

## Benchmark #7

### 1 MeV H on Fe

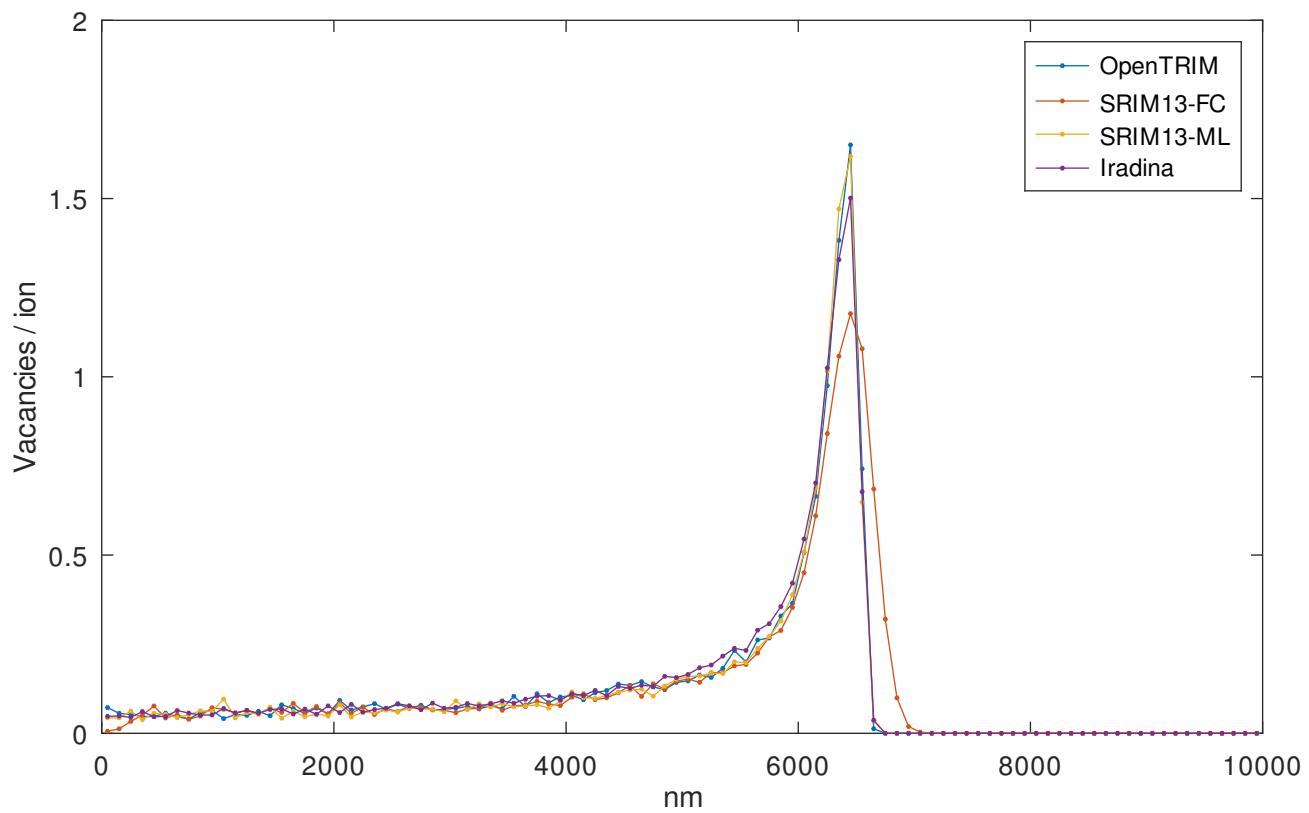
Ion energy E0 = 1e+06 eV

Target depth = 10000 nm

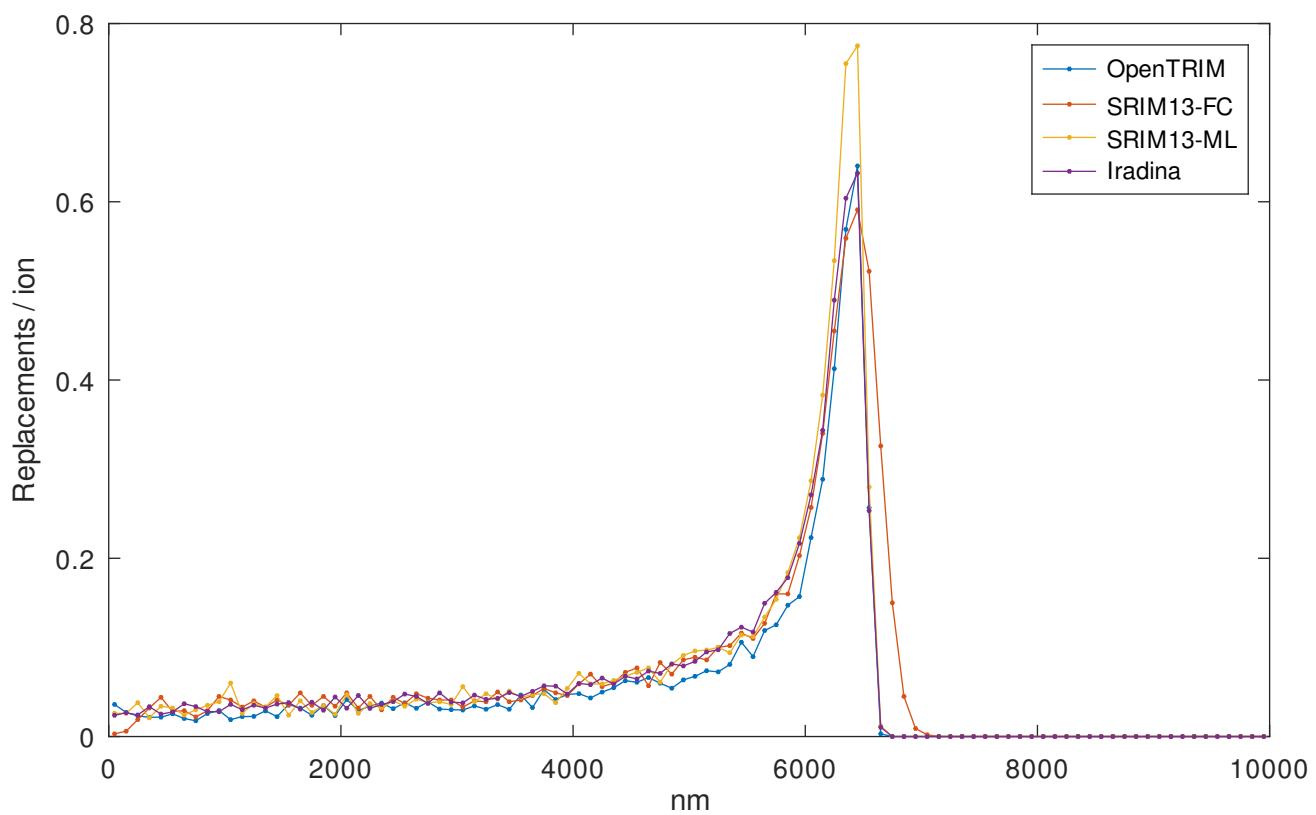
Summary Table

Quantity	OpenTRIM	SRIM13-FC	SRIM13-ML	Iradina
V(Fe)	12.2	12.2	11.9	12.5
R(tot)	5.23	6.69	6.53	6.14
I(H)	1	1	1	1
EI(H)/E0	0.998	0.998	0.998	0
EI(r)/E0	0.00012	0.000104	0.000102	0
EI/E0	0.998	0.998	0.998	0.998
EPh(H)/E0	0.000847	0.000654	0.000915	0
EPh(r)/E0	0.000932	0.00154	0.00178	0
EPh(tot)/E0	0.00178	0.00219	0.00269	0.00183
1 - (EI+EPh)/E0	-1.19e-07	-0.00055	-0.000704	0

