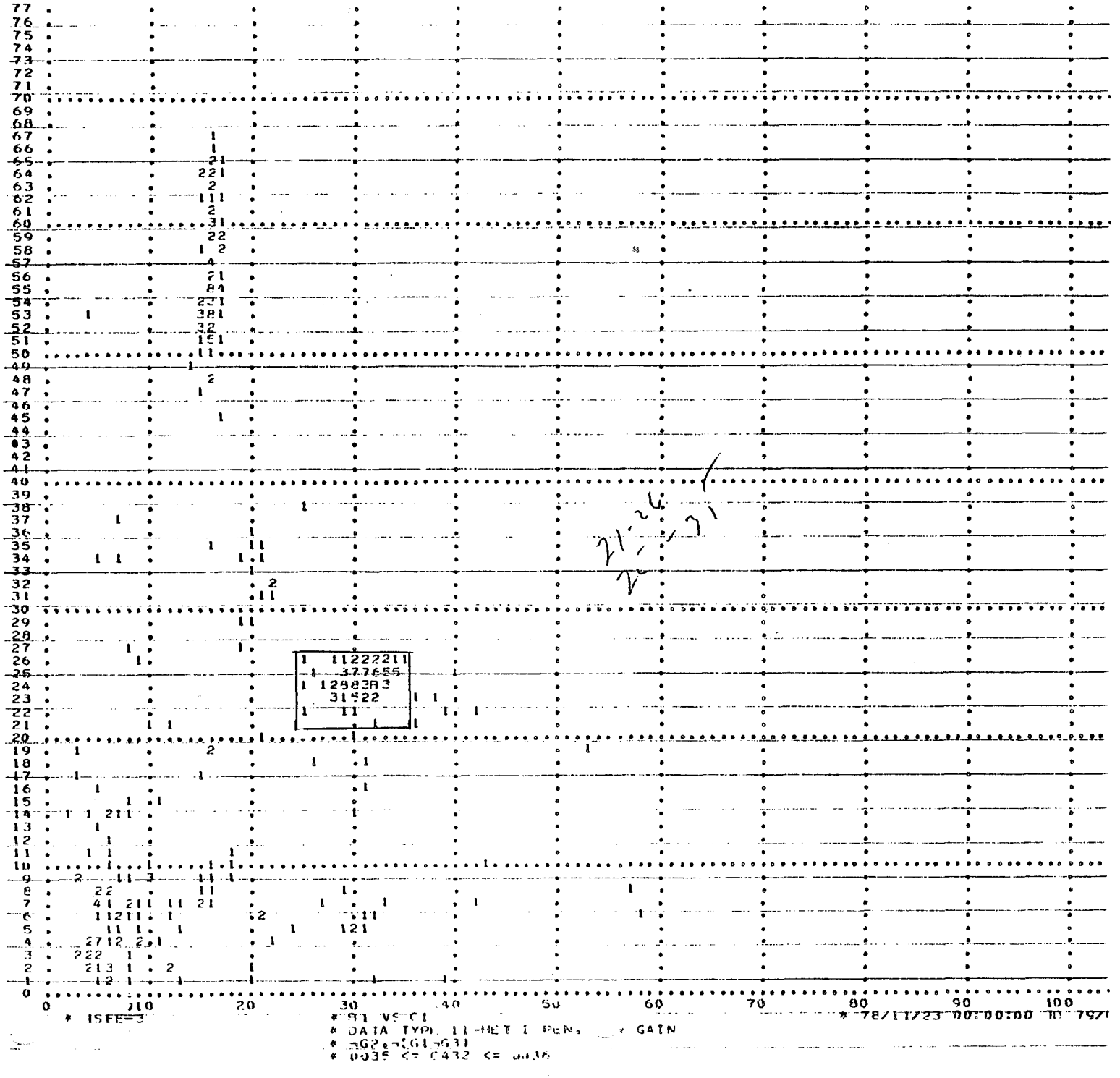
APPENDIX C - LOWGAIN UNI-DIRECTIONAL TRACK DEFINITION

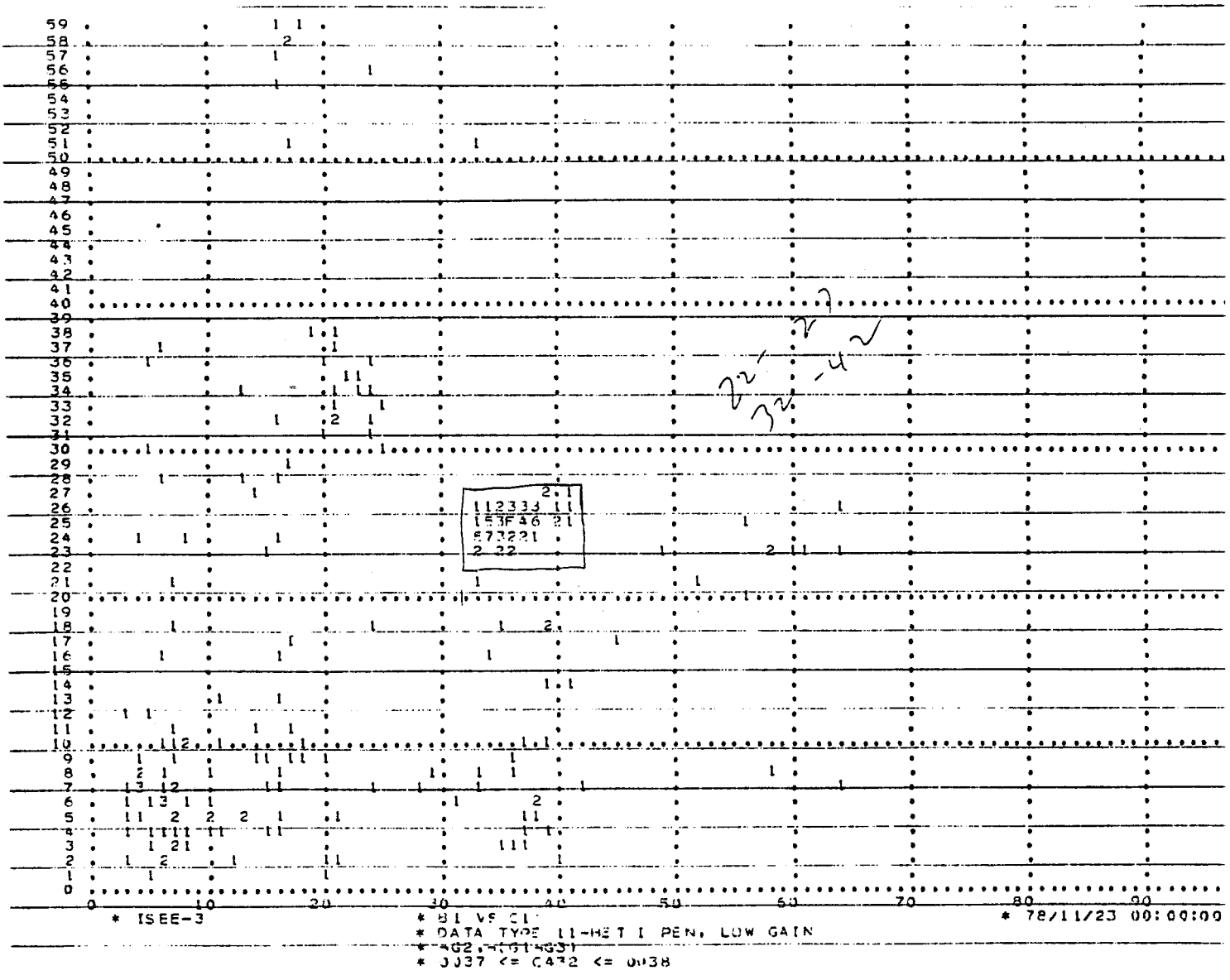
The penetrating track definition for the mode IPB low gain alpha TRACK is shown in the following pages. The time period summarized for this data is that given in Table 3 of this document.

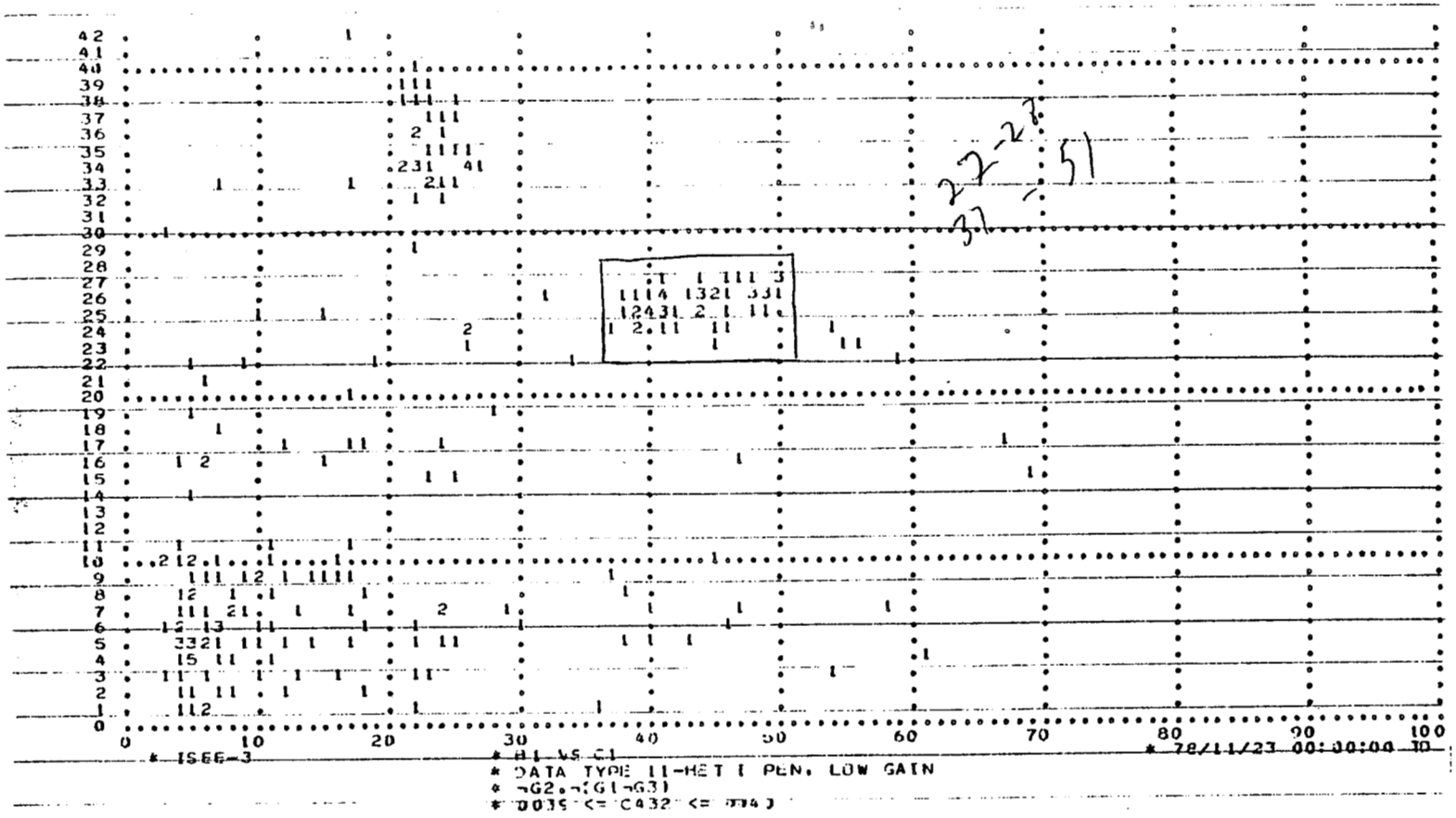

* ISEE-3
* BI VS C1
* DATA TYPE 11-HE T I PEN. LOW GAIN
* 0029 <= C432 <= 0035
* 78/11/23 00:00:00


* ISEE-3
* B1 VS C1
* DATA TYPE 11-RET 1 PEN, LOW GAIN
* ¬G2.¬(G1¬G3)
* 0031 <= C432 <= 0032
* 78/11/23 00:00:00 TO 75/0
0
10
20
30
40
50
60
70
80
90
100


112932
288962
7884321
16324
* ISEE-3
* B1 VS C1
* DATA TYPE 11-BET 1 PEN, LOW GAIN
* ¬G2.¬(G1=G3)
* 0033 <= C432 <= 0034
* 78/11/23 00:00:00 TO 79/0


* ISFE=3
* 78/11/23 00:00:00 TO 79/1
* 91 VS CI
* DATA TYPE 11-NET 1 PEN
* GAIN
* 0035 <= 0432 <= 0036


* ISEE-3
* B1 VS C1
* DATA TYPE 11-HET I PEN, LOW GAIN
* 78/11/23 00:00:00


* ISEE-3
* B1 VS C1
* DATA TYPE 11-HET 1 PEN, LOW GAIN
* ¬G2.¬(G1¬G3)
* 0035 <= C432 <= 0744
* 78/11/23 00:00:00.00

APPENDIX D - TESTM AND ENDPOINT ENERGIES

As mentioned in Section 3.2, the range/energy program TESTM can be made to output energy units by setting the energy per channel to 1.0. This is accomplished by setting the PSMeV parameters equal to the number of channels associated with each detector element. For ISEE-3 all elements have 4096 channels. All PSMeV are set to 4096. (Offsets are made equal to 0.0 at this point.)

The TESTM output is then examined. Refer to the sample output below for protons, high gain, A stopping. According to that printout, the C4 detector is entered with a 57.28 MeV/nucleon initial particle energy and the energy deposited in SUM C1C2C3 starts to drop off. Since there is no dead layer between C3b and C4a (refer to Figure 4), 55.5 MeV would be the first iteration endpoint energy.

Note also that detector and dead layer boundaries are flagged with the element name or an 'X' for dead layers.

For comparison TESTM output is included for protons and all helium-4 modes. See the computer printout in the book ISEE-3 CALIBRATION: I3 for complete TESTM listings in this mode of operation of the program.

```
 I  ISEE  HET1  CALIB (ENTERED 2/9/81)  MODIFIED FROM [200,105]IH1LOZ.DET
C       PEN OFFSETS SET TO 2.3; FMCD PEN FSMEV  C3 THICK ME, SPAC,RADIUS AS VOYAG
C       FILE NAME: ICFSMV.DET
C
C     MODES      GAINS
C        4          2
C
CC
C ELEM    NO. THICK AMP-AST   BST    PEN THRESHOLDS SPACING   RADIUS CURV
          0    16      7      7      7                   0    15960    1
    A1    1   148      1      7      7    .63     .13 68314    15960    1
    A2    2   151      2      7      7    .62     .12  2592    15960    1
    C1    3  2920      3      6      2    2.5      .5     0    17131    1
          0    81      7      7      7                1851    17131    1
    C2    4  2925      4      5      5   4.68     .92   671    17131    1
          0   171      7      7      7                 672    17131    1
    C2    4  2900      4      5      5   4.68     .92  1851    17131    1
    C3    5  2939      5      4      4   4.66     .92   671    17131    1
          0   143      7      7      7                 672    17131    1
    C3    5  2918      5      4      4   4.66     .92  1851    17131    1
    C4    6  2925      6      3      3   4.69     .92   671    17131    1
          0   140      7      7      7                 672    17131    1
    C4    6  2935      6      3      3   4.69     .92  2473    17131    1
          0    68      7      7      7                   0    15960    2
    B2    7  1930      7      2      7   2.13      .3 53607    15960    2
    B1    8  1915      7      1      1   1.02      .3     0    15960    3
          0    84      7      7      7                   0    15960    3
          0    33      7      7      7                   0    15960    1
C
CC
          LOW GAIN                HIGH GAIN
CHANNLS   OFFSET      FSMEV       OFFSET      FSMEV
   4096     0.00       4096.         0.       4096.      AST  A1
   4096     0.00       4096.         0.       4096.      AST  A2
   4096      .00       4096.         .0       4096.      AST  C1
   4096      .00       4096.         0.       4096.      AST  C2
   4096      .00       4096.         0.       4096.      AST  C3
   4096     0.00       4096.        0.0       4096.      PEN & BST B1
   4096      .00       4096.         0.       4096.      BST  B2
   4096     0.00       4096.       0.00       4096.      PEN & BST C4
   4096      .00       4096.         0.       4096.      PEN & BST C3
   4096     0.00       4096.        0.0       4096.      PEN & BST C2
   4096     0.00       4096.       0.00       4096.      PEN  C1
C
CC
                    SLANT 1                        SLANT 2
C   1     2  BOTH   GN   CH1   CH2   CH3    SUM    CH1   CH2   CH3    SUM
  SA1   SA2    SA    1    1.    .6   .375   -39.     1.    .6  5.43  -105.
        SB     SB    2                             1.    1.    1.   -60.
        SB     SB    2                             1.    1.    1.   -60.
```

Z= 2, A= 4.0015 IN SILICON VERSION R PWT= 1.25, PQ= 0.50, A0= 0.009270, I50= 92
FLS= 1.34, CLS= 33.58, CB2= 0.000256, COW= 1931.5
C137= 137., BOZZ= 0.800, TAU0= 0.0401, BOFF=0.00400

I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA	I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA
1	0.000024	0.008025	0.1045	0.684	0.696	109	0.2828	4.53	1.21951	0.002	1.189
3	0.000029	0.008764	0.1101	0.673	0.703	111	0.3364	5.30	1.17690	0.002	1.256
5	0.000035	0.009598	0.1159	0.662	0.708	113	0.4000	6.25	1.12261	0.002	1.323
7	0.000041	0.010541	0.1219	0.649	0.714	115	0.4757	7.45	1.05842	0.001	1.389
9	0.000049	0.011609	0.1281	0.636	0.718	117	0.5657	8.96	0.98676	0.001	1.450
11	0.000058	0.012817	0.1344	0.622	0.723	119	0.6727	10.90	0.91051	0.001	1.504
13	0.000069	0.014187	0.1410	0.607	0.727	121	0.8000	13.41	0.83257	0.001	1.551
15	0.000082	0.015740	0.1478	0.591	0.731	123	0.9514	16.70	0.75542	0.001	1.590
17	0.000098	0.017502	0.1549	0.574	0.735	125	1.1314	21.01	0.68095	0.001	1.623
19	0.000116	0.019504	0.1621	0.557	0.738	127	1.3454	26.72	0.61047	0.001	1.651
21	0.000138	0.021778	0.1696	0.538	0.741	129	1.6000	34.32	0.54478	0.001	1.674
23	0.000164	0.024363	0.1774	0.519	0.743	131	1.9027	44.46	0.48430	0.001	1.693
25	0.000195	0.027304	0.1854	0.498	0.746	133	2.2627	58.05	0.42916	0.001	1.710
27	0.000232	0.030650	0.1938	0.477	0.747	135	2.6909	76.32	0.37927	0.001	1.723
29	0.000276	0.034458	0.2025	0.454	0.748	137	3.2000	100.93	0.33442	0.001	1.735
31	0.000328	0.038793	0.2115	0.430	0.748	139	3.8055	134.15	0.29430	0.001	1.745
33	0.000391	0.043727	0.2210	0.406	0.746	141	4.5255	179.09	0.25855	0.001	1.754
35	0.000465	0.049343	0.2309	0.381	0.743	143	5.3817	239.97	0.22680	0.001	1.762
37	0.000552	0.055732	0.2415	0.355	0.739	145	6.4000	322.56	0.19868	0.001	1.769
39	0.000657	0.062995	0.2527	0.329	0.734	147	7.6109	434.76	0.17384	0.001	1.775
41	0.000781	0.071245	0.2647	0.303	0.727	149	9.0509	587.32	0.15196	0.001	1.780
43	0.000929	0.080605	0.2776	0.277	0.719	151	10.7635	794.98	0.13271	0.001	1.785
45	0.001105	0.091210	0.2916	0.251	0.710	153	12.8000	1077.86	0.11581	0.001	1.789
47	0.001314	0.103207	0.3068	0.226	0.700	155	15.2218	1463.47	0.10101	0.001	1.791
49	0.001562	0.116756	0.3233	0.202	0.690	157	18.1019	1989.36	0.08806	0.001	1.793
51	0.001858	0.132031	0.3413	0.179	0.680	159	21.5269	2706.81	0.07675	0.001	1.793
53	0.002210	0.149223	0.3610	0.158	0.671	161	25.5999	3685.73	0.06689	0.001	1.793
55	0.002628	0.168541	0.3823	0.138	0.663	163	30.4436	5021.32	0.05831	0.001	1.791
57	0.003125	0.190216	0.4054	0.120	0.657	165	36.2038	6843.01	0.05085	0.001	1.787
59	0.003716	0.214510	0.4304	0.104	0.652	167	43.0538	9326.35	0.04438	0.001	1.782
61	0.004419	0.241717	0.4571	0.090	0.651	169	51.1999	12708.88	0.03876	0.001	1.775
63	0.005256	0.272174	0.4856	0.077	0.653	171	60.8873	17310.90	0.03390	0.001	1.766
65	0.006250	0.306276	0.5156	0.066	0.658	173	72.4076	23562.64	0.02970	0.001	1.754
67	0.007433	0.344488	0.5470	0.056	0.665	175	86.1076	32039.26	0.02608	0.001	1.740
69	0.008839	0.387352	0.5796	0.048	0.668	177	102.3998	43505.40	0.02296	0.001	1.723
71	0.010511	0.435470	0.6138	0.041	0.671	179	121.7746	58970.91	0.02027	0.001	1.702
73	0.012500	0.489518	0.6497	0.034	0.675	181	144.8152	79759.32	0.01797	0.001	1.678
75	0.014865	0.550264	0.6872	0.029	0.678	183	172.2152	107589.95	0.01599	0.001	1.650
77	0.017678	0.618573	0.7266	0.025	0.680	185	204.7996	144673.77	0.01431	0.001	1.618
79	0.021022	0.695422	0.7679	0.021	0.682	187	243.5491	193821.70	0.01287	0.001	1.582
81	0.025000	0.781903	0.8114	0.017	0.683	189	289.6303	258562.25	0.01166	0.001	1.542
83	0.029730	0.879247	0.8571	0.015	0.684	191	344.4305	343263.16	0.01063	0.001	1.497
85	0.035355	0.988843	0.9052	0.012	0.687	193	409.5992	453250.75	0.00978	0.000	1.450
87	0.042045	1.112290	0.9554	0.010	0.694	195	487.0982	594919.50	0.00906	0.000	1.399
89	0.050000	1.251467	1.0071	0.009	0.705	197	579.2607	775825.50	0.00848	0.000	1.347
91	0.059460	1.408647	1.0592	0.007	0.723	199	688.8609	1004759.94	0.00800	0.000	1.293
93	0.070711	1.586661	1.1103	0.006	0.749	201	819.1983	1291808.12	0.00762	0.000	1.239
95	0.084089	1.789116	1.1580	0.005	0.784	203	974.1965	1648399.37	0.00733	0.000	1.187
97	0.100000	2.020682	1.2001	0.004	0.827	205	1158.5214	2087371.75	0.00711	0.000	1.137
99	0.118920	2.287464	1.2339	0.004	0.878	207	1377.7218	2623064.00	0.00696	0.000	1.091
101	0.141421	2.597458	1.2571	0.003	0.935	209	1638.3966	3271468.50	0.00686	0.000	1.049
103	0.168179	2.961121	1.2680	0.003	0.996	211	1948.3929	4050493.75	0.00681	0.000	1.012
105	0.200000	3.392248	1.2655	0.002	1.059	213	2317.0427	4980146.50	0.00681	0.000	0.979
107	0.237841	3.908867	1.2493	0.002	1.123	215	2755.4436	6083122.50	0.00682	0.000	1.000

HE4- I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,105]IH1LOZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 7

LOW GAIN
A STOPPING

AXIAL PARTICLES							MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	A1	A2	C1C2C3		GEOMETRY	SEC	E/NUC	A1	A2	C1C2C3
167.	4.39	15.9	0.6	0.0	A2	1.2352	1.1033	4.39	15.9	0.6	0.0
170.	4.44	15.2	1.6	0.0		1.2351	1.1033	4.44	15.2	1.6	0.0
174.	4.49	14.5	2.4	0.0		1.2350	1.1033	4.49	14.5	2.4	0.0
177.	4.55	14.0	3.2	0.0		1.2349	1.1033	4.55	14.0	3.2	0.0
184.	4.65	13.2	4.4	0.0		1.2346	1.1033	4.65	13.2	4.4	0.0
191.	4.76	12.5	5.6	0.0		1.2344	1.1033	4.76	12.5	5.6	0.0
199.	4.88	12.0	6.6	0.0		1.2342	1.1033	4.88	12.0	6.6	0.0
207.	4.99	11.5	7.6	0.0		1.2339	1.1032	4.99	11.5	7.6	0.0
224.	5.22	10.7	9.3	0.0		1.2333	1.1032	5.22	10.7	9.3	0.0
242.	5.47	10.0	11.0	0.0		1.2328	1.1031	5.47	10.0	11.0	0.0
261.	5.72	9.4	12.6	0.0		1.2321	1.1031	5.72	9.4	12.6	0.0
282.	5.98	8.9	14.2	0.0		1.2314	1.1030	5.98	8.9	14.2	0.0
304.	6.26	8.4	15.8	0.0		1.2307	1.1029	6.26	8.4	15.8	0.0
325.	6.50	8.1	14.7	2.5	C1	1.2307	1.1027	6.50	8.1	14.7	2.5
332.	6.58	8.0	13.8	3.8		1.2307	1.1027	6.58	8.0	13.8	3.8
338.	6.65	7.9	13.1	4.9		1.2307	1.1026	6.65	7.9	13.1	4.9
345.	6.73	7.8	12.5	5.9		1.2307	1.1026	6.73	7.8	12.5	5.9
359.	6.89	7.6	11.6	7.6		1.2307	1.1026	6.89	7.6	11.6	7.6
373.	7.05	7.4	10.9	9.2		1.2307	1.1026	7.05	7.4	10.9	9.2
388.	7.21	7.2	10.3	10.6		1.2307	1.1025	7.21	7.2	10.3	10.6
403.	7.37	7.1	9.8	12.0		1.2307	1.1025	7.37	7.1	9.8	12.0
420.	7.54	6.9	9.4	13.3		1.2307	1.1024	7.54	6.9	9.4	13.3
436.	7.72	6.7	9.0	14.5		1.2307	1.1024	7.72	6.7	9.0	14.5
454.	7.89	6.6	8.6	15.7		1.2307	1.1023	7.89	6.6	8.6	15.7
472.	8.07	6.4	8.3	16.9		1.2307	1.1023	8.07	6.4	8.3	16.9
491.	8.26	6.3	8.0	18.1	SA2	1.2307	1.1022	8.26	6.3	8.0	18.1
511.	8.45	6.2	7.7	19.3	SA2	1.2307	1.1022	8.45	6.2	7.7	19.3
531.	8.64	6.0	7.4	20.5	SA2	1.2307	1.1021	8.64	6.0	7.4	20.5
552.	8.84	5.9	7.2	21.6	SA2	1.2307	1.1021	8.84	5.9	7.2	21.6
574.	9.04	5.8	7.0	22.8	SA2	1.2307	1.1020	9.04	5.8	7.0	22.8
597.	9.24	5.7	6.8	24.0	SA2	1.2307	1.1019	9.24	5.7	6.8	24.0
621.	9.45	5.6	6.6	25.1	SA2	1.2307	1.1019	9.45	5.6	6.6	25.1
646.	9.67	5.4	6.4	26.3	SA2	1.2307	1.1018	9.67	5.4	6.4	26.3
672.	9.89	5.3	6.2	27.5	SA2	1.2307	1.1017	9.89	5.3	6.2	27.5
699.	10.11	5.2	6.1	28.7	SA2	1.2307	1.1017	10.11	5.2	6.1	28.7
727.	10.34	5.1	5.9	29.8	SA2	1.2307	1.1016	10.34	5.1	5.9	29.8
756.	10.58	5.0	5.7	31.0	SA2	1.2307	1.1015	10.58	5.0	5.7	31.0
786.	10.82	4.9	5.6	32.3	SA2	1.2307	1.1014	10.82	4.9	5.6	32.3
817.	11.06	4.8	5.5	33.5	SA2	1.2307	1.1013	11.06	4.8	5.5	33.5
850.	11.31	4.7	5.3	34.7	SA2	1.2307	1.1013	11.31	4.7	5.3	34.7
884.	11.57	4.6	5.2	36.0	SA2	1.2307	1.1012	11.57	4.6	5.2	36.0
919.	11.83	4.5	5.1	37.2	SA2	1.2307	1.1011	11.83	4.5	5.1	37.2
956.	12.09	4.5	5.0	38.5	SA2	1.2307	1.1010	12.09	4.5	5.0	38.5
994.	12.37	4.4	4.8	39.8	SA2	1.2307	1.1009	12.37	4.4	4.8	39.8
1034.	12.64	4.3	4.7	41.1	SA2	1.2307	1.1008	12.64	4.3	4.7	41.1
1076.	12.93	4.2	4.6	42.5	SA2	1.2307	1.1007	12.93	4.2	4.6	42.5
1119.	13.22	4.1	4.5	43.8	SA2	1.2307	1.1005	13.22	4.1	4.5	43.8
1163.	13.52	4.0	4.4	45.2	SA2	1.2307	1.1004	13.52	4.0	4.4	45.2
1210.	13.82	4.0	4.3	46.6	SA2	1.2307	1.1003	13.82	4.0	4.3	46.6
1258.	14.13	3.9	4.2	48.0	SA2	1.2307	1.1002	14.13	3.9	4.2	48.0
1309.	14.45	3.8	4.1	49.5	SA2	1.2307	1.1000	14.45	3.8	4.1	49.5
1361.	14.77	3.8	4.0	50.9	SA2	1.2307	1.0999	14.77	3.8	4.0	50.9
1415.	15.11	3.7	4.0	52.4	SA2	1.2307	1.0997	15.11	3.7	4.0	52.4
1472.	15.44	3.6	3.9	53.9	SA2	1.2307	1.0996	15.44	3.6	3.9	53.9
1531.	15.79	3.5	3.8	55.5	SA2	1.2307	1.0994	15.79	3.5	3.8	55.5
1592.	16.14	3.5	3.7	57.0	SA2	1.2307	1.0993	16.14	3.5	3.7	57.0
1656.	16.51	3.4	3.6	58.6	SA2	1.2307	1.0991	16.51	3.4	3.6	58.6
1722.	16.88	3.4	3.6	60.2	SA2	1.2307	1.0989	16.88	3.4	3.6	60.2
1791.	17.25	3.3	3.5	61.9	SA2	1.2307	1.0988	17.25	3.3	3.5	61.9
1863.	17.64	3.2	3.4	63.6	SA2	1.2307	1.0986	17.64	3.2	3.4	63.6
1937.	18.03	3.2	3.4	65.3	SA2	1.2307	1.0984	18.03	3.2	3.4	65.3

