

# Benchmark #5

## 300keV Xe on UO2

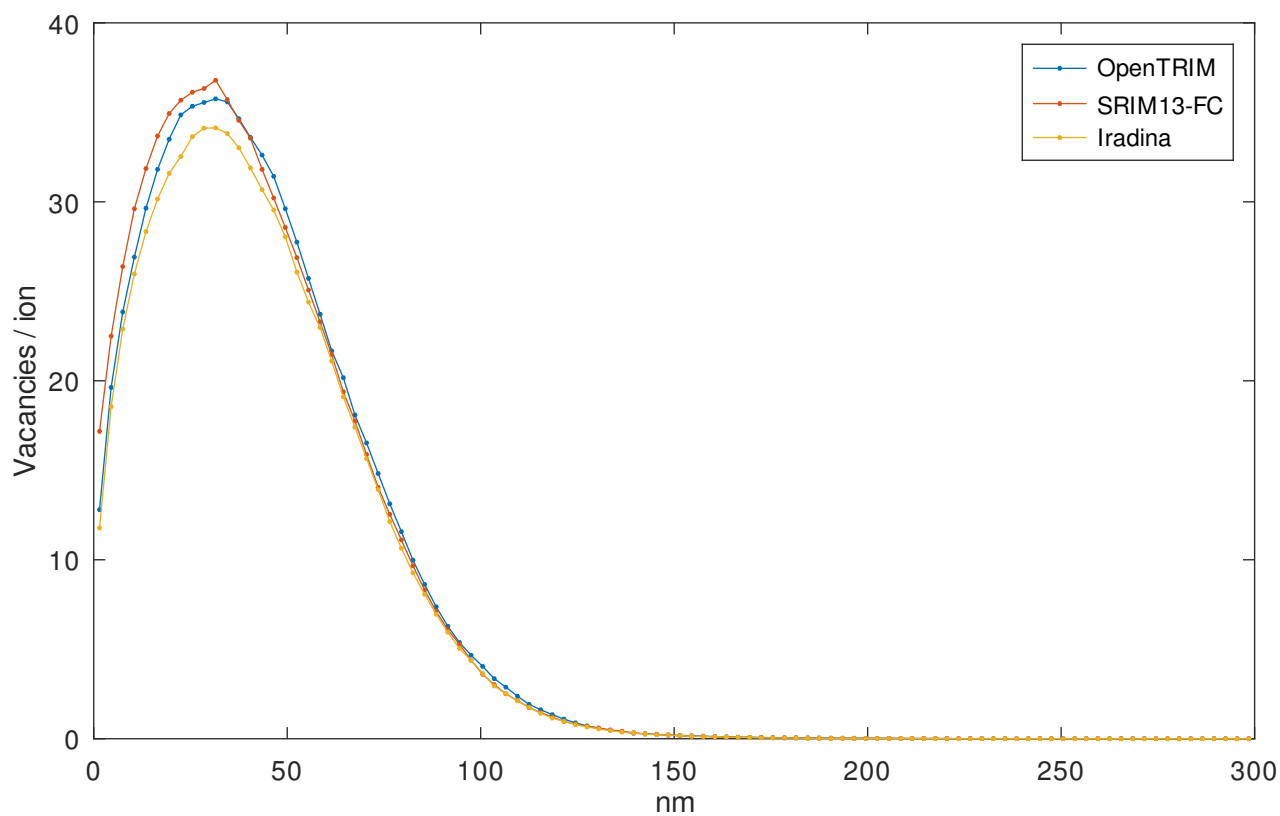
Ion energy E0 = 300000 eV

Target depth = 300 nm

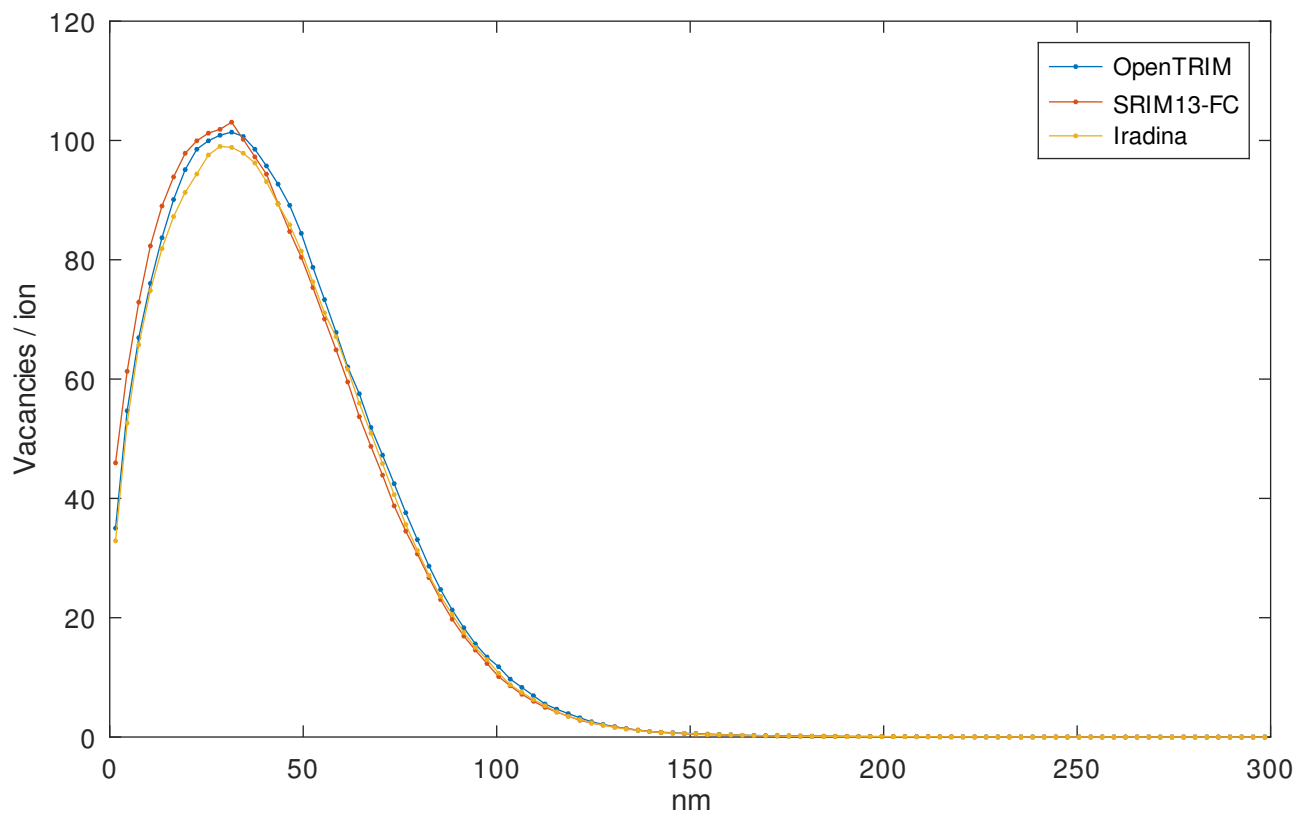
Summary Table

