## **TURTLE**

Nominal beam axes are separated by 10,000 u

long, low energy tail, this way

X (microns)

Incoming beam axis this way —

```
-5000.000 -4000.000 -3000.000 -2000.000 -1000.000
                                                            0.000 1000.000 2000.000 3000.000 4000.000 5000.000
                                                                                                            TOTALS
-3000.
        TO-2750.
-2750.
        TO-2500.
-2500.
        TO-2250.
-2250.
        TO-2000.
-2000.
        TO-1750.
-1750.
        TO-1500.
-1500.
        TO-1250.
                       -1250.
        TO-1000. I 11 1
-1000.
 -500.000 TO-250.000 I 1 33212635382943667B4BA75CAIC8HVFKILDHDHBE6EAACBB854487633754433846545122 12 1 1
   250.000 TO 500.000 I 131123341211542557868DCDEBGDKNP$KKMGC7BIJJ9GG9BBK7B53B3895A55416224312112 1
 500.000 TO 750.000 I 31133311 2245123 3624664A58HEICEBB96AC38955 41411412111 1 1 1 1 750.000 TO1000.000 I 1 1112211 1 1 2 22 411121127546AC38351321 22 211 1 1 1 1111 1
                   11 1 3 1141 212 12369522
                                                       211 1
 1000.000 To1250.000 I
                        11 1 11 11
                                          1 1322 11 1 1
                     11
1250.000 To1500.000 I
1500.000 To1750.000 I
                     1 11 1
                                            2 2 11
                            2 1
                                          11 1 1 1 1
                                                       1 1 1
1750.000 TO2000.000 I 11
                  T 75701554823076753549912890344393836309313102132213208804022826079152446970920177919905916006321
           TOTALS I 6886557334254910572568960541599414084177163667705574060617206977902687846879265291138478864470030200 I
                                   34879 INCLUDING UNDERFLOW AND OVERFLOW AS FOLLOWS
         TOTAL NUMBER OF ENTRIES =
                       LEFT
                                                RIGHT
         ABOVE
                        2410
                                   32385
                                                   25
         BELOW
                                                           Horiz. charge CG = - 834 u
  SUM OF SQUARES =
                      5317179.
         CENTER = -834.734 RMS HALF WIDTH = 3153.652
                    6.980 RMS HALF WIDTH = 253.890
= 0.0280
         CENTER =
         CORRELATION =
                                                        Vert. charge CG = 7 u
```

## **TURTLE** X (microns) low energy tail -5000.000 -4000.000 -3000.000 -2000.000 -1000.000 0.000 1000.000 2000.000 3000.000 4000.000 5000.000 TOTALS TO-7750. -8000. Nominal beam axes are -7000. TO-6750. 1 1 separated by 10,000 u 11 -6000. TO-5750. 11 1 1 -5000. TO-4750. 111 1 11 1 -4000. TO-3750. 1 1 1 2 1 1 2 1 1 1 11 11 111 2 2 2 2 11 13 12 11 1 2 2 1 1 11221 13 11 1 2 2 1 11121 11 11 1211223 -3000.21 11121 1 1 11 2121314 1 12 I 1 11 31 13 1632 212 31121 11 1 521 23443591512 1 2121 1 1 11 11 111 1 155344BA3 53 442 123 1 -2000. 1 1 111 3212141334 5A98656673413442 3 2 2243794AD96B7875919843432212 11 I 1151 2 1212131 214112657538EA6FG98E743458754C556 843133 31256264749DCAA8C4B9EEGJFEEHD8CDGFGC9CAGDG5EGFC5CAG46A8E894262 1 1 -500.000 TO-250.000 I 23455463A8FEEKBDMNMJKLPNJDLIJOTNZPOLMOFMLJJMJIIJJJJMOEGHHELTRGLKOWJUMJDKCIDB6625 1 250.000 TO 500.000 I QZLWQ\$YTMPQOYPHHML\$RNPXUT\$XZ\$\$\$\$\$\$ZY\$S\$\$\$ZWVU\$NOXUM\$INIBBJA9797385811331 1 1788 500.000 TO 750.000 I 54312222 3413583174566878428AEKDGFBFFG37587244224112421 12 1111 327 750.000 To1000.000 I 3 1 1 111222 3 35 325226579C846284 23 21111 213 11 1 1 1 1 2 2122211 43 1 1 1 111 1121 1 1 111 2 1 21 22 1 1 1250.000 To1500.000 I 1500.000 To1750.000 I 1 1 1 1 1 1 1 1 1 1 11 1111 1 1750.000 TO2000.000 I I 256908212032804832714214122565176868284433453219914119011900000834024555771003868467122123063 TOTALS I 9922419282458410900892984327254683250681356038356514469024263719039494981409316625566084784258340021 I 34879 INCLUDING UNDERFLOW AND OVERFLOW AS FOLLOWS TOTAL NUMBER OF ENTRIES = LEFT RIGHT Horiz. charge CG = - 857 u ABOVE 27 2093 32619 BELOW SUM OF SOUARES = 4458875. -857.014 RMS HALF WIDTH = 3078.988

Vert. charge CG = - 83 u

-82.939 RMS HALF WIDTH = 756.157

## X vs. Y at 45 m parasitic crossing point for 35,000 disrupted beam particles, dy = 200 nm at IP