RECORD
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LOW GAIN
B STOPPING

AXIAL PARTICLES							MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	B1	B2	C4C3C2		GEOMETRY	SEC	E/NUC	B1	B2	C4C3C2
2040.	18.57	69.7	2.2	0.0	B2 SB	1.7913	1.1534	18.57	69.7	2.2	0.0
2081.	18.78	64.5	8.2	0.0	SB	1.7890	1.1532	18.78	64.5	8.2	0.0
2123.	18.99	61.4	12.1	0.0	SB	1.7867	1.1530	18.99	61.4	12.1	0.0
2165.	19.20	59.1	15.3	0.0	SB	1.7843	1.1528	19.20	59.1	15.3	0.0
2209.	19.41	57.2	18.2	0.0	SB	1.7819	1.1526	19.41	57.2	18.2	0.0
2253.	19.63	55.5	20.7	0.0	SB	1.7795	1.1523	19.63	55.5	20.7	0.0
2298.	19.85	54.0	23.1	0.0	SB	1.7770	1.1521	19.85	54.0	23.1	0.0
2344.	20.07	52.7	25.4	0.0	SB	1.7744	1.1519	20.07	52.7	25.4	0.0
2391.	20.30	51.4	27.6	0.0	SB	1.7719	1.1516	20.30	51.4	27.6	0.0
2438.	20.53	50.3	29.6	0.0	SB	1.7692	1.1514	20.53	50.3	29.6	0.0
2487.	20.76	49.2	31.6	0.0	SB	1.7665	1.1512	20.76	49.2	31.6	0.0
2537.	20.99	48.2	33.6	0.0	SB	1.7638	1.1509	20.99	48.2	33.6	0.0
2588.	21.22	47.3	35.5	0.0	SB	1.7610	1.1507	21.22	47.3	35.5	0.0
2639.	21.46	46.4	37.3	0.0	SB	1.7582	1.1504	21.46	46.4	37.3	0.0
2692.	21.70	45.5	39.2	0.0	SB	1.7554	1.1501	21.70	45.5	39.2	0.0
2746.	21.94	44.7	41.0	0.0	SB	1.7524	1.1499	21.94	44.7	41.0	0.0
2801.	22.19	43.9	42.7	0.0	SB	1.7495	1.1496	22.19	43.9	42.7	0.0
2857.	22.44	43.2	44.5	0.0	SB	1.7464	1.1493	22.44	43.2	44.5	0.0
2914.	22.69	42.5	46.2	0.0	SB	1.7434	1.1490	22.69	42.5	46.2	0.0
2972.	22.94	41.8	47.9	0.0	SB	1.7402	1.1487	22.94	41.8	47.9	0.0
3032.	23.20	41.2	49.6	0.0	SB	1.7370	1.1484	23.20	41.2	49.6	0.0
3093.	23.46	40.5	51.3	0.0	SB	1.7338	1.1481	23.46	40.5	51.3	0.0
3154.	23.72	39.9	53.0	0.0	SB	1.7305	1.1478	23.72	39.9	53.0	0.0
3217.	23.99	39.3	54.7	0.0	SB	1.7271	1.1475	23.99	39.3	54.7	0.0
3282.	24.25	38.8	56.3	0.0	SB	1.7237	1.1472	24.25	38.8	56.3	0.0
3347.	24.53	38.2	58.0	0.0	SB	1.7203	1.1469	24.53	38.2	58.0	0.0

3414.	24.80	37.7	59.6	0.0		SB	1.7167	1.1466	24.80	37.7	59.6	0.0
3483.	25.08	37.1	61.3	0.0		SB	1.7131	1.1463	25.08	37.1	61.3	0.0
3552.	25.36	36.6	62.9	0.0		SP	1.7095	1.1459	25.36	36.6	62.9	0.0
3623.	25.64	36.1	64.6	0.0		SB	1.7058	1.1456	25.64	36.1	64.6	0.0
3696.	25.93	35.7	66.2	0.0		SP	1.7020	1.1452	25.93	35.7	66.2	0.0
3770.	26.22	35.2	67.9	0.0		SP	1.6982	1.1449	26.22	35.2	67.9	0.0
3845.	26.51	34.7	69.5	0.0		SP	1.6943	1.1445	26.51	34.7	69.5	0.0
3922.	26.80	34.3	71.2	0.0		SP	1.6903	1.1442	26.80	34.3	71.2	0.0
3962.	26.96	34.1	72.0	0.0	XX	SF	1.6883	1.1440	26.96	34.1	72.0	0.0
3993.	27.07	33.9	66.6	0.0		SB	1.6867	1.1438	27.07	33.9	66.6	0.0
4023.	27.19	33.7	63.8	0.0		SP	1.6851	1.1437	27.19	33.7	63.8	0.0
4052.	27.30	33.6	61.8	4.8	C4	SB	1.6851	1.1419	27.30	33.6	61.8	4.8
4133.	27.60	33.2	57.7	13.1		SP	1.6851	1.1416	27.60	33.2	57.7	13.1
4216.	27.91	32.7	54.7	18.7		SB	1.6851	1.1412	27.91	32.7	54.7	18.7
4300.	28.22	32.3	52.2	23.4		SB	1.6851	1.1408	28.22	32.3	52.2	23.4
4386.	28.54	31.9	50.2	27.4		SB	1.6851	1.1405	28.54	31.9	50.2	27.4
4474.	28.86	31.6	48.4	31.2		SP	1.6851	1.1401	28.86	31.6	48.4	31.2
4563.	29.18	31.2	46.8	34.7		SP	1.6851	1.1397	29.18	31.2	46.8	34.7
4655.	29.50	30.6	45.3	37.9		SB	1.6851	1.1393	29.50	30.8	45.3	37.9
4748.	29.83	30.5	44.0	41.1		SB	1.6851	1.1389	29.83	30.5	44.0	41.1
4843.	30.16	30.1	42.8	44.1		SB	1.6851	1.1385	30.16	30.1	42.8	44.1
4939.	30.50	29.7	41.7	47.0		SB	1.6851	1.1381	30.50	29.7	41.7	47.0
5038.	30.84	29.4	40.6	49.9		SB	1.6851	1.1377	30.84	29.4	40.6	49.9
5139.	31.18	29.1	39.7	52.6		SB	1.6851	1.1372	31.18	29.1	39.7	52.6
5242.	31.53	28.7	38.8	55.4		SP	1.6851	1.1368	31.53	28.7	38.8	55.4
5347.	31.88	28.4	37.9	58.0		SB	1.6851	1.1364	31.88	28.4	37.9	58.0
5454.	32.24	28.1	37.1	60.6		SP	1.6851	1.1359	32.24	28.1	37.1	60.6
5563.	32.60	27.8	36.3	63.2		SB	1.6851	1.1355	32.60	27.8	36.3	63.2
5674.	32.96	27.5	35.6	65.8		SB	1.6851	1.1350	32.96	27.5	35.6	65.8
5787.	33.33	27.2	34.9	68.3		SB	1.6851	1.1345	33.33	27.2	34.9	68.3
5903.	33.70	26.9	34.2	70.8		SP	1.6851	1.1341	33.70	26.9	34.2	70.8
6021.	34.08	26.6	33.6	73.3		SP	1.6851	1.1336	34.08	26.6	33.6	73.3
6142.	34.46	26.3	33.0	75.7		SP	1.6813	1.1331	34.46	26.3	33.0	75.7
6264.	34.84	26.0	32.4	78.2		SB	1.6755	1.1326	34.84	26.0	32.4	78.2
6390.	35.23	25.7	31.8	80.6		SB	1.6695	1.1321	35.23	25.7	31.8	80.6
6517.	35.62	25.5	31.3	83.1		SB	1.6635	1.1316	35.62	25.5	31.3	83.1
6648.	36.02	25.2	30.8	85.5		SB	1.6574	1.1311	36.02	25.2	30.8	85.5
6781.	36.42	24.9	30.3	87.9		SB	1.6512	1.1306	36.42	24.9	30.3	87.9
6916.	36.83	24.7	29.8	90.3		SP	1.6449	1.1300	36.83	24.7	29.8	90.3
6965.	36.97	24.6	29.6	91.2	XX	SB	1.6120	1.1273	36.97	24.6	29.6	91.2
7013.	37.11	24.5	29.5	83.9		SB	1.6099	1.1271	37.11	24.5	29.5	83.9
7060.	37.25	24.4	29.3	80.3		SB	1.6077	1.1269	37.25	24.4	29.3	80.3
7105.	37.39	24.3	29.2	77.8	XX	SB	1.5761	1.1242	37.39	24.3	29.2	77.8
7247.	37.80	24.1	28.7	88.0		SB	1.5700	1.1237	37.80	24.1	28.7	88.0
7392.	38.22	23.8	28.3	92.1		SB	1.5637	1.1232	38.22	23.8	28.3	92.1
7540.	38.65	23.6	27.9	95.4		SB	1.5574	1.1227	38.65	23.6	27.9	95.4
7691.	39.08	23.3	27.4	98.4		SP	1.5509	1.1221	39.08	23.3	27.4	98.4
7844.	39.52	23.1	27.0	101.3		SP	1.5444	1.1216	39.52	23.1	27.0	101.3
8001.	39.96	22.9	26.7	104.0		SP	1.5378	1.1210	39.96	22.9	26.7	104.0
8161.	40.40	22.6	26.3	106.7		SB	1.5311	1.1205	40.40	22.6	26.3	106.7
8325.	40.85	22.4	25.9	109.3		SB	1.5243	1.1199	40.85	22.4	25.9	109.3
8491.	41.31	22.2	25.6	111.9		SB	1.5174	1.1193	41.31	22.2	25.6	111.9
8661.	41.77	22.0	25.2	114.5		SB	1.5105	1.1188	41.77	22.0	25.2	114.5
8834.	42.23	21.7	24.9	117.1		SB	1.5034	1.1182	42.23	21.7	24.9	117.1
9011.	42.70	21.5	24.5	119.7		SP	1.4962	1.1176	42.70	21.5	24.5	119.7
9191.	43.18	21.3	24.2	122.3		SP	1.4890	1.1170	43.18	21.3	24.2	122.3
9375.	43.66	21.1	23.9	124.9		SB	1.4816	1.1164	43.66	21.1	23.9	124.9
9562.	44.15	20.9	23.6	127.4		SB	1.4742	1.1157	44.15	20.9	23.6	127.4
9754.	44.64	20.7	23.3	130.0		SB	1.4667	1.1151	44.64	20.7	23.3	130.0

C3
C2
C1

HE4- I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,105]IH1LOZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 262

LOW GAIN
A PENETRATING

AXIAL PARTICLES							MAXIMALLY INCLINED PARTICLES					
RANGE	E/NUC	B1	C1	C4C3C2			GEOMETRY	SEC	E/NUC	B1	C1	C4C3C2
23314.	72.78	1.0	21.2	189.0	B1	SB	0.8783	1.0674	72.78	1.0	21.2	189.0
23514.	73.13	19.8	21.2	186.5		SB	0.8746	1.0671	73.13	19.8	21.2	186.5
23714.	73.48	29.5	21.1	184.1		SB	0.8709	1.0668	73.48	29.5	21.1	184.1
23914.	73.83	37.2	21.0	181.9		SB	0.8673	1.0665	73.83	37.2	21.0	181.9
24114.	74.18	43.8	20.9	179.8		SB	0.8636	1.0662	74.18	43.8	20.9	179.8
24314.	74.53	49.8	20.8	177.8		SB	0.8600	1.0659	74.53	49.8	20.8	177.8
24514.	74.87	55.2	20.8	175.9		SB	0.8564	1.0656	74.87	55.2	20.8	175.9
24714.	75.21	60.2	20.7	174.1		SB	0.8529	1.0654	75.21	60.2	20.7	174.1
24914.	75.56	64.9	20.6	172.4		SB	0.8493	1.0651	75.56	64.9	20.6	172.4
25114.	75.90	69.3	20.5	170.7		SB	0.8458	1.0648	75.90	69.3	20.5	170.7
25225.	76.09	71.7	20.5	169.8	XX	SB	0.8438	1.0647	76.09	71.7	20.5	169.8
25255.	76.14	66.4	20.5	169.6		SB	0.8438	1.0647	76.14	66.4	20.5	169.6
25285.	76.19	63.6	20.5	169.4		SB	0.8438	1.0647	76.19	63.6	20.5	169.4
25309.	76.23	61.9	20.5	169.2	XX	SB	0.8438	1.0647	76.23	61.9	20.5	169.2
25339.	76.28	60.1	20.4	168.9		SB	0.8438	1.0647	76.28	60.1	20.4	168.9
25342.	76.28	59.9	20.4	168.9	XX	SB	0.8438	1.0647	76.28	59.9	20.4	168.9
25542.	76.62	52.6	20.4	167.4		SB	0.8438	1.0647	76.62	52.6	20.4	167.4
25742.	76.95	48.1	20.3	166.0		SB	0.8438	1.0647	76.95	48.1	20.3	166.0
25942.	77.28	44.8	20.2	164.6		SB	0.8438	1.0647	77.28	44.8	20.2	164.6
26142.	77.61	42.3	20.2	163.2		SB	0.8438	1.0647	77.61	42.3	20.2	163.2
26342.	77.93	40.2	20.1	161.9		SB	0.8438	1.0647	77.93	40.2	20.1	161.9
26542.	78.26	38.4	20.0	160.7		SB	0.8438	1.0647	78.26	38.4	20.0	160.7
26742.	78.59	36.9	20.0	159.5		SB	0.8438	1.0647	78.59	36.9	20.0	159.5
26942.	78.91	35.5	19.9	158.3		SB	0.8438	1.0647	78.91	35.5	19.9	158.3
27142.	79.23	34.3	19.8	157.1		SB	0.8438	1.0647	79.23	34.3	19.8	157.1
27342.	79.56	33.3	19.8	156.0		SB	0.8438	1.0647	79.56	33.3	19.8	156.0
27542.	79.88	32.3	19.7	154.9		SB	0.8438	1.0647	79.88	32.3	19.7	154.9
27742.	80.20	31.4	19.6	153.9		SB	0.8438	1.0647	80.20	31.4	19.6	153.9
27942.	80.52	30.6	19.6	152.8		SB	0.8438	1.0647	80.52	30.6	19.6	152.8
28142.	80.84	29.9	19.5	151.8		SB	0.8438	1.0647	80.84	29.9	19.5	151.8
28342.	81.16	29.2	19.4	150.8		SB	0.8438	1.0647	81.16	29.2	19.4	150.8
29476.	82.94	26.2	19.1	145.7		SB	0.8438	1.0647	82.94	26.2	19.1	145.7
30655.	84.77	23.9	18.8	141.0		SB	0.8438	1.0647	84.77	23.9	18.8	141.0
31881.	86.64	22.1	18.5	136.7		SB	0.8438	1.0647	86.64	22.1	18.5	136.7
33156.	88.55	20.6	18.1	132.7		SB	0.8438	1.0647	88.55	20.6	18.1	132.7
34482.	90.50	19.4	17.8	128.9		SB	0.8438	1.0647	90.50	19.4	17.8	128.9
35862.	92.51	18.4	17.5	125.4		SB	0.8438	1.0647	92.51	18.4	17.5	125.4
37296.	94.56	17.5	17.2	122.0		SB	0.8438	1.0647	94.56	17.5	17.2	122.0
38788.	96.65	16.6	17.0	118.9		SB	0.8438	1.0647	96.65	16.6	17.0	118.9
40340.	98.80	15.9	16.7	115.9		SB	0.8438	1.0647	98.80	15.9	16.7	115.9
41953.	101.00	15.3	16.4	113.1		SB	0.8438	1.0647	101.00	15.3	16.4	113.1
43631.	103.24	14.7	16.1	110.4		SB	0.8438	1.0647	103.24	14.7	16.1	110.4
45376.	105.54	14.2	15.8	107.8		SB	0.8438	1.0647	105.54	14.2	15.8	107.8
47192.	107.90	13.7	15.6	105.4		SB	0.8438	1.0647	107.90	13.7	15.6	105.4
49079.	110.31	13.2	15.3	103.0		SB	0.8438	1.0647	110.31	13.2	15.3	103.0
51042.	112.78	12.8	15.1	100.8		SB	0.8438	1.0647	112.78	12.8	15.1	100.8
53084.	115.30	12.4	14.8	98.6		SB	0.8438	1.0647	115.30	12.4	14.8	98.6
55207.	117.89	12.0	14.6	96.5		SB	0.8438	1.0647	117.89	12.0	14.6	96.5
57416.	120.53	11.7	14.4	94.5		SB	0.8438	1.0647	120.53	11.7	14.4	94.5
59712.	123.24	11.4	14.1	92.5		SB	0.8438	1.0647	123.24	11.4	14.1	92.5
62101.	126.02	11.1	13.9	90.7		SB	0.8438	1.0647	126.02	11.1	13.9	90.7
64585.	128.86	10.8	13.7	88.9		SB	0.8438	1.0647	128.86	10.8	13.7	88.9
67168.	131.76	10.5	13.5	87.1		SB	0.8438	1.0647	131.76	10.5	13.5	87.1
69855.	134.74	10.2	13.2	85.4		SB	0.8438	1.0647	134.74	10.2	13.2	85.4
72649.	137.79	10.0	13.0	83.8		SB	0.8438	1.0647	137.79	10.0	13.0	83.8
75555.	140.91	9.8	12.8	82.2		SB	0.8438	1.0647	140.91	9.8	12.8	82.2
81600.	147.26	9.3	12.4	79.2		SB	0.8438	1.0647	147.26	9.3	12.4	79.2
88128.	153.91	8.9	12.1	76.4		SB	0.8438	1.0647	153.91	8.9	12.1	76.4
95178.	160.88	8.6	11.7	73.8		SB	0.8438	1.0647	160.88	8.6	11.7	73.8

102792.	168.19	8.2	11.4	71.3	SB	0.8438	1.0647	168.19	8.2	11.4	71.3
111015.	175.85	7.9	11.0	68.9	SB	0.8438	1.0647	175.85	7.9	11.0	68.9
119897.	183.89	7.6	10.7	66.7	SB	0.8438	1.0647	183.89	7.6	10.7	66.7
129488.	192.33	7.3	10.4	64.5	SB	0.8438	1.0647	192.33	7.3	10.4	64.5
139847.	201.18	7.1	10.1	62.5	SB	0.8438	1.0647	201.18	7.1	10.1	62.5
151035.	210.47	6.8	9.8	60.6	SB	0.8438	1.0647	210.47	6.8	9.8	60.6
163118.	220.23	6.6	9.5	58.7	SB	0.8438	1.0647	220.23	6.6	9.5	58.7
176167.	230.48	6.4	9.3	57.0	SB	0.8438	1.0647	230.48	6.4	9.3	57.0
190261.	241.25	6.2	9.0	55.3	SB	0.8438	1.0647	241.25	6.2	9.0	55.3
205482.	252.57	6.0	8.8	53.7	SB	0.8438	1.0647	252.57	6.0	8.8	53.7
221920.	264.48	5.8	8.5	52.2	SB	0.8438	1.0647	264.48	5.8	8.5	52.2
239674.	277.00	5.6	8.3	50.8	SB	0.8438	1.0647	277.00	5.6	8.3	50.8
258848.	290.17	5.5	8.1	49.4	SB	0.8438	1.0647	290.17	5.5	8.1	49.4
279555.	304.03	5.3	7.9	48.1	SB	0.8438	1.0647	304.03	5.3	7.9	48.1
301920.	318.63	5.2	7.7	46.8		0.8438	1.0647	318.63	5.2	7.7	46.8
326073.	334.02	5.0	7.5	45.6		0.8438	1.0647	334.02	5.0	7.5	45.6
352159.	350.23	4.9	7.3	44.5		0.8438	1.0647	350.23	4.9	7.3	44.5
380332.	367.32	4.8	7.2	43.4		0.8438	1.0647	367.32	4.8	7.2	43.4
410759.	385.36	4.7	7.0	42.3		0.8438	1.0647	385.36	4.7	7.0	42.3
443619.	404.39	4.6	6.8	41.4		0.8438	1.0647	404.39	4.6	6.8	41.4
514598.	444.16	4.4	6.5	39.6		0.8438	1.0647	444.16	4.4	6.5	39.6
596934.	488.43	4.2	6.3	38.0		0.8438	1.0647	488.43	4.2	6.3	38.0
692444.	537.80	4.0	6.1	36.5		0.8438	1.0647	537.80	4.0	6.1	36.5
803235.	592.98	3.9	5.8	35.2		0.8438	1.0647	592.98	3.9	5.8	35.2
931752.	654.82	3.7	5.6	34.0		0.8438	1.0647	654.82	3.7	5.6	34.0
1080832.	724.27	3.6	5.5	32.9		0.8438	1.0647	724.27	3.6	5.5	32.9
1253766.	802.49	3.5	5.3	32.0		0.8438	1.0647	802.49	3.5	5.3	32.0
1454971.	977.22	3.3	5.1	30.6		0.8438	1.0647	977.22	3.3	5.1	30.6
2184561.	1198.87	3.2	4.9	29.5		0.8438	1.0647	1198.87	3.2	4.9	29.5
2883621.	1483.12	3.1	4.8	28.8		0.8438	1.0647	1483.12	3.1	4.8	28.8
3806379.	1851.66	3.1	4.7	28.5		0.8438	1.0647	1851.66	3.1	4.7	28.5
5024421.	2334.80	3.1	4.7	28.4		0.8438	1.0647	2334.80	3.1	4.7	28.4
5189246.	2400.20	3.1	4.7	28.4	XX	0.8438	1.0647	2400.20	3.1	4.7	28.4

RECORD 354

LOW GAIN
B PENETRATING

AXIAL PARTICLES							GEOMETRY	MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	B1	C1	C4C3C2				SEC	E/NUC	B1	C1	C4C3C2
22117.	70.66	14.1	2.5	234.7	C1	SB	0.8972	1.0689	70.66	14.1	2.5	234.7
22317.	71.01	14.0	20.1	224.2		SB	0.8933	1.0686	71.01	14.0	20.1	224.2
22517.	71.37	14.0	29.8	217.2		SB	0.8895	1.0683	71.37	14.0	29.8	217.2
22717.	71.73	13.9	37.4	211.6		SB	0.8858	1.0680	71.73	13.9	37.4	211.6
22917.	72.08	13.8	44.0	207.0		SB	0.8820	1.0677	72.08	13.8	44.0	207.0
23117.	72.44	13.8	49.9	202.9		SB	0.8783	1.0674	72.44	13.8	49.9	202.9
23317.	72.79	13.7	55.3	199.3		SB	0.8746	1.0671	72.79	13.7	55.3	199.3
23517.	73.14	13.7	60.3	196.0		SB	0.8709	1.0668	73.14	13.7	60.3	196.0
23717.	73.49	13.6	65.0	193.0		SB	0.8673	1.0665	73.49	13.6	65.0	193.0
23917.	73.84	13.6	69.4	190.2		SB	0.8636	1.0662	73.84	13.6	69.4	190.2
24117.	74.18	13.5	73.7	187.7		SB	0.8600	1.0659	74.18	13.5	73.7	187.7
24317.	74.53	13.5	77.7	185.2		SB	0.8564	1.0656	74.53	13.5	77.7	185.2
24517.	74.87	13.4	81.6	183.0		SB	0.8529	1.0654	74.87	13.4	81.6	183.0
24717.	75.22	13.4	85.3	180.8		SB	0.8493	1.0651	75.22	13.4	85.3	180.8
24917.	75.56	13.3	89.0	178.8		SB	0.8458	1.0648	75.56	13.3	89.0	178.8
25027.	75.75	13.3	90.9	177.7	XX	SB	0.8438	1.0647	75.75	13.3	90.9	177.7
25078.	75.84	13.3	83.3	177.2		SB	0.8438	1.0647	75.84	13.3	83.3	177.2
25130.	75.92	13.3	79.6	176.7		SB	0.8438	1.0647	75.92	13.3	79.6	176.7
25178.	76.01	13.3	77.0	176.2	XX	SB	0.8438	1.0647	76.01	13.3	77.0	176.2
25228.	76.09	13.3	74.7	175.8		SB	0.8438	1.0647	76.09	13.3	74.7	175.8
25279.	76.18	13.3	72.8	175.3		SB	0.8438	1.0647	76.18	13.3	72.8	175.3
25326.	76.26	13.2	71.2	174.9	XX	SB	0.8438	1.0647	76.26	13.2	71.2	174.9
25342.	76.28	13.2	70.7	174.7	XX	SB	0.8438	1.0647	76.28	13.2	70.7	174.7
25542.	76.62	13.2	65.7	173.0		SB	0.8438	1.0647	76.62	13.2	65.7	173.0
25742.	76.95	13.2	61.9	171.4		SB	0.8438	1.0647	76.95	13.2	61.9	171.4
25942.	77.28	13.1	58.9	169.8		SB	0.8438	1.0647	77.28	13.1	58.9	169.8
26142.	77.61	13.1	56.4	168.2		SB	0.8438	1.0647	77.61	13.1	56.4	168.2
26342.	77.93	13.0	54.2	166.8		SB	0.8438	1.0647	77.93	13.0	54.2	166.8
26542.	78.26	13.0	52.3	165.4		SB	0.8438	1.0647	78.26	13.0	52.3	165.4
26742.	78.59	12.9	50.6	164.0		SB	0.8438	1.0647	78.59	12.9	50.6	164.0
26942.	78.91	12.9	49.1	162.7		SB	0.8438	1.0647	78.91	12.9	49.1	162.7
27142.	79.23	12.9	47.8	161.4		SB	0.8438	1.0647	79.23	12.9	47.8	161.4
27342.	79.56	12.8	46.5	160.1		SB	0.8438	1.0647	79.56	12.8	46.5	160.1
27542.	79.88	12.8	45.4	158.9		SB	0.8438	1.0647	79.88	12.8	45.4	158.9
27742.	80.20	12.7	44.4	157.8		SB	0.8438	1.0647	80.20	12.7	44.4	157.8
27942.	80.52	12.7	43.4	156.6		SB	0.8438	1.0647	80.52	12.7	43.4	156.6
28142.	80.84	12.7	42.5	155.5		SB	0.8438	1.0647	80.84	12.7	42.5	155.5
28342.	81.16	12.6	41.7	154.4		SB	0.8438	1.0647	81.16	12.6	41.7	154.4
28542.	81.47	12.6	40.9	153.4		SB	0.8438	1.0647	81.47	12.6	40.9	153.4
29684.	83.27	12.4	37.2	147.9		SB	0.8438	1.0647	83.27	12.4	37.2	147.9
30871.	85.10	12.2	34.4	142.9		SB	0.8438	1.0647	85.10	12.2	34.4	142.9
32106.	86.98	12.0	32.1	138.3		SB	0.8438	1.0647	86.98	12.0	32.1	138.3
33390.	88.90	11.8	30.1	134.1		SB	0.8438	1.0647	88.90	11.8	30.1	134.1
34726.	90.86	11.6	28.5	130.2		SB	0.8438	1.0647	90.86	11.6	28.5	130.2
36115.	92.87	11.4	27.1	126.5		SB	0.8438	1.0647	92.87	11.4	27.1	126.5
37559.	94.93	11.2	25.8	123.0		SB	0.8438	1.0647	94.93	11.2	25.8	123.0
39062.	97.03	11.0	24.7	119.8		SB	0.8438	1.0647	97.03	11.0	24.7	119.8
40624.	99.19	10.8	23.7	116.7		SB	0.8438	1.0647	99.19	10.8	23.7	116.7
42249.	101.39	10.6	22.8	113.8		SB	0.8438	1.0647	101.39	10.6	22.8	113.8
43939.	103.65	10.5	21.9	111.0		SB	0.8438	1.0647	103.65	10.5	21.9	111.0
45697.	105.96	10.3	21.2	108.4		SB	0.8438	1.0647	105.96	10.3	21.2	108.4
47525.	108.33	10.1	20.5	105.9		SB	0.8438	1.0647	108.33	10.1	20.5	105.9
49426.	110.75	10.0	19.8	103.5		SB	0.8438	1.0647	110.75	10.0	19.8	103.5
51403.	113.22	9.8	19.2	101.1		SB	0.8438	1.0647	113.22	9.8	19.2	101.1
53459.	115.76	9.6	18.6	98.9		SB	0.8438	1.0647	115.76	9.6	18.6	98.9
55597.	118.36	9.5	18.1	96.8		SB	0.8438	1.0647	118.36	9.5	18.1	96.8
57821.	121.01	9.3	17.6	94.7		SB	0.8438	1.0647	121.01	9.3	17.6	94.7
60134.	123.73	9.2	17.1	92.8		SB	0.8438	1.0647	123.73	9.2	17.1	92.8
62539.	126.52	9.0	16.7	90.9		SB	0.8438	1.0647	126.52	9.0	16.7	90.9
65041.	129.37	8.9	16.2	89.0		SB	0.8438	1.0647	129.37	8.9	16.2	89.0
67642.	132.29	8.8	15.8	87.3		SB	0.8438	1.0647	132.29	8.8	15.8	87.3
70348.	135.28	8.6	15.5	85.6		SB	0.8438	1.0647	135.28	8.6	15.5	85.6
73162.	138.34	8.5	15.1	83.9		SB	0.8438	1.0647	138.34	8.5	15.1	83.9
76088.	141.48	8.4	14.7	82.3		SB	0.8438	1.0647	141.48	8.4	14.7	82.3
79132.	144.69	8.2	14.4	80.7		SB	0.8438	1.0647	144.69	8.2	14.4	80.7