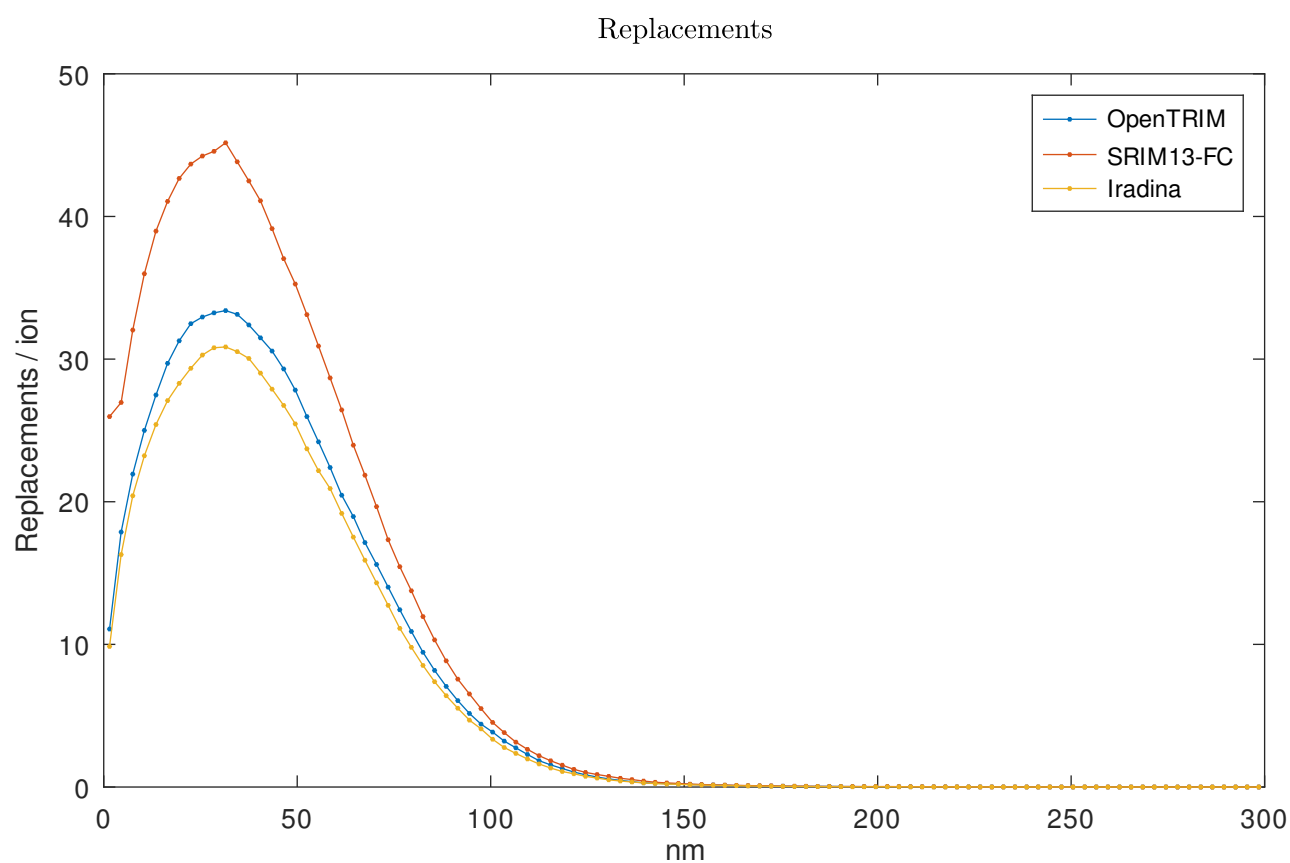
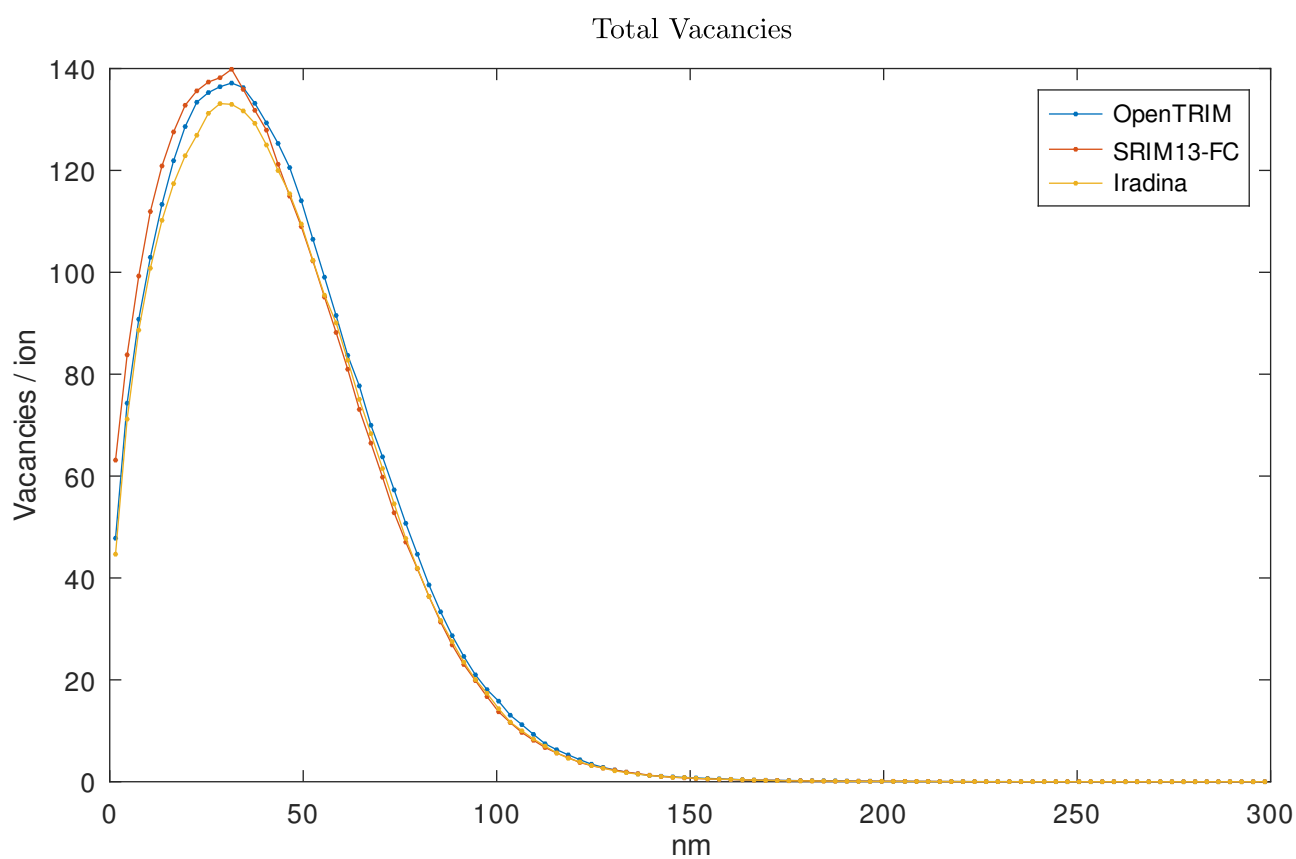
Quantity	OpenTRIM	SRIM13-FC	Iradina
V(U)	777	786	735
V(O)	2.21e+03	2.19e+03	2.14e+03
V(tot)	2.98e+03	2.98e+03	2.87e+03
R(tot)	727	970	666
I(Xe)	0.977	0.978	0.979
EI(Xe)/E0	0.0998	0.1	0
EI(r)/E0	0.346	0.325	0
EI/E0	0.446	0.425	0.43
EPh(Xe)/E0	0.0038	0.00366	0
EPh(r)/E0	0.535	0.518	0
EPh(tot)/E0	0.539	0.522	0.555
1 - (EI+EPh)/E0	0.0152	0.0527	0.0151

