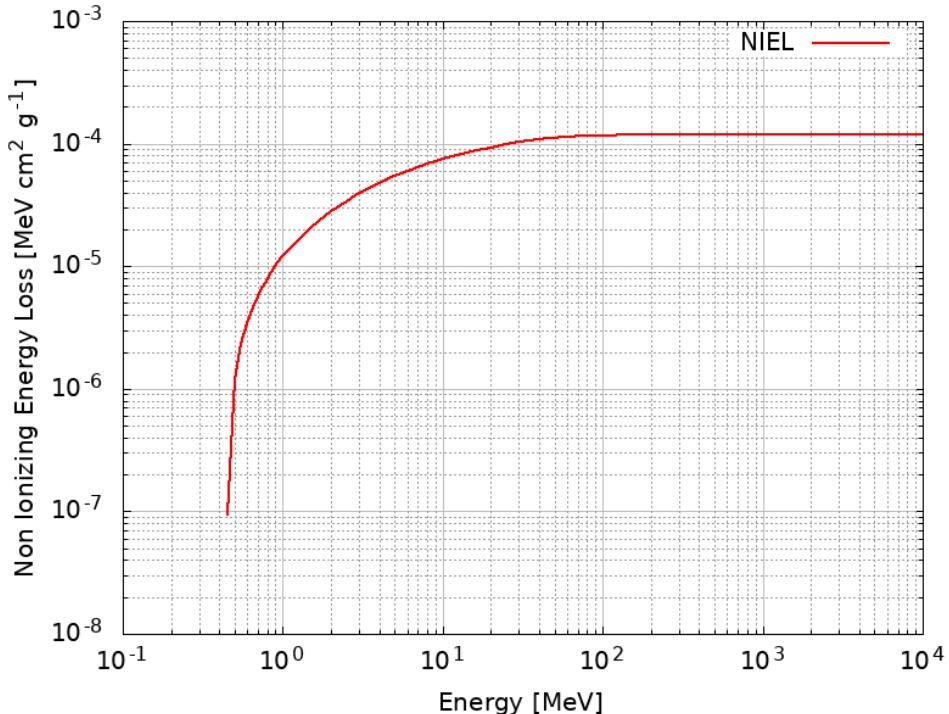


SR (screened relativistic) NIEL (non ionizing energy loss) Calculator

Electrons: SR-NIEL – 7 ver. 11.0 - 15.September.2025



Input Parameters	
Electrons in Si	
Displacement Threshold Energies [eV]:	50.00;
Minimum Energy [MeV]:	1.0e-01
Maximum Energy [MeV]:	1.0e+04
Form Factor Model :	Exponential
Particle Fluence [cm ⁻²]:	1.00e+00



Energy (MeV)	NIEL (MeV cm ² g ⁻¹)	NIEL Dose* (MeV g ⁻¹)	NIEL Dose* (Gy)
1.0000e-01	0.0000e+00	0.0000e+00	0.0000e+00
1.5000e-01	0.0000e+00	0.0000e+00	0.0000e+00
2.0000e-01	0.0000e+00	0.0000e+00	0.0000e+00
2.5000e-01	0.0000e+00	0.0000e+00	0.0000e+00
3.0000e-01	0.0000e+00	0.0000e+00	0.0000e+00
3.5000e-01	0.0000e+00	0.0000e+00	0.0000e+00
4.0000e-01	0.0000e+00	0.0000e+00	0.0000e+00
4.5000e-01	9.3273e-08	9.3273e-08	1.4948e-17
5.0000e-01	1.1902e-06	1.1902e-06	1.9074e-16
5.5000e-01	2.3128e-06	2.3128e-06	3.7065e-16
6.0000e-01	3.4443e-06	3.4443e-06	5.5196e-16
6.5000e-01	4.5734e-06	4.5734e-06	7.3291e-16
7.0000e-01	5.6929e-06	5.6929e-06	9.1233e-16
7.5000e-01	6.7981e-06	6.7981e-06	1.0894e-15
8.0000e-01	7.8858e-06	7.8858e-06	1.2637e-15
8.5000e-01	8.9539e-06	8.9539e-06	1.4349e-15
9.0000e-01	1.0001e-05	1.0001e-05	1.6028e-15
9.5000e-01	1.1028e-05	1.1028e-05	1.7672e-15
1.0000e+00	1.2032e-05	1.2032e-05	1.9282e-15
1.5000e+00	2.0951e-05	2.0951e-05	3.3575e-15
2.0000e+00	2.8178e-05	2.8178e-05	4.5158e-15
2.5000e+00	3.4181e-05	3.4181e-05	5.4777e-15
3.0000e+00	3.9282e-05	3.9282e-05	6.2953e-15
3.5000e+00	4.3701e-05	4.3701e-05	7.0033e-15
4.0000e+00	4.7586e-05	4.7586e-05	7.6260e-15
4.5000e+00	5.1045e-05	5.1045e-05	8.1804e-15
5.0000e+00	5.4157e-05	5.4157e-05	8.6790e-15
5.5000e+00	5.6980e-05	5.6980e-05	9.1314e-15
6.0000e+00	5.9560e-05	5.9560e-05	9.5448e-15
6.5000e+00	6.1932e-05	6.1932e-05	9.9250e-15
7.0000e+00	6.4124e-05	6.4124e-05	1.0276e-14
7.5000e+00	6.6161e-05	6.6161e-05	1.0603e-14
8.0000e+00	6.8059e-05	6.8059e-05	1.0907e-14
8.5000e+00	6.9836e-05	6.9836e-05	1.1192e-14
9.0000e+00	7.1505e-05	7.1505e-05	1.1459e-14
9.5000e+00	7.3076e-05	7.3076e-05	1.1711e-14
1.0000e+01	7.4560e-05	7.4560e-05	1.1949e-14
1.5000e+01	8.5941e-05	8.5941e-05	1.3773e-14
2.0000e+01	9.3475e-05	9.3475e-05	1.4980e-14
2.5000e+01	9.8867e-05	9.8867e-05	1.5844e-14
3.0000e+01	1.0289e-04	1.0289e-04	1.6490e-14
3.5000e+01	1.0598e-04	1.0598e-04	1.6985e-14
4.0000e+01	1.0840e-04	1.0840e-04	1.7371e-14
4.5000e+01	1.1030e-04	1.1030e-04	1.7677e-14
5.0000e+01	1.1182e-04	1.1182e-04	1.7920e-14
5.5000e+01	1.1304e-04	1.1304e-04	1.8116e-14
6.0000e+01	1.1403e-04	1.1403e-04	1.8274e-14
6.5000e+01	1.1483e-04	1.1483e-04	1.8403e-14

