

Benchmark #5

300keV Xe on UO₂

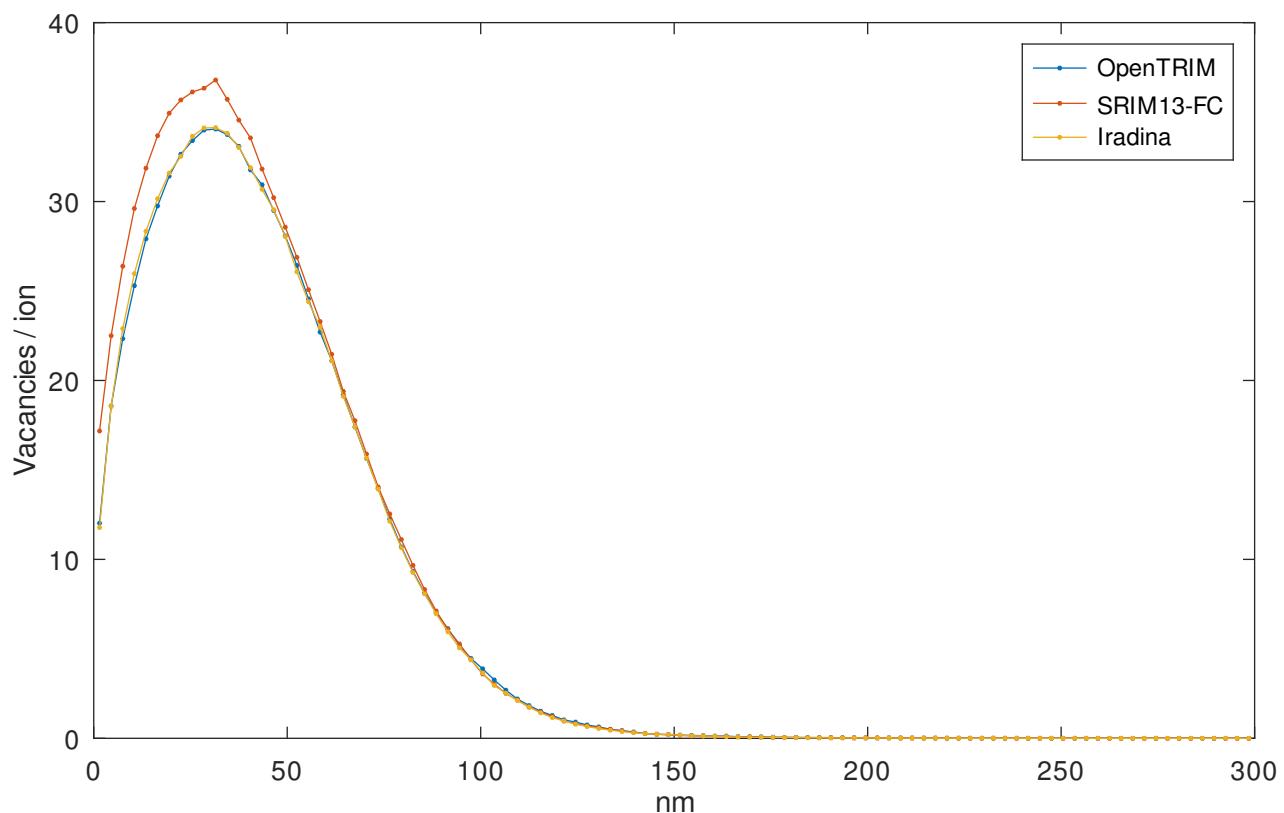
Ion energy E0 = 300000 eV