Vacancies of U in Uranium oxide

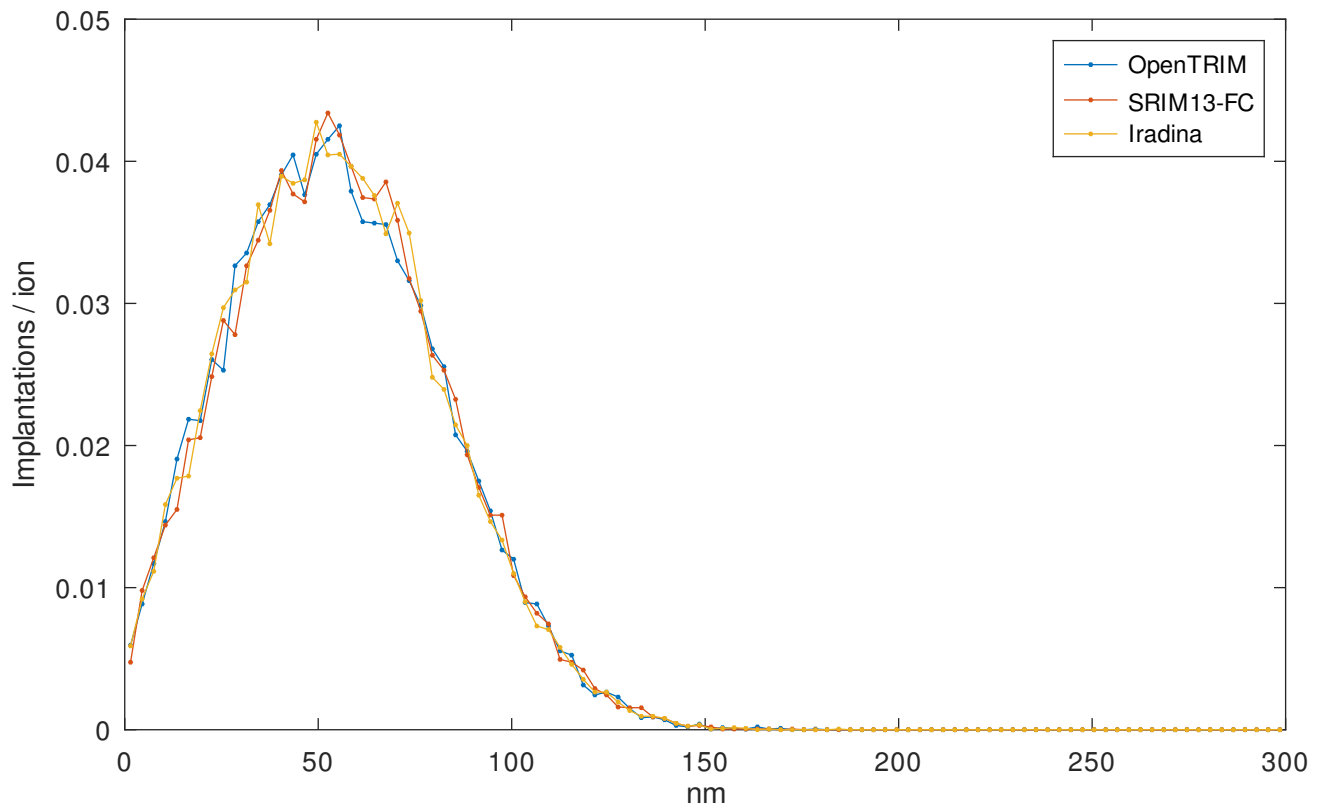


Vacancies of O in Uranium oxide