82297.	147.98	8.1	14.1	79.2	SB	0.8438	1.0647	147.98	8.1	14.1	79.2
85589.	151.34	8.0	13.8	77.8	SB	0.8438	1.0647	151.34	8.0	13.8	77.8
89013.	154.79	7.9	13.5	76.4	SB	0.8438	1.0647	154.79	7.9	13.5	76.4
92573.	158.33	7.7	13.2	75.0	SB	0.8438	1.0647	158.33	7.7	13.2	75.0
96276.	161.95	7.6	12.9	73.7	SB	0.8438	1.0647	161.95	7.6	12.9	73.7
100127.	165.65	7.5	12.7	72.4	SB	0.8438	1.0647	165.65	7.5	12.7	72.4
104132.	169.45	7.4	12.4	71.1	SB	0.8438	1.0647	169.45	7.4	12.4	71.1
108297.	173.34	7.3	12.2	69.9	SB	0.8438	1.0647	173.34	7.3	12.2	69.9
116961.	181.26	7.1	11.7	67.6	SB	0.8438	1.0647	181.26	7.1	11.7	67.6
126318.	189.57	6.9	11.3	65.4	SB	0.8438	1.0647	189.57	6.9	11.3	65.4
136424.	198.28	6.7	10.9	63.3	SB	0.8438	1.0647	198.28	6.7	10.9	63.3
147337.	207.43	6.5	10.5	61.3	SB	0.8438	1.0647	207.43	6.5	10.5	61.3
159124.	217.04	6.3	10.2	59.4	SB	0.8438	1.0647	217.04	6.3	10.2	59.4
171854.	227.13	6.1	9.8	57.6	SB	0.8438	1.0647	227.13	6.1	9.8	57.6
185603.	237.73	6.0	9.5	55.9	SB	0.8438	1.0647	237.73	6.0	9.5	55.9
200451.	248.86	5.8	9.2	54.3	SB	0.8438	1.0647	248.86	5.8	9.2	54.3
216487.	260.58	5.6	8.9	52.8	SB	0.8438	1.0647	260.58	5.6	8.9	52.8
233806.	272.89	5.5	8.7	51.3	SB	0.8438	1.0647	272.89	5.5	8.7	51.3
252510.	285.85	5.4	8.4	49.9	SB	0.8438	1.0647	285.85	5.4	8.4	49.9
272711.	299.49	5.2	8.2	48.5	SB	0.8438	1.0647	299.49	5.2	8.2	48.5
294528.	313.85	5.1	8.0	47.3	SB	0.8438	1.0647	313.85	5.1	8.0	47.3
318090.	328.97	5.0	7.8	46.0		0.8438	1.0647	328.97	5.0	7.8	46.0
343538.	344.91	4.8	7.5	44.9		0.8438	1.0647	344.91	4.8	7.5	44.9
371021.	361.72	4.7	7.4	43.8		0.8438	1.0647	361.72	4.7	7.4	43.8
400702.	379.44	4.6	7.2	42.7		0.8438	1.0647	379.44	4.6	7.2	42.7
432758.	398.15	4.5	7.0	41.7		0.8438	1.0647	398.15	4.5	7.0	41.7
467379.	417.89	4.4	6.8	40.7		0.8438	1.0647	417.89	4.4	6.8	40.7
542160.	459.18	4.2	6.5	39.0		0.8438	1.0647	459.18	4.2	6.5	39.0
628905.	505.17	4.1	6.3	37.4		0.8438	1.0647	505.17	4.1	6.3	37.4
729530.	556.49	3.9	6.0	36.0		0.8438	1.0647	556.49	3.9	6.0	36.0
846255.	613.92	3.8	5.8	34.8		0.8438	1.0647	613.92	3.8	5.8	34.8
981656.	678.31	3.7	5.6	33.6		0.8438	1.0647	678.31	3.7	5.6	33.6
1138721.	750.70	3.6	5.4	32.6		0.8438	1.0647	750.70	3.6	5.4	32.6
1320916.	832.32	3.5	5.3	31.7		0.8438	1.0647	832.32	3.5	5.3	31.7
1743609.	1014.89	3.3	5.1	30.4		0.8438	1.0647	1014.89	3.3	5.1	30.4
2301564.	1246.96	3.2	4.9	29.4		0.8438	1.0647	1246.96	3.2	4.9	29.4
3038065.	1545.16	3.1	4.8	28.7		0.8438	1.0647	1545.16	3.1	4.8	28.7
4010246.	1932.62	3.1	4.7	28.4		0.8438	1.0647	1932.62	3.1	4.7	28.4
5189246.	2400.20	3.1	4.7	28.4	XX	0.8438	1.0647	2400.20	3.1	4.7	28.4

Z= 1, A= 1.0073 IN SILICON VERSION R PWT= 1.25, PO= 0.50, BO= 0.005109, I50= 89
FLS= 1.34, CLS= 16.81, CR2= 0.000196, COW= 1118.1
C137= 137., BOZZ= 0.700, TAUO= 0.0122, BOFF=0.00400

I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA	I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA
1	0.000024	0.007397	0.0285	0.318	0.576	109	0.2828	2.83	0.37326	0.001	1.439
3	0.000029	0.008071	0.0307	0.309	0.579	111	0.3364	3.47	0.34543	0.001	1.471
5	0.000035	0.008816	0.0330	0.300	0.581	113	0.4000	4.30	0.31786	0.001	1.506
7	0.000041	0.009640	0.0355	0.290	0.583	115	0.4757	5.38	0.29075	0.001	1.540
9	0.000049	0.010552	0.0382	0.280	0.584	117	0.5657	6.79	0.26440	0.001	1.571
11	0.000058	0.011560	0.0410	0.269	0.585	119	0.6727	8.63	0.23919	0.001	1.598
13	0.000069	0.012676	0.0441	0.259	0.585	121	0.8000	11.06	0.21541	0.001	1.621
15	0.000082	0.013911	0.0474	0.248	0.585	123	0.9514	14.27	0.19325	0.001	1.641
17	0.000098	0.015278	0.0509	0.237	0.585	125	1.1314	18.54	0.17278	0.001	1.659
19	0.000116	0.016790	0.0547	0.226	0.585	127	1.3454	24.22	0.15403	0.001	1.675
21	0.000138	0.018464	0.0588	0.214	0.585	129	1.6000	31.82	0.13694	0.001	1.690
23	0.000164	0.020317	0.0632	0.203	0.584	131	1.9027	41.99	0.12144	0.001	1.703
25	0.000195	0.022367	0.0679	0.192	0.584	133	2.2627	55.64	0.10746	0.001	1.715
27	0.000232	0.024635	0.0730	0.181	0.583	135	2.6909	74.01	0.09489	0.001	1.726
29	0.000276	0.027145	0.0784	0.170	0.583	137	3.2000	98.78	0.08363	0.001	1.736
31	0.000328	0.029921	0.0843	0.159	0.582	139	3.8055	132.23	0.07358	0.001	1.746
33	0.000391	0.032992	0.0906	0.148	0.581	141	4.5255	177.48	0.06464	0.001	1.754
35	0.000465	0.036389	0.0975	0.137	0.581	143	5.3817	238.78	0.05670	0.001	1.762
37	0.000552	0.040145	0.1048	0.126	0.580	145	6.4000	321.95	0.04967	0.001	1.769
39	0.000657	0.044299	0.1127	0.116	0.580	147	7.6109	434.92	0.04346	0.001	1.775
41	0.000781	0.048892	0.1212	0.105	0.579	149	9.0509	588.55	0.03799	0.001	1.780
43	0.000929	0.053970	0.1304	0.096	0.579	151	10.7635	797.66	0.03317	0.001	1.785
45	0.001105	0.059583	0.1403	0.086	0.579	153	12.8000	1082.52	0.02895	0.001	1.789
47	0.001314	0.065790	0.1509	0.077	0.579	155	15.2218	1470.82	0.02525	0.001	1.791
49	0.001562	0.072651	0.1623	0.069	0.580	157	18.1019	2000.39	0.02201	0.001	1.793
51	0.001858	0.080239	0.1745	0.061	0.582	159	21.5269	2722.85	0.01919	0.001	1.793
53	0.002210	0.088631	0.1876	0.054	0.585	161	25.5999	3708.60	0.01672	0.001	1.793
55	0.002628	0.097918	0.2015	0.047	0.590	163	30.4436	5053.51	0.01458	0.001	1.791
57	0.003125	0.108203	0.2163	0.041	0.596	165	36.2038	6887.90	0.01271	0.001	1.787
59	0.003716	0.119603	0.2320	0.036	0.604	167	43.0538	9388.57	0.01109	0.001	1.782
61	0.004419	0.132258	0.2483	0.031	0.615	169	51.1999	12794.69	0.00969	0.001	1.775
63	0.005256	0.146328	0.2653	0.027	0.628	171	60.8873	17428.79	0.00848	0.001	1.766
65	0.006250	0.162006	0.2828	0.023	0.645	173	72.4076	23724.11	0.00743	0.001	1.754
67	0.007433	0.179526	0.3005	0.020	0.662	175	86.1076	32259.81	0.00652	0.001	1.740
69	0.008839	0.199162	0.3185	0.017	0.669	177	102.3998	43805.84	0.00574	0.001	1.723
71	0.010511	0.221205	0.3372	0.015	0.675	179	121.7746	59379.08	0.00507	0.001	1.702
73	0.012500	0.245979	0.3567	0.013	0.681	181	144.8152	80312.26	0.00449	0.001	1.678
75	0.014865	0.273849	0.3768	0.011	0.687	183	172.2152	108336.63	0.00400	0.001	1.650
77	0.017678	0.305237	0.3977	0.009	0.695	185	204.7996	145678.58	0.00358	0.001	1.618
79	0.021022	0.340632	0.4191	0.008	0.706	187	243.5491	195168.50	0.00322	0.001	1.582
81	0.025000	0.380616	0.4407	0.007	0.722	189	289.6303	260359.39	0.00291	0.001	1.542
83	0.029730	0.425896	0.4621	0.006	0.744	191	344.4305	345649.22	0.00266	0.000	1.497
85	0.035355	0.477361	0.4824	0.005	0.776	193	409.5992	456401.41	0.00244	0.000	1.450
87	0.042045	0.536153	0.5007	0.004	0.818	195	487.0982	599054.69	0.00227	0.000	1.399
89	0.050000	0.603778	0.5156	0.004	0.871	197	579.2607	781217.12	0.00212	0.000	1.347
91	0.059460	0.682246	0.5259	0.003	0.935	199	686.8609	1011741.06	0.00200	0.000	1.293
93	0.070711	0.774264	0.5303	0.003	1.007	201	819.1983	1300781.62	0.00191	0.000	1.239
95	0.084089	0.883511	0.5279	0.002	1.084	203	974.1965	1659848.25	0.00183	0.000	1.187
97	0.100000	1.014921	0.5184	0.002	1.162	205	1158.5214	2101866.50	0.00178	0.000	1.137
99	0.118920	1.175133	0.5025	0.002	1.234	207	1377.7218	2641274.50	0.00174	0.000	1.091
101	0.141421	1.372948	0.4812	0.002	1.295	209	1638.3966	3294175.00	0.00172	0.000	1.049
103	0.168179	1.619911	0.4562	0.002	1.343	211	1948.3929	4078601.25	0.00170	0.000	1.012
105	0.200000	1.930994	0.4292	0.002	1.380	213	2317.0427	5014697.50	0.00170	0.000	0.979
107	0.237841	2.325546	0.4013	0.001	1.410	215	2755.4436	6125316.50	0.00171	0.000	1.000

PROT I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,105]IH1LOZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 458

HIGH GAIN
A STOPPING

AXIAL PARTICLES						GEOMETRY	MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	A1	A2	C1C2C3		SEC	E/NUC	A1	A2	C1C2C3
165.	4.39	4.0	0.1	0.0	A2	1.2353	1.1033	4.39	4.0	0.1	0.0
168.	4.44	3.8	0.4	0.0		1.2351	1.1033	4.44	3.8	0.4	0.0
172.	4.49	3.6	0.6	0.0		1.2350	1.1033	4.49	3.6	0.6	0.0
175.	4.55	3.5	0.8	0.0		1.2349	1.1033	4.55	3.5	0.8	0.0
182.	4.65	3.3	1.1	0.0		1.2347	1.1033	4.65	3.3	1.1	0.0
197.	4.86	3.0	1.7	0.0		1.2342	1.1033	4.86	3.0	1.7	0.0
228.	5.30	2.6	2.5	0.0		1.2332	1.1032	5.30	2.6	2.5	0.0
301.	6.23	2.1	4.0	0.0		1.2308	1.1030	6.23	2.1	4.0	0.0
321.	6.46	2.0	3.8	0.5	C1	1.2308	1.1027	6.46	2.0	3.8	0.5
327.	6.53	2.0	3.5	0.9		1.2308	1.1027	6.53	2.0	3.5	0.9
334.	6.61	2.0	3.3	1.2		1.2308	1.1027	6.61	2.0	3.3	1.2
340.	6.68	2.0	3.2	1.4		1.2308	1.1026	6.68	2.0	3.2	1.4
354.	6.84	1.9	2.9	1.9		1.2308	1.1026	6.84	1.9	2.9	1.9
382.	7.15	1.8	2.6	2.6		1.2308	1.1025	7.15	1.8	2.6	2.6
443.	7.78	1.7	2.2	3.8		1.2308	1.1024	7.78	1.7	2.2	3.8
514.	8.48	1.5	1.9	4.9		1.2308	1.1022	8.48	1.5	1.9	4.9
597.	9.23	1.4	1.7	6.0		1.2308	1.1019	9.23	1.4	1.7	6.0
692.	10.04	1.3	1.5	7.1		1.2308	1.1017	10.04	1.3	1.5	7.1
803.	10.93	1.2	1.4	8.3		1.2308	1.1014	10.93	1.2	1.4	8.3
931.	11.89	1.1	1.3	9.5		1.2308	1.1010	11.89	1.1	1.3	9.5
1080.	12.93	1.1	1.2	10.7		1.2308	1.1006	12.93	1.1	1.2	10.7
1253.	14.06	1.0	1.1	12.0		1.2308	1.1002	14.06	1.0	1.1	12.0
1454.	15.29	0.9	1.0	13.4		1.2308	1.0996	15.29	0.9	1.0	13.4
1686.	16.63	0.8	0.9	14.9		1.2308	1.0990	16.63	0.8	0.9	14.9
1956.	18.08	0.8	0.8	16.5		1.2308	1.0983	18.08	0.8	0.8	16.5
2269.	19.65	0.7	0.8	18.2		1.2308	1.0975	19.65	0.7	0.8	18.2
2632.	21.36	0.7	0.7	20.0		1.2308	1.0966	21.36	0.7	0.7	20.0
3053.	23.21	0.6	0.7	22.0		1.2290	1.0956	23.21	0.6	0.7	22.0
3235.	23.98	0.6	0.7	22.8	XX	1.2235	1.0951	23.98	0.6	0.7	22.8
3267.	24.11	0.6	0.7	21.3		1.2225	1.0950	24.11	0.6	0.7	21.3
3299.	24.24	0.6	0.6	20.6		1.2215	1.0950	24.24	0.6	0.6	20.6
3329.	24.37	0.6	0.6	21.0	C2	1.1668	1.0905	24.37	0.6	0.6	21.0
3396.	24.64	0.6	0.6	22.0		1.1649	1.0904	24.64	0.6	0.6	22.0
3464.	24.91	0.6	0.6	22.6		1.1630	1.0902	24.91	0.6	0.6	22.6
3533.	25.19	0.6	0.6	23.0		1.1611	1.0901	25.19	0.6	0.6	23.0
3675.	25.75	0.6	0.6	23.8		1.1572	1.0897	25.75	0.6	0.6	23.8
3969.	26.89	0.6	0.6	25.2		1.1491	1.0891	26.89	0.6	0.6	25.2
4286.	28.07	0.6	0.6	26.5		1.1403	1.0884	28.07	0.6	0.6	26.5
4629.	29.31	0.5	0.6	27.9		1.1311	1.0876	29.31	0.5	0.6	27.9
4999.	30.60	0.5	0.5	29.3		1.1212	1.0868	30.60	0.5	0.5	29.3
5399.	31.94	0.5	0.5	30.7		1.1107	1.0860	31.94	0.5	0.5	30.7
5831.	33.35	0.5	0.5	32.2		1.0994	1.0851	33.35	0.5	0.5	32.2
6241.	34.64	0.5	0.5	33.5	XX	1.0721	1.0829	34.64	0.5	0.5	33.5
6299.	34.82	0.5	0.5	31.4		1.0706	1.0827	34.82	0.5	0.5	31.4
6357.	35.00	0.5	0.5	30.3		1.0692	1.0826	35.00	0.5	0.5	30.3
6412.	35.17	0.5	0.5	29.6	XX	1.0514	1.0812	35.17	0.5	0.5	29.6
6540.	35.56	0.5	0.5	32.1		1.0483	1.0810	35.56	0.5	0.5	32.1
6671.	35.96	0.5	0.5	33.0		1.0452	1.0807	35.96	0.5	0.5	33.0
6804.	36.36	0.4	0.5	33.7		1.0420	1.0804	36.36	0.4	0.5	33.7
7077.	37.16	0.4	0.5	34.8		1.0355	1.0799	37.16	0.4	0.5	34.8
7360.	37.99	0.4	0.4	35.8		1.0289	1.0794	37.99	0.4	0.4	35.8
7654.	38.83	0.4	0.4	36.8		1.0220	1.0788	38.83	0.4	0.4	36.8
7960.	39.69	0.4	0.4	37.8		1.0150	1.0783	39.69	0.4	0.4	37.8
8597.	41.44	0.4	0.4	39.8		1.0005	1.0771	41.44	0.4	0.4	39.8
9285.	43.26	0.4	0.4	41.7		0.9852	1.0759	43.26	0.4	0.4	41.7
9325.	43.37	0.4	0.4	41.9	C3	0.9449	1.0727	43.37	0.4	0.4	41.9
9512.	43.85	0.4	0.4	42.4		0.9411	1.0724	43.85	0.4	0.4	42.4
9702.	44.34	0.4	0.4	42.9		0.9372	1.0721	44.34	0.4	0.4	42.9
9896.	44.84	0.4	0.4	43.4		0.9332	1.0717	44.84	0.4	0.4	43.4

534
RECORD
XX
XX
C4

HIGH GAIN
B STOPPING

AXIAL PARTICLES

RANGE	E/NUC	B1	B2	C4C3C2	
2035.	18.48	17.7	0.3	0.0	B2
2076.	18.69	16.2	2.0	0.0	
2117.	18.90	15.5	3.0	0.0	
2160.	19.11	14.9	3.8	0.0	
2246.	19.54	14.0	5.1	0.0	
2336.	19.97	13.2	6.3	0.0	
2429.	20.42	12.6	7.4	0.0	
2526.	20.87	12.1	8.3	0.0	
2728.	21.79	11.3	10.2	0.0	
2947.	22.75	10.6	11.9	0.0	
3183.	23.76	9.9	13.5	0.0	
3437.	24.81	9.4	15.1	0.0	
3712.	25.90	8.9	16.7	0.0	
3962.	26.86	8.5	18.1	0.0	XX
3992.	26.98	8.5	16.7	0.0	
4022.	27.09	8.5	16.0	0.0	
4043.	27.17	8.4	15.6	0.9	C4
4124.	27.47	8.3	14.5	3.2	
4207.	27.78	8.2	13.8	4.6	
4291.	28.09	8.1	13.1	5.8	
4377.	28.40	8.0	12.6	6.8	
4464.	28.72	7.9	12.2	7.7	
4643.	29.36	7.7	11.4	9.4	
4829.	30.01	7.6	10.8	11.0	
5022.	30.67	7.4	10.2	12.4	
5223.	31.36	7.2	9.8	13.8	
5431.	32.05	7.1	9.3	15.1	
5649.	32.76	6.9	9.0	16.4	
5875.	33.49	6.8	8.6	17.6	
6110.	34.23	6.6	8.3	18.8	
6354.	34.99	6.5	8.0	20.1	
6608.	35.77	6.3	7.8	21.3	
6873.	36.56	6.2	7.5	22.5	
6965.	36.84	6.2	7.4	22.9	XX
7013.	36.98	6.1	7.4	21.0	
7060.	37.12	6.1	7.3	20.1	
7105.	37.25	6.1	7.3	19.5	XX
7247.	37.66	6.0	7.2	22.1	
7392.	38.08	6.0	7.1	23.1	
7540.	38.51	5.9	7.0	23.9	
7841.	39.36	5.8	6.8	25.4	
8155.	40.23	5.7	6.6	26.7	
8481.	41.13	5.6	6.4	28.0	
8821.	42.04	5.5	6.2	29.3	
9173.	42.97	5.3	6.1	30.6	
9540.	43.93	5.2	5.9	31.9	
9922.	44.90	5.1	5.8	33.2	

MAXIMALLY INCLINED PARTICLES

GEOMETRY	SEC	E/NUC	B1	B2	C4C3C2
1.7916	1.1535	18.48	17.7	0.3	0.0
1.7893	1.1533	18.69	16.2	2.0	0.0
1.7870	1.1530	18.90	15.5	3.0	0.0
1.7846	1.1528	19.11	14.9	3.8	0.0
1.7798	1.1524	19.54	14.0	5.1	0.0
1.7749	1.1519	19.97	13.2	6.3	0.0
1.7697	1.1515	20.42	12.6	7.4	0.0
1.7644	1.1510	20.87	12.1	8.3	0.0
1.7534	1.1499	21.79	11.3	10.2	0.0
1.7416	1.1489	22.75	10.6	11.9	0.0
1.7290	1.1477	23.76	9.9	13.5	0.0
1.7155	1.1465	24.81	9.4	15.1	0.0
1.7012	1.1452	25.90	8.9	16.7	0.0
1.6883	1.1440	26.86	8.5	18.1	0.0
1.6867	1.1438	26.98	8.5	16.7	0.0
1.6852	1.1437	27.09	8.5	16.0	0.0
1.6852	1.1420	27.17	8.4	15.6	0.9
1.6852	1.1416	27.47	8.3	14.5	3.2
1.6852	1.1413	27.78	8.2	13.8	4.6
1.6852	1.1409	28.09	8.1	13.1	5.8
1.6852	1.1405	28.40	8.0	12.6	6.8
1.6852	1.1401	28.72	7.9	12.2	7.7
1.6852	1.1394	29.36	7.7	11.4	9.4
1.6852	1.1386	30.01	7.6	10.8	11.0
1.6852	1.1377	30.67	7.4	10.2	12.4
1.6852	1.1369	31.36	7.2	9.8	13.8
1.6852	1.1360	32.05	7.1	9.3	15.1
1.6852	1.1351	32.76	6.9	9.0	16.4
1.6852	1.1342	33.49	6.8	8.6	17.6
1.6829	1.1332	34.23	6.6	8.3	18.8
1.6712	1.1322	34.99	6.5	8.0	20.1
1.6593	1.1312	35.77	6.3	7.8	21.3
1.6469	1.1302	36.56	6.2	7.5	22.5
1.6120	1.1273	36.84	6.2	7.4	22.9
1.6099	1.1271	36.98	6.1	7.4	21.0
1.6077	1.1269	37.12	6.1	7.3	20.1
1.5761	1.1242	37.25	6.1	7.3	19.5
1.5700	1.1237	37.66	6.0	7.2	22.1
1.5637	1.1232	38.08	6.0	7.1	23.1
1.5574	1.1227	38.51	5.9	7.0	23.9
1.5445	1.1216	39.36	5.8	6.8	25.4
1.5314	1.1205	40.23	5.7	6.6	26.7
1.5178	1.1194	41.13	5.6	6.4	28.0
1.5039	1.1182	42.04	5.5	6.2	29.3
1.4897	1.1170	42.97	5.3	6.1	30.6
1.4751	1.1158	43.93	5.2	5.9	31.9
1.4601	1.1146	44.90	5.1	5.8	33.2

C3
XX
XX
C2
XX
XX
XX
C1
SB

PROT I ISEF HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,105JIH1LOZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 620

HIGH GAIN
A PENETRATING

AXIAL PARTICLES							MAXIMALLY INCLINED PARTICLES						
RANGE	E/NUC	B1	C1	C4C3C2			GEOMETRY	SEC	E/NUC	B1	C1	C4C3C2
23313.	72.50	0.3	5.3	47.4	B1		0.8783	1.0674	72.50	0.3	5.3	47.4
23513.	72.85	5.0	5.3	46.7			0.8746	1.0671	72.85	5.0	5.3	46.7
23713.	73.20	7.4	5.3	46.2			0.8710	1.0668	73.20	7.4	5.3	46.2
23913.	73.55	9.3	5.3	45.6		SB	0.8673	1.0665	73.55	9.3	5.3	45.6
24870.	75.19	16.0	5.2	43.3		SB	0.8501	1.0651	75.19	16.0	5.2	43.3
25225.	75.79	18.0	5.1	42.6	XX	SB	0.8438	1.0647	75.79	18.0	5.1	42.6
25255.	75.84	16.6	5.1	42.5		SB	0.8438	1.0647	75.84	16.6	5.1	42.5
25285.	75.89	15.9	5.1	42.5		SB	0.8438	1.0647	75.89	15.9	5.1	42.5
25309.	75.93	15.5	5.1	42.4	XX	SB	0.8438	1.0647	75.93	15.5	5.1	42.4
25339.	75.99	15.0	5.1	42.4		SB	0.8438	1.0647	75.99	15.0	5.1	42.4
25342.	75.99	15.0	5.1	42.3	XX	SB	0.8438	1.0647	75.99	15.0	5.1	42.3
25542.	76.32	13.2	5.1	42.0		SB	0.8438	1.0647	76.32	13.2	5.1	42.0
25742.	76.65	12.1	5.1	41.6			0.8438	1.0647	76.65	12.1	5.1	41.6
25942.	76.98	11.2	5.1	41.3			0.8438	1.0647	76.98	11.2	5.1	41.3
26980.	78.67	8.8	5.0	39.6			0.8438	1.0647	78.67	8.8	5.0	39.6
28059.	80.39	7.6	4.9	38.2			0.8438	1.0647	80.39	7.6	4.9	38.2
29181.	82.16	6.7	4.8	36.9			0.8438	1.0647	82.16	6.7	4.8	36.9
30348.	83.97	6.1	4.7	35.6			0.8438	1.0647	83.97	6.1	4.7	35.6
31562.	85.82	5.6	4.6	34.5			0.8438	1.0647	85.82	5.6	4.6	34.5
32825.	87.71	5.3	4.6	33.5			0.8438	1.0647	87.71	5.3	4.6	33.5
34138.	89.65	4.9	4.5	32.6			0.8438	1.0647	89.65	4.9	4.5	32.6
36869.	93.58	4.4	4.3	30.8			0.8438	1.0647	93.58	4.4	4.3	30.8
39818.	97.70	4.1	4.2	29.3			0.8438	1.0647	97.70	4.1	4.2	29.3
43004.	102.01	3.7	4.1	27.9			0.8438	1.0647	102.01	3.7	4.1	27.9
46444.	106.52	3.5	3.9	26.7			0.8438	1.0647	106.52	3.5	3.9	26.7
50160.	111.23	3.3	3.8	25.5			0.8438	1.0647	111.23	3.3	3.8	25.5
54173.	116.17	3.1	3.7	24.4			0.8438	1.0647	116.17	3.1	3.7	24.4
58506.	121.35	2.9	3.6	23.5			0.8438	1.0647	121.35	2.9	3.6	23.5
67867.	132.02	2.6	3.4	21.7			0.8438	1.0647	132.02	2.6	3.4	21.7
78726.	143.69	2.4	3.2	20.2			0.8438	1.0647	143.69	2.4	3.2	20.2
91322.	156.47	2.2	3.0	18.8			0.8438	1.0647	156.47	2.2	3.0	18.8
105934.	170.46	2.0	2.8	17.6			0.8438	1.0647	170.46	2.0	2.8	17.6
122883.	185.79	1.9	2.7	16.5			0.8438	1.0647	185.79	1.9	2.7	16.5
142545.	202.62	1.8	2.5	15.5			0.8438	1.0647	202.62	1.8	2.5	15.5
188159.	238.68	1.6	2.3	13.9			0.8438	1.0647	238.68	1.6	2.3	13.9
248370.	281.83	1.4	2.1	12.6			0.8438	1.0647	281.83	1.4	2.1	12.6
327848.	333.71	1.3	1.9	11.4			0.8438	1.0647	333.71	1.3	1.9	11.4
432760.	396.42	1.1	1.7	10.4			0.8438	1.0647	396.42	1.1	1.7	10.4
571243.	472.70	1.1	1.6	9.6			0.8438	1.0647	472.70	1.1	1.6	9.6
754041.	566.13	1.0	1.5	8.9			0.8438	1.0647	566.13	1.0	1.5	8.9
995333.	681.49	0.9	1.4	8.4			0.8438	1.0647	681.49	0.9	1.4	8.4
1313840.	825.17	0.9	1.3	7.9			0.8438	1.0647	825.17	0.9	1.3	7.9
1734269.	1005.86	0.8	1.3	7.6			0.8438	1.0647	1005.86	0.8	1.3	7.6
2289235.	1235.43	0.8	1.2	7.3			0.8438	1.0647	1235.43	0.8	1.2	7.3
3021790.	1530.27	0.8	1.2	7.2			0.8438	1.0647	1530.27	0.8	1.2	7.2
3988763.	1913.18	0.8	1.2	7.1			0.8438	1.0647	1913.18	0.8	1.2	7.1
5225246.	2400.20	0.8	1.2	7.1	XX		0.8438	1.0647	2400.20	0.8	1.2	7.1

