**5 Degree Dose Centre of Sphere**

O. Littlejohns

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| Date | Updated Reference Number | change |
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| 12/11/2007 | PLM-CAM-RadDoseSphere-712-1 | first version issued |
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| **SHIELDOSE-2 Version 2.10** |
| |  | | --- | | Target material: Si | | Shield configuration: Centre of Al spheres | | Proton results without nuclear attenuation | |

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| **Total mission dose (rad)** | | | | | | | | |
| **Al absorber thickness** | | | **Total** | [**Trapped electrons**](http://www.spenvis.oma.be/spenvis/htusers/l/littlejohns/45INC/1194865570/spenvis_trp.html#EDI) | **Brems- strahlung** | [**Trapped protons**](http://www.spenvis.oma.be/spenvis/htusers/l/littlejohns/45INC/1194865570/spenvis_trp.html#PDI) | **Tr. electrons+ Bremsstrahlung** | **Tr. el.+Bremss. +Tr. protons** |
| **(mm)** | **(mils)** | **(g cm-2)** |
| 0.050 | 1.968 | 0.014 | 4.961E-01 | 4.949E-01 | 1.132E-03 | 0.000E+00 | 4.961E-01 | 4.961E-01 |
| 0.100 | 3.937 | 0.027 | 4.478E-01 | 4.467E-01 | 1.083E-03 | 0.000E+00 | 4.478E-01 | 4.478E-01 |
| 0.200 | 7.874 | 0.054 | 3.903E-01 | 3.894E-01 | 9.657E-04 | 0.000E+00 | 3.903E-01 | 3.903E-01 |
| 0.300 | 11.811 | 0.081 | 3.244E-01 | 3.236E-01 | 8.294E-04 | 0.000E+00 | 3.244E-01 | 3.244E-01 |
| 0.400 | 15.748 | 0.108 | 2.632E-01 | 2.625E-01 | 7.133E-04 | 0.000E+00 | 2.632E-01 | 2.632E-01 |
| 0.500 | 19.685 | 0.135 | 2.148E-01 | 2.142E-01 | 6.271E-04 | 0.000E+00 | 2.148E-01 | 2.148E-01 |
| 0.600 | 23.622 | 0.162 | 1.802E-01 | 1.796E-01 | 5.639E-04 | 0.000E+00 | 1.802E-01 | 1.802E-01 |
| 0.800 | 31.496 | 0.216 | 1.382E-01 | 1.377E-01 | 4.766E-04 | 0.000E+00 | 1.382E-01 | 1.382E-01 |
| 1.000 | 39.370 | 0.270 | 1.134E-01 | 1.130E-01 | 4.226E-04 | 0.000E+00 | 1.134E-01 | 1.134E-01 |
| 1.500 | 59.055 | 0.405 | 8.046E-02 | 8.010E-02 | 3.607E-04 | 0.000E+00 | 8.046E-02 | 8.046E-02 |
| 2.000 | 78.740 | 0.540 | 6.449E-02 | 6.417E-02 | 3.241E-04 | 0.000E+00 | 6.449E-02 | 6.449E-02 |
| 2.500 | 98.425 | 0.675 | 5.534E-02 | 5.505E-02 | 2.954E-04 | 0.000E+00 | 5.534E-02 | 5.534E-02 |
| 3.000 | 118.110 | 0.810 | 4.892E-02 | 4.865E-02 | 2.685E-04 | 0.000E+00 | 4.892E-02 | 4.892E-02 |
| 4.000 | 157.480 | 1.080 | 3.674E-02 | 3.652E-02 | 2.196E-04 | 0.000E+00 | 3.674E-02 | 3.674E-02 |
| 5.000 | 196.850 | 1.350 | 2.459E-02 | 2.441E-02 | 1.820E-04 | 0.000E+00 | 2.459E-02 | 2.459E-02 |
| 6.000 | 236.220 | 1.620 | 1.346E-02 | 1.331E-02 | 1.536E-04 | 0.000E+00 | 1.346E-02 | 1.346E-02 |
| 7.000 | 275.590 | 1.890 | 5.083E-03 | 4.951E-03 | 1.317E-04 | 0.000E+00 | 5.083E-03 | 5.083E-03 |
| 8.000 | 314.960 | 2.160 | 1.259E-03 | 1.145E-03 | 1.142E-04 | 0.000E+00 | 1.259E-03 | 1.259E-03 |
| 9.000 | 354.330 | 2.430 | 1.458E-04 | 4.572E-05 | 1.000E-04 | 0.000E+00 | 1.458E-04 | 1.458E-04 |
| 10.000 | 393.700 | 2.700 | 9.099E-05 | 9.615E-07 | 9.003E-05 | 0.000E+00 | 9.099E-05 | 9.099E-05 |
| 12.000 | 472.440 | 3.240 | 7.615E-05 | 0.000E+00 | 7.615E-05 | 0.000E+00 | 7.615E-05 | 7.615E-05 |
| 14.000 | 551.180 | 3.780 | 6.660E-05 | 0.000E+00 | 6.660E-05 | 0.000E+00 | 6.660E-05 | 6.660E-05 |
| 16.000 | 629.920 | 4.320 | 6.157E-05 | 0.000E+00 | 6.157E-05 | 0.000E+00 | 6.157E-05 | 6.157E-05 |
| 18.000 | 708.660 | 4.860 | 5.858E-05 | 0.000E+00 | 5.858E-05 | 0.000E+00 | 5.858E-05 | 5.858E-05 |
| 20.000 | 787.400 | 5.400 | 5.526E-05 | 0.000E+00 | 5.526E-05 | 0.000E+00 | 5.526E-05 | 5.526E-05 |