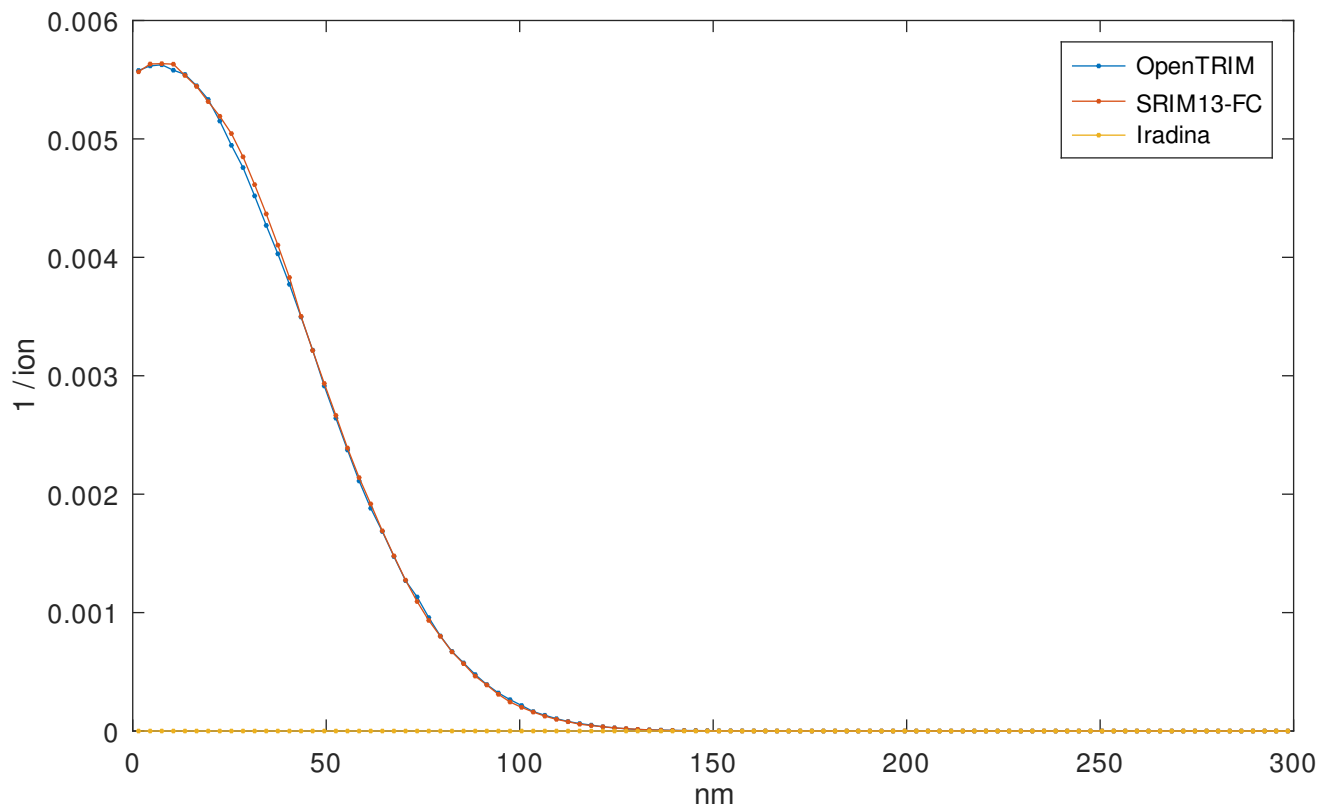




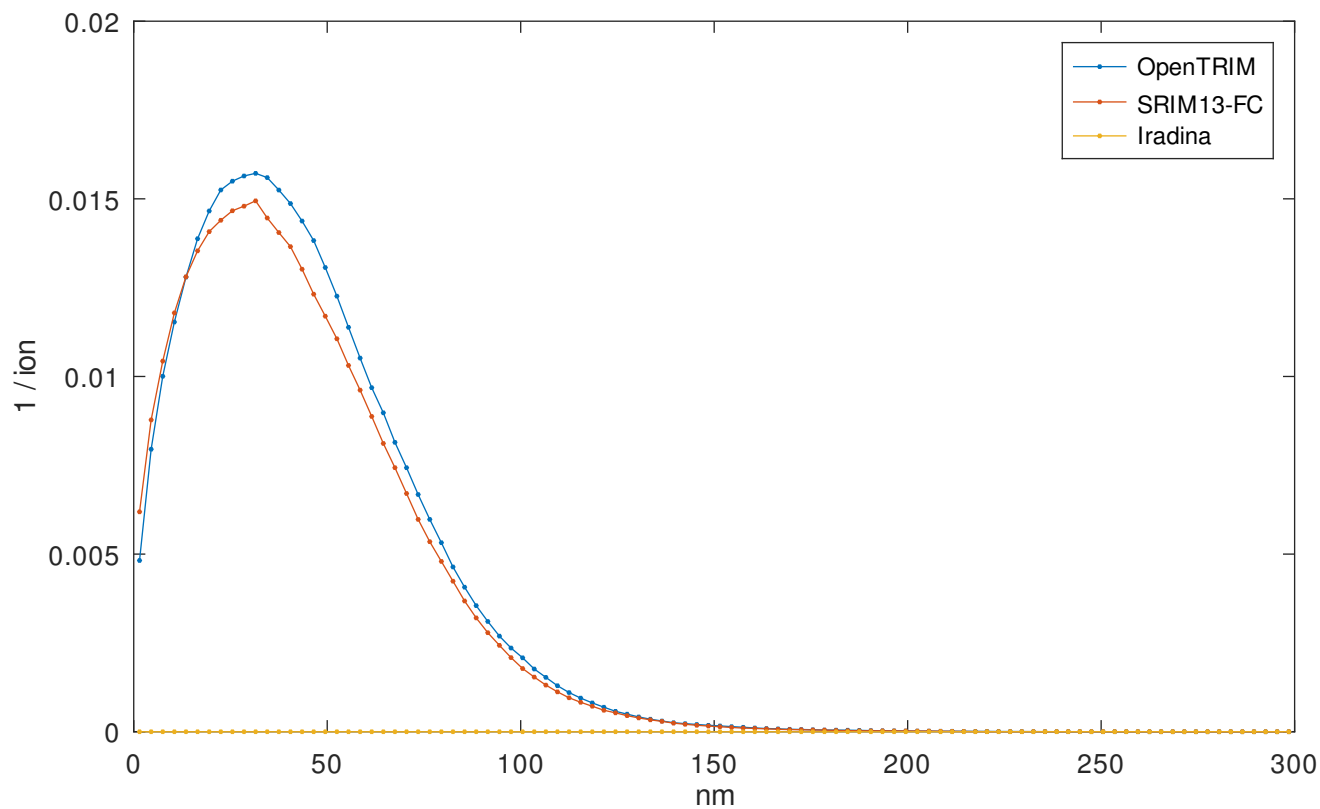