RECORD 667

HIGH GAIN
B PENETRATING

AXIAL PARTICLES								MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	B1	C1	C4C3C2			GEOMETRY	SEC	E/NUC	B1	C1	C4C3C2
22113.	70.38	3.5	0.5	58.9	C1	SB	0.8972	1.0689	70.38	3.5	0.5	58.9
22313.	70.74	3.5	5.0	56.2		SB	0.8934	1.0686	70.74	3.5	5.0	56.2
22513.	71.09	3.5	7.5	54.5		SB	0.8896	1.0683	71.09	3.5	7.5	54.5
22713.	71.45	3.5	9.4	53.1		SB	0.8858	1.0680	71.45	3.5	9.4	53.1
22913.	71.80	3.5	11.0	51.9		SB	0.8821	1.0677	71.80	3.5	11.0	51.9
23113.	72.15	3.5	12.5	50.9		SB	0.8784	1.0674	72.15	3.5	12.5	50.9
23313.	72.50	3.4	13.9	50.0		SB	0.8747	1.0671	72.50	3.4	13.9	50.0
23513.	72.85	3.4	15.1	49.2		SB	0.8710	1.0668	72.85	3.4	15.1	49.2
23713.	73.20	3.4	16.3	48.4		SB	0.8673	1.0665	73.20	3.4	16.3	48.4
23913.	73.55	3.4	17.4	47.7		SB	0.8637	1.0662	73.55	3.4	17.4	47.7
24113.	73.89	3.4	18.5	47.1		SB	0.8601	1.0659	73.89	3.4	18.5	47.1
24313.	74.24	3.4	19.5	46.5		SB	0.8565	1.0657	74.24	3.4	19.5	46.5
24513.	74.58	3.4	20.5	45.9		SB	0.8529	1.0654	74.58	3.4	20.5	45.9
25027.	75.46	3.3	22.8	44.5	XX	SB	0.8438	1.0647	75.46	3.3	22.8	44.5
25078.	75.54	3.3	20.8	44.4		SB	0.8438	1.0647	75.54	3.3	20.8	44.4
25130.	75.63	3.3	19.9	44.3		SB	0.8438	1.0647	75.63	3.3	19.9	44.3
25178.	75.71	3.3	19.3	44.2	XX	SB	0.8438	1.0647	75.71	3.3	19.3	44.2
25228.	75.80	3.3	18.7	44.1		SB	0.8438	1.0647	75.80	3.3	18.7	44.1
25279.	75.88	3.3	18.2	44.0		SB	0.8438	1.0647	75.88	3.3	18.2	44.0
25326.	75.96	3.3	17.8	43.8	XX	SB	0.8438	1.0647	75.96	3.3	17.8	43.8
25342.	75.99	3.3	17.7	43.8	XX	SB	0.8438	1.0647	75.99	3.3	17.7	43.8
25542.	76.32	3.3	16.5	43.4		SB	0.8438	1.0647	76.32	3.3	16.5	43.4
25742.	76.65	3.3	15.5	43.0		SB	0.8438	1.0647	76.65	3.3	15.5	43.0
25942.	76.98	3.3	14.8	42.6		SB	0.8438	1.0647	76.98	3.3	14.8	42.6
26980.	78.67	3.2	12.2	40.7			0.8438	1.0647	78.67	3.2	12.2	40.7
28059.	80.39	3.2	10.8	39.1			0.8438	1.0647	80.39	3.2	10.8	39.1
29181.	82.16	3.1	9.7	37.7			0.8438	1.0647	82.16	3.1	9.7	37.7
30348.	83.97	3.1	8.9	36.4			0.8438	1.0647	83.97	3.1	8.9	36.4
31562.	85.82	3.0	8.3	35.2			0.8438	1.0647	85.82	3.0	8.3	35.2
32825.	87.71	3.0	7.8	34.1			0.8438	1.0647	87.71	3.0	7.8	34.1
34138.	89.65	2.9	7.3	33.1			0.8438	1.0647	89.65	2.9	7.3	33.1
35503.	91.63	2.9	6.9	32.1			0.8438	1.0647	91.63	2.9	6.9	32.1
38344.	95.66	2.8	6.3	30.4			0.8438	1.0647	95.66	2.8	6.3	30.4
41411.	99.87	2.7	5.8	28.9			0.8438	1.0647	99.87	2.7	5.8	28.9
44724.	104.28	2.6	5.4	27.5			0.8438	1.0647	104.28	2.6	5.4	27.5
48302.	108.89	2.5	5.1	26.3			0.8438	1.0647	108.89	2.5	5.1	26.3
52166.	113.72	2.4	4.8	25.1			0.8438	1.0647	113.72	2.4	4.8	25.1
56339.	118.78	2.4	4.5	24.1			0.8438	1.0647	118.78	2.4	4.5	24.1
60847.	124.07	2.3	4.3	23.1			0.8438	1.0647	124.07	2.3	4.3	23.1
70582.	135.00	2.2	3.9	21.4			0.8438	1.0647	135.00	2.2	3.9	21.4
81875.	146.95	2.0	3.5	19.9			0.8438	1.0647	146.95	2.0	3.5	19.9
94975.	160.04	1.9	3.3	18.6			0.8438	1.0647	160.04	1.9	3.3	18.6
110171.	174.37	1.8	3.0	17.4			0.8438	1.0647	174.37	1.8	3.0	17.4
127799.	190.09	1.7	2.8	16.3			0.8438	1.0647	190.09	1.7	2.8	16.3
148246.	207.33	1.6	2.6	15.3			0.8438	1.0647	207.33	1.6	2.6	15.3
195685.	244.31	1.5	2.3	13.7			0.8438	1.0647	244.31	1.5	2.3	13.7
258305.	288.59	1.3	2.1	12.4			0.8438	1.0647	288.59	1.3	2.1	12.4
340962.	341.85	1.2	1.9	11.3			0.8438	1.0647	341.85	1.2	1.9	11.3
450070.	406.30	1.1	1.7	10.3			0.8438	1.0647	406.30	1.1	1.7	10.3
594093.	484.76	1.0	1.6	9.5			0.8438	1.0647	484.76	1.0	1.6	9.5
784202.	580.97	1.0	1.5	8.9			0.8438	1.0647	580.97	1.0	1.5	8.9
1035147.	699.90	0.9	1.4	8.3			0.8438	1.0647	699.90	0.9	1.4	8.3
1366394.	848.22	0.9	1.3	7.9			0.8438	1.0647	848.22	0.9	1.3	7.9
1803640.	1035.00	0.8	1.3	7.6			0.8438	1.0647	1035.00	0.8	1.3	7.6
2380805.	1272.67	0.8	1.2	7.3			0.8438	1.0647	1272.67	0.8	1.2	7.3
3142662.	1578.40	0.8	1.2	7.2			0.8438	1.0647	1578.40	0.8	1.2	7.2
4148314.	1976.06	0.8	1.2	7.1			0.8438	1.0647	1976.06	0.8	1.2	7.1
5225246.	2400.20	0.8	1.2	7.1	XX		0.8438	1.0647	2400.20	0.8	1.2	7.1

Z= 2, A= 4.0015 IN SILICON VERSION R PWT= 1.25, PQ= 0.50, B0= 0.009270, I50= 92
FLS= 1.34, CLS= 33.58, CB2= 0.000256, COW= 1931.5
C137= 137., ROZZ= 0.800, TAU0= 0.0401, BOFF=0.00400

I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA	I	E(MEV/NUC)	R(MICRON)	MEV/MG/CM2	PCT	ALPHA
1	0.000024	0.008025	0.1045	0.684	0.696	109	0.2828	4.53	1.21951	0.002	1.189
3	0.000029	0.008764	0.1101	0.673	0.703	111	0.3364	5.30	1.17690	0.002	1.256
5	0.000035	0.009598	0.1159	0.662	0.708	113	0.4000	6.25	1.12261	0.002	1.323
7	0.000041	0.010541	0.1219	0.649	0.714	115	0.4757	7.45	1.05842	0.001	1.389
9	0.000049	0.011609	0.1281	0.636	0.718	117	0.5657	8.96	0.98676	0.001	1.450
11	0.000058	0.012817	0.1344	0.622	0.723	119	0.6727	10.90	0.91051	0.001	1.504
13	0.000069	0.014187	0.1410	0.607	0.727	121	0.8000	13.41	0.83257	0.001	1.551
15	0.000082	0.015740	0.1478	0.591	0.731	123	0.9514	16.70	0.75542	0.001	1.590
17	0.000098	0.017502	0.1549	0.574	0.735	125	1.1314	21.01	0.68095	0.001	1.623
19	0.000116	0.019504	0.1621	0.557	0.738	127	1.3454	26.72	0.61047	0.001	1.651
21	0.000138	0.021778	0.1696	0.538	0.741	129	1.6000	34.32	0.54478	0.001	1.674
23	0.000164	0.024363	0.1774	0.519	0.743	131	1.9027	44.46	0.48430	0.001	1.693
25	0.000195	0.027304	0.1854	0.498	0.746	133	2.2627	58.05	0.42916	0.001	1.710
27	0.000232	0.030650	0.1938	0.477	0.747	135	2.6909	76.32	0.37927	0.001	1.723
29	0.000276	0.034458	0.2025	0.454	0.748	137	3.2000	100.93	0.33442	0.001	1.735
31	0.000328	0.038793	0.2115	0.430	0.748	139	3.8055	134.15	0.29430	0.001	1.745
33	0.000391	0.043727	0.2210	0.406	0.746	141	4.5255	179.09	0.25855	0.001	1.754
35	0.000465	0.049343	0.2309	0.381	0.743	143	5.3817	239.97	0.22680	0.001	1.762
37	0.000552	0.055732	0.2415	0.355	0.739	145	6.4000	322.56	0.19868	0.001	1.769
39	0.000657	0.062995	0.2527	0.329	0.734	147	7.6109	434.76	0.17384	0.001	1.775
41	0.000781	0.071245	0.2647	0.303	0.727	149	9.0509	587.32	0.15196	0.001	1.780
43	0.000929	0.080605	0.2776	0.277	0.719	151	10.7635	794.98	0.13271	0.001	1.785
45	0.001105	0.091210	0.2916	0.251	0.710	153	12.8000	1077.86	0.11581	0.001	1.789
47	0.001314	0.103207	0.3068	0.226	0.700	155	15.2218	1463.47	0.10101	0.001	1.791
49	0.001562	0.116756	0.3233	0.202	0.690	157	18.1019	1989.36	0.08806	0.001	1.793
51	0.001858	0.132031	0.3413	0.179	0.680	159	21.5269	2706.81	0.07675	0.001	1.793
53	0.002210	0.149223	0.3610	0.158	0.671	161	25.5999	3685.73	0.06689	0.001	1.793
55	0.002628	0.168541	0.3823	0.138	0.663	163	30.4436	5021.32	0.05831	0.001	1.791
57	0.003125	0.190216	0.4054	0.120	0.657	165	36.2038	6843.01	0.05085	0.001	1.787
59	0.003716	0.214510	0.4304	0.104	0.652	167	43.0538	9326.35	0.04438	0.001	1.782
61	0.004419	0.241717	0.4571	0.090	0.651	169	51.1999	12708.88	0.03876	0.001	1.775
63	0.005256	0.272174	0.4856	0.077	0.653	171	60.8873	17310.90	0.03390	0.001	1.766
65	0.006250	0.306276	0.5156	0.066	0.658	173	72.4076	23562.64	0.02970	0.001	1.754
67	0.007433	0.344488	0.5470	0.056	0.665	175	86.1076	32039.26	0.02608	0.001	1.740
69	0.008839	0.387352	0.5796	0.048	0.668	177	102.3998	43505.40	0.02296	0.001	1.723
71	0.010511	0.435470	0.6138	0.041	0.671	179	121.7746	58970.91	0.02027	0.001	1.702
73	0.012500	0.489518	0.6497	0.034	0.675	181	144.8152	79759.32	0.01797	0.001	1.678
75	0.014865	0.550264	0.6872	0.029	0.678	183	172.2152	107589.95	0.01599	0.001	1.650
77	0.017678	0.618573	0.7266	0.025	0.680	185	204.7996	144673.77	0.01431	0.001	1.618
79	0.021022	0.695422	0.7679	0.021	0.682	187	243.5491	193821.70	0.01287	0.001	1.582
81	0.025000	0.781903	0.8114	0.017	0.683	189	289.6303	258562.25	0.01166	0.001	1.542
83	0.029730	0.879247	0.8571	0.015	0.684	191	344.4305	343263.16	0.01063	0.001	1.497
85	0.035355	0.988843	0.9052	0.012	0.687	193	409.5992	453250.75	0.00978	0.000	1.450
87	0.042045	1.112290	0.9554	0.010	0.694	195	487.0982	594919.50	0.00906	0.000	1.399
89	0.050000	1.251467	1.0071	0.009	0.705	197	579.2607	775825.50	0.00848	0.000	1.347
91	0.059460	1.408647	1.0592	0.007	0.723	199	688.8609	1004759.94	0.00800	0.000	1.293
93	0.070711	1.586661	1.1103	0.006	0.749	201	819.1983	1291808.12	0.00762	0.000	1.239
95	0.084089	1.789116	1.1580	0.005	0.784	203	974.1965	1648399.37	0.00733	0.000	1.187
97	0.100000	2.020682	1.2001	0.004	0.827	205	1158.5214	2087371.75	0.00711	0.000	1.137
99	0.118920	2.287464	1.2339	0.004	0.878	207	1377.7218	2623064.00	0.00696	0.000	1.091
101	0.141421	2.597458	1.2571	0.003	0.935	209	1638.3966	3271468.50	0.00686	0.000	1.049
103	0.168179	2.961121	1.2680	0.003	0.996	211	1948.3929	4050493.75	0.00681	0.000	1.012
105	0.200000	3.392248	1.2655	0.002	1.059	213	2317.0427	4980146.50	0.00681	0.000	0.979
107	0.237841	3.908867	1.2493	0.002	1.123	215	2755.4436	6083122.50	0.00682	0.000	1.000

HE4- I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,105]IH1LOZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 725

HIGH GAIN
A STOPPING

AXIAL PARTICLES						MAXIMALLY INCLINED PARTICLES					
RANGE	E/NUC	A1	A2	C1C2C3		GEOMETRY	SEC	E/NUC	A1	A2	C1C2C3
165.	4.36	16.3	0.1	0.0	A2	1.2353	1.1033	4.36	16.3	0.1	0.0
168.	4.41	15.6	1.1	0.0		1.2352	1.1033	4.41	15.6	1.1	0.0
172.	4.46	14.9	2.0	0.0		1.2351	1.1033	4.46	14.9	2.0	0.0
175.	4.52	14.3	2.8	0.0		1.2349	1.1033	4.52	14.3	2.8	0.0
182.	4.62	13.4	4.1	0.0		1.2347	1.1033	4.62	13.4	4.1	0.0
189.	4.73	12.7	5.2	0.0		1.2345	1.1033	4.73	12.7	5.2	0.0
197.	4.84	12.1	6.3	0.0		1.2342	1.1033	4.84	12.1	6.3	0.0
205.	4.96	11.6	7.3	0.0		1.2340	1.1032	4.96	11.6	7.3	0.0
221.	5.19	10.8	9.1	0.0		1.2334	1.1032	5.19	10.8	9.1	0.0
239.	5.43	10.1	10.8	0.0		1.2328	1.1031	5.43	10.1	10.8	0.0
258.	5.68	9.5	12.4	0.0		1.2322	1.1031	5.68	9.5	12.4	0.0
278.	5.94	9.0	14.0	0.0		1.2315	1.1030	5.94	9.0	14.0	0.0
301.	6.22	8.5	15.6	0.0		1.2308	1.1030	6.22	8.5	15.6	0.0
317.	6.41	8.2	16.2	0.5	C1	1.2308	1.1027	6.41	8.2	16.2	0.5
324.	6.49	8.1	14.9	2.2		1.2308	1.1027	6.49	8.1	14.9	2.2
330.	6.56	8.0	13.9	3.6		1.2308	1.1027	6.56	8.0	13.9	3.6
337.	6.64	7.9	13.2	4.7		1.2308	1.1027	6.64	7.9	13.2	4.7
344.	6.72	7.8	12.6	5.7		1.2308	1.1026	6.72	7.8	12.6	5.7
357.	6.87	7.6	11.7	7.5		1.2308	1.1026	6.87	7.6	11.7	7.5
372.	7.03	7.4	11.0	9.0		1.2308	1.1026	7.03	7.4	11.0	9.0
386.	7.19	7.2	10.4	10.5		1.2308	1.1025	7.19	7.2	10.4	10.5
402.	7.36	7.1	9.9	11.8		1.2308	1.1025	7.36	7.1	9.9	11.8
418.	7.53	6.9	9.4	13.1		1.2308	1.1024	7.53	6.9	9.4	13.1
435.	7.70	6.8	9.0	14.4		1.2308	1.1024	7.70	6.8	9.0	14.4
452.	7.87	6.6	8.6	15.6		1.2308	1.1023	7.87	6.6	8.6	15.6
470.	8.05	6.5	8.3	16.8		1.2308	1.1023	8.05	6.5	8.3	16.8
489.	8.24	6.3	8.0	18.0		1.2308	1.1022	8.24	6.3	8.0	18.0
509.	8.43	6.2	7.7	19.2		1.2308	1.1022	8.43	6.2	7.7	19.2
529.	8.62	6.1	7.5	20.4		1.2308	1.1021	8.62	6.1	7.5	20.4
550.	8.82	5.9	7.2	21.5		1.2308	1.1021	8.82	5.9	7.2	21.5
572.	9.02	5.8	7.0	22.7		1.2308	1.1020	9.02	5.8	7.0	22.7
595.	9.22	5.7	6.8	23.8		1.2308	1.1019	9.22	5.7	6.8	23.8
619.	9.43	5.6	6.6	25.0		1.2308	1.1019	9.43	5.6	6.6	25.0
643.	9.65	5.5	6.4	26.2		1.2308	1.1018	9.65	5.5	6.4	26.2
669.	9.87	5.3	6.2	27.4		1.2308	1.1017	9.87	5.3	6.2	27.4
696.	10.09	5.2	6.1	28.5		1.2308	1.1017	10.09	5.2	6.1	28.5
724.	10.32	5.1	5.9	29.7		1.2308	1.1016	10.32	5.1	5.9	29.7
753.	10.55	5.0	5.8	30.9		1.2308	1.1015	10.55	5.0	5.8	30.9
783.	10.79	4.9	5.6	32.1		1.2308	1.1014	10.79	4.9	5.6	32.1
814.	11.03	4.8	5.5	33.4		1.2308	1.1014	11.03	4.8	5.5	33.4
847.	11.28	4.7	5.3	34.6		1.2308	1.1013	11.28	4.7	5.3	34.6
881.	11.54	4.6	5.2	35.8		1.2308	1.1012	11.54	4.6	5.2	35.8
916.	11.80	4.6	5.1	37.1		1.2308	1.1011	11.80	4.6	5.1	37.1
952.	12.07	4.5	5.0	38.4		1.2308	1.1010	12.07	4.5	5.0	38.4
991.	12.34	4.4	4.8	39.7		1.2308	1.1009	12.34	4.4	4.8	39.7
1030.	12.62	4.3	4.7	41.0		1.2308	1.1008	12.62	4.3	4.7	41.0
1071.	12.90	4.2	4.6	42.3		1.2308	1.1007	12.90	4.2	4.6	42.3
1114.	13.19	4.1	4.5	43.7		1.2308	1.1005	13.19	4.1	4.5	43.7
1159.	13.49	4.1	4.4	45.1		1.2308	1.1004	13.49	4.1	4.4	45.1
1205.	13.79	4.0	4.3	46.5		1.2308	1.1003	13.79	4.0	4.3	46.5
1253.	14.10	3.9	4.2	47.9		1.2308	1.1002	14.10	3.9	4.2	47.9
1303.	14.42	3.8	4.1	49.3		1.2308	1.1000	14.42	3.8	4.1	49.3
1356.	14.74	3.8	4.1	50.8		1.2308	1.0999	14.74	3.8	4.1	50.8
1410.	15.07	3.7	4.0	52.3		1.2308	1.0998	15.07	3.7	4.0	52.3
1466.	15.41	3.6	3.9	53.8		1.2308	1.0996	15.41	3.6	3.9	53.8
1525.	15.76	3.6	3.8	55.3		1.2308	1.0995	15.76	3.6	3.8	55.3
1586.	16.11	3.5	3.7	56.9		1.2308	1.0993	16.11	3.5	3.7	56.9
1649.	16.47	3.4	3.7	58.5		1.2308	1.0991	16.47	3.4	3.7	58.5

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HIGH GAIN
B STOPPING

AXIAL PARTICLES								MAXIMALLY INCLINED PARTICLES					
RANGE	E/NUC	B1	B2	C4C3C2			GEOMETRY	SEC	E/NUC	B1	B2	C4C3C2
2034.	18.53	71.4	0.3	0.0	B2	SB	1.7917	1.1535	18.53	71.4	0.3	0.0
2074.	18.74	65.1	7.5	0.0		SB	1.7894	1.1533	18.74	65.1	7.5	0.0
2116.	18.95	61.9	11.6	0.0		SB	1.7871	1.1530	18.95	61.9	11.6	0.0
2158.	19.16	59.5	14.8	0.0		SB	1.7847	1.1528	19.16	59.5	14.8	0.0
2201.	19.38	57.5	17.7	0.0		SB	1.7823	1.1526	19.38	57.5	17.7	0.0
2245.	19.60	55.8	20.3	0.0		SB	1.7799	1.1524	19.60	55.8	20.3	0.0
2290.	19.82	54.2	22.7	0.0		SB	1.7774	1.1522	19.82	54.2	22.7	0.0
2336.	20.04	52.9	25.0	0.0		SB	1.7749	1.1519	20.04	52.9	25.0	0.0
2383.	20.26	51.6	27.2	0.0		SB	1.7723	1.1517	20.26	51.6	27.2	0.0
2430.	20.49	50.5	29.3	0.0		SB	1.7697	1.1514	20.49	50.5	29.3	0.0
2479.	20.72	49.4	31.3	0.0		SB	1.7670	1.1512	20.72	49.4	31.3	0.0
2529.	20.95	48.4	33.3	0.0		SB	1.7643	1.1509	20.95	48.4	33.3	0.0
2579.	21.18	47.4	35.2	0.0		SB	1.7615	1.1507	21.18	47.4	35.2	0.0
2631.	21.42	46.5	37.0	0.0		SB	1.7587	1.1504	21.42	46.5	37.0	0.0
2683.	21.66	45.7	38.9	0.0		SB	1.7558	1.1502	21.66	45.7	38.9	0.0
2737.	21.90	44.9	40.7	0.0		SB	1.7529	1.1499	21.90	44.9	40.7	0.0
2792.	22.15	44.1	42.4	0.0		SB	1.7499	1.1496	22.15	44.1	42.4	0.0
2848.	22.40	43.3	44.2	0.0		SB	1.7469	1.1494	22.40	43.3	44.2	0.0
2905.	22.65	42.6	45.9	0.0		SB	1.7439	1.1491	22.65	42.6	45.9	0.0
2963.	22.90	41.9	47.7	0.0		SB	1.7407	1.1488	22.90	41.9	47.7	0.0
3022.	23.16	41.3	49.4	0.0		SB	1.7376	1.1485	23.16	41.3	49.4	0.0
3082.	23.42	40.6	51.0	0.0		SB	1.7343	1.1482	23.42	40.6	51.0	0.0
3144.	23.68	40.0	52.7	0.0		SB	1.7310	1.1479	23.68	40.0	52.7	0.0
3207.	23.94	39.4	54.4	0.0		SB	1.7277	1.1476	23.94	39.4	54.4	0.0
3271.	24.21	38.9	56.1	0.0		SB	1.7243	1.1473	24.21	38.9	56.1	0.0
3336.	24.48	38.3	57.7	0.0		SB	1.7208	1.1470	24.48	38.3	57.7	0.0
3403.	24.75	37.8	59.4	0.0		SB	1.7173	1.1466	24.75	37.8	59.4	0.0
3471.	25.03	37.2	61.0	0.0		SB	1.7137	1.1463	25.03	37.2	61.0	0.0
3541.	25.31	36.7	62.7	0.0		SB	1.7101	1.1460	25.31	36.7	62.7	0.0
3611.	25.59	36.2	64.3	0.0		SB	1.7064	1.1456	25.59	36.2	64.3	0.0
3684.	25.88	35.7	66.0	0.0		SB	1.7027	1.1453	25.88	35.7	66.0	0.0
3757.	26.17	35.3	67.6	0.0		SB	1.6988	1.1449	26.17	35.3	67.6	0.0
3833.	26.46	34.8	69.2	0.0		SB	1.6949	1.1446	26.46	34.8	69.2	0.0
3909.	26.75	34.4	70.9	0.0		SB	1.6910	1.1442	26.75	34.4	70.9	0.0
3962.	26.96	34.1	72.0	0.0	XX	SB	1.6883	1.1440	26.96	34.1	72.0	0.0
3992.	27.07	33.9	66.7	0.0		SB	1.6867	1.1438	27.07	33.9	66.7	0.0
4022.	27.18	33.7	63.9	0.0		SB	1.6852	1.1437	27.18	33.7	63.9	0.0
4034.	27.23	33.7	63.0	0.9	C4	SB	1.6852	1.1420	27.23	33.7	63.0	0.9
4114.	27.53	33.2	58.5	11.6		SB	1.6852	1.1417	27.53	33.2	58.5	11.6
4197.	27.84	32.8	55.3	17.6		SB	1.6852	1.1413	27.84	32.8	55.3	17.6
4281.	28.15	32.4	52.8	22.4		SB	1.6852	1.1409	28.15	32.4	52.8	22.4
4366.	28.46	32.0	50.6	26.5		SB	1.6852	1.1406	28.46	32.0	50.6	26.5
4454.	28.78	31.6	48.7	30.3		SB	1.6852	1.1402	28.78	31.6	48.7	30.3
4543.	29.10	31.3	47.1	33.9		SB	1.6852	1.1398	29.10	31.3	47.1	33.9
4634.	29.43	30.9	45.6	37.2		SB	1.6852	1.1394	29.43	30.9	45.6	37.2
4726.	29.76	30.5	44.3	40.4		SB	1.6852	1.1390	29.76	30.5	44.3	40.4
4821.	30.09	30.2	43.1	43.4		SB	1.6852	1.1386	30.09	30.2	43.1	43.4
4917.	30.42	29.8	41.9	46.4		SB	1.6852	1.1382	30.42	29.8	41.9	46.4
5016.	30.76	29.5	40.9	49.2		SB	1.6852	1.1378	30.76	29.5	40.9	49.2
5116.	31.11	29.1	39.9	52.0		SB	1.6852	1.1373	31.11	29.1	39.9	52.0
5218.	31.45	28.8	39.0	54.7		SB	1.6852	1.1369	31.45	28.8	39.0	54.7
5323.	31.80	28.5	38.1	57.4		SB	1.6852	1.1365	31.80	28.5	38.1	57.4
5429.	32.16	28.2	37.3	60.0		SB	1.6852	1.1360	32.16	28.2	37.3	60.0
5538.	32.52	27.9	36.5	62.6		SB	1.6852	1.1356	32.52	27.9	36.5	62.6
5648.	32.88	27.6	35.8	65.2		SB	1.6852	1.1351	32.88	27.6	35.8	65.2
5761.	33.25	27.2	35.1	67.7		SB	1.6852	1.1346	33.25	27.2	35.1	67.7
5876.	33.62	27.0	34.4	70.2		SB	1.6852	1.1342	33.62	27.0	34.4	70.2
5994.	33.99	26.7	33.7	72.7		SB	1.6852	1.1337	33.99	26.7	33.7	72.7
6114.	34.37	26.4	33.1	75.2		SB	1.6827	1.1332	34.37	26.4	33.1	75.2
6236.	34.75	26.1	32.5	77.6		SB	1.6768	1.1327	34.75	26.1	32.5	77.6
6361.	35.14	25.8	32.0	80.1		SB	1.6709	1.1322	35.14	25.8	32.0	80.1
6488.	35.53	25.5	31.4	82.5		SB	1.6649	1.1317	35.53	25.5	31.4	82.5
6618.	35.93	25.3	30.9	84.9		SB	1.6588	1.1312	35.93	25.3	30.9	84.9
6750.	36.33	25.0	30.4	87.3		SB	1.6526	1.1307	36.33	25.0	30.4	87.3
6885.	36.73	24.7	29.9	89.8		SB	1.6463	1.1301	36.73	24.7	29.9	89.8
6965.	36.97	24.6	29.6	91.2	XX	SB	1.6120	1.1273	36.97	24.6	29.6	91.2

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HE4- I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM RE0R,105]IH11OZ.DET

DETECTOR FILE: ICIFSMV.DET
OUTPUT FILE: ICIFSMV.TRK
RECORD 983

HIGH GAIN
A PENETRATING

AXIAL PARTICLES							MAXIMALLY INCLINED PARTICLES					
RANGE	E/NUC	B1	C1	C4C3C2			GEOMETRY	SEC	E/NUC	B1	C1	C4C3C2
23312.	72.78	0.3	21.3	189.0	B1	SB	0.8784	1.0674	72.78	0.3	21.3	189.0
23512.	73.13	19.7	21.2	186.5		SB	0.8747	1.0671	73.13	19.7	21.2	186.5
23712.	73.48	29.4	21.1	184.1		SB	0.8710	1.0668	73.48	29.4	21.1	184.1
23912.	73.83	37.1	21.0	181.9		SB	0.8673	1.0665	73.83	37.1	21.0	181.9
24112.	74.17	43.8	20.9	179.8		SB	0.8637	1.0662	74.17	43.8	20.9	179.8
24312.	74.52	49.7	20.8	177.8		SB	0.8601	1.0659	74.52	49.7	20.8	177.8
24512.	74.87	55.1	20.8	175.9		SB	0.8565	1.0657	74.87	55.1	20.8	175.9
24712.	75.21	60.1	20.7	174.1		SB	0.8529	1.0654	75.21	60.1	20.7	174.1
24912.	75.55	64.8	20.6	172.4		SB	0.8493	1.0651	75.55	64.8	20.6	172.4
25112.	75.89	69.3	20.5	170.7		SB	0.8459	1.0648	75.89	69.3	20.5	170.7
25225.	76.09	71.7	20.5	169.8	XX	SB	0.8438	1.0647	76.09	71.7	20.5	169.8
25255.	76.14	66.4	20.5	169.6		SB	0.8438	1.0647	76.14	66.4	20.5	169.6
25285.	76.19	63.6	20.5	169.4		SB	0.8438	1.0647	76.19	63.6	20.5	169.4
25309.	76.23	61.9	20.5	169.2	XX	SB	0.8438	1.0647	76.23	61.9	20.5	169.2
25339.	76.28	60.1	20.4	168.9		SB	0.8438	1.0647	76.28	60.1	20.4	168.9
25342.	76.28	59.9	20.4	168.9	XX	SB	0.8438	1.0647	76.28	59.9	20.4	168.9
25542.	76.62	52.6	20.4	167.4		SB	0.8438	1.0647	76.62	52.6	20.4	167.4
25742.	76.95	48.1	20.3	166.0		SB	0.8438	1.0647	76.95	48.1	20.3	166.0
25942.	77.28	44.8	20.2	164.6		SB	0.8438	1.0647	77.28	44.8	20.2	164.6
26142.	77.61	42.3	20.2	163.2		SB	0.8438	1.0647	77.61	42.3	20.2	163.2
26342.	77.93	40.2	20.1	161.9		SB	0.8438	1.0647	77.93	40.2	20.1	161.9
26542.	78.26	38.4	20.0	160.7		SB	0.8438	1.0647	78.26	38.4	20.0	160.7
26742.	78.59	36.9	20.0	159.5		SB	0.8438	1.0647	78.59	36.9	20.0	159.5
26942.	78.91	35.5	19.9	158.3		SB	0.8438	1.0647	78.91	35.5	19.9	158.3
27142.	79.23	34.3	19.8	157.1		SB	0.8438	1.0647	79.23	34.3	19.8	157.1
27342.	79.56	33.3	19.8	156.0		SB	0.8438	1.0647	79.56	33.3	19.8	156.0
27542.	79.88	32.3	19.7	154.9		SB	0.8438	1.0647	79.88	32.3	19.7	154.9
27742.	80.20	31.4	19.6	153.9		SB	0.8438	1.0647	80.20	31.4	19.6	153.9
27942.	80.52	30.6	19.6	152.8		SB	0.8438	1.0647	80.52	30.6	19.6	152.8
28142.	80.84	29.9	19.5	151.8		SB	0.8438	1.0647	80.84	29.9	19.5	151.8
28342.	81.16	29.2	19.4	150.8		SB	0.8438	1.0647	81.16	29.2	19.4	150.8
29476.	82.94	26.2	19.1	145.7		SB	0.8438	1.0647	82.94	26.2	19.1	145.7
30655.	84.77	23.9	18.8	141.0		SB	0.8438	1.0647	84.77	23.9	18.8	141.0
31881.	86.64	22.1	18.5	136.7		SB	0.8438	1.0647	86.64	22.1	18.5	136.7
33156.	88.55	20.6	18.1	132.7		SB	0.8438	1.0647	88.55	20.6	18.1	132.7
34482.	90.50	19.4	17.8	128.9		SB	0.8438	1.0647	90.50	19.4	17.8	128.9
35862.	92.51	18.4	17.5	125.4		SB	0.8438	1.0647	92.51	18.4	17.5	125.4
37296.	94.56	17.5	17.2	122.0		SB	0.8438	1.0647	94.56	17.5	17.2	122.0
38788.	96.65	16.6	17.0	118.9		SB	0.8438	1.0647	96.65	16.6	17.0	118.9
40340.	98.80	15.9	16.7	115.9		SB	0.8438	1.0647	98.80	15.9	16.7	115.9
41953.	101.00	15.3	16.4	113.1		SB	0.8438	1.0647	101.00	15.3	16.4	113.1
43631.	103.24	14.7	16.1	110.4		SB	0.8438	1.0647	103.24	14.7	16.1	110.4
45376.	105.54	14.2	15.8	107.8		SB	0.8438	1.0647	105.54	14.2	15.8	107.8
47192.	107.90	13.7	15.6	105.4		SB	0.8438	1.0647	107.90	13.7	15.6	105.4
49079.	110.31	13.2	15.3	103.0		SB	0.8438	1.0647	110.31	13.2	15.3	103.0
51042.	112.78	12.8	15.1	100.8		SB	0.8438	1.0647	112.78	12.8	15.1	100.8
53084.	115.30	12.4	14.8	98.6		SB	0.8438	1.0647	115.30	12.4	14.8	98.6
55207.	117.89	12.0	14.6	96.5		SB	0.8438	1.0647	117.89	12.0	14.6	96.5
57416.	120.53	11.7	14.4	94.5		SB	0.8438	1.0647	120.53	11.7	14.4	94.5
59712.	123.24	11.4	14.1	92.5		SB	0.8438	1.0647	123.24	11.4	14.1	92.5
62101.	126.02	11.1	13.9	90.7		SB	0.8438	1.0647	126.02	11.1	13.9	90.7
64585.	128.86	10.8	13.7	88.9		SB	0.8438	1.0647	128.86	10.8	13.7	88.9
67168.	131.76	10.5	13.5	87.1		SB	0.8438	1.0647	131.76	10.5	13.5	87.1
69855.	134.74	10.2	13.2	85.4		SB	0.8438	1.0647	134.74	10.2	13.2	85.4
72649.	137.79	10.0	13.0	83.8		SB	0.8438	1.0647	137.79	10.0	13.0	83.8
75555.	140.91	9.8	12.8	82.2		SB	0.8438	1.0647	140.91	9.8	12.8	82.2
81600.	147.26	9.3	12.4	79.2		SB	0.8438	1.0647	147.26	9.3	12.4	79.2
88128.	153.91	8.9	12.1	76.4		SB	0.8438	1.0647	153.91	8.9	12.1	76.4
95178.	160.88	8.6	11.7	73.8		SB	0.8438	1.0647	160.88	8.6	11.7	73.8

