

## 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]:	21.00;
Minimum Energy [MeV]:	1.0e+00
Maximum Energy [MeV]:	1.0e+04
Form Factor Model :	Uniform
Particle Fluence [cm <sup>-2</sup> ]:	1.00e+00

Energy (MeV)	NIEL (MeV cm <sup>2</sup> g <sup>-1</sup> )	NIEL Dose* (MeV g <sup>-1</sup> )	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	2.4792e-06	2.4792e-06	3.9732e-16
3.0000e-01	5.8523e-06	5.8523e-06	9.3787e-16
3.5000e-01	8.5424e-06	8.5424e-06	1.3690e-15
4.0000e-01	1.0822e-05	1.0822e-05	1.7343e-15
4.5000e-01	1.2831e-05	1.2831e-05	2.0562e-15
5.0000e-01	1.4649e-05	1.4649e-05	2.3475e-15
5.5000e-01	1.6323e-05	1.6323e-05	2.6159e-15
6.0000e-01	1.7886e-05	1.7886e-05	2.8663e-15
6.5000e-01	1.9357e-05	1.9357e-05	3.1022e-15
7.0000e-01	2.0752e-05	2.0752e-05	3.3257e-15
7.5000e-01	2.2082e-05	2.2082e-05	3.5387e-15
8.0000e-01	2.3354e-05	2.3354e-05	3.7426e-15
8.5000e-01	2.4574e-05	2.4574e-05	3.9382e-15
9.0000e-01	2.5749e-05	2.5749e-05	4.1265e-15
9.5000e-01	2.6882e-05	2.6882e-05	4.3080e-15
1.0000e+00	2.7977e-05	2.7977e-05	4.4834e-15
1.5000e+00	3.7307e-05	3.7307e-05	5.9786e-15
2.0000e+00	4.4610e-05	4.4610e-05	7.1490e-15
2.5000e+00	5.0602e-05	5.0602e-05	8.1093e-15
3.0000e+00	5.5669e-05	5.5669e-05	8.9213e-15
3.5000e+00	6.0047e-05	6.0047e-05	9.6229e-15
4.0000e+00	6.3892e-05	6.3892e-05	1.0239e-14
4.5000e+00	6.7314e-05	6.7314e-05	1.0788e-14
5.0000e+00	7.0392e-05	7.0392e-05	1.1281e-14
5.5000e+00	7.3184e-05	7.3184e-05	1.1728e-14
6.0000e+00	7.5736e-05	7.5736e-05	1.2137e-14
6.5000e+00	7.8083e-05	7.8083e-05	1.2513e-14
7.0000e+00	8.0253e-05	8.0253e-05	1.2861e-14
7.5000e+00	8.2268e-05	8.2268e-05	1.3184e-14
8.0000e+00	8.4147e-05	8.4147e-05	1.3485e-14
8.5000e+00	8.5907e-05	8.5907e-05	1.3767e-14
9.0000e+00	8.7559e-05	8.7559e-05	1.4032e-14
9.5000e+00	8.9115e-05	8.9115e-05	1.4281e-14
1.0000e+01	9.0583e-05	9.0583e-05	1.4517e-14
1.5000e+01	1.0186e-04	1.0186e-04	1.6323e-14
2.0000e+01	1.0931e-04	1.0931e-04	1.7518e-14
2.5000e+01	1.1463e-04	1.1463e-04	1.8370e-14
3.0000e+01	1.1859e-04	1.1859e-04	1.9005e-14
3.5000e+01	1.2160e-04	1.2160e-04	1.9488e-14
4.0000e+01	1.2394e-04	1.2394e-04	1.9862e-14
4.5000e+01	1.2576e-04	1.2576e-04	2.0154e-14
5.0000e+01	1.2720e-04	1.2720e-04	2.0384e-14
5.5000e+01	1.2833e-04	1.2833e-04	2.0566e-14
6.0000e+01	1.2923e-04	1.2923e-04	2.0710e-14
6.5000e+01	1.2995e-04	1.2995e-04	2.0825e-14

7.0000e+01	1.3052e-04	1.3052e-04	2.0917e-14
7.5000e+01	1.3097e-04	1.3097e-04	2.0990e-14
8.0000e+01	1.3134e-04	1.3134e-04	2.1048e-14
8.5000e+01	1.3163e-04	1.3163e-04	2.1095e-14
9.0000e+01	1.3187e-04	1.3187e-04	2.1132e-14
9.5000e+01	1.3205e-04	1.3205e-04	2.1163e-14
1.0000e+02	1.3221e-04	1.3221e-04	2.1187e-14
1.5000e+02	1.3276e-04	1.3276e-04	2.1276e-14
2.0000e+02	1.3278e-04	1.3278e-04	2.1278e-14
2.5000e+02	1.3270e-04	1.3270e-04	2.1266e-14
3.0000e+02	1.3262e-04	1.3262e-04	2.1252e-14
3.5000e+02	1.3254e-04	1.3254e-04	2.1240e-14
4.0000e+02	1.3247e-04	1.3247e-04	2.1229e-14
4.5000e+02	1.3241e-04	1.3241e-04	2.1220e-14
5.0000e+02	1.3236e-04	1.3236e-04	2.1212e-14
5.5000e+02	1.3232e-04	1.3232e-04	2.1205e-14
6.0000e+02	1.3228e-04	1.3228e-04	2.1199e-14
6.5000e+02	1.3225e-04	1.3225e-04	2.1194e-14
7.0000e+02	1.3222e-04	1.3222e-04	2.1189e-14
7.5000e+02	1.3220e-04	1.3220e-04	2.1185e-14
8.0000e+02	1.3217e-04	1.3217e-04	2.1181e-14
8.5000e+02	1.3215e-04	1.3215e-04	2.1178e-14
9.0000e+02	1.3213e-04	1.3213e-04	2.1175e-14
9.5000e+02	1.3212e-04	1.3212e-04	2.1173e-14
1.0000e+03	1.3210e-04	1.3210e-04	2.1170e-14
1.5000e+03	1.3200e-04	1.3200e-04	2.1154e-14
2.0000e+03	1.3195e-04	1.3195e-04	2.1145e-14
2.5000e+03	1.3192e-04	1.3192e-04	2.1140e-14
3.0000e+03	1.3189e-04	1.3189e-04	2.1137e-14
3.5000e+03	1.3188e-04	1.3188e-04	2.1134e-14
4.0000e+03	1.3187e-04	1.3187e-04	2.1132e-14
4.5000e+03	1.3186e-04	1.3186e-04	2.1131e-14
5.0000e+03	1.3185e-04	1.3185e-04	2.1129e-14
5.5000e+03	1.3184e-04	1.3184e-04	2.1128e-14
6.0000e+03	1.3184e-04	1.3184e-04	2.1128e-14
6.5000e+03	1.3183e-04	1.3183e-04	2.1127e-14
7.0000e+03	1.3183e-04	1.3183e-04	2.1126e-14
7.5000e+03	1.3182e-04	1.3182e-04	2.1126e-14
8.0000e+03	1.3182e-04	1.3182e-04	2.1125e-14
8.5000e+03	1.3182e-04	1.3182e-04	2.1125e-14
9.0000e+03	1.3182e-04	1.3182e-04	2.1124e-14
9.5000e+03	1.3181e-04	1.3181e-04	2.1124e-14
1.0000e+04	1.3181e-04	1.3181e-04	2.1124e-14

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