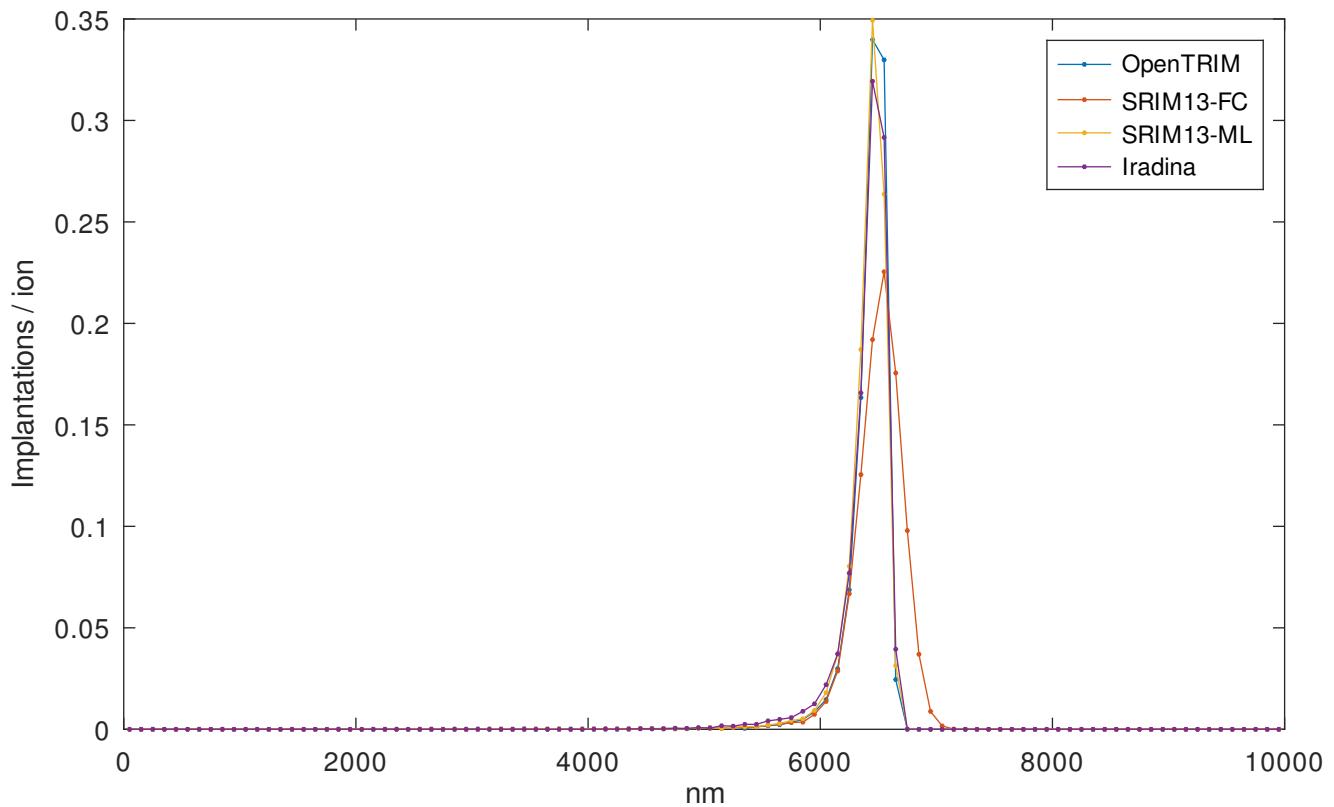
### Vacancies of Fe in Fe



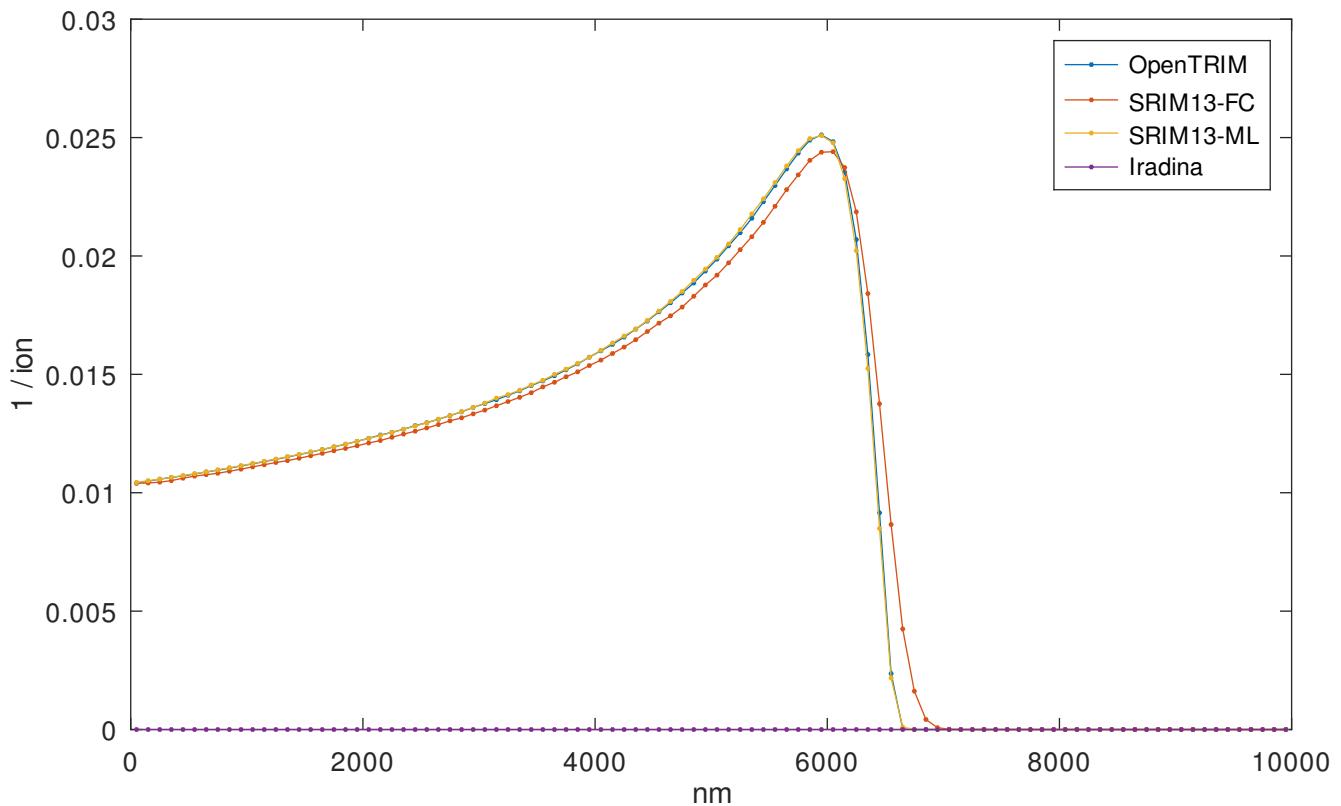