7.0000e+01	1.1549e-04	1.1549e-04	1.8508e-14
7.5000e+01	1.1602e-04	1.1602e-04	1.8594e-14
8.0000e+01	1.1647e-04	1.1647e-04	1.8664e-14
8.5000e+01	1.1683e-04	1.1683e-04	1.8723e-14
9.0000e+01	1.1713e-04	1.1713e-04	1.8771e-14
9.5000e+01	1.1738e-04	1.1738e-04	1.8811e-14
1.0000e+02	1.1759e-04	1.1759e-04	1.8845e-14
1.5000e+02	1.1849e-04	1.1849e-04	1.8989e-14
2.0000e+02	1.1863e-04	1.1863e-04	1.9010e-14
2.5000e+02	1.1860e-04	1.1860e-04	1.9006e-14
3.0000e+02	1.1854e-04	1.1854e-04	1.8997e-14
3.5000e+02	1.1847e-04	1.1847e-04	1.8986e-14
4.0000e+02	1.1841e-04	1.1841e-04	1.8976e-14
4.5000e+02	1.1836e-04	1.1836e-04	1.8968e-14
5.0000e+02	1.1831e-04	1.1831e-04	1.8960e-14
5.5000e+02	1.1827e-04	1.1827e-04	1.8953e-14
6.0000e+02	1.1823e-04	1.1823e-04	1.8947e-14
6.5000e+02	1.1820e-04	1.1820e-04	1.8942e-14
7.0000e+02	1.1817e-04	1.1817e-04	1.8937e-14
7.5000e+02	1.1814e-04	1.1814e-04	1.8933e-14
8.0000e+02	1.1812e-04	1.1812e-04	1.8929e-14
8.5000e+02	1.1810e-04	1.1810e-04	1.8926e-14
9.0000e+02	1.1808e-04	1.1808e-04	1.8923e-14
9.5000e+02	1.1806e-04	1.1806e-04	1.8920e-14
1.0000e+03	1.1805e-04	1.1805e-04	1.8918e-14
1.5000e+03	1.1794e-04	1.1794e-04	1.8901e-14
2.0000e+03	1.1788e-04	1.1788e-04	1.8892e-14
2.5000e+03	1.1785e-04	1.1785e-04	1.8886e-14
3.0000e+03	1.1783e-04	1.1783e-04	1.8882e-14
3.5000e+03	1.1781e-04	1.1781e-04	1.8880e-14
4.0000e+03	1.1780e-04	1.1780e-04	1.8878e-14
4.5000e+03	1.1779e-04	1.1779e-04	1.8876e-14
5.0000e+03	1.1778e-04	1.1778e-04	1.8875e-14
5.5000e+03	1.1777e-04	1.1777e-04	1.8874e-14
6.0000e+03	1.1777e-04	1.1777e-04	1.8873e-14
6.5000e+03	1.1776e-04	1.1776e-04	1.8872e-14
7.0000e+03	1.1776e-04	1.1776e-04	1.8871e-14
7.5000e+03	1.1775e-04	1.1775e-04	1.8871e-14
8.0000e+03	1.1775e-04	1.1775e-04	1.8870e-14
8.5000e+03	1.1775e-04	1.1775e-04	1.8870e-14
9.0000e+03	1.1774e-04	1.1774e-04	1.8869e-14
9.5000e+03	1.1774e-04	1.1774e-04	1.8869e-14
1.0000e+04	1.1774e-04	1.1774e-04	1.8869e-14

* The medium has to be thick enough to fully absorb the kinetic energy of recoil nuclei.