1075
RECORD
XX

HIGH GAIN
B PENETRATING

AXIAL PARTICLES							GEOMETRY	MAXIMALLY INCLINED PARTICLES				
RANGE	E/NUC	B1	C1	C4C3C2				SEC	E/NUC	B1	C1	C4C3C2
22109.	70.64	14.1	0.5	235.3	C1	SB	0.8973	1.0689	70.64	14.1	0.5	235.3
22309.	71.00	14.0	19.7	224.5		SB	0.8935	1.0686	71.00	14.0	19.7	224.5
22509.	71.36	14.0	29.5	217.4		SB	0.8897	1.0683	71.36	14.0	29.5	217.4
22709.	71.71	13.9	37.2	211.8		SB	0.8859	1.0680	71.71	13.9	37.2	211.8
22909.	72.07	13.9	43.8	207.2		SB	0.8821	1.0677	72.07	13.9	43.8	207.2
23109.	72.42	13.8	49.7	203.1		SB	0.8784	1.0674	72.42	13.8	49.7	203.1
23309.	72.78	13.7	55.1	199.4		SB	0.8747	1.0671	72.78	13.7	55.1	199.4
23509.	73.13	13.7	60.1	196.1		SB	0.8711	1.0668	73.13	13.7	60.1	196.1
23709.	73.48	13.6	64.8	193.1		SB	0.8674	1.0665	73.48	13.6	64.8	193.1
23909.	73.82	13.6	69.3	190.3		SB	0.8637	1.0662	73.82	13.6	69.3	190.3
24109.	74.17	13.5	73.5	187.8		SB	0.8602	1.0659	74.17	13.5	73.5	187.8
24309.	74.52	13.5	77.6	185.3		SB	0.8566	1.0657	74.52	13.5	77.6	185.3
24509.	74.86	13.4	81.5	183.0		SB	0.8530	1.0654	74.86	13.4	81.5	183.0
24709.	75.21	13.4	85.2	180.9		SB	0.8494	1.0651	75.21	13.4	85.2	180.9
24909.	75.55	13.3	88.8	178.8		SB	0.8460	1.0648	75.55	13.3	88.8	178.8
25027.	75.75	13.3	90.9	177.7	XX	SB	0.8438	1.0647	75.75	13.3	90.9	177.7
25078.	75.84	13.3	83.3	177.2		SB	0.8438	1.0647	75.84	13.3	83.3	177.2
25130.	75.92	13.3	79.6	176.7		SB	0.8438	1.0647	75.92	13.3	79.6	176.7
25178.	76.01	13.3	77.0	176.2	XX	SB	0.8438	1.0647	76.01	13.3	77.0	176.2
25228.	76.09	13.3	74.7	175.8		SB	0.8438	1.0647	76.09	13.3	74.7	175.8
25279.	76.18	13.3	72.8	175.3		SB	0.8438	1.0647	76.18	13.3	72.8	175.3
25326.	76.26	13.2	71.2	174.9	XX	SB	0.8438	1.0647	76.26	13.2	71.2	174.9
25342.	76.28	13.2	70.7	174.7	XX	SB	0.8438	1.0647	76.28	13.2	70.7	174.7
25542.	76.62	13.2	65.7	173.0		SB	0.8438	1.0647	76.62	13.2	65.7	173.0
25742.	76.95	13.2	61.9	171.4		SB	0.8438	1.0647	76.95	13.2	61.9	171.4
25942.	77.28	13.1	58.9	169.8		SB	0.8438	1.0647	77.28	13.1	58.9	169.8
26142.	77.61	13.1	56.4	168.2		SB	0.8438	1.0647	77.61	13.1	56.4	168.2
26342.	77.93	13.0	54.2	166.8		SB	0.8438	1.0647	77.93	13.0	54.2	166.8
26542.	78.26	13.0	52.3	165.4		SB	0.8438	1.0647	78.26	13.0	52.3	165.4
26742.	78.59	12.9	50.6	164.0		SB	0.8438	1.0647	78.59	12.9	50.6	164.0
26942.	78.91	12.9	49.1	162.7		SB	0.8438	1.0647	78.91	12.9	49.1	162.7
27142.	79.23	12.9	47.8	161.4		SB	0.8438	1.0647	79.23	12.9	47.8	161.4
27342.	79.56	12.8	46.5	160.1		SB	0.8438	1.0647	79.56	12.8	46.5	160.1
27542.	79.88	12.8	45.4	158.9		SB	0.8438	1.0647	79.88	12.8	45.4	158.9
27742.	80.20	12.7	44.4	157.8		SB	0.8438	1.0647	80.20	12.7	44.4	157.8
27942.	80.52	12.7	43.4	156.6		SB	0.8438	1.0647	80.52	12.7	43.4	156.6
28142.	80.84	12.7	42.5	155.5		SB	0.8438	1.0647	80.84	12.7	42.5	155.5
28342.	81.16	12.6	41.7	154.4		SB	0.8438	1.0647	81.16	12.6	41.7	154.4
28542.	81.47	12.6	40.9	153.4		SB	0.8438	1.0647	81.47	12.6	40.9	153.4
29684.	83.27	12.4	37.2	147.9		SB	0.8438	1.0647	83.27	12.4	37.2	147.9
30871.	85.10	12.2	34.4	142.9		SB	0.8438	1.0647	85.10	12.2	34.4	142.9
32106.	86.98	12.0	32.1	138.3		SB	0.8438	1.0647	86.98	12.0	32.1	138.3
33390.	88.90	11.8	30.1	134.1		SB	0.8438	1.0647	88.90	11.8	30.1	134.1
34726.	90.86	11.6	28.5	130.2		SB	0.8438	1.0647	90.86	11.6	28.5	130.2
36115.	92.87	11.4	27.1	126.5		SB	0.8438	1.0647	92.87	11.4	27.1	126.5
37559.	94.93	11.2	25.8	123.0		SB	0.8438	1.0647	94.93	11.2	25.8	123.0
39062.	97.03	11.0	24.7	119.8		SB	0.8438	1.0647	97.03	11.0	24.7	119.8
40624.	99.19	10.8	23.7	116.7		SB	0.8438	1.0647	99.19	10.8	23.7	116.7
42249.	101.39	10.6	22.8	113.8		SB	0.8438	1.0647	101.39	10.6	22.8	113.8
43939.	103.65	10.5	21.9	111.0		SB	0.8438	1.0647	103.65	10.5	21.9	111.0
45697.	105.96	10.3	21.2	108.4		SB	0.8438	1.0647	105.96	10.3	21.2	108.4
47525.	108.33	10.1	20.5	105.9		SB	0.8438	1.0647	108.33	10.1	20.5	105.9
49426.	110.75	10.0	19.8	103.5		SB	0.8438	1.0647	110.75	10.0	19.8	103.5
51403.	113.22	9.8	19.2	101.1		SB	0.8438	1.0647	113.22	9.8	19.2	101.1
53459.	115.76	9.6	18.6	98.9		SB	0.8438	1.0647	115.76	9.6	18.6	98.9
55597.	118.36	9.5	18.1	96.8		SB	0.8438	1.0647	118.36	9.5	18.1	96.8
57821.	121.01	9.3	17.6	94.7		SB	0.8438	1.0647	121.01	9.3	17.6	94.7
60134.	123.73	9.2	17.1	92.8		SB	0.8438	1.0647	123.73	9.2	17.1	92.8
62539.	126.52	9.0	16.7	90.9		SB	0.8438	1.0647	126.52	9.0	16.7	90.9
65041.	129.37	8.9	16.2	89.0		SB	0.8438	1.0647	129.37	8.9	16.2	89.0
67642.	132.29	8.8	15.8	87.3		SB	0.8438	1.0647	132.29	8.8	15.8	87.3
70348.	135.28	8.6	15.5	85.6		SB	0.8438	1.0647	135.28	8.6	15.5	85.6
73162.	138.34	8.5	15.1	83.9		SB	0.8438	1.0647	138.34	8.5	15.1	83.9
76088.	141.48	8.4	14.7	82.3		SB	0.8438	1.0647	141.48	8.4	14.7	82.3

79132.	144.69	8.2	14.4	80.7	SB	0.8438	1.0647	144.69	8.2	14.4	80.7
82297.	147.98	8.1	14.1	79.2	SB	0.8438	1.0647	147.98	8.1	14.1	79.2
85589.	151.34	8.0	13.8	77.8	SB	0.8438	1.0647	151.34	8.0	13.8	77.8
89013.	154.79	7.9	13.5	76.4	SB	0.8438	1.0647	154.79	7.9	13.5	76.4
92573.	158.33	7.7	13.2	75.0	SB	0.8438	1.0647	158.33	7.7	13.2	75.0
96276.	161.95	7.6	12.9	73.7	SB	0.8438	1.0647	161.95	7.6	12.9	73.7
100127.	165.65	7.5	12.7	72.4	SB	0.8438	1.0647	165.65	7.5	12.7	72.4
104132.	169.45	7.4	12.4	71.1	SB	0.8438	1.0647	169.45	7.4	12.4	71.1
108297.	173.34	7.3	12.2	69.9	SB	0.8438	1.0647	173.34	7.3	12.2	69.9
116961.	181.26	7.1	11.7	67.6	SB	0.8438	1.0647	181.26	7.1	11.7	67.6
126318.	189.57	6.9	11.3	65.4	SB	0.8438	1.0647	189.57	6.9	11.3	65.4
136424.	198.28	6.7	10.9	63.3	SB	0.8438	1.0647	198.28	6.7	10.9	63.3
147337.	207.43	6.5	10.5	61.3	SB	0.8438	1.0647	207.43	6.5	10.5	61.3
159124.	217.04	6.3	10.2	59.4	SB	0.8438	1.0647	217.04	6.3	10.2	59.4
171854.	227.13	6.1	9.8	57.6	SB	0.8438	1.0647	227.13	6.1	9.8	57.6
185603.	237.73	6.0	9.5	55.9	SB	0.8438	1.0647	237.73	6.0	9.5	55.9
200451.	248.86	5.8	9.2	54.3	SB	0.8438	1.0647	248.86	5.8	9.2	54.3
216487.	260.58	5.6	8.9	52.8	SB	0.8438	1.0647	260.58	5.6	8.9	52.8
233806.	272.89	5.5	8.7	51.3	SB	0.8438	1.0647	272.89	5.5	8.7	51.3
252510.	285.85	5.4	8.4	49.9	SB	0.8438	1.0647	285.85	5.4	8.4	49.9
272711.	299.49	5.2	8.2	48.5	SB	0.8438	1.0647	299.49	5.2	8.2	48.5
294528.	313.85	5.1	8.0	47.3	SB	0.8438	1.0647	313.85	5.1	8.0	47.3
318090.	328.97	5.0	7.8	46.0		0.8438	1.0647	328.97	5.0	7.8	46.0
343538.	344.91	4.8	7.5	44.9		0.8438	1.0647	344.91	4.8	7.5	44.9
371021.	361.72	4.7	7.4	43.8		0.8438	1.0647	361.72	4.7	7.4	43.8
400702.	379.44	4.6	7.2	42.7		0.8438	1.0647	379.44	4.6	7.2	42.7
432758.	398.15	4.5	7.0	41.7		0.8438	1.0647	398.15	4.5	7.0	41.7
467379.	417.89	4.4	6.8	40.7		0.8438	1.0647	417.89	4.4	6.8	40.7
542160.	459.18	4.2	6.5	39.0		0.8438	1.0647	459.18	4.2	6.5	39.0
628905.	505.17	4.1	6.3	37.4		0.8438	1.0647	505.17	4.1	6.3	37.4
729530.	556.49	3.9	6.0	36.0		0.8438	1.0647	556.49	3.9	6.0	36.0
846255.	613.92	3.8	5.8	34.8		0.8438	1.0647	613.92	3.8	5.8	34.8
981656.	678.31	3.7	5.6	33.6		0.8438	1.0647	678.31	3.7	5.6	33.6
1138721.	750.70	3.6	5.4	32.6		0.8438	1.0647	750.70	3.6	5.4	32.6
1320916.	832.32	3.5	5.3	31.7		0.8438	1.0647	832.32	3.5	5.3	31.7
1743609.	1014.89	3.3	5.1	30.4		0.8438	1.0647	1014.89	3.3	5.1	30.4
2301564.	1246.96	3.2	4.9	29.4		0.8438	1.0647	1246.96	3.2	4.9	29.4
3038065.	1545.16	3.1	4.8	28.7		0.8438	1.0647	1545.16	3.1	4.8	28.7
4010246.	1932.62	3.1	4.7	28.4		0.8438	1.0647	1932.62	3.1	4.7	28.4
5189246.	2400.20	3.1	4.7	28.4	XX	0.8438	1.0647	2400.20	3.1	4.7	28.4

APPENDIX E - BOXGEN DEAD LAYER DEFINITIONS

BOXGEN output for all 3-dimensional stopping modes, which was used to obtain DEAD LAYER limits, is given in the following pages.

FILE 1 - 71 RECORDS IN 1 BLOCKS 06-JAN-83
C I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,1
C DETECTOR FILE ICIG3.DET ,TRACK FILE ICIDEAD.TRK
C A-STOPPING HIGH GAIN
C
C
* IA3H PROT 1 1.007 6.386 58.519
3 64 1 1 64 6 43 6 82 1

2	1	39	43	66	82	6.386	6.935	1.2303
3	2	37	42	57	71	6.578	7.234	1.2303
4	3	35	40	50	61	6.890	7.620	1.2303
5	4	33	38	44	54	7.290	8.076	1.2303
6	5	31	35	39	48	7.763	8.591	1.2303
7	6	29	33	36	43	8.292	9.153	1.2303
8	7	27	31	33	39	8.870	9.754	1.2303
9	8	26	30	30	36	9.486	10.389	1.2303
10	9	24	28	28	33	10.134	11.051	1.2303
11	10	23	26	26	31	10.809	11.735	1.2303
12	11	22	25	24	29	11.505	12.439	1.2303
13	12	21	24	23	27	12.219	13.159	1.2303
14	13	20	22	22	25	12.950	13.893	1.2303
15	14	19	21	21	24	13.693	14.639	1.2303
16	15	18	20	20	23	14.450	15.398	1.2303
17	16	17	20	19	21	15.213	16.162	1.2303
18	17	16	19	18	20	15.987	16.936	1.2303
19	18	16	18	17	20	16.767	17.716	1.2303
20	19	15	17	16	19	17.553	18.501	1.2303
21	20	15	17	16	18	18.346	19.293	1.2303
22	21	14	16	15	17	19.142	20.089	1.2303
23	22	14	16	15	17	19.945	20.890	1.2303
24	23	13	15	14	16	20.750	21.694	1.2303
25	24**	12	15	13	16	21.559	24.917	1.2303
26	25**	12	14	13	15	22.371	25.362	1.2298
27	26**	12	14	12	15	23.185	25.607	1.2293
28	27**	11	13	12	14	24.034	26.095	1.2290
29	28**	11	13	12	14	24.940	26.738	1.2235
30	29	11	12	11	13	26.475	27.478	1.1545
31	30	11	12	11	12	27.258	28.240	1.1505
32	31	10	12	11	12	28.056	29.030	1.1437
33	32	10	11	11	12	28.869	29.839	1.1406
34	33	10	11	10	12	29.693	30.656	1.1331
35	34**	9	11	9	11	30.521	35.827	1.1259
36	35**	9	10	9	11	31.355	36.406	1.1220
37	36**	9	10	9	11	32.193	36.543	1.1136
38	37**	9	10	9	11	33.033	36.681	1.1069
39	38**	9	10	9	10	33.877	36.967	1.1015
40	39**	8	10	9	10	34.753	37.421	1.0842
41	40**	8	9	9	10	35.655	38.013	1.0737
42	41	8	9	9	9	37.560	38.664	1.0369
43	42	8	9	8	9	38.304	39.371	1.0310
44	43	8	9	8	9	39.071	40.115	1.0248
45	44	8	8	8	9	39.856	40.885	1.0186
46	45	8	8	8	9	40.655	41.671	1.0152
47	46	7	8	8	9	41.463	42.470	1.0084
48	47	7	8	8	8	42.279	43.277	1.0014
49	48	7	8	8	8	43.125	44.093	0.9942
50	49**	7	8	7	8	44.033	44.999	0.9869
51	50	7	8	7	8	44.978	45.904	0.9415
52	51**	6	8	7	8	45.864	50.731	0.9340
53	52**	6	7	7	8	46.747	51.720	0.9265
54	53**	6	7	7	8	47.628	52.215	0.9189
55	54**	6	7	7	7	48.509	52.364	0.9111
56	55**	6	7	7	7	49.389	52.513	0.9033
57	56**	6	7	7	7	50.279	52.822	0.8960
58	57**	6	7	6	7	51.185	53.360	0.8918
59	58	6	7	6	7	52.923	54.047	0.8497
60	59	6	7	6	7	53.711	54.770	0.8425
61	60	6	6	6	7	54.521	55.556	0.8362
62	61**	6	6	6	7	55.345	57.087	0.8319
63	62**	6	6	6	7	56.183	58.018	0.6678
64	63**	6	6	6	6	57.077	58.519	0.3330
65	64**	6	6	6	6	57.990	58.413	0.2705

FILE 2 - 261 RECORDS IN 3 BLOCKS 06-JAN-83
C I ISEE HET1 CALIB (ENTERED 2/9/81) MODIFIED FROM REOR,1
C DETECTOR FILE ICIG3.DET ,TRACK FILF ICIDEAD.TRK
C A-STOPPING HIGH GAIN
C
C

* IA3H	HE4-	2	4.002		6.340	58.721		
3	254	1	1	254	25	175	26 351	1
2	1	165	175	320	351	6.340	6.742	1.2303
3	2	163	174	306	340	6.374	6.778	1.2303
4	3	162	173	293	326	6.411	6.823	1.2303
5	4	161	172	281	313	6.459	6.872	1.2303
6	5	159	170	270	301	6.511	6.930	1.2303
7	6	157	169	260	289	6.570	6.994	1.2303
8	7	155	167	250	279	6.637	7.064	1.2303
9	8	154	165	241	269	6.710	7.140	1.2303
10	9	151	163	232	259	6.789	7.222	1.2303
11	10	149	161	224	250	6.875	7.310	1.2303
12	11	147	159	216	242	6.966	7.402	1.2303
13	12	145	157	209	234	7.062	7.500	1.2303
14	13	143	155	202	226	7.163	7.602	1.2303
15	14	141	153	196	219	7.269	7.708	1.2303
16	15	139	150	190	213	7.379	7.820	1.2303
17	16	136	148	184	206	7.494	7.935	1.2303
18	17	134	146	179	200	7.613	8.054	1.2303
19	18	132	144	174	195	7.736	8.177	1.2303
20	19	130	142	169	189	7.863	8.303	1.2303
21	20	128	140	165	184	7.993	8.433	1.2303
22	21	126	137	160	179	8.127	8.566	1.2303
23	22	124	135	156	175	8.264	8.702	1.2303
24	23	122	133	152	171	8.404	8.841	1.2303
25	24	120	131	149	166	8.547	8.982	1.2303
26	25	118	129	145	162	8.692	9.127	1.2303
27	26	116	127	142	159	8.840	9.274	1.2303
28	27	114	125	139	155	8.991	9.423	1.2303
29	28	113	124	136	152	9.144	9.575	1.2303
30	29	111	122	133	148	9.300	9.729	1.2303
31	30	109	120	130	145	9.457	9.885	1.2303
32	31	107	118	127	142	9.617	10.043	1.2303
33	32	106	116	125	139	9.778	10.203	1.2303
34	33	104	115	122	137	9.942	10.364	1.2303
35	34	103	113	120	134	10.107	10.528	1.2303
36	35	101	111	118	131	10.274	10.693	1.2303
37	36	100	110	115	129	10.442	10.860	1.2303
38	37	98	108	113	127	10.612	11.028	1.2303
39	38	97	107	111	124	10.783	11.198	1.2303
40	39	96	105	109	122	10.956	11.369	1.2303
41	40	94	104	108	120	11.130	11.541	1.2303
42	41	93	103	106	118	11.306	11.715	1.2303
43	42	92	101	104	116	11.483	11.890	1.2303
44	43	91	100	102	114	11.661	12.066	1.2303
45	44	89	99	101	112	11.839	12.244	1.2303
46	45	88	97	99	110	12.020	12.422	1.2303
47	46	87	96	98	109	12.201	12.602	1.2303
48	47	86	95	96	107	12.383	12.782	1.2303
49	48	85	94	95	105	12.566	12.963	1.2303
50	49	84	93	93	104	12.750	13.146	1.2303
51	50	83	91	92	102	12.935	13.329	1.2303
52	51	82	90	91	101	13.120	13.513	1.2303
53	52	81	89	89	100	13.307	13.698	1.2303
54	53	80	88	88	98	13.494	13.884	1.2303
55	54	79	87	87	97	13.682	14.070	1.2303
56	55	78	86	86	96	13.871	14.257	1.2303
57	56	77	85	85	94	14.061	14.445	1.2303
58	57	76	84	84	93	14.251	14.634	1.2303
59	58	75	83	83	92	14.442	14.823	1.2303
60	59	75	82	82	91	14.633	15.013	1.2303
61	60	74	81	81	90	14.825	15.204	1.2303
62	61	73	81	80	88	15.017	15.395	1.2303
63	62	72	80	79	87	15.211	15.587	1.2303
64	63	71	79	78	86	15.404	15.779	1.2303
65	64	71	78	77	85	15.598	15.972	1.2303
66	65	70	77	76	84	15.793	16.165	1.2303
67	66	69	76	75	83	15.988	16.359	1.2303
68	67	69	76	74	82	16.184	16.553	1.2303
69	68	68	75	73	81	16.380	16.748	1.2303
70	69	67	74	73	81	16.576	16.943	1.2303
71	70	67	73	72	80	16.773	17.139	1.2303
72	71	66	73	71	79	16.971	17.335	1.2303
73	72	65	72	70	78	17.168	17.531	1.2303

74	73	65	71	70	77	17.367	17.728	1.2303
75	74	64	71	69	76	17.565	17.925	1.2303
76	75	63	70	68	76	17.764	18.123	1.2303
77	76	63	69	67	75	17.963	18.321	1.2303
78	77	62	69	67	74	18.163	18.519	1.2303
79	78	62	68	66	73	18.362	18.718	1.2303
80	79	61	67	66	73	18.563	18.917	1.2303
81	80	61	67	65	72	18.763	19.116	1.2303
82	81	60	66	64	71	18.964	19.316	1.2303
83	82	60	66	64	71	19.165	19.516	1.2303
84	83	59	65	63	70	19.366	19.716	1.2303
85	84	59	65	63	69	19.568	19.917	1.2303
86	85	58	64	62	69	19.770	20.117	1.2303
87	86	58	63	61	68	19.972	20.318	1.2303
88	87	57	63	61	67	20.174	20.520	1.2303
89	88	57	62	60	67	20.377	20.721	1.2303
90	89	56	62	60	66	20.580	20.923	1.2303
91	90	56	61	59	66	20.783	21.125	1.2303
92	91	55	61	59	65	20.986	21.328	1.2303
93	92	55	60	58	64	21.190	21.530	1.2303
94	93	54	60	58	64	21.393	21.733	1.2303
95	94**	50	59	52	63	21.597	24.370	1.2303
96	95**	49	59	52	63	21.801	24.628	1.2303
97	96**	49	59	52	62	22.006	24.886	1.2303
98	97**	49	58	52	62	22.210	25.145	1.2303
99	98**	49	58	52	61	22.415	25.354	1.2303
100	99**	49	57	52	61	22.620	25.397	1.2303
101	100**	49	57	52	60	22.825	25.440	1.2303
102	101**	49	56	52	60	23.030	25.483	1.2303
103	102**	49	56	51	59	23.236	25.526	1.2303
104	103**	48	56	51	59	23.441	25.569	1.2303
105	104**	48	55	51	59	23.647	25.611	1.2303
106	105**	48	55	51	58	23.859	25.695	1.2303
107	106**	48	54	50	58	24.087	25.798	1.2287
108	107**	48	54	50	57	24.316	25.902	1.2273
109	108**	47	54	50	57	24.544	26.035	1.2259
110	109**	47	53	50	56	24.772	26.170	1.2244
111	110**	47	53	49	56	25.000	26.322	1.2236
112	111	46	50	49	53	25.976	26.477	1.1600
113	112	46	50	49	53	26.162	26.645	1.1594
114	113	46	50	48	53	26.351	26.815	1.1579
115	114	46	50	48	52	26.544	26.992	1.1566
116	115	45	49	48	52	26.737	27.173	1.1557
117	116	45	49	47	52	26.933	27.357	1.1541
118	117	45	49	47	52	27.131	27.546	1.1534
119	118	45	49	47	51	27.330	27.736	1.1517
120	119	44	48	47	51	27.530	27.928	1.1502
121	120	44	48	46	51	27.731	28.123	1.1493
122	121	44	48	46	50	27.933	28.319	1.1475
123	122	43	47	46	50	28.136	28.517	1.1460
124	123	43	47	45	50	28.340	28.716	1.1450
125	124	43	47	45	49	28.545	28.916	1.1432
126	125	43	47	45	49	28.750	29.117	1.1425
127	126	42	46	45	49	28.956	29.319	1.1406
128	127	42	46	44	49	29.162	29.522	1.1389
129	128	42	46	44	48	29.369	29.726	1.1380
130	129	42	46	44	48	29.577	29.930	1.1360
131	130	42	45	44	48	29.784	30.136	1.1344
132	131	41	45	43	47	29.993	30.341	1.1333
133	132	41	45	43	47	30.201	30.547	1.1314
134	133	41	45	43	47	30.410	30.754	1.1306
135	134**	37	44	38	47	30.619	35.106	1.1286
136	135**	37	44	38	46	30.829	35.369	1.1268
137	136**	36	44	38	46	31.038	35.633	1.1258
138	137**	36	44	38	46	31.248	35.896	1.1237
139	138**	36	43	38	46	31.459	36.160	1.1222
140	139**	36	43	38	45	31.669	36.423	1.1209
141	140**	36	43	38	45	31.880	36.591	1.1190
142	141**	36	43	38	45	32.091	36.738	1.1180
143	142**	36	42	37	45	32.302	36.886	1.1158
144	143**	36	42	37	44	32.514	37.034	1.1150
145	144**	36	42	37	44	32.725	37.181	1.1128
146	145**	35	42	37	44	32.937	37.329	1.1110
147	146**	35	42	37	44	33.149	37.476	1.1098
148	147**	35	41	37	43	33.361	37.624	1.1078
149	148**	35	41	37	43	33.573	37.772	1.1068
150	149**	35	41	37	43	33.786	37.919	1.1045
151	150**	35	41	37	43	33.998	38.067	1.1029
152	151**	35	40	36	42	34.211	38.214	1.1014
153	152**	35	40	36	42	34.426	38.362	1.0996
154	153**	35	40	36	42	34.653	38.509	1.0982
155	154**	35	40	36	42	34.880	38.657	1.0931
156	155**	34	40	36	42	35.107	38.805	1.0881
157	156**	34	39	36	41	35.335	38.952	1.0831