Implanted Xe ion



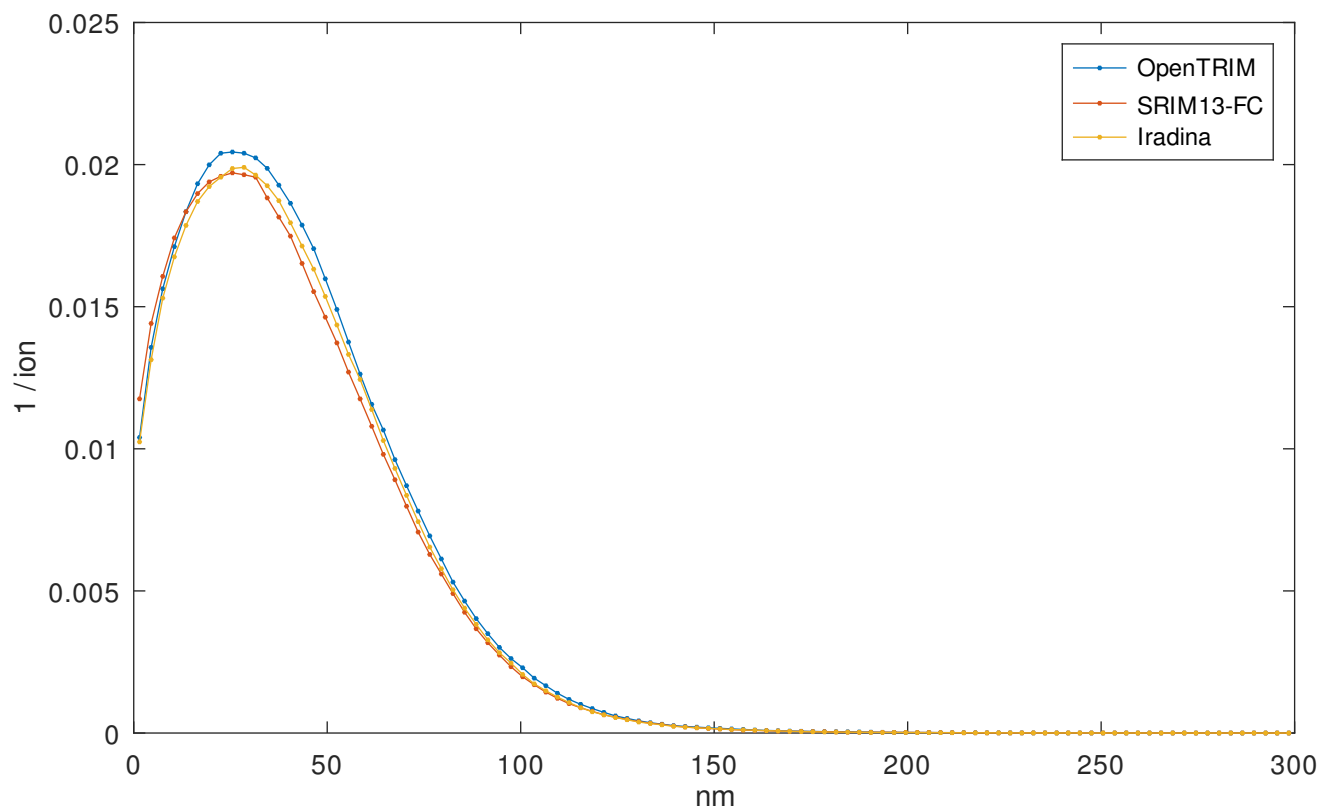
Ionization fraction  $E_I/E_0$  by Xe ion