Target depth = 300 nm

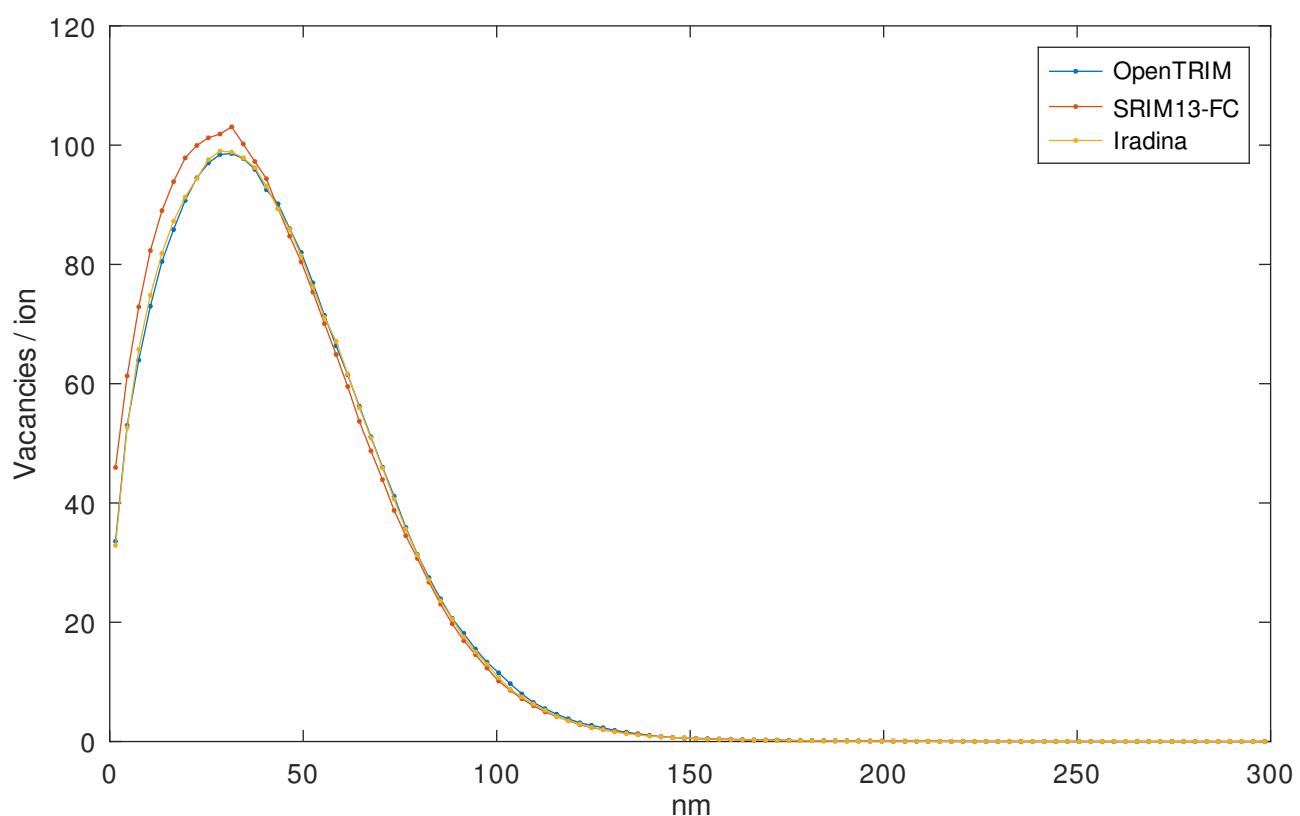
Summary Table

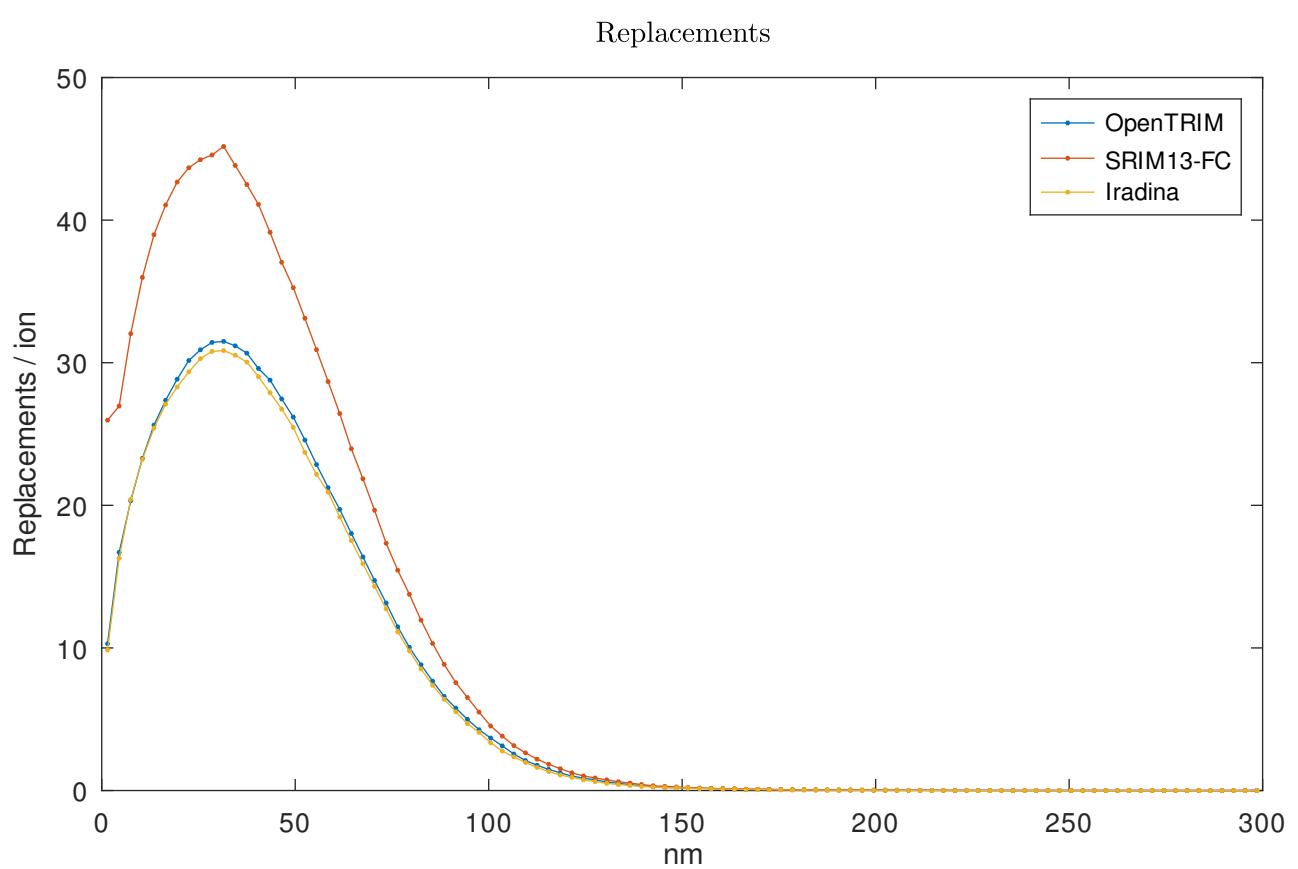