158	157**	34	39	36	41	35.562	39.100	1.0781
159	158**	34	39	36	41	35.789	39.247	1.0739
160	159	34	36	36	38	38.595	39.395	1.0148
161	160	34	36	35	38	38.744	39.543	1.0129
162	161	34	36	35	38	38.893	39.690	1.0110
163	162	34	36	35	38	39.042	39.838	1.0091
164	163	34	36	35	38	39.191	39.985	1.0072
165	164	33	36	35	37	39.340	40.133	1.0053
166	165	33	36	35	37	39.489	40.280	1.0034
167	166	33	36	35	37	39.638	40.428	1.0015
168	167	33	35	35	37	39.787	40.576	0.9996
169	168	33	35	35	37	39.936	40.723	0.9978
170	169	33	35	34	37	40.085	40.871	0.9959
171	170	33	35	34	37	40.234	41.018	0.9940
172	171	33	35	34	37	40.383	41.166	0.9921
173	172	33	35	34	36	40.532	41.314	0.9902
174	173	33	35	34	36	40.681	41.461	0.9883
175	174	32	35	34	36	40.830	41.609	0.9864
176	175	32	35	34	36	40.979	41.756	0.9845
177	176	32	34	34	36	41.128	41.904	0.9826
178	177	32	34	34	36	41.277	42.051	0.9807
179	178	32	34	33	36	41.426	42.199	0.9788
180	179	32	34	33	36	41.575	42.347	0.9769
181	180	32	34	33	36	41.724	42.494	0.9750
182	181	32	34	33	35	41.873	42.642	0.9731
183	182	32	34	33	35	42.022	42.789	0.9712
184	183	31	34	33	35	42.171	42.937	0.9693
185	184	31	34	33	35	42.320	43.085	0.9675
186	185	31	33	33	35	42.469	43.232	0.9656
187	186	31	33	33	35	42.618	43.380	0.9637
188	187	31	33	32	35	42.767	43.527	0.9618
189	188	31	33	32	35	42.916	43.675	0.9599
190	189	31	33	32	34	43.084	43.823	0.9580
191	190	31	33	32	34	43.309	43.970	0.9561
192	191	31	33	32	34	43.534	44.118	0.9542
193	192	31	33	32	34	43.759	44.265	0.9523
194	193	30	33	32	34	43.984	44.413	0.9504
195	194	30	33	32	34	44.209	44.560	0.9485
196	195	30	32	31	34	44.434	44.708	0.9466
197	196	30	32	31	34	44.659	44.911	0.9454
198	197	30	32	31	34	44.884	45.136	0.9425
199	198	30	32	31	33	45.109	45.361	0.9403
200	199	30	32	31	33	45.334	45.586	0.9381
201	200	30	32	31	33	45.559	45.810	0.9359
202	201	29	32	31	33	45.784	46.035	0.9338
203	202	29	32	31	33	46.009	46.260	0.9316
204	203	29	31	31	33	46.234	46.485	0.9294
205	204**	27	31	28	33	46.459	50.658	0.9272
206	205**	27	31	28	33	46.684	50.908	0.9250
207	206**	27	31	28	32	46.909	51.157	0.9229
208	207**	27	31	28	32	47.134	51.407	0.9207
209	208**	27	31	28	32	47.358	51.656	0.9185
210	209**	27	31	28	32	47.583	51.905	0.9163
211	210**	27	31	28	32	47.808	52.155	0.9141
212	211**	27	31	28	32	48.033	52.371	0.9120
213	212**	27	30	28	32	48.258	52.519	0.9098
214	213**	27	30	28	32	48.483	52.667	0.9076
215	214**	27	30	28	31	48.708	52.815	0.9054
216	215**	27	30	28	31	48.933	52.963	0.9032
217	216**	27	30	28	31	49.158	53.111	0.9011
218	217**	26	30	28	31	49.383	53.259	0.8989
219	218**	26	30	28	31	49.608	53.407	0.8967
220	219**	26	30	27	31	49.833	53.555	0.8945
221	220**	26	29	27	31	50.058	53.703	0.8923
222	221**	26	29	27	31	50.285	53.851	0.8902
223	222**	26	29	27	30	50.513	53.999	0.8880
224	223**	26	29	27	30	50.741	54.147	0.8858
225	224**	26	29	27	30	50.969	54.295	0.8836
226	225**	26	29	27	30	51.197	54.443	0.8814
227	226**	26	29	27	30	51.425	54.590	0.8793
228	227**	26	29	27	30	51.653	54.738	0.8771
229	228**	26	29	27	30	51.881	54.886	0.8753
230	229	26	27	27	28	54.178	55.034	0.8269
231	230	26	27	27	28	54.328	55.182	0.8250
232	231	26	27	27	28	54.478	55.330	0.8232
233	232	26	27	27	28	54.627	55.478	0.8214
234	233	26	27	27	28	54.777	55.626	0.8195
235	234	25	27	27	28	54.926	55.774	0.8177
236	235	25	27	26	28	55.076	55.922	0.8158
237	236	25	27	26	28	55.225	56.070	0.8140
238	237	25	27	26	28	55.375	56.218	0.8121
239	238	25	27	26	28	55.524	56.366	0.8103
240	239	25	27	26	28	55.674	56.514	0.8084
241	240	25	27	26	28	55.824	56.662	0.8066
242	241	25	27	26	28	55.973	56.810	0.8047
243	242	25	26	26	28	56.123	56.958	0.8029
244	243	25	26	26	27	56.272	57.106	0.8010
245	244	25	26	26	27	56.422	57.254	0.7992
246	245	25	26	26	27	56.571	57.401	0.7973
247	246	25	26	26	27	56.721	57.549	0.7716
248	247	25	26	26	27	56.885	57.697	0.7151
249	248	25	26	26	27	57.117	57.845	0.6187
250	249	25	26	26	27	57.348	57.993	0.5224
251	250	25	26	26	27	57.580	58.141	0.4260
252	251	25	26	26	27	57.812	58.289	0.3296
253	252	25	26	26	27	58.044	58.437	0.2599
254	253	25	26	26	27	58.276	58.585	0.2599
255	254	26	26	27	27	58.508	58.721	0.2599

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FILE   3 -        66 RECORDS IN    1 BLOCKS        06-JAN-83
C    I  ISEE  HET1  CALIB (ENTERED 2/9/81)  MODIFIED FROM REOR,1
C    DETECTOR FILE ICIG3.DET                ,TRACK FILE TCIDEAD.TRK
C    B-STOPPING                           LOW GAIN
C
C
* IL3L    HE4-          2        4.002              26.997      70.157
      3          59          1          1        59        24          57          12        52          1
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2	1	55	57	50	52	26.997	27.726	1.6851
3	2	55	56	48	51	27.137	27.879	1.6851
4	3	54	56	46	49	27.292	28.107	1.6851
5	4	54	55	44	47	27.524	28.373	1.6851
6	5	53	55	42	45	27.794	28.680	1.6851
7	6	52	54	40	43	28.106	29.026	1.6851
8	7	52	54	39	42	28.458	29.408	1.6851
9	8	51	53	37	40	28.846	29.829	1.6851
10	9	50	52	36	38	29.273	30.281	1.6851
11	10	49	51	34	37	29.731	30.768	1.6851
12	11	48	50	33	35	30.226	31.279	1.6851
13	12	47	50	32	34	30.744	31.816	1.6851
14	13	47	49	31	33	31.289	32.380	1.6851
15	14	46	48	30	32	31.859	32.972	1.6851
16	15	45	47	29	31	32.459	33.586	1.6851
17	16	44	46	28	30	33.080	34.221	1.6851
18	17	43	45	27	29	33.723	34.876	1.6827
19	18**	40	44	24	28	34.386	37.607	1.6735
20	19**	40	44	24	27	35.068	37.780	1.6622
21	20**	40	43	24	26	35.767	38.115	1.6506
22	21**	39	42	23	26	36.483	38.622	1.6184
23	22	39	40	23	24	38.170	39.241	1.5578
24	23	38	40	22	23	38.795	39.903	1.5466
25	24	37	39	22	23	39.463	40.605	1.5350
26	25	37	39	21	22	40.171	41.336	1.5228
27	26	36	38	21	22	40.908	42.091	1.5107
28	27	36	37	20	21	41.669	42.866	1.5044
29	28	35	37	20	21	42.450	43.657	1.4913
30	29	35	36	19	21	43.247	44.461	1.4778
31	30	34	36	19	20	44.056	45.275	1.4641
32	31	33	35	19	20	44.876	46.103	1.3882
33	32	33	35	18	19	45.710	46.942	1.3727
34	33	32	34	18	19	46.555	47.789	1.3556
35	34	32	34	18	19	47.407	48.647	1.3494
36	35**	30	33	16	18	48.271	52.485	1.3355
37	36**	30	33	16	18	49.142	52.661	1.3214
38	37**	30	32	16	18	50.020	52.837	1.3070
39	38**	30	32	16	17	50.905	53.318	1.2793
40	39	29	31	16	17	52.967	54.001	1.2243
41	40	29	30	16	16	53.654	54.755	1.2125
42	41	29	30	15	16	54.412	55.568	1.2062
43	42	28	30	15	16	55.229	56.409	1.1923
44	43	28	29	15	16	56.074	57.273	1.1786
45	44	28	29	15	15	56.942	58.158	1.1722
46	45	27	28	15	15	57.830	58.630	1.1575
47	46	27	28	15	15	58.304	58.660	1.1335
48	47	27	28	14	15	58.334	58.780	1.1133
49	48	27	28	14	15	58.455	59.682	1.1006
50	49	27	28	14	15	59.361	60.594	1.0898
51	50**	25	28	13	15	60.276	64.760	1.0756
52	51**	25	27	13	14	61.197	64.908	1.0621
53	52**	25	27	13	14	62.125	65.119	1.0555
54	53**	25	27	13	14	63.060	65.630	1.0410
55	54**	25	26	13	14	63.998	66.351	1.0177
56	55	25	26	13	13	66.055	67.109	0.9734
57	56**	24	25	12	13	66.816	70.157	0.9683
58	57**	24	25	12	13	67.664	70.126	0.9547
59	58**	24	25	12	13	68.533	70.049	0.9279
60	59**	24	25	12	13	69.436	70.008	0.4494

```
FILE    4 -         78 RECORDS IN    1 BLOCKS       06-JAN-83
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81)  MODIFIED FROM REOR,1
C     DETECTOR FILE ICIG3.DET            ,TRACK FILE ICIDEAD.TRK
C     B-STOPPING                       HIGH GAIN
C
C
```

● IB3H	PROT	1	1.007		26.870	69.881		
3	71	1	1	71	20	48	20 86	1
2	1	46	48	82	86	26.870	27.573	1.6852
3	2	46	47	80	84	26.985	27.690	1.6852
4	3	46	47	77	82	27.104	27.839	1.6852
5	4	46	47	75	79	27.255	28.025	1.6852
6	5	45	47	72	77	27.444	28.248	1.6852
7	6	45	46	70	74	27.671	28.496	1.6852
8	7	44	46	67	72	27.923	28.770	1.6852
9	8	44	45	65	69	28.202	29.071	1.6852
10	9	43	45	63	67	28.507	29.396	1.6852
11	10	43	44	61	65	28.838	29.745	1.6852
12	11	42	44	59	63	29.192	30.115	1.6852
13	12	42	43	57	61	29.568	30.507	1.6852
14	13	41	43	55	59	29.965	30.918	1.6852
15	14	40	42	54	57	30.382	31.350	1.6852
16	15	40	41	52	55	30.820	31.800	1.6852
17	16	39	41	50	54	31.275	32.266	1.6852
18	17	39	40	49	52	31.748	32.750	1.6852
19	18	38	40	48	51	32.238	33.252	1.6852
20	19	37	39	46	49	32.746	33.764	1.6852
21	20	37	39	45	48	33.265	34.293	1.6837
22	21**	34	38	40	47	33.799	37.327	1.6824
23	22**	34	37	39	46	34.349	37.466	1.6729
24	23**	34	37	39	44	34.910	37.604	1.6625
25	24**	34	36	39	43	35.482	37.802	1.6529
26	25**	33	36	38	42	36.068	38.171	1.6473
27	26	33	34	38	40	37.717	38.631	1.5601
28	27	33	34	37	39	38.182	39.147	1.5519
29	28	32	34	37	39	38.703	39.691	1.5463
30	29	32	33	36	38	39.252	40.260	1.5355
31	30	31	33	35	37	39.826	40.858	1.5262
32	31	31	32	35	36	40.429	41.470	1.5197
33	32	31	32	34	36	41.046	42.093	1.5080
34	33	30	32	33	35	41.674	42.732	1.4975
35	34	30	31	33	35	42.317	43.381	1.4911
36	35	29	31	32	34	42.971	44.038	1.4787
37	36	29	30	32	33	43.633	44.704	1.4669
38	37	29	30	31	33	44.304	45.379	1.4609
39	38	28	30	31	32	44.984	46.061	1.3605
40	39	28	29	30	32	45.670	46.751	1.3719
41	40	28	29	30	31	46.365	47.447	1.3569
42	41	27	28	29	31	47.065	48.150	1.3508
43	42	27	28	29	30	47.772	48.857	1.3380
44	43**	25	28	27	30	48.484	52.342	1.3259
45	44**	25	27	27	29	49.201	52.483	1.3198
46	45**	25	27	27	29	49.925	52.625	1.3065
47	46**	25	27	26	28	50.652	52.986	1.2828
48	47**	25	26	26	28	51.384	53.487	1.2678
49	48	25	26	26	27	53.140	54.101	1.2217
50	49	24	26	26	27	53.756	54.722	1.2093
51	50	24	25	25	26	54.381	55.403	1.2002
52	51	24	25	25	26	55.065	56.092	1.1920
53	52	24	25	25	26	55.757	56.802	1.1811
54	53	23	25	24	26	56.470	57.521	1.1739
55	54	23	24	24	25	57.193	58.250	1.1613
56	55	23	24	24	25	57.925	58.411	1.1553
57	56	23	24	24	25	58.087	58.434	1.1267
58	57	23	24	24	25	58.110	58.764	1.1101
59	58	23	24	24	25	58.441	59.506	1.0994
60	59	23	24	23	24	59.186	60.255	1.0895
61	60**	21	23	22	24	59.939	64.474	1.0764
62	61**	21	23	22	24	60.693	64.593	1.0666
63	62**	21	23	22	24	61.455	64.712	1.0583
64	63**	21	23	22	23	62.219	64.949	1.0474
65	64**	21	23	22	23	62.988	65.380	1.0401
66	65**	21	22	21	23	63.759	65.968	1.0175
67	66	21	22	21	22	65.673	66.591	0.9757
68	67	21	22	21	22	66.298	67.248	0.9698
69	68**	20	21	20	22	66.957	69.881	0.9602
70	69**	20	21	20	22	67.667	69.825	0.9532
71	70**	20	21	20	21	68.387	69.772	0.9264
72	71**	20	21	20	21	69.129	69.741	0.4494

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FILE    5 -       284 RECORDS IN    3 BLOCKS     06-JAN-83
C     I  ISEE  HET1  CALIB (ENTERED 2/9/81)  MODIFIED FROM REOP,1
C     DETECTOR FILE ICIG3.DET            ,TRACK FILE ICIDEAD.TRK
C     B-STOPPING                     HIGH GAIN
C
C
* IB3H   HE4-          2       4.002             26.928       70.144
         3      277          1          1      277       77       188      80      346        1
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2	1	183	188	337	346	26.928	27.545	1.6852
3	2	183	187	335	344	26.953	27.570	1.6852
4	3	183	187	333	342	26.978	27.595	1.6852
5	4	183	187	331	340	27.003	27.619	1.6852
6	5	183	187	329	338	27.028	27.644	1.6852
7	6	182	187	327	336	27.053	27.669	1.6852
8	7	182	186	325	334	27.078	27.694	1.6852
9	8	182	186	323	332	27.104	27.718	1.6852
10	9	182	186	321	330	27.129	27.743	1.6852
11	10	182	186	319	328	27.154	27.768	1.6852
12	11	181	186	316	326	27.179	27.793	1.6852
13	12	181	186	314	324	27.204	27.817	1.6852
14	13	181	185	312	322	27.229	27.862	1.6852
15	14	181	185	309	320	27.275	27.907	1.6852
16	15	180	185	307	317	27.321	27.952	1.6852
17	16	180	184	304	314	27.366	27.997	1.6852
18	17	180	184	302	312	27.412	28.042	1.6852
19	18	179	184	299	309	27.458	28.087	1.6852
20	19	179	183	296	307	27.503	28.135	1.6852
21	20	179	183	294	304	27.553	28.192	1.6852
22	21	178	183	291	302	27.610	28.248	1.6852
23	22	178	182	289	299	27.667	28.304	1.6852
24	23	177	182	286	296	27.724	28.361	1.6852
25	24	177	181	284	294	27.782	28.417	1.6852
26	25	176	181	281	291	27.839	28.482	1.6852
27	26	176	181	279	289	27.905	28.547	1.6852
28	27	176	180	276	286	27.971	28.612	1.6852
29	28	175	180	274	284	28.037	28.677	1.6852
30	29	175	179	271	281	28.104	28.745	1.6852
31	30	174	179	269	279	28.172	28.817	1.6852
32	31	174	178	267	277	28.246	28.890	1.6852
33	32	173	178	264	274	28.319	28.962	1.6852
34	33	173	177	262	272	28.393	29.035	1.6852
35	34	172	177	260	270	28.467	29.114	1.6852
36	35	172	176	258	267	28.547	29.193	1.6852
37	36	171	176	255	265	28.627	29.272	1.6852
38	37	171	175	253	263	28.708	29.351	1.6852
39	38	170	175	251	261	28.788	29.436	1.6852
40	39	169	174	249	258	28.874	29.521	1.6852
41	40	169	174	247	256	28.961	29.606	1.6852
42	41	168	173	245	254	29.047	29.692	1.6852
43	42	168	173	243	252	29.135	29.782	1.6852
44	43	167	172	241	250	29.226	29.872	1.6852
45	44	167	171	239	248	29.317	29.963	1.6852
46	45	166	171	237	246	29.409	30.056	1.6852
47	46	166	170	235	244	29.504	30.151	1.6852
48	47	165	170	233	242	29.600	30.246	1.6852
49	48	164	169	231	240	29.696	30.342	1.6852
50	49	164	169	229	238	29.794	30.442	1.6852
51	50	163	168	227	236	29.895	30.541	1.6852
52	51	163	168	225	234	29.995	30.640	1.6852
53	52	162	167	224	232	30.096	30.744	1.6852
54	53	162	166	222	231	30.201	30.847	1.6852
55	54	161	166	220	229	30.306	30.950	1.6852
56	55	160	165	218	227	30.411	31.057	1.6852
57	56	160	165	217	225	30.519	31.164	1.6852
58	57	159	164	215	224	30.628	31.272	1.6852
59	58	159	163	213	222	30.737	31.382	1.6852
60	59	158	163	212	220	30.848	31.492	1.6852
61	60	157	162	210	219	30.960	31.603	1.6852
62	61	157	162	208	217	31.073	31.717	1.6852
63	62	156	161	207	215	31.187	31.831	1.6852
64	63	156	161	205	214	31.303	31.945	1.6852
65	64	155	160	204	212	31.419	32.062	1.6852
66	65	155	159	202	211	31.537	32.179	1.6852
67	66	154	159	201	209	31.656	32.297	1.6852
68	67	153	158	199	207	31.775	32.417	1.6852
69	68	153	158	198	206	31.897	32.537	1.6852
70	69	152	157	197	205	32.019	32.658	1.6852
71	70	152	156	195	203	32.141	32.781	1.6852
72	71	151	156	194	202	32.266	32.904	1.6852
73	72	150	155	192	200	32.391	33.028	1.6852
74	73	150	155	191	199	32.516	33.154	1.6852
75	74	149	154	190	197	32.644	33.280	1.6852
76	75	149	154	188	196	32.771	33.407	1.6852
77	76	148	153	187	195	32.900	33.536	1.6852
78	77	148	152	186	193	33.030	33.665	1.6852

79	78	147	152	185	192	33.161	33.795	1.6852
80	79	146	151	183	191	33.292	33.927	1.6852
81	80	146	151	182	190	33.425	34.058	1.6852
82	81	145	150	181	188	33.558	34.191	1.6852
83	82	145	149	180	187	33.693	34.325	1.6842
84	83	144	149	178	186	33.828	34.459	1.6833
85	84	144	148	177	185	33.964	34.595	1.6827
86	85	143	148	176	183	34.101	34.731	1.6799
87	86	142	147	175	182	34.239	34.868	1.6778
88	87**	133	147	157	181	34.377	37.469	1.6756
89	88**	133	146	157	180	34.518	37.504	1.6734
90	89**	133	146	156	179	34.658	37.540	1.6716
91	90**	132	145	156	178	34.799	37.576	1.6691
92	91**	132	144	156	177	34.941	37.612	1.6669
93	92**	132	144	156	175	35.083	37.647	1.6653
94	93**	132	143	156	174	35.227	37.683	1.6624
95	94**	132	143	155	173	35.371	37.719	1.6602
96	95**	132	142	155	172	35.516	37.755	1.6589
97	96**	132	142	155	171	35.662	37.790	1.6556
98	97**	132	141	155	170	35.808	37.826	1.6535
99	98**	131	141	154	169	35.955	37.888	1.6510
100	99**	131	140	154	168	36.104	37.977	1.6487
101	100**	131	140	153	167	36.252	38.067	1.6469
102	101**	131	139	153	166	36.401	38.156	1.6248
103	102**	130	138	152	165	36.551	38.245	1.6129
104	103	130	134	152	158	37.790	38.355	1.5638
105	104	130	134	151	157	37.900	38.467	1.5614
106	105	129	134	150	157	38.014	38.579	1.5597
107	106	129	133	150	156	38.127	38.694	1.5581
108	107	128	133	149	155	38.242	38.819	1.5561
109	108	128	132	149	155	38.369	38.945	1.5542
110	109	128	132	148	154	38.496	39.070	1.5523
111	110	127	132	147	153	38.622	39.203	1.5511
112	111	127	131	147	153	38.756	39.337	1.5483
113	112	126	131	146	152	38.891	39.471	1.5463
114	113	126	130	145	151	39.027	39.609	1.5448
115	114	126	130	145	150	39.166	39.749	1.5420
116	115	125	130	144	150	39.307	39.890	1.5399
117	116	125	129	143	149	39.449	40.033	1.5383
118	117	124	129	143	148	39.593	40.178	1.5355
119	118	124	128	142	148	39.740	40.323	1.5333
120	119	124	128	141	147	39.886	40.470	1.5316
121	120	123	128	141	146	40.035	40.619	1.5288
122	121	123	127	140	146	40.185	40.768	1.5265
123	122	122	127	139	145	40.335	40.919	1.5248
124	123	122	126	139	144	40.488	41.072	1.5218
125	124	121	126	138	144	40.641	41.224	1.5195
126	125	121	125	137	143	40.795	41.378	1.5179
127	126	121	125	137	142	40.950	41.533	1.5147
128	127	120	125	136	142	41.107	41.688	1.5123
129	128	120	124	135	141	41.263	41.845	1.5108
130	129	119	124	135	140	41.421	42.003	1.5075
131	130	119	123	134	140	41.580	42.161	1.5050
132	131	119	123	133	139	41.739	42.320	1.5036
133	132	118	122	133	138	41.900	42.480	1.5001
134	133	118	122	132	138	42.061	42.640	1.4976
135	134	117	122	132	137	42.222	42.801	1.4963
136	135	117	121	131	137	42.385	42.963	1.4926
137	136	117	121	130	136	42.548	43.125	1.4902
138	137	116	120	130	135	42.711	43.289	1.4876
139	138	116	120	129	135	42.876	43.453	1.4850
140	139	115	120	129	134	43.041	43.617	1.4827
141	140	115	119	128	133	43.206	43.782	1.4799
142	141	115	119	128	133	43.373	43.948	1.4774
143	142	114	118	127	132	43.540	44.114	1.4751
144	143	114	118	126	132	43.707	44.281	1.4722
145	144	113	118	126	131	43.875	44.448	1.4696
146	145	113	117	125	131	44.044	44.616	1.4675
147	146	113	117	125	130	44.212	44.784	1.4644
148	147	112	116	124	129	44.382	44.953	1.4617
149	148	112	116	124	129	44.552	45.122	1.4597
150	149	112	116	123	128	44.722	45.292	1.4086
151	150	111	115	123	128	44.894	45.463	1.3846
152	151	111	115	122	127	45.065	45.633	1.3821
153	152	110	115	122	127	45.237	45.805	1.3801
154	153	110	114	121	126	45.410	45.977	1.3771
155	154	110	114	121	126	45.583	46.149	1.3746
156	155	109	113	120	125	45.756	46.321	1.3727
157	156	109	113	120	125	45.930	46.495	1.3696
158	157	109	113	119	124	46.104	46.668	1.3671
159	158	108	112	119	124	46.279	46.842	1.3654
160	159	108	112	118	123	46.454	47.016	1.3620
161	160	108	112	118	123	46.630	47.191	1.3594

162	161	107	111	117	122	46.805	47.366	1.3580
163	162	107	111	117	122	46.982	47.542	1.3543
164	163	107	111	116	121	47.158	47.718	1.3520
165	164	106	110	116	121	47.335	47.894	1.3492
166	165	106	110	115	120	47.513	48.071	1.3466
167	166	106	109	115	120	47.691	48.248	1.3447
168	167	105	109	114	119	47.869	48.426	1.3414
169	168	105	109	114	119	48.048	48.603	1.3389
170	169	105	108	113	118	48.226	48.782	1.3373
171	170	104	108	113	118	48.406	48.960	1.3336
172	171	104	108	113	117	48.586	49.139	1.3313
173	172**	98	107	105	117	48.765	52.446	1.3284
174	173**	98	107	105	116	48.946	52.483	1.3258
175	174**	98	107	105	116	49.126	52.519	1.3240
176	175**	98	106	105	115	49.308	52.555	1.3206
177	176**	98	106	105	115	49.489	52.592	1.3180
178	177**	98	106	105	115	49.670	52.628	1.3153
179	178**	98	105	105	114	49.853	52.664	1.3126
180	179**	98	105	105	114	50.035	52.701	1.3107
181	180**	98	105	105	113	50.217	52.737	1.3073
182	181**	98	105	104	113	50.400	52.773	1.3047
183	182**	98	104	104	112	50.583	52.810	1.3020
184	183**	98	104	104	112	50.767	52.846	1.2994
185	184**	97	104	104	112	50.951	52.936	1.2975
186	185**	97	103	104	111	51.135	53.041	1.2940
187	186**	97	103	104	111	51.319	53.146	1.2915
188	187**	97	103	103	110	51.504	53.251	1.2790
189	188**	97	102	103	110	51.689	53.373	1.2675
190	189	97	100	103	107	53.023	53.506	1.2255
191	190	96	100	103	107	53.157	53.639	1.2236
192	191	96	100	102	107	53.290	53.778	1.2221
193	192	96	100	102	106	53.429	53.926	1.2198
194	193	96	99	102	106	53.579	54.075	1.2177
195	194	95	99	102	106	53.728	54.227	1.2161
196	195	95	99	101	105	53.881	54.385	1.2135
197	196	95	99	101	105	54.040	54.543	1.2113
198	197	95	98	101	105	54.199	54.706	1.2099
199	198	95	98	100	105	54.362	54.871	1.2069
200	199	94	98	100	104	54.528	55.035	1.2047
201	200	94	98	100	104	54.693	55.205	1.2023
202	201	94	97	100	104	54.863	55.374	1.1999
203	202	94	97	99	103	55.034	55.545	1.1983
204	203	93	97	99	103	55.206	55.718	1.1952
205	204	93	97	99	103	55.379	55.891	1.1930
206	205	93	96	98	102	55.553	56.066	1.1905
207	206	93	96	98	102	55.729	56.242	1.1880
208	207	92	96	98	102	55.906	56.419	1.1865
209	208	92	96	97	101	56.084	56.597	1.1832
210	209	92	95	97	101	56.262	56.775	1.1812
211	210	92	95	97	101	56.441	56.955	1.1783
212	211	91	95	96	101	56.622	57.135	1.1759
213	212	91	95	96	100	56.802	57.316	1.1734
214	213	91	94	96	100	56.984	57.497	1.1709
215	214	91	94	96	100	57.167	57.679	1.1694
216	215	90	94	95	99	57.350	57.862	1.1659
217	216	90	94	95	99	57.533	58.045	1.1640
218	217	90	93	95	99	57.717	58.229	1.1609
219	218	90	93	94	98	57.902	58.381	1.1587
220	219	90	93	94	98	58.054	58.456	1.1469
221	220	90	93	94	98	58.130	58.531	1.1331
222	221	89	93	94	98	58.205	58.606	1.1192
223	222	89	93	94	98	58.281	58.728	1.1083
224	223	89	93	94	98	58.402	58.913	1.1021
225	224	89	92	93	97	58.589	59.099	1.1000
226	225	89	92	93	97	58.775	59.286	1.0974
227	226	88	92	93	97	58.963	59.472	1.0951
228	227	88	92	93	96	59.150	59.660	1.0926
229	228	88	91	92	96	59.338	59.847	1.0902
230	229	88	91	92	96	59.527	60.036	1.0890
231	230	87	91	92	96	59.716	60.225	1.0854
232	231	87	91	91	95	59.906	60.414	1.0830
233	232	87	90	91	95	60.096	60.603	1.0806
234	233	87	90	91	95	60.285	60.792	1.0782
235	234**	83	90	86	94	60.475	64.675	1.0758
236	235**	82	90	86	94	60.665	64.705	1.0734
237	236**	82	89	86	94	60.854	64.736	1.0722
238	237**	82	89	86	94	61.046	64.766	1.0686
239	238**	82	89	86	93	61.238	64.797	1.0662
240	239**	82	89	86	93	61.430	64.827	1.0638
241	240**	82	89	86	93	61.621	64.858	1.0614
242	241**	82	88	86	93	61.813	64.888	1.0590
243	242**	82	88	86	92	62.005	64.919	1.0566
244	243**	82	88	86	92	62.197	64.950	1.0553

245	244**	82	88	85	92	62.390	64.980	1.0518
246	245**	82	87	85	91	62.584	65.011	1.0494
247	246**	82	87	85	91	62.777	65.076	1.0470
248	247**	82	87	85	91	62.971	65.169	1.0446
249	248**	82	87	85	91	63.164	65.263	1.0421
250	249**	82	87	85	90	63.358	65.357	1.0397
251	250**	82	86	85	90	63.551	65.468	1.0382
252	251**	82	86	85	90	63.746	65.593	1.0260
253	252**	81	86	85	90	63.940	65.717	1.0191
254	253	81	84	84	88	65.419	65.852	0.9850
255	254	81	84	84	88	65.555	65.996	0.9829
256	255	81	84	84	88	65.698	66.139	0.9812
257	256	81	84	84	87	65.842	66.293	0.9803
258	257	81	84	84	87	65.997	66.448	0.9776
259	258	81	84	84	87	66.153	66.612	0.9763
260	259	80	84	83	87	66.317	66.783	0.9738
261	260	80	83	83	87	66.489	66.954	0.9718
262	261	80	83	83	86	66.660	67.124	0.9699
263	262	80	83	83	86	66.831	67.295	0.9678
264	263	80	83	83	86	67.002	67.466	0.9658
265	264	80	83	82	86	67.174	67.637	0.9638
266	265**	77	83	80	86	67.345	70.144	0.9618
267	266**	77	82	80	85	67.516	70.141	0.9598
268	267**	77	82	80	85	67.687	70.122	0.9568
269	268**	77	82	80	85	67.871	70.103	0.9556
270	269**	77	82	80	85	68.054	70.088	0.9535
271	270**	77	82	80	85	68.238	70.073	0.9514
272	271**	77	81	80	84	68.422	70.058	0.9493
273	272**	77	81	80	84	68.606	70.046	0.9471
274	273**	77	81	80	84	68.790	70.037	0.9450
275	274**	77	81	80	84	68.974	70.029	0.9429
276	275**	77	81	80	84	69.158	70.021	0.9416
277	276**	77	81	80	83	69.345	70.012	0.9216
278	277**	77	80	80	83	69.533	70.004	0.4494

