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|--|----------------|--|
| radiation effects on <i>silicon</i> studied at SIRAD | | |
| energy transfer | protons | heavy ions |
| <i>displacement</i> | bulk damage | ... |
| <i>ionization</i> | surface damage | total dose effects single event effects |

| <i>Potential = 15 MV, inj = 0.15 MV</i> | | | | | |
|---|---------------------|---|----------------------------|--------------------|--------------------------|
| ion | <i>Kin</i> (MeV) | <i>surface LET</i> (MeV·cm ² /mg) | <i>Range</i> (μ m) | <i>Probability</i> | <i>Rigidity</i> (T·m) |
| <i>protons</i> | 30.15 | 0.015 | 5000 | 1 | 0.80 |
| ⁷ <i>Li</i> | 60.15 | 0.35 | 435 | 0.94 | 1 |
| ¹² <i>C</i> | 101.4 | 1.4 | 191 | 0.35 | 0.8 |
| ¹⁶ <i>O</i> | 116.4 | 2.9 | 122 | 0.30 | 0.9 |
| ¹⁹ <i>F</i> | 131.4 | 3.6 | 113 | 0.21 | 0.9 |
| ²⁸ <i>Si</i> | 168.9 | 8.5 | 70 | 0.13 | 0.9 |
| ³⁵ <i>Cl</i> | 183.9 | 12.4 | 57 | 0.11 | 1 |
| ⁵⁸ <i>Ni</i> | 247.7 | 26.5 | 41 | 0.069 | 1.02 |
| ⁶³ <i>Cu</i> | 247.7 | 28 | 38 | 0.067 | 1.06 |
| ⁷⁹ <i>Br</i> | 258.9 | 38 | 35 | 0.055 | 1.14 |
| ¹⁰⁷ <i>Ag</i> | 296.4 | 53 | 33 | 0.044 | 1.22 |
| ¹²⁷ <i>I</i> | 296.4 | 59 | 30 | 0.040 | 1.33 |
| ¹⁹⁷ <i>Au</i> | 333.9 | 80 | 28 | 0.032 | 1.54 |