### Replacements



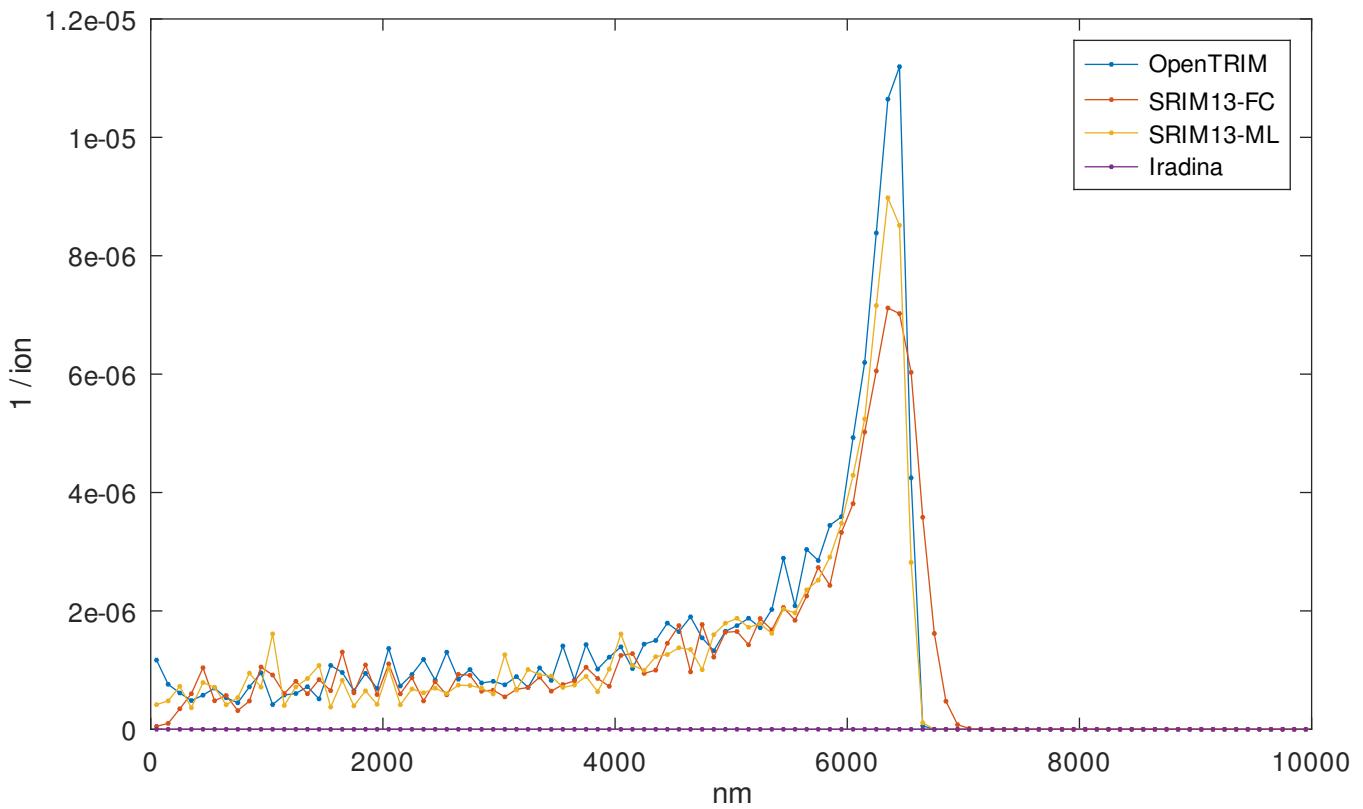
### Implanted H