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FILE   6 -          71 RECORDS IN    1 BLOCKS        06-JAN-83
C   II ISEE   HET2   CALIB (ENTERED 2/9/81) MODIFIED FROM [2RE,R05
C     DETECTOR FILE ICIIG3.DET                ,TRACK FILE ICIIDEAD.TRK
C     A-STOPPING                        HIGH GAIN
C
C
*IIA3H    PROT              1      1.007                  6.469     58.535
     3          64            1        1          64         6        43          6        79          1
```

2	1	39	43	63	79	6.469	7.072	1.2303
3	2	37	41	54	68	6.718	7.422	1.2303
4	3	35	39	48	59	7.081	7.857	1.2303
5	4	32	37	42	52	7.532	8.363	1.2303
6	5	30	35	38	46	8.054	8.926	1.2303
7	6	28	33	34	41	8.633	9.535	1.2303
8	7	27	31	31	38	9.259	10.184	1.2303
9	8	25	29	29	34	9.922	10.865	1.2303
10	9	24	27	27	32	10.616	11.570	1.2303
11	10	22	26	25	29	11.335	12.299	1.2303
12	11	21	24	23	28	12.075	13.046	1.2303
13	12	20	23	22	26	12.833	13.808	1.2303
14	13	19	22	21	24	13.606	14.585	1.2303
15	14	18	21	20	23	14.392	15.375	1.2303
16	15	18	20	19	22	15.189	16.171	1.2303
17	16	17	19	18	21	15.995	16.979	1.2303
18	17	16	19	17	20	16.807	17.790	1.2303
19	18	16	18	16	19	17.630	18.613	1.2303
20	19	15	17	16	18	18.455	19.437	1.2303
21	20	15	17	15	17	19.288	20.270	1.2303
22	21	14	16	15	17	20.124	21.105	1.2303
23	22**	13	15	13	16	20.966	24.265	1.2303
24	23**	13	15	13	15	21.810	25.243	1.2303
25	24**	12	14	13	15	22.659	25.446	1.2291
26	25**	12	14	12	14	23.509	25.763	1.2269
27	26**	12	14	12	14	24.434	26.317	1.2254
28	27	12	13	12	13	25.965	27.006	1.1586
29	28	11	13	11	13	26.723	27.754	1.1527
30	29	11	12	11	12	27.526	28.546	1.1496
31	30	11	12	11	12	28.346	29.355	1.1424
32	31	11	12	11	12	29.178	30.182	1.1356
33	32**	9	11	9	12	30.021	35.186	1.1319
34	33**	9	11	9	11	30.871	36.269	1.1238
35	34**	9	11	9	11	31.724	36.484	1.1168
36	35**	9	11	9	11	32.584	36.626	1.1121
37	36**	9	10	9	10	33.446	36.790	1.1036
38	37**	9	10	9	10	34.312	37.195	1.0998
39	38**	9	10	9	10	35.247	37.752	1.0777
40	39	9	10	9	9	37.254	38.387	1.0380
41	40	9	9	8	9	37.996	39.102	1.0355
42	41	8	9	8	9	38.773	39.856	1.0293
43	42	8	9	8	9	39.572	40.638	1.0229
44	43	8	9	8	9	40.387	41.439	1.0162
45	44	8	9	8	9	41.213	42.255	1.0093
46	45	8	9	8	8	42.027	43.082	1.0023
47	46	8	9	8	8	42.682	43.873	0.9950
48	47	8	8	8	8	43.303	44.531	0.9884
49	48**	8	8	7	8	44.001	45.123	0.9851
50	49	8	8	7	8	44.743	45.833	0.9390
51	50	8	8	7	8	45.499	46.575	0.9343
52	51**	7	8	7	8	46.270	50.830	0.9273
53	52**	7	8	7	8	47.051	51.824	0.9204
54	53**	7	8	7	8	47.838	52.218	0.9172
55	54**	7	8	7	7	48.631	52.361	0.9099
56	55**	7	8	7	7	49.429	52.504	0.9024
57	56**	7	7	6	7	50.266	52.788	0.8953
58	57**	7	7	6	7	51.173	53.281	0.8916
59	58	7	7	6	7	52.723	53.907	0.8501
60	59	7	7	6	7	53.449	54.570	0.8434
61	60	7	7	6	7	54.192	55.291	0.8405
62	61	7	7	6	7	54.956	56.029	0.8330
63	62**	6	7	6	7	55.733	57.473	0.7791
64	63**	6	7	6	6	56.536	58.397	0.5570
65	64**	7	7	6	6	57.442	58.535	0.2705

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FILE    7 -       264 RECORDS IN    3 BLOCKS      06-JAN-83
C    II ISEE  HET2  CALIB (ENTERED 2/9/81) MODIFIED FROM [2RE,R05
C     DETECTOR FILE ICIIG3.DET          ,TRACK FILE ICIIDEAD.TRK
C     A-STOPPING                        HIGH GAIN
C
C
*IIA3H    HE4-            2      4.002             6.384     58.739
       3      257         1        1       257       25       174       26       352       1
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2	1	163	174	319	352	6.384	6.792	1.2303
3	2	162	173	305	340	6.423	6.832	1.2303
4	3	161	171	292	325	6.464	6.882	1.2303
5	4	159	170	280	312	6.516	6.937	1.2303
6	5	157	169	269	300	6.575	7.000	1.2303
7	6	156	167	258	288	6.641	7.070	1.2303
8	7	154	165	248	277	6.714	7.147	1.2303
9	8	152	163	239	267	6.794	7.230	1.2303
10	9	149	161	230	257	6.880	7.319	1.2303
11	10	147	159	222	248	6.973	7.414	1.2303
12	11	145	157	214	240	7.071	7.515	1.2303
13	12	143	155	207	232	7.175	7.621	1.2303
14	13	141	152	200	274	7.285	7.731	1.2303
15	14	138	150	194	217	7.399	7.846	1.2303
16	15	136	148	188	210	7.519	7.966	1.2303
17	16	134	146	182	204	7.642	8.090	1.2303
18	17	132	143	177	198	7.770	8.218	1.2303
19	18	129	141	172	192	7.903	8.350	1.2303
20	19	127	139	167	187	8.038	8.485	1.2303
21	20	125	137	163	182	8.178	8.624	1.2303
22	21	123	135	158	177	8.321	8.766	1.2303
23	22	121	133	154	173	8.467	8.912	1.2303
24	23	119	130	150	168	8.617	9.060	1.2303
25	24	117	128	147	164	8.769	9.211	1.2303
26	25	115	126	143	160	8.925	9.365	1.2303
27	26	113	124	140	156	9.083	9.522	1.2303
28	27	112	123	137	153	9.243	9.681	1.2303
29	28	110	121	134	149	9.406	9.842	1.2303
30	29	108	119	131	146	9.571	10.006	1.2303
31	30	106	117	128	143	9.738	10.172	1.2303
32	31	105	115	125	140	9.908	10.340	1.2303
33	32	103	114	123	137	10.079	10.509	1.2303
34	33	102	112	120	134	10.252	10.681	1.2303
35	34	100	110	118	132	10.428	10.854	1.2303
36	35	99	109	116	129	10.604	11.030	1.2303
37	36	97	107	114	127	10.782	11.206	1.2303
38	37	96	106	112	125	10.963	11.384	1.2303
39	38	94	104	110	122	11.144	11.564	1.2303
40	39	93	103	108	120	11.327	11.745	1.2303
41	40	92	101	106	118	11.511	11.927	1.2303
42	41	91	100	104	116	11.696	12.111	1.2303
43	42	89	99	102	114	11.883	12.296	1.2303
44	43	88	97	101	112	12.071	12.482	1.2303
45	44	87	96	99	110	12.260	12.670	1.2303
46	45	86	95	97	109	12.450	12.858	1.2303
47	46	85	93	96	107	12.641	13.047	1.2303
48	47	84	92	95	105	12.833	13.238	1.2303
49	48	83	91	93	104	13.026	13.429	1.2303
50	49	82	90	92	102	13.220	13.621	1.2303
51	50	81	89	90	101	13.415	13.815	1.2303
52	51	80	88	89	99	13.610	14.009	1.2303
53	52	79	87	88	98	13.807	14.203	1.2303
54	53	78	86	87	96	14.004	14.399	1.2303
55	54	77	85	86	95	14.202	14.595	1.2303
56	55	76	84	84	94	14.400	14.793	1.2303
57	56	75	83	83	93	14.600	14.990	1.2303
58	57	74	82	82	91	14.800	15.189	1.2303
59	58	73	81	81	90	15.001	15.388	1.2303
60	59	73	80	80	89	15.202	15.588	1.2303
61	60	72	79	79	88	15.404	15.788	1.2303
62	61	71	78	78	87	15.606	15.989	1.2303
63	62	70	77	77	86	15.809	16.191	1.2303
64	63	69	77	76	85	16.013	16.393	1.2303
65	64	69	76	75	84	16.217	16.595	1.2303
66	65	68	75	75	83	16.421	16.799	1.2303
67	66	67	74	74	82	16.626	17.002	1.2303
68	67	67	74	73	81	16.831	17.206	1.2303
69	68	66	73	72	80	17.037	17.411	1.2303
70	69	65	72	71	79	17.243	17.616	1.2303
71	70	65	71	71	78	17.450	17.821	1.2303
72	71	64	71	70	77	17.657	18.027	1.2303
73	72	63	70	69	77	17.865	18.233	1.2303

74	73	63	69	68	76	18.073	18.440	1.2303
75	74	62	69	68	75	18.281	18.647	1.2303
76	75	62	68	67	74	18.490	18.854	1.2303
77	76	61	67	66	73	18.699	19.062	1.2303
78	77	61	67	66	73	18.908	19.270	1.2303
79	78	60	66	65	72	19.117	19.479	1.2303
80	79	59	66	64	71	19.327	19.687	1.2303
81	80	59	65	64	71	19.537	19.896	1.2303
82	81	58	64	63	70	19.748	20.106	1.2303
83	82	58	64	63	69	19.959	20.315	1.2303
84	83	57	63	62	69	20.170	20.526	1.2303
85	84	57	63	61	68	20.381	20.736	1.2303
86	85	56	62	61	67	20.593	20.946	1.2303
87	86	56	62	60	67	20.805	21.157	1.2303
88	87	56	61	60	66	21.017	21.368	1.2303
89	88	55	61	59	66	21.229	21.579	1.2303
90	89**	50	60	53	65	21.441	24.232	1.2303
91	90**	50	60	53	64	21.654	24.502	1.2303
92	91**	50	59	53	64	21.867	24.772	1.2303
93	92**	50	59	53	63	22.080	25.043	1.2303
94	93**	50	58	53	63	22.294	25.313	1.2303
95	94**	50	58	53	62	22.507	25.386	1.2303
96	95**	50	57	53	62	22.721	25.430	1.2303
97	96**	49	57	53	61	22.935	25.473	1.2303
98	97**	49	57	52	61	23.150	25.516	1.2303
99	98**	49	56	52	60	23.364	25.560	1.2303
100	99**	49	56	52	60	23.578	25.603	1.2301
101	100**	49	55	52	59	23.794	25.670	1.2299
102	101**	48	55	51	59	24.032	25.773	1.2298
103	102**	48	54	51	58	24.270	25.876	1.2276
104	103**	48	54	51	58	24.509	26.000	1.2265
105	104**	48	54	51	57	24.747	26.136	1.2246
106	105**	47	53	50	57	24.985	26.282	1.2238
107	106	47	51	50	54	25.897	26.438	1.1604
108	107	47	51	50	54	26.085	26.606	1.1597
109	108	46	50	49	54	26.274	26.780	1.1581
110	109	46	50	49	53	26.466	26.954	1.1569
111	110	46	50	49	53	26.663	27.132	1.1559
112	111	46	50	48	53	26.860	27.321	1.1544
113	112	45	49	48	53	27.059	27.509	1.1531
114	113	45	49	48	52	27.262	27.698	1.1519
115	114	45	49	48	52	27.464	27.895	1.1505
116	115	45	48	47	52	27.668	28.091	1.1491
117	116	44	48	47	51	27.874	28.288	1.1478
118	117	44	48	47	51	28.080	28.490	1.1463
119	118	44	48	46	51	28.287	28.692	1.1449
120	119	43	47	46	50	28.496	28.894	1.1434
121	120	43	47	46	50	28.704	29.099	1.1427
122	121	43	47	45	50	28.914	29.305	1.1405
123	122	43	47	45	49	29.124	29.511	1.1390
124	123	42	46	45	49	29.335	29.719	1.1382
125	124	42	46	45	49	29.547	29.927	1.1360
126	125	42	46	44	49	29.759	30.135	1.1345
127	126	42	46	44	48	29.971	30.345	1.1335
128	127	42	45	44	48	30.184	30.555	1.1314
129	128	41	45	44	48	30.398	30.766	1.1299
130	129**	37	45	39	47	30.611	35.065	1.1288
131	130**	37	44	39	47	30.825	35.338	1.1268
132	131**	37	44	39	47	31.040	35.611	1.1252
133	132**	37	44	39	47	31.254	35.884	1.1239
134	133**	37	44	39	46	31.469	36.157	1.1220
135	134**	37	44	39	46	31.685	36.430	1.1204
136	135**	37	43	39	46	31.901	36.516	1.1189
137	136**	37	43	39	45	32.116	36.553	1.1172
138	137**	37	43	39	45	32.333	36.589	1.1155
139	138**	37	43	39	45	32.549	36.625	1.1139
140	139**	37	42	39	45	32.765	36.662	1.1129
141	140**	37	42	39	44	32.982	36.698	1.1106
142	141**	37	42	38	44	33.199	36.735	1.1089
143	142**	37	42	38	44	33.417	36.771	1.1077
144	143**	36	41	38	44	33.634	36.807	1.1056
145	144**	36	41	38	43	33.852	36.844	1.1039
146	145**	36	41	38	43	34.069	36.880	1.1023
147	146**	36	41	38	43	34.287	36.963	1.1005
148	147**	36	41	38	43	34.513	37.062	1.0988
149	148**	36	40	38	43	34.748	37.161	1.0971
150	149**	36	40	38	42	34.983	37.260	1.0959
151	150**	36	40	37	42	35.219	37.380	1.0937
152	151**	36	40	37	42	35.454	37.511	1.0920
153	152**	35	40	37	42	35.689	37.643	1.0903
154	153**	35	39	37	41	35.924	37.786	1.0799
155	154	35	38	37	40	37.268	37.938	1.0407
156	155	35	38	37	39	37.450	38.091	1.0395
157	156	35	37	37	39	37.637	38.259	1.0388
158	157	35	37	36	39	37.825	38.431	1.0369
159	158	35	37	36	39	38.012	38.602	1.0356
160	159	34	37	36	39	38.202	38.774	1.0342
161	160	34	37	36	39	38.398	38.945	1.0329
162	161	34	37	36	39	38.594	39.131	1.0321

163	162	34	37	36	38	38.790	39.318	1.0300
164	163	34	36	35	38	38.987	39.505	1.0285
165	164	34	36	35	38	39.188	39.692	1.0270
166	165	34	36	35	38	39.390	39.882	1.0258
167	166	33	36	35	38	39.592	40.078	1.0240
168	167	33	36	35	38	39.794	40.273	1.0224
169	168	33	36	35	37	39.999	40.469	1.0209
170	169	33	36	35	37	40.205	40.665	1.0193
171	170	33	36	34	37	40.411	40.866	1.0184
172	171	33	35	34	37	40.617	41.067	1.0161
173	172	33	35	34	37	40.824	41.269	1.0145
174	173	33	35	34	37	41.033	41.470	1.0128
175	174	32	35	34	37	41.242	41.674	1.0116
176	175	32	35	34	36	41.451	41.880	1.0095
177	176	32	35	34	36	41.660	42.085	1.0079
178	177	32	35	33	36	41.871	42.291	1.0062
179	178	32	34	33	36	42.082	42.497	1.0046
180	179	32	34	33	36	42.293	42.705	1.0029
181	180	32	34	33	36	42.504	42.914	1.0012
182	181	32	34	33	36	42.697	43.122	0.9995
183	182	31	34	33	35	42.880	43.331	0.9978
184	183	31	34	33	35	43.060	43.541	0.9966
185	184	31	34	33	35	43.212	43.752	0.9943
186	185	31	33	33	35	43.364	43.963	0.9926
187	186	31	33	32	35	43.516	44.173	0.9908
188	187	31	33	32	35	43.691	44.380	0.9892
189	188	31	33	32	35	43.868	44.557	0.9769
190	189	31	33	32	34	44.046	44.733	0.9580
191	190	31	33	32	34	44.230	44.889	0.9468
192	191	31	33	32	34	44.413	45.040	0.9435
193	192	30	33	32	34	44.600	45.191	0.9423
194	193	30	32	32	34	44.789	45.356	0.9415
195	194	30	32	32	34	44.979	45.532	0.9398
196	195	30	32	31	34	45.168	45.708	0.9384
197	196	30	32	31	34	45.357	45.890	0.9375
198	197	30	32	31	33	45.548	46.073	0.9355
199	198	30	32	31	33	45.742	46.256	0.9341
200	199	30	32	31	33	45.935	46.444	0.9334
201	200	30	32	31	33	46.129	46.633	0.9311
202	201	30	32	31	33	46.323	46.822	0.9297
203	202	30	32	31	33	46.517	47.011	0.9282
204	203**	28	31	29	33	46.714	50.566	0.9267
205	204**	28	31	29	33	46.911	50.816	0.9257
206	205**	28	31	29	33	47.108	51.066	0.9237
207	206**	28	31	29	32	47.304	51.316	0.9221
208	207**	28	31	29	32	47.501	51.567	0.9206
209	208**	27	31	28	32	47.700	51.817	0.9191
210	209**	27	31	28	32	47.899	52.067	0.9177
211	210**	27	31	28	32	48.098	52.316	0.9160
212	211**	27	31	28	32	48.297	52.455	0.9144
213	212**	27	31	28	32	48.496	52.594	0.9128
214	213**	27	30	28	32	48.696	52.733	0.9113
215	214**	27	30	28	32	48.897	52.872	0.9097
216	215**	27	30	28	31	49.098	53.011	0.9089
217	216**	27	30	28	31	49.299	53.150	0.9066
218	217**	27	30	28	31	49.500	53.288	0.9050
219	218**	27	30	28	31	49.701	53.427	0.9034
220	219**	27	30	28	31	49.903	53.566	0.9018
221	220**	27	30	28	31	50.105	53.705	0.9006
222	221**	27	30	28	31	50.327	53.844	0.8986
223	222**	27	30	28	31	50.555	53.983	0.8970
224	223**	27	29	28	31	50.784	54.122	0.8954
225	224**	27	29	28	31	51.012	54.261	0.8938
226	225**	27	29	28	30	51.240	54.400	0.8921
227	226**	27	29	27	30	51.469	54.539	0.8913
228	227**	26	29	27	30	51.697	54.678	0.8809
229	228**	26	29	27	30	51.925	54.816	0.8761
230	229	26	28	27	29	54.040	54.955	0.8279
231	230	26	28	27	29	54.181	55.094	0.8261
232	231	26	28	27	29	54.321	55.233	0.8244
233	232	26	28	27	29	54.462	55.372	0.8227
234	233	26	28	27	29	54.602	55.511	0.8209
235	234	26	27	27	28	54.743	55.650	0.8192
236	235	26	27	27	28	54.883	55.789	0.8175
237	236	26	27	27	28	55.024	55.928	0.8157
238	237	26	27	27	28	55.164	56.067	0.8140
239	238	26	27	27	28	55.305	56.205	0.8123
240	239	26	27	27	28	55.446	56.344	0.8105
241	240	26	27	27	28	55.586	56.483	0.8088
242	241	26	27	27	28	55.727	56.622	0.8071
243	242	26	27	27	28	55.867	56.761	0.8053
244	243	26	27	26	28	56.008	56.900	0.8036
245	244	26	27	26	28	56.148	57.039	0.8019
246	245	25	27	26	28	56.289	57.178	0.8001
247	246	25	27	26	28	56.429	57.317	0.7984
248	247	25	27	26	28	56.570	57.456	0.7967
249	248	25	27	26	28	56.710	57.595	0.7949
250	249	25	27	26	28	56.851	57.733	0.7355
251	250	25	27	26	28	57.074	57.872	0.6435
252	251	26	27	26	27	57.304	58.011	0.5479
253	252	26	26	26	27	57.535	58.150	0.4523
254	253	26	26	27	27	57.765	58.289	0.3567
255	254	26	26	27	27	57.995	58.428	0.2611
256	255	26	26	27	27	58.225	58.567	0.2599
257	256	26	26	27	27	58.455	58.706	0.2599
258	257	26	26	27	27	58.685	58.738	0.2599

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FILE   8 -         67 RECORDS IN    1 BLOCKS      06-JAN-83
C   II ISEE  HET2  CALIB (ENTERED 2/9/81) MODIFIED FEB. [288,805
C     DETECTOR FILE ICIIG3.DET             ,TRACK FILE ICIIHEAD.TRK
C     B-STOPPING                        LOW GAIN
C
C
*IIL3L    HE4-           2      4.002         26.952      70.149
      3          60        1         1        60       24      56       13      51       1
```

2	1	55	56	49	51	26.952	27.676	1.6847
3	2	54	56	47	50	27.087	27.826	1.6847
4	3	54	55	45	48	27.240	28.047	1.6847
5	4	53	55	44	47	27.464	28.305	1.6847
6	5	53	54	42	45	27.727	28.603	1.6847
7	6	52	54	40	43	28.030	28.941	1.6847
8	7	51	53	39	41	28.373	29.313	1.6847
9	8	50	52	37	40	28.751	29.721	1.6847
10	9	50	52	36	38	29.165	30.162	1.6847
11	10	49	51	34	37	29.613	30.637	1.6847
12	11	48	50	33	35	30.094	31.133	1.6847
13	12	47	49	32	34	30.598	31.656	1.6847
14	13	46	48	31	33	31.127	32.209	1.6847
15	14	46	48	30	32	31.668	32.786	1.6847
16	15	45	47	29	31	32.272	33.384	1.6847
17	16	44	46	28	30	32.878	34.003	1.6812
18	17	43	45	27	29	33.504	34.641	1.5725
19	18**	40	44	24	28	34.150	37.544	1.6619
20	19**	40	44	24	27	34.815	37.711	1.6509
21	20**	40	43	24	26	35.497	37.971	1.6456
22	21**	39	42	23	26	36.199	38.432	1.6341
23	22	39	40	23	24	37.980	39.010	1.5469
24	23	38	40	22	24	38.563	39.635	1.5362
25	24	37	39	22	23	39.194	40.310	1.5253
26	25	37	39	21	23	39.875	41.022	1.5199
27	26	36	38	21	22	40.592	41.755	1.5078
28	27	36	37	20	22	41.331	42.507	1.3954
29	28	35	37	20	21	42.089	43.275	1.4826
30	29	35	36	20	21	42.863	44.058	1.4694
31	30	34	36	19	20	43.652	44.854	1.4567
32	31	34	35	19	20	44.454	45.662	1.4499
33	32	33	35	18	20	45.267	46.481	1.3693
34	33	33	34	18	19	46.092	47.311	1.3563
35	34	32	34	18	19	46.927	48.149	1.3430
36	35	32	33	17	18	47.770	48.994	1.3294
37	36**	30	33	16	18	48.621	52.544	1.3157
38	37**	30	32	16	18	49.479	52.718	1.3044
39	38**	30	32	16	18	50.347	52.976	1.2953
40	39**	29	31	16	17	51.221	53.527	1.2810
41	40	29	30	16	17	53.178	54.236	1.2141
42	41	29	30	16	16	53.991	54.986	1.2012
43	42	28	30	15	16	54.644	55.801	1.1900
44	43	28	29	15	16	55.464	56.638	1.1823
45	44	28	29	15	16	56.305	57.492	1.1683
46	45	27	29	15	15	57.163	58.364	1.1556
47	46	27	28	15	15	58.038	58.623	1.1480
48	47	27	28	15	15	58.299	58.646	1.1206
49	48	27	28	15	15	58.322	58.979	1.1033
50	49	27	28	14	15	58.656	59.868	1.0920
51	50	27	28	14	15	59.549	60.767	1.0813
52	51**	25	27	13	15	60.451	64.766	1.0674
53	52**	25	27	13	15	61.359	64.911	1.0533
54	53**	25	27	13	14	62.272	65.171	1.0417
55	54**	25	27	13	14	63.193	65.696	1.0334
56	55	25	26	13	14	65.399	66.429	0.9788
57	56	25	26	13	14	66.134	67.174	0.9663
58	57**	24	25	13	13	66.882	70.149	0.9618
59	58**	24	25	13	13	67.728	70.104	0.9483
60	59**	24	25	13	13	68.566	70.034	0.9197
61	60**	24	25	13	13	69.475	69.993	0.4467

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FILE   9 -        77 RECORDS IN    1 BLOCKS       06-JAN-83
C   II ISEE  HET2  CALIB (ENTERED 2/9/81) MODIFIED FROM [2RE;R05
C     DETECTOR FILE ICIIG3.DET              ,TRACK FILE ICIIDEAD.TRK
C     B-STOPPING                        HIGH GAIN
C
C
*IIB3H    PROT            1        1.007             26.826     69.880
         3         70       1          1         70         19       45         19        81          1
```

2	1	44	45	77	81	26.826	27.530	1.6849
3	2	44	45	75	79	26.943	27.649	1.6849
4	3	43	45	72	76	27.064	27.802	1.6849
5	4	43	44	70	74	27.220	27.990	1.6849
6	5	43	44	68	72	27.411	28.219	1.6849
7	6	42	44	65	69	27.643	28.472	1.6849
8	7	42	43	63	67	27.901	28.753	1.6849
9	8	41	43	61	65	28.186	29.060	1.6849
10	9	41	42	59	63	28.498	29.392	1.6849
11	10	40	42	57	61	28.835	29.747	1.6849
12	11	40	41	55	59	29.196	30.125	1.6849
13	12	39	41	53	57	29.579	30.523	1.6849
14	13	39	40	52	55	29.983	30.945	1.6849
15	14	38	40	50	53	30.411	31.385	1.6849
16	15	38	39	49	52	30.856	31.842	1.6849
17	16	37	39	47	50	31.320	32.318	1.6849
18	17	36	38	46	49	31.802	32.814	1.6849
19	18	36	37	45	47	32.304	33.320	1.6849
20	19	35	37	43	46	32.817	33.845	1.6802
21	20	35	36	42	45	33.347	34.384	1.6756
22	21**	32	36	37	44	33.893	37.352	1.6659
23	22**	32	35	37	43	34.451	37.490	1.6558
24	23**	32	35	37	42	35.020	37.629	1.6465
25	24**	32	34	36	41	35.605	37.907	1.6409
26	25**	31	34	36	40	36.200	38.308	1.6054
27	26	31	32	35	37	37.858	38.795	1.5468
28	27	31	32	35	37	38.349	39.312	1.5370
29	28	30	32	34	36	38.871	39.880	1.5329
30	29	30	31	33	35	39.443	40.465	1.5220
31	30	29	31	33	35	40.033	41.067	1.5109
32	31	29	30	32	34	40.641	41.693	1.5063
33	32	29	30	32	33	41.272	42.330	1.4946
34	33	28	30	31	33	41.914	42.976	1.4827
35	34	28	29	31	32	42.565	43.636	1.4719
36	35	27	29	30	32	43.230	44.305	1.4654
37	36	27	28	29	31	43.904	44.981	1.4529
38	37	27	28	29	31	44.584	45.666	1.3871
39	38	26	28	29	30	45.274	46.359	1.3646
40	39	26	27	28	30	45.972	47.061	1.3561
41	40	26	27	28	29	46.678	47.767	1.3437
42	41	25	27	27	29	47.388	48.479	1.3319
43	42**	24	26	25	28	48.105	52.259	1.3259
44	43**	24	26	25	28	48.829	52.403	1.3129
45	44**	24	26	25	27	49.556	52.546	1.3005
46	45**	24	25	25	27	50.289	52.773	1.2945
47	46**	23	25	25	27	51.028	53.227	1.2811
48	47	23	24	24	26	52.880	53.806	1.2148
49	48	23	24	24	25	53.461	54.433	1.2046
50	49	23	24	24	25	54.092	55.096	1.1985
51	50	23	24	24	25	54.758	55.785	1.1865
52	51	22	23	23	24	55.450	56.499	1.1810
53	52	22	23	23	24	56.167	57.220	1.1677
54	53	22	23	23	24	56.891	57.956	1.1572
55	54	22	23	23	24	57.631	58.391	1.1493
56	55	22	22	23	23	58.068	58.407	1.1270
57	56	22	22	23	23	58.084	58.473	1.1066
58	57	21	22	22	23	58.150	59.221	1.0939
59	58	21	22	22	23	58.901	59.977	1.0866
60	59**	20	22	21	23	59.660	64.412	1.0723
61	60**	20	22	21	23	60.422	64.532	1.0662
62	61**	20	22	21	22	61.191	64.652	1.0531
63	62**	20	21	20	22	61.961	64.815	1.0482
64	63**	20	21	20	22	62.739	65.217	1.0349
65	64**	20	21	20	22	63.517	65.775	1.0167
66	65	20	20	20	21	65.480	66.406	0.9716
67	66	19	20	20	21	66.113	67.048	0.9648
68	67**	19	20	19	21	66.758	69.880	0.9563
69	68**	19	20	19	20	67.476	69.629	0.9483
70	69**	19	20	19	20	68.197	69.768	0.9274
71	70**	19	20	19	20	68.947	69.735	0.4467

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FILE  10 -       281 RECORDS IN    3 BLOCKS      06-JAN-83
C   II ISEE  HET2  CALIB (ENTERED 2/9/81) MODIFIED FROM L2PE,R05
C    DETECTOR FILE ICIIG3.DET              ,TRACK FILE ICIIDFAD.TRK
C    B-STOPPING                        HIGH GAIN
C
C
*IIB3H   HE4-            2      4.002              26.884      70.137
```