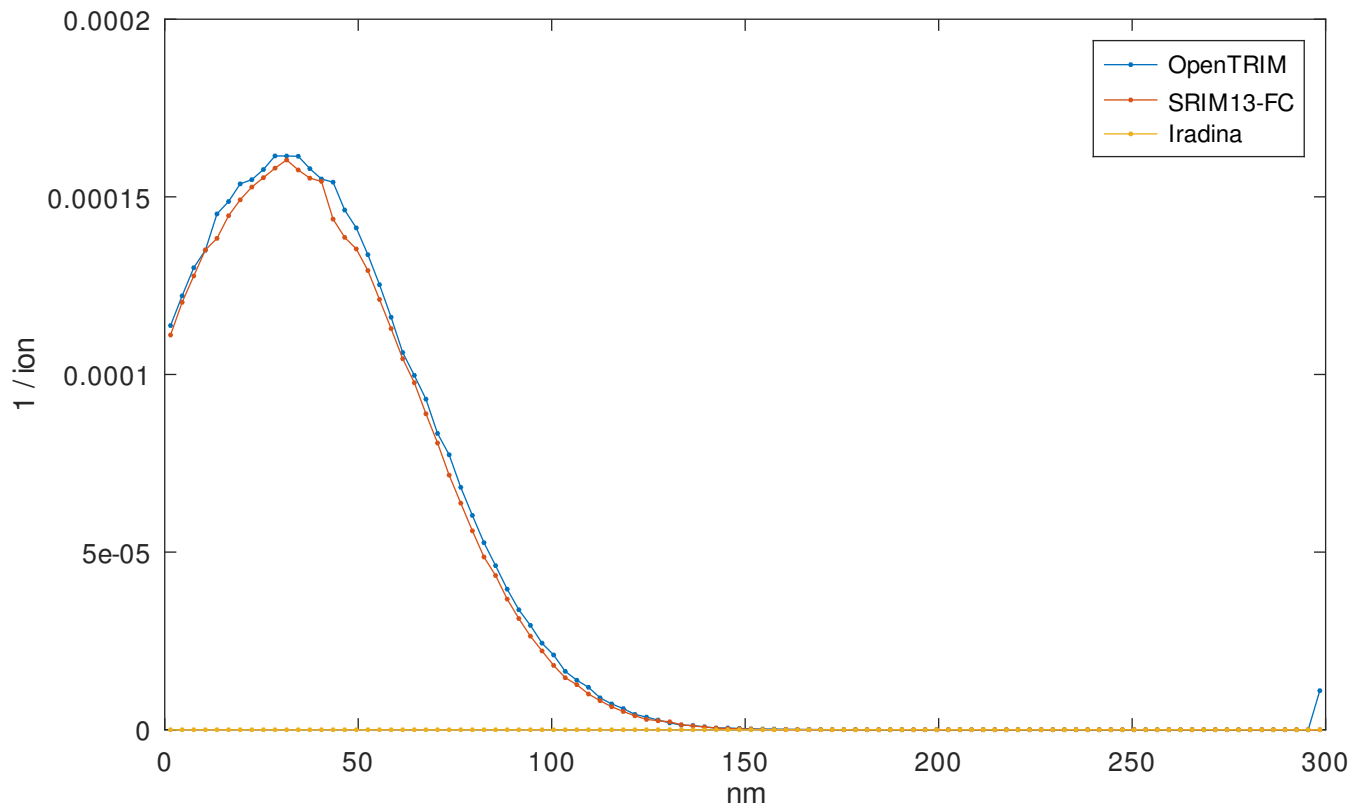
Ionization fraction  $E_I/E_0$  by recoils