ion



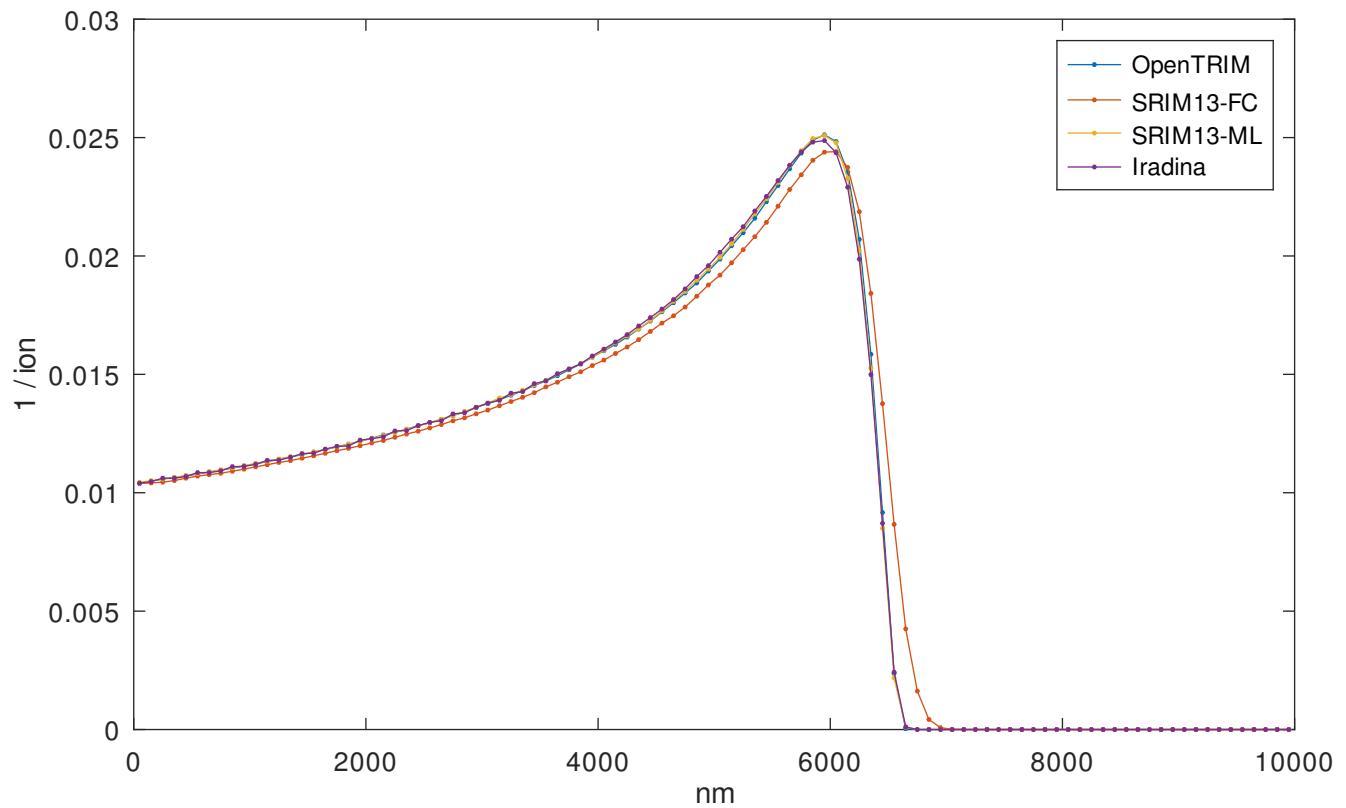
### Ionization fraction $E_I/E_0$ by H ion