3	274	1	1	274	73	179	75 324	1
2	1	175	179	315	324	26.864	27.500	1.6849
3	2	175	179	313	322	26.908	27.525	1.6849
4	3	174	179	311	320	26.934	27.550	1.6849
5	4	174	178	310	318	26.959	27.575	1.6849
6	5	174	178	308	317	26.985	27.600	1.6849
7	6	174	178	306	315	27.010	27.625	1.6849
8	7	174	178	304	313	27.035	27.650	1.6849
9	8	174	178	302	311	27.061	27.675	1.6849
10	9	173	177	300	309	27.086	27.700	1.6849
11	10	173	177	298	307	27.112	27.725	1.6849
12	11	173	177	297	306	27.137	27.750	1.6849
13	12	173	177	295	304	27.163	27.779	1.6849
14	13	172	177	292	302	27.192	27.824	1.6849
15	14	172	176	290	299	27.238	27.869	1.6849
16	15	172	176	287	297	27.284	27.915	1.6849
17	16	171	176	285	295	27.330	27.960	1.6849
18	17	171	175	282	292	27.376	28.006	1.6849
19	18	171	175	280	290	27.422	28.051	1.6849
20	19	170	175	278	287	27.469	28.103	1.6849
21	20	170	174	275	285	27.522	28.160	1.6849
22	21	170	174	273	282	27.580	28.217	1.6849
23	22	169	174	270	280	27.638	28.274	1.6849
24	23	169	173	268	278	27.695	28.331	1.6849
25	24	168	173	266	275	27.753	28.391	1.6849
26	25	169	172	263	273	27.814	28.456	1.6849
27	26	168	172	261	271	27.881	28.522	1.6849
28	27	167	172	259	268	27.948	28.588	1.6849
29	28	167	171	256	266	28.015	28.654	1.6849
30	29	166	171	254	264	28.082	28.725	1.6849
31	30	166	170	252	261	28.154	28.798	1.6849
32	31	165	170	250	259	28.228	28.872	1.6849
33	32	165	169	248	257	28.303	28.945	1.6849
34	33	164	169	245	255	28.377	29.022	1.6849
35	34	164	168	243	252	28.455	29.101	1.6849
36	35	163	168	241	250	28.536	29.181	1.6849
37	36	163	167	239	248	28.617	29.261	1.6849
38	37	162	167	237	246	28.699	29.345	1.6849
39	38	167	166	235	244	28.783	29.430	1.6849
40	39	161	166	233	242	28.870	29.516	1.6849
41	40	161	165	231	240	28.957	29.602	1.6849
42	41	160	165	229	238	29.044	29.692	1.6849
43	42	160	164	227	236	29.136	29.783	1.6849
44	43	159	164	225	234	29.228	29.874	1.6849
45	44	159	163	223	232	29.321	29.967	1.6849
46	45	158	163	221	230	29.415	30.063	1.6849
47	46	158	162	220	228	29.512	30.159	1.6849
48	47	157	162	218	226	29.610	30.255	1.6849
49	48	156	161	216	225	29.707	30.355	1.6849
50	49	156	160	214	223	29.809	30.455	1.6849
51	50	155	160	213	221	29.911	30.556	1.6849
52	51	155	159	211	219	30.012	30.659	1.6849
53	52	154	159	209	217	30.117	30.764	1.6849
54	53	154	158	208	216	30.223	30.868	1.6849
55	54	153	158	206	214	30.329	30.975	1.6849
56	55	153	157	204	212	30.436	31.084	1.6849
57	56	152	157	203	211	30.548	31.192	1.6849
58	57	151	156	201	209	30.657	31.302	1.6849
59	58	151	155	200	208	30.769	31.414	1.6849
60	59	150	155	198	206	30.883	31.527	1.6849
61	60	150	154	196	204	30.997	31.640	1.6849
62	61	149	154	195	203	31.112	31.756	1.6849
63	62	149	153	194	201	31.229	31.871	1.6849
64	63	148	153	192	200	31.346	31.989	1.6849
65	64	147	152	191	198	31.465	32.108	1.6849
66	65	147	151	189	197	31.585	32.226	1.6849
67	66	146	151	188	195	31.706	32.347	1.6849
68	67	146	150	186	194	31.829	32.469	1.6849
69	68	145	150	185	193	31.952	32.591	1.6849
70	69	145	149	184	191	32.075	32.715	1.6849
71	70	144	149	182	190	32.201	32.840	1.6849
72	71	143	148	181	189	32.327	32.965	1.6849
73	72	143	148	180	187	32.454	33.093	1.6849

74	73	142	147	179	186	32.583	33.220	1.6849
75	74	142	146	177	185	32.712	33.349	1.6849
76	75	141	146	176	183	32.842	33.479	1.6840
77	76	141	145	175	182	32.974	33.609	1.6825
78	77	140	145	174	181	33.106	33.741	1.6813
79	78	140	144	173	180	33.239	33.874	1.6791
80	79	139	144	171	178	33.374	34.007	1.6771
81	80	138	143	170	177	33.508	34.142	1.6756
82	81	138	142	169	176	33.644	34.277	1.6729
83	82	137	142	168	175	33.781	34.413	1.6709
84	83	137	141	167	174	33.918	34.550	1.6697
85	84	136	141	166	173	34.058	34.688	1.6666
86	85**	127	140	148	171	34.197	37.424	1.6647
87	86**	126	140	147	170	34.337	37.460	1.6624
88	87**	126	139	147	169	34.479	37.495	1.6602
89	88**	126	139	147	168	34.620	37.531	1.6586
90	89**	126	138	147	167	34.763	37.567	1.6558
91	90**	126	138	147	166	34.907	37.602	1.6536
92	91**	126	137	146	165	35.051	37.638	1.6523
93	92**	126	137	146	164	35.197	37.673	1.6492
94	93**	126	136	146	163	35.343	37.709	1.6470
95	94**	126	136	146	162	35.489	37.745	1.6447
96	95**	125	135	146	161	35.637	37.780	1.6424
97	96**	125	134	145	160	35.785	37.816	1.6406
98	97**	125	134	145	159	35.934	37.904	1.6378
99	98**	125	133	144	158	36.084	37.993	1.6354
100	99**	124	133	144	157	36.234	38.082	1.6340
101	100**	124	132	143	156	36.386	38.171	1.6086
102	101	124	128	143	149	37.716	38.268	1.5520
103	102	124	128	142	148	37.814	38.380	1.5501
104	103	123	127	142	148	37.927	38.492	1.5485
105	104	123	127	141	147	38.041	38.605	1.5468
106	105	123	127	141	146	38.154	38.725	1.5456
107	106	122	126	140	146	38.276	38.851	1.5432
108	107	122	126	139	145	38.403	38.977	1.5413
109	108	121	126	139	144	38.530	39.105	1.5396
110	109	121	125	138	144	38.659	39.240	1.5374
111	110	121	125	138	143	38.795	39.375	1.5354
112	111	120	124	137	143	38.931	39.510	1.5334
113	112	120	124	136	142	39.068	39.651	1.5312
114	113	119	124	136	141	39.210	39.793	1.5291
115	114	119	123	135	141	39.353	39.934	1.5270
116	115	119	123	134	140	39.495	40.080	1.5248
117	116	118	122	134	139	39.643	40.227	1.5226
118	117	118	122	133	139	39.790	40.373	1.5204
119	118	117	122	132	138	39.938	40.523	1.5181
120	119	117	121	132	137	40.089	40.673	1.5158
121	120	117	121	131	137	40.241	40.824	1.5137
122	121	116	120	131	136	40.393	40.978	1.5112
123	122	116	120	130	135	40.548	41.131	1.5088
124	123	115	120	129	135	40.702	41.285	1.5068
125	124	115	119	129	134	40.858	41.442	1.5041
126	125	115	119	128	134	41.016	41.598	1.5018
127	126	114	118	128	133	41.173	41.756	1.4998
128	127	114	118	127	132	41.332	41.915	1.4969
129	128	113	118	126	132	41.492	42.074	1.4945
130	129	113	117	126	131	41.653	42.234	1.4927
131	130	113	117	125	130	41.814	42.395	1.4896
132	131	112	116	125	130	41.977	42.556	1.4871
133	132	112	116	124	129	42.139	42.719	1.4854
134	133	112	116	123	129	42.303	42.882	1.4822
135	134	111	115	123	128	42.468	43.046	1.4796
136	135	111	115	122	127	42.632	43.211	1.4781
137	136	110	114	122	127	42.799	43.376	1.4746
138	137	110	114	121	126	42.965	43.541	1.4720
139	138	110	114	121	126	43.132	43.708	1.4706
140	139	109	113	120	125	43.300	43.876	1.4669
141	140	109	113	120	125	43.468	44.043	1.4644
142	141	108	113	119	124	43.637	44.212	1.4618
143	142	108	112	119	124	43.807	44.380	1.4592
144	143	108	112	118	123	43.977	44.549	1.4568
145	144	107	111	118	122	44.147	44.720	1.4425
146	145	107	111	117	122	44.319	44.891	1.4231
147	146	107	111	116	121	44.491	45.061	1.4036
148	147	106	110	116	121	44.663	45.232	1.3852
149	148	106	110	115	120	44.835	45.405	1.3749
150	149	106	110	115	120	45.008	45.577	1.3724
151	150	105	109	114	119	45.182	45.750	1.3702
152	151	105	109	114	119	45.356	45.924	1.3675
153	152	105	108	114	118	45.531	46.098	1.3649
154	153	104	108	113	118	45.706	46.272	1.3629
155	154	104	108	113	117	45.881	46.447	1.3599
156	155	103	107	112	117	46.058	46.622	1.3574
157	156	103	107	112	116	46.234	46.798	1.3557
158	157	103	107	111	116	46.411	46.975	1.3523

159	158	102	106	111	115	46.589	47.152	1.3498
160	159	102	106	110	115	46.767	47.329	1.3472
161	160	102	106	110	114	46.946	47.506	1.3446
162	161	101	105	109	114	47.124	47.683	1.3421
163	162	101	105	109	113	47.302	47.862	1.3406
164	163	101	105	108	113	47.482	48.041	1.3369
165	164	100	104	108	113	47.662	48.221	1.3344
166	165	100	104	108	112	47.842	48.400	1.3318
167	166	100	104	107	112	48.023	48.579	1.3292
168	167	99	103	107	111	48.203	48.758	1.3266
169	168	99	103	106	111	48.383	48.940	1.3240
170	169	99	103	106	110	48.566	49.121	1.3214
171	170**	93	102	99	110	48.748	52.434	1.3188
172	171**	93	102	99	109	48.931	52.471	1.3161
173	172**	93	102	99	109	49.113	52.507	1.3135
174	173**	93	101	99	109	49.296	52.544	1.3111
175	174**	93	101	99	108	49.478	52.581	1.3083
176	175**	93	101	99	108	49.663	52.618	1.3056
177	176**	93	100	98	107	49.847	52.655	1.3030
178	177**	93	100	98	107	50.032	52.692	1.3003
179	178**	93	100	98	107	50.216	52.729	1.2977
180	179**	93	99	98	106	50.401	52.765	1.2953
181	180**	93	99	98	106	50.585	52.802	1.2924
182	181**	93	99	98	105	50.772	52.839	1.2897
183	182**	93	99	98	105	50.958	52.932	1.2870
184	183**	93	98	98	105	51.144	53.038	1.2843
185	184**	92	98	98	104	51.330	53.145	1.2817
186	185**	92	98	97	104	51.517	53.251	1.2792
187	186**	92	97	97	103	51.703	53.377	1.2617
188	187	92	95	97	101	53.027	53.511	1.2166
189	188	92	95	97	101	53.163	53.646	1.2148
190	189	91	95	96	100	53.298	53.791	1.2133
191	190	91	95	96	100	53.444	53.949	1.2108
192	191	91	94	96	100	53.603	54.107	1.2086
193	192	91	94	96	99	53.761	54.265	1.2065
194	193	91	94	95	99	53.920	54.423	1.2043
195	194	90	94	95	99	54.079	54.581	1.2022
196	195	90	94	95	99	54.237	54.738	1.2000
197	196	90	93	94	98	54.396	54.896	1.1978
198	197	90	93	94	98	54.555	55.069	1.1967
199	198	89	93	94	98	54.728	55.242	1.1932
200	199	89	93	94	97	54.902	55.416	1.1909
201	200	89	92	93	97	55.077	55.589	1.1885
202	201	89	92	93	97	55.251	55.763	1.1861
203	202	88	92	93	97	55.425	55.936	1.1838
204	203	88	92	92	96	55.599	56.109	1.1814
205	204	88	91	92	96	55.773	56.290	1.1802
206	205	88	91	92	96	55.955	56.471	1.1766
207	206	88	91	92	95	56.137	56.652	1.1741
208	207	87	91	91	95	56.318	56.833	1.1716
209	208	87	90	91	95	56.500	57.013	1.1692
210	209	87	90	91	94	56.682	57.194	1.1667
211	210	87	90	90	94	56.863	57.376	1.1645
212	211	86	90	90	94	57.046	57.561	1.1618
213	212	86	89	90	94	57.232	57.747	1.1593
214	213	86	89	90	93	57.418	57.932	1.1568
215	214	86	89	89	93	57.604	58.118	1.1543
216	215	85	89	89	93	57.791	58.303	1.1518
217	216	85	89	89	92	57.977	58.488	1.1493
218	217	85	88	89	92	58.163	58.609	1.1472
219	218	85	88	89	92	58.285	58.617	1.1286
220	219	85	88	89	92	58.292	58.624	1.1080
221	220	85	88	88	92	58.300	58.806	1.0974
222	221	85	88	88	92	58.482	58.994	1.0935
223	222	84	88	88	91	58.671	59.182	1.0921
224	223	84	87	87	91	58.860	59.371	1.0888
225	224	84	87	87	91	59.049	59.560	1.0872
226	225	84	87	87	91	59.239	59.750	1.0840
227	226	83	87	87	90	59.430	59.940	1.0823
228	227	83	87	86	90	59.621	60.131	1.0792
229	228	83	86	86	90	59.813	60.322	1.0768
230	229	83	86	86	89	60.005	60.513	1.0744
231	230	83	86	86	89	60.196	60.704	1.0720
232	231**	78	86	81	89	60.388	64.641	1.0696
233	232**	78	85	81	89	60.580	64.672	1.0672
234	233**	78	85	81	88	60.772	64.703	1.0656
235	234**	78	85	81	88	60.965	64.734	1.0624
236	235**	78	85	81	88	61.159	64.765	1.0600
237	236**	78	85	81	88	61.353	64.796	1.0576
238	237**	78	84	81	87	61.547	64.827	1.0552
239	238**	78	84	81	87	61.741	64.857	1.0528
240	239**	78	84	81	87	61.935	64.888	1.0504
241	240**	78	84	80	87	62.129	64.919	1.0488
242	241**	78	83	80	86	62.324	64.950	1.0456
243	242**	78	83	80	86	62.520	64.981	1.0431
244	243**	78	83	80	86	62.715	65.034	1.0407

245	244**	78	83	80	86	62.911	65.129	1.0383
246	245**	78	83	80	85	63.107	65.224	1.0359
247	246**	78	82	80	85	63.303	65.319	1.0335
248	247**	78	82	80	85	63.498	65.427	1.0318
249	248**	78	82	80	85	63.695	65.553	1.0208
250	249**	77	82	80	84	63.892	65.679	1.0133
251	250	77	80	79	83	65.381	65.819	0.9789
252	251	77	80	79	83	65.522	65.978	0.9768
253	252	77	80	79	82	65.682	66.137	0.9749
254	253	77	80	79	82	65.841	66.295	0.9731
255	254	77	80	79	82	66.000	66.454	0.9712
256	255	77	80	79	82	66.159	66.612	0.9694
257	256	76	79	78	82	66.318	66.771	0.9675
258	257	76	79	78	81	66.477	66.929	0.9657
259	258	76	79	78	81	66.636	67.088	0.9639
260	259	76	79	78	81	66.795	67.252	0.9623
261	260	76	79	78	81	66.960	67.433	0.9600
262	261	76	79	78	81	67.141	67.613	0.9579
263	262**	73	78	75	81	67.322	70.137	0.9558
264	263**	73	78	75	80	67.503	70.128	0.9538
265	264**	73	78	75	80	67.683	70.109	0.9517
266	265**	74	78	75	80	67.864	70.090	0.9496
267	266**	74	78	75	80	68.045	70.075	0.9475
268	267**	74	78	75	80	68.226	70.059	0.9455
269	268**	74	77	75	79	68.407	70.044	0.9405
270	269**	74	77	75	79	68.596	70.032	0.9331
271	270**	74	77	75	79	68.785	70.024	0.9257
272	271**	74	77	75	79	68.974	70.015	0.9183
273	272**	74	77	75	79	69.163	70.007	0.9108
274	273**	74	77	75	78	69.351	69.998	0.9034
275	274**	74	76	75	78	69.540	69.990	0.4467

PREFACE

Appendix G of the Calibration of the High Energy Telescopes for the Voyager and ISEE Cosmic Ray Experiments (CSC/TM-81/6280) has been expanded to include a discussion of the range-energy relation. The attached pages should replace the corresponding pages in the original document. Each revision is marked by a vertical bar in the right margin; the date of the revision is shown in the lower right corner. The original COMDEX number on the document cover and title page should be changed to CSC/TM-81/6280UD1.

TABLES

APPENDIX G

DON REAMES ON TESTA

Programs on the PDP 11/70

D. V. Reames

1. Introducton

Programs have been written on the PDP 11/70 that allow generation of response tables ("boxes") for particle telescopes whose complexity does not exceed that of the Voyager-ISEE HET telescopes. Response is based upon an internally generated range/energy relation for silicon that is calibrated to a few percent accuracy for particle species from protons through Fe at energies from below 1 MeV/AMU through ionization minimum (2.4 GeV/AMU) Heavier species and thinner detector elements (<10 microns) may also be used, but with greater uncertainty.

The program TESTA accepts a detector description file as input and produces calculated track files on disk for the detector modes and particle species requested.

The program PLOTPR uses the track file from TESTA to produce any number of printer plots of theoretical response matrices. The desired plots are selected interactively at the CRT terminal.

The program BOXGEN or AUTOBOX uses the track file data from TESTA to generate response tables in a form suitable for input to the FLXPLT program on the IBM 360.

An additional program, PLOTVG, was written to plot response curves on the vector general plotter. However, partly because of VG limitation, the part of the program that would allow measurements to be compared with the curves has not been implemented.

2. Track Calculations-TESTA

Most of the physics of the detector system and its response to particles is determined by the TESTA program; the main task of the other programs is to reformat the output from TESTA.

2.1 Detector Description File:

The input to TESTA is a detector description file such as that shown in Figure 12 b. Records beginning with C in the first column are treated as comments and are not analyzed by the program. A file for a new detector is most easily created by copying and editing an old file, using the commented column headings as a template.

The features of the detector file are as follows:

2.1.1 Title Record: the first two characters will be used as part of an output "mole name" to signify telescope number. The remainder of the record is a descriptive title that appears on all calculated output from all 11/70 programs based on this file. Additional data (range/energy version and file name) are later appended to the title, beginning in column 58.

2.1.2 Telescope Complexity: the number of modes (maximum 4) and gains (maximum 2). Modes for this double ended telescope will involve particles that stop after entering from either end and those that penetrate after entering either end. A single ended telescope like the ISEE-VLET, has only 1 mode.

2.1.3 Detector-Layer Records: one record for each distinguishable physical layer in the detector (maximum 19). These records include a 2 character element name and number for each electrically defined active element (maximum 8) or blank and zero for dead layers Threshold energies are also specified (MeV) in high and low gain for active elements. Every layer is defined by a thickness, spacing to the next layer and radius, all in microns, and a curvature index for curved elements. Thicknesses need not be integers. Columns 4,5 and 6 contain pointers that define how the signal (the energy deposited in each layer) will be summed by pointing to a summing register for each mode. (An attempt is made to duplicate the preamplifier-summing amplifier-PHA configuration of a HET). Registers number 1 and 2 will become the two "delta E" elements. Both must exceed threshold to form a coincidence. Register 6 sums the anti-coincidence signal, distinquishing stopping and penetrating particles. Energy deposited in registers 3, 4 and 5 will be converted to channels and then summed to produce the "E" pulse height. Register 7 collects the unobserved energy from dead layers.

2.1.4 Calibration Records (11): specify the conversion from MeV to channels for the active layers described in comments on the right for low and high gain, respectively, via

delta E(channels) = (channels/FSMeV) * (delta E(MeV)) + OFFSET

2.1.5 Slant Descriminator Definiton: up to two slants may be defined in each stopping mode and for penetrating mode. Slants

are computed in channels and, for a given mode, may apply to low gain only (GN=1) or both low and high gain (GN=2). Slants are computed from the listed coefficients by

CH1 * delta E1 + CH2 * delta E2 + CH3 * E + SUM

where delta E1, delta E2 and E are expressed in channels. The slant is true if the above result is greater than zero. The text labels under 1, 2 or both will appear on the printed output whenever the corresponding slant conditions are true.

2.1.6 Species Cards: define the specific particle species, modes and gains for the current track calculation. A header record specifies the number of modes and the number of species in each gain. This is followed by species records with a 4-character name, and its charge and mass (AMU).

2.2 TESTA Calculations:

With access to a detector file, TESTA proceeds to calculate track data for each gain and species listed on the file. For each such case, the subroutine TABLE is invoked to generate a range/energy table that will be used for all detector modes requested.

2.2.1 Logic Summary:

For each detector model, the program first maps the detector by summing the thicknesses in the proper direction to determine the particle range to each physical boundary of the system from the first coincidence (elements 1 and 2), to the anti-coincidences (element 6) or to ionization minimum for penetrating particles. For the first interface with each active element, the range is then modified so that the energy deposited in the detector exceeds thresholds.

The program then calculates the detector response as the particle range is stepped in small increments from boundary to boundary. The stepping algorithm allows the step size to increase if the charge in the response in any channel is less than a user-specified precision between 1 and 10%.

Each range point also corresponds to a given depth in the detector when detector spacing data are included. The depth and detector radii define a maximum inclination angle and for flat detectors, the response of a particle at the maximum angle is calculated For curved detectors, the "extreme response" curve depends upon the curvature and a first order approximation for HET detectors is internally generated by TESTA.

A geometry factor is also defined at each calculated depth. A two-concentric-element geometry factor is calculated using radii of the front detector (first detector with sum register pointer not equal to 7), and the current detector (or the last detector pointer not equal to 7). The geometry factor is calculated as shown in Figure 2 of the main document.

The calculation starts at the front of the telescope and proceeds to greater and greater depth. The geometry factor at a given depth is taken as the minimum of the current and preceding ones in order to compensate to first order for detectors with large-radius elements that do not define the geometry.

2.2.2 The Range-Energy relation:

Calibration of the ISEE and Voyager experiment response matrices requires an accurate description of the stopping process from about 20 keV/nucleon for Iron nuclei in the first channel of the VLET (very low energy telescope) through minimum ionization at 2.4 GeV/nucleon. At high energies the stopping process is well described by the BETHE-BLOCK formula. Modifications of their formula allow it to be extended down to energies where the parti-

cle captures the first few orbital electrons. At low energies where the binding of orbital elections is approximated by the Thomas-Fermi model, the electronic stopping power is approximately linear in velocity and a more complex but well described nuclear stopping power begins to dominate the energy loss process. (Lindhard Scharff and Schiott, 1963, "LSS")

At intermediate energies, where the stopping power is passing through a maximum, it is common to use empirical power law expansion to fit the measurements (eg. Northcliffe & Schilling 1970). In this work, we have preferred to modify the high and low energy forms into better agreement and to use an empirical weighting factor to shift between them in order to merge smoothly into the correct asymptotic behavior.

The Thomas-Fermi statistical model of the atom results in a smooth dependence on the atomic number of the particle and of the stopping material. A more discontinuous behavior arising from atomic shell effects has been observed (cf eg. Ziegler, 1978). We have included a small empirical correction term B(Z) in the expression for the characteristic velocity of each element to cover any residual effects of this kind. This factor is found to vary more smoothly than expected and to peak for Silicon ions (stopping in the Si detectors).

The available data for ions stopping in Si (or Al) have been considered in determining the fit constraints as well as data from the ISEE- VLET's which constrains the range energy for the heavier elements within an accuracy of 2-3%.

Parameters of the stopping material, Si, are explicitly included in the formalism as Z(stopping), A(stopping), the mean ionization potential, I(stopping) =173.5 eV and the density, ρ(stopping) = 2.33 g/cm^2. However the adequacy of the fit for other materials has not been studied and should not be assumed.

Our form of the BETHE-BLOCK expression with charge pickup differs slightly from that given in Bichsel (1970). Let b be the particle velocity (in units of the velocity of light,c) and Z and A be its atomic number and weight, respectively. Let

$$\beta_o \equiv B(z)\frac{Z^{2/3}}{137} \tag{1}$$

characterize the particles' orbital electron velocity where B(Z) is a parameter of order 1 described previously and given by the table:

Z	B(Z)	Z	B(Z)	Z	B(Z)
1	.7	10	.99	19	.985
2	.8	11	.99	20	.985
3	.85	12	1.02	21	.985
4	.9	13	1.02	22	.985
5	.95	14	1.02	23	.995
6	.975	15	1.0	24	.995
7	.975	16	1.0	25	.995
8	.975	17	1.0	26	.995
9	.99	19	1.0	27	1.0

Using β_o, we define

$$v_{rel} = (\beta - 0.004)/\beta_o \qquad \text{for} \quad \beta > .004 \tag{2}$$
$$= 0 \qquad\qquad\qquad\quad \beta < .004$$

the .004 offset being empirical.

The effective charge for stopping, Z^*, is

$$Z^* = Z(1 - \exp(-v_{rel})) \tag{3}$$

and our BETHE-BLOCK form is

$$\left.\frac{dE}{dx}\right|_{BB} = c_1 \frac{Z^{*2}}{\beta^2}\left[\ln\left(1 + \frac{2m_e}{I_a}\beta^2\gamma^2\right) - \beta^2\right] \tag{4}$$

where m_e is the electron mass,

$$\gamma = (1-\beta^2)^{-1/2}$$

and the constant

$$c_1 = \frac{4\pi e^4 N_e}{m_e c^2}$$

$$= 3.071 \times 10^{-5} \frac{Z_a}{A_a} \rho_a \qquad (5)$$

The latter value gives units of MeV/micron used in the programs. Including the one in the logarithm prevents a divergence at low velocities but has almost no effect in the region where the BETHE-BLOCK form dominates.

Generally speaking, the BB form will be valid for $\beta > \beta_0$ (see eqn. 1) and the LSS form will be valid for $\beta < \beta_0$. Since the transition appears in practice to depend on the electron characteristics of the target as well as the projectile, we define

$$\epsilon_{\beta 2} = \beta_0^2 + \frac{I_a}{2 m_e} \qquad (6)$$

The weighting factor is then

$$w_t = \exp\left(-1.25 \beta^2 / \epsilon_{\beta 2}\right) \qquad (7)$$

The LSS electronic stopping power (per atom) is given by

$$S_e = \xi_e \cdot 8\pi e^2 a_0 \frac{Z Z_a}{Z_{LS}} \frac{v}{v_0} \qquad \text{for } v > v_0 Z^{2/3} \qquad (8)$$

where $\xi_e \sim Z^{1/6}$

and $Z_{LS}^{2/3} = Z^{2/3} + Z_a^{2/3}$

The following modifications are made to the LSS form:

1. A constant multiplier of 1.34 is included (other authors have also found Equation 8 to underestimate the stopping power).

2. A factor B(Z) is included in the denominator for consistency with Equation 1.

3. An exponential factor, similar in form to the weight factor

is included to roll over the linear dependence at and above the cross-over region.

The result, in MeV/micron is

$$\left.\frac{dE}{dx}\right|_{LSS} = 1.34 \cdot \frac{157.8\,\rho\, z_0 z^{1.133}}{A_c\left(z^{2/3} + z_0^{2/3}\right)^{3/2} B(z)}\, \beta \exp\left(-0.5\,\beta^2/c_{\beta 2}\right) \qquad (9)$$

The contribution to the energy loss from nuclear collisions was obtained by fitting the Thomas-Fermi scattering function (see LSS figure 1) to the empirical form

$$f(x) = (.077)(\ln(4500x)) \,/\, (1 + 1.29x) \qquad (10)$$

and integrating to obtain the dimensionless stopping power

$$\frac{d\epsilon}{d\rho} = \frac{1}{\epsilon}\int_0^{\epsilon} f(\chi)\, d\chi \qquad (11)$$

which is a lengthy integration; retaining dominant terms gives (in our units)

$$\left.\frac{dE}{dx}\right|_{Nuc} = C_N\left\{\left[8.157 + 0.5\ln(w+1)\right]\frac{\ln(w+1)}{w} + \ln(w/w+1) - (1+0.645w)/(w+1)^2\right\} \qquad (12)$$

where

$$w = \text{MAX}\,(.007814\ ,\ C_\epsilon * E/A) \qquad (13)$$

In terms of the particle energy E, and the constants defined in equations 12 and 13 are

$$C_\epsilon = 1.29\,\frac{32566\, A A_0}{(A+A_0) Z Z_0 \left(z^{2/3} + z_0^{2/3}\right)^{1/2}} \qquad (14)$$

and

$$C_N = 0.77\,\frac{0.511\,\rho\, A Z Z_0}{A_0 (A+A_0)\left(z^{2/3} + z_0^{2/3}\right)^{1/2}} \qquad (15)$$

Finally, the full energy loss is defined to be

$$\frac{dE}{dx} = w_t \left.\frac{dE}{dx}\right|_{LSS} + (1-w_t)\left.\frac{dE}{dx}\right|_{BB} + \left.\frac{dE}{dx}\right|_{Nuc} \qquad (16)$$

In equation 16 the symbol | means that portion of the energy loss from the LSS type interaction, etc. for the other symbols.

The range-energy relation is derived from the energy loss via

$$R = \int_0^E \left(\frac{dE}{dx}\right)^{-1} dE \qquad (17)$$

using an algorithm described elsewhere.

The energy loss formalism described herein relates to programs and output described as version "R". Earlier (or later) versions may involve a completely different parameterization.

3. Operators guide

3.1 Input required:

In running TESTA, the run is prompted for:

- An output file name Any valid file name may be entered; ISEE convention uses a file type .TRK with names like ICHET1.TRK. The program may be terminated by entering a period instead of a file name.
- An input detector file name (e.g. ICHET1.DET)
- Stepping precision (percent channel change per step; default 5%)
- Print compression flag: true- print every line; false- print every other step for single mode telescopes, every 4th step for multi-mode telescopes. This controls printed output only, all steps are recorded on the track file.
- Range/energy flag: true- a one page complete range/energy loss table will be produced for each particle species in the detector file. A further prompt for new values of constants should be defaulted (/return); false- no R-E table output

3.2 Output Given:

The printed output from TESTA lists the telescope response for each step (depth) in the detector. Listed are:

- The range (depth) in microns
- The particle energy in MeV/AMU
- The response (channels)
- The response (channels)
- The response channels
- The name of a physical boundary when first encountered (XX for dead layers) These are the precise points at which the threshold is exceeded or the boundary is reached, not the nearest step.
- The name of the slant condition satisfied,if any
- The geometry factor (cm2 ster)
- The secant of the maximum inclination angle
- The energy and channel response for the extreme-response track at the same depth (three sets of entries)

The direct-access output file records contain similar information to that printed. The file is headed by index records for each species that point to the data records for each mode.