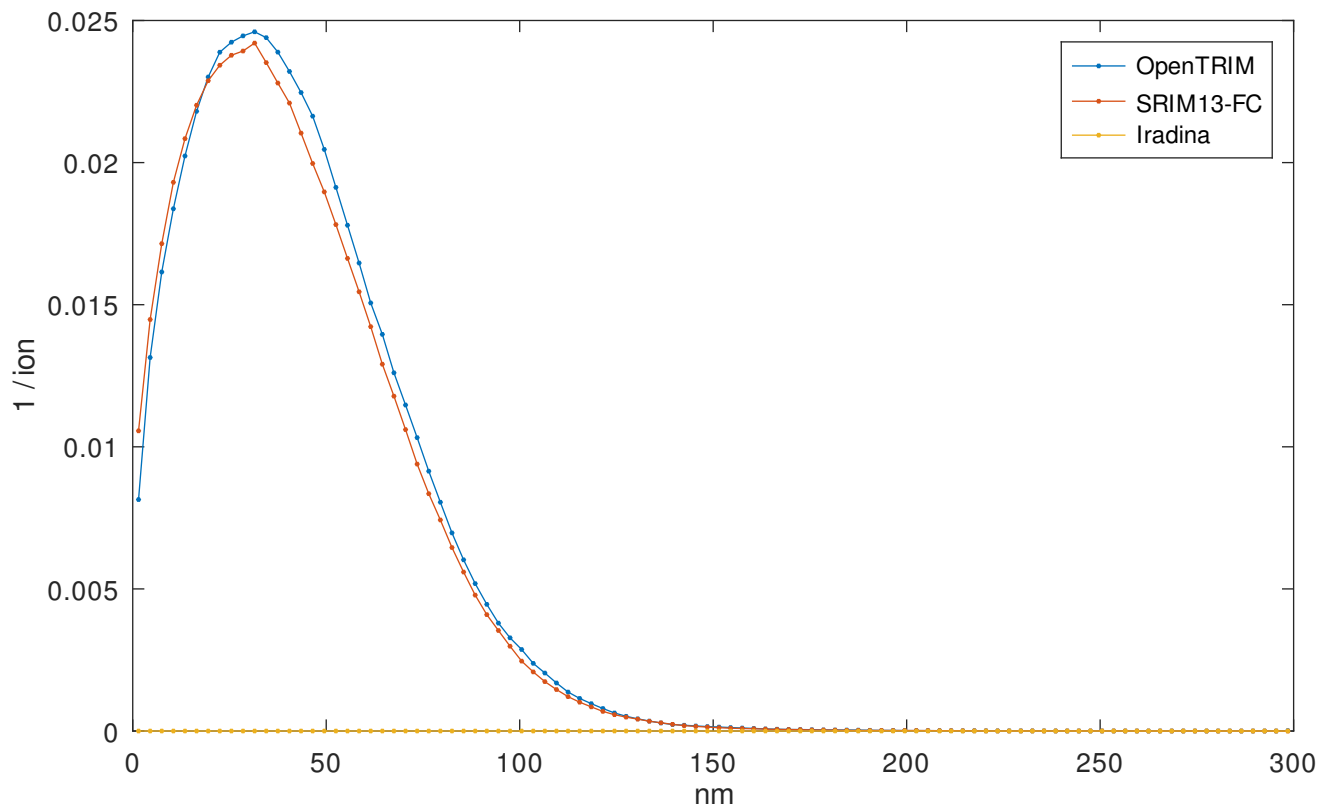
Total Ionization fraction  $E_I/E_0$



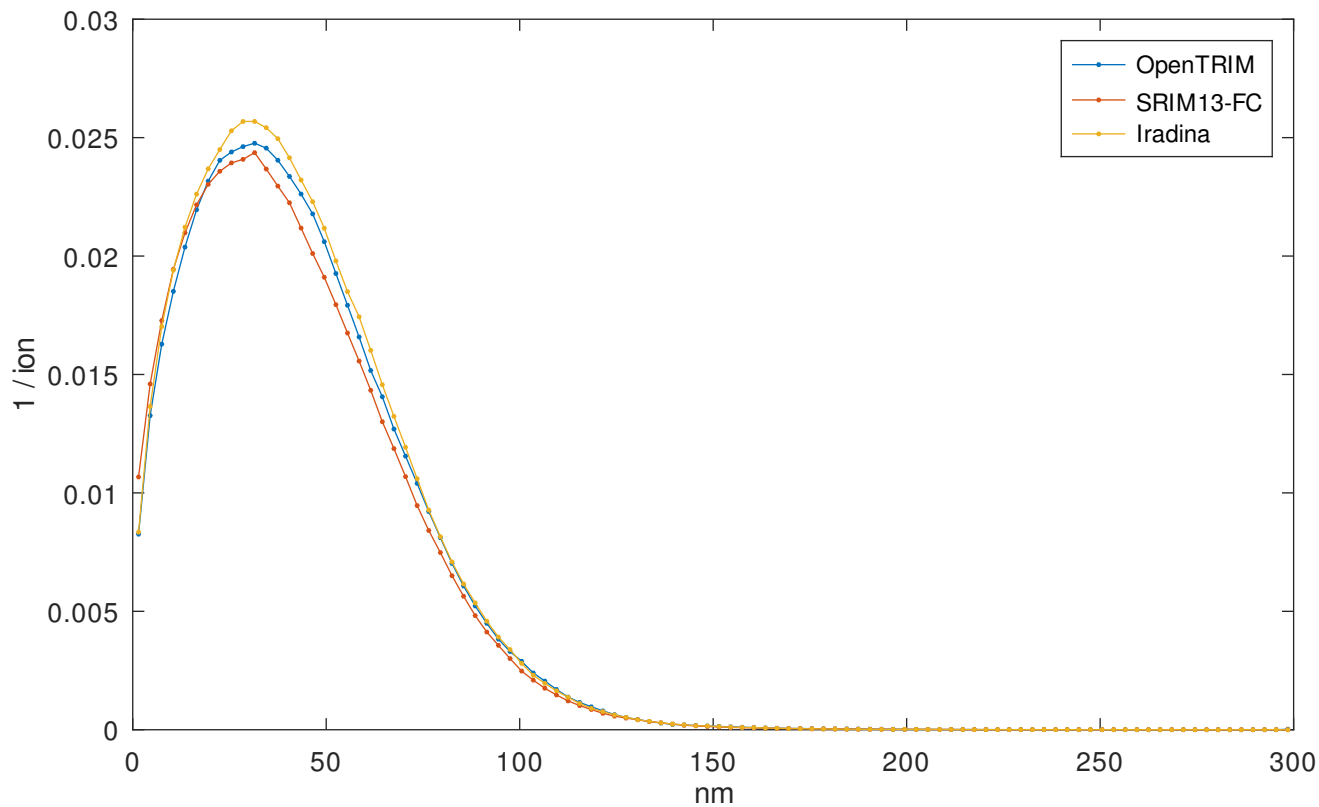
Phonon energy fraction  $E_{Ph}/E_0$  by Xe ion



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



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



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