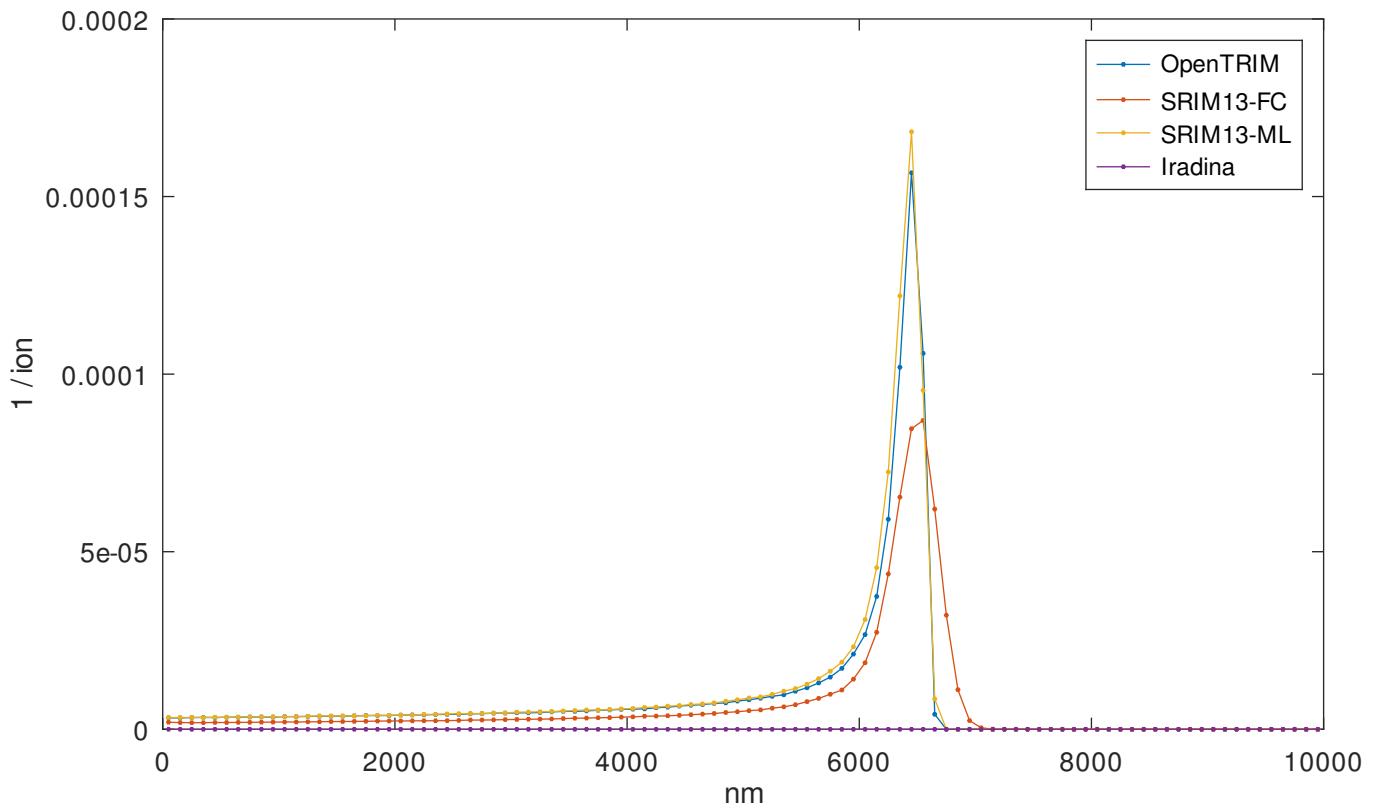
Ionization fraction  $E_I/E_0$  by recoils



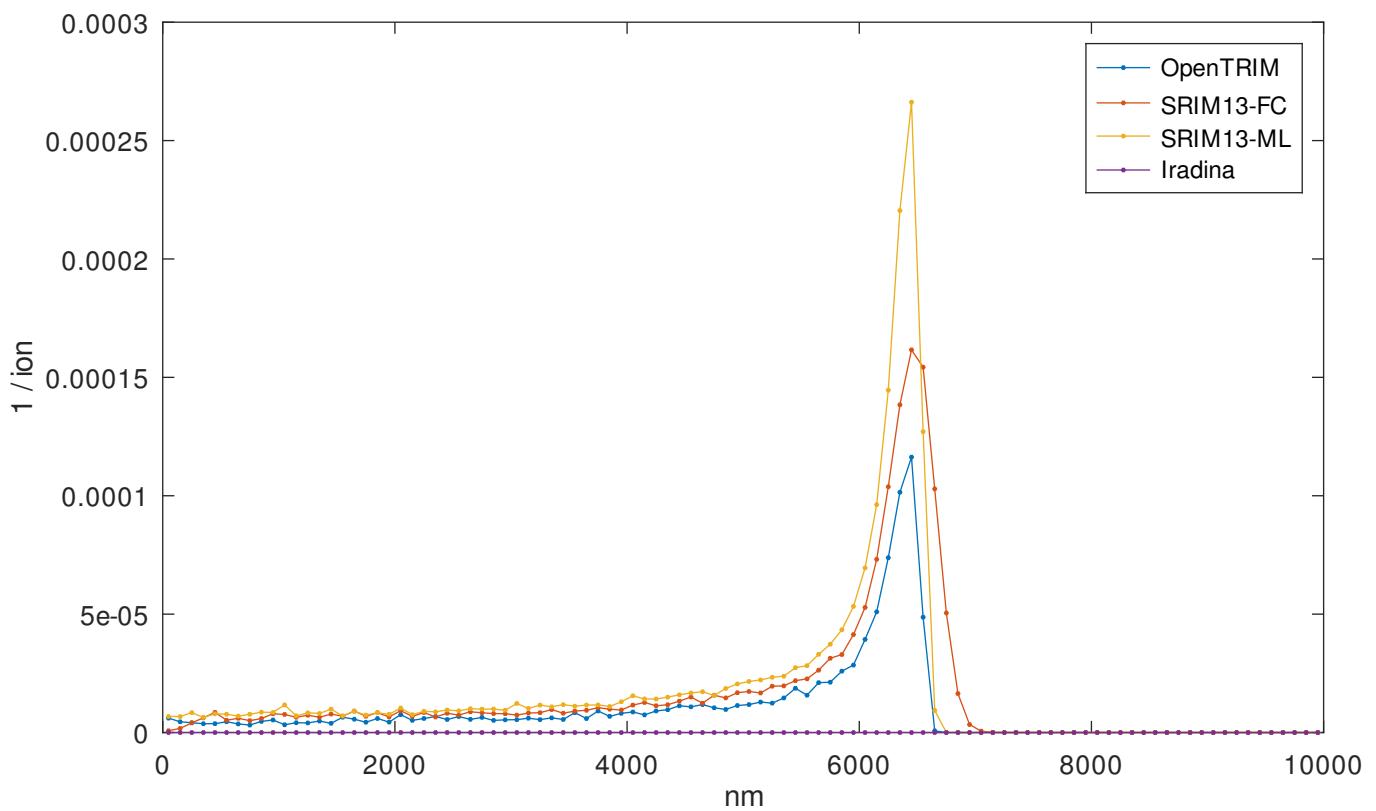
Total Ionization fraction  $E_I/E_0$



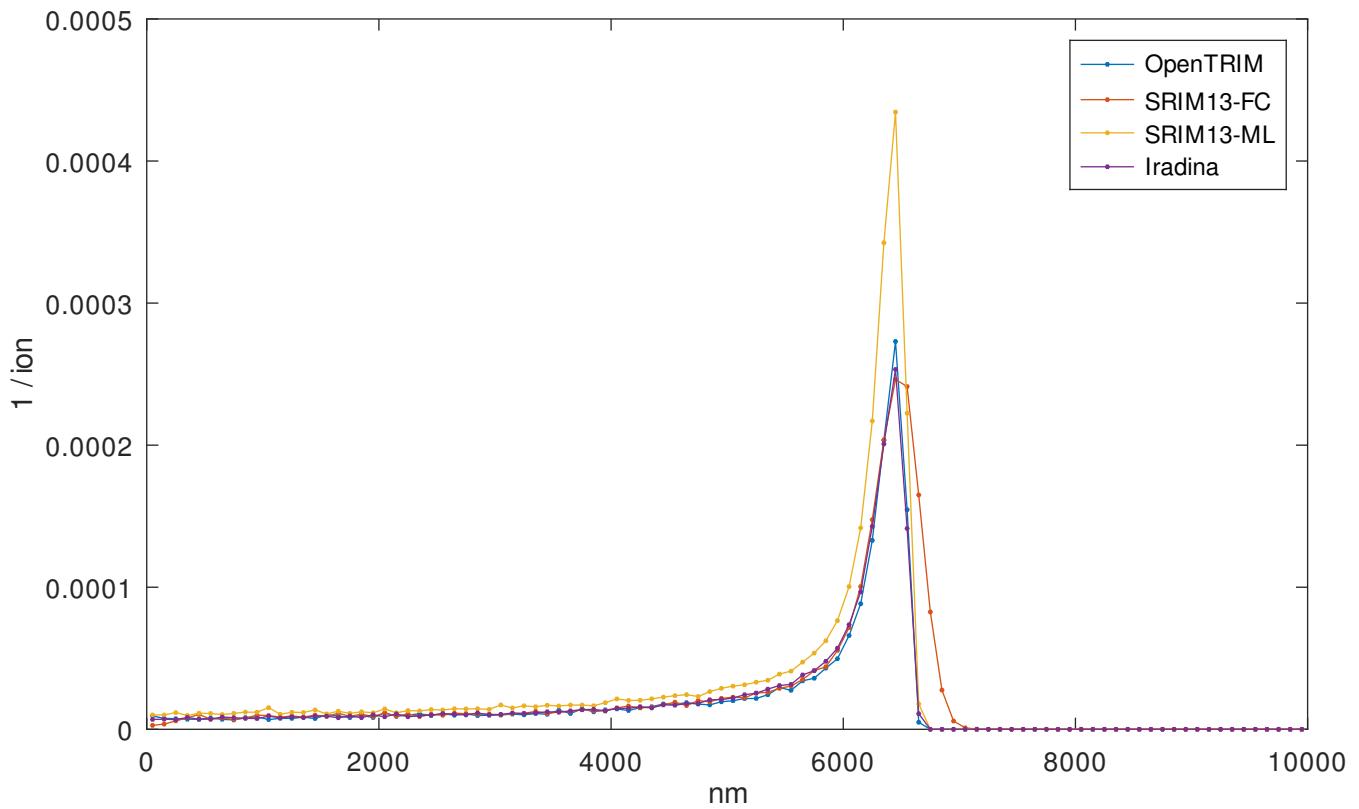
Phonon energy fraction  $E_{Ph}/E_0$  by H ion



Phonon energy fraction  $E_{Ph}/E_0$  by recoils



Total Phonon energy fraction  $E_{Ph}/E_0$



Total fractional energy deposition  $(E_I + E_{Ph})/E_0$