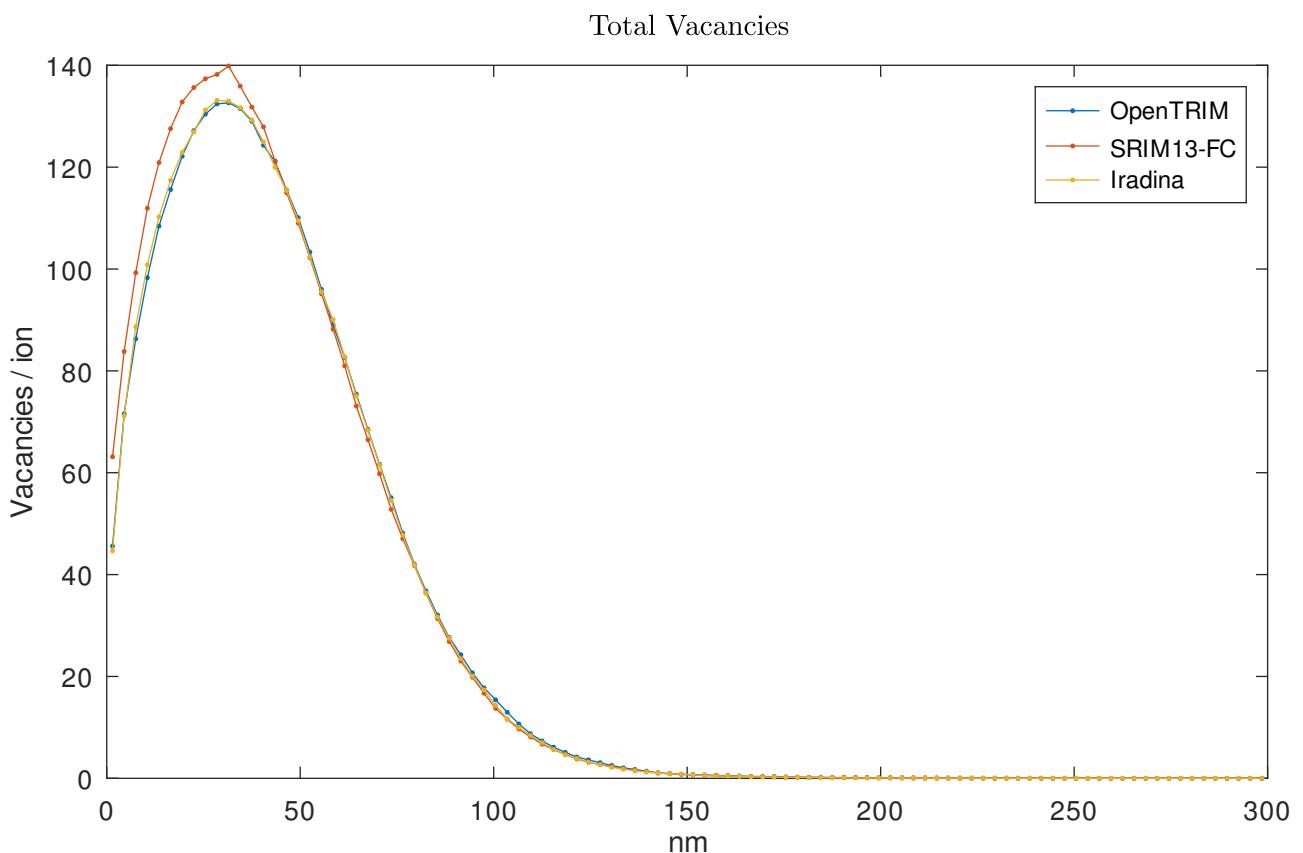
Quantity	OpenTRIM	SRIM13-FC	Iradina
V(U)	736	786	735
V(O)	2.14e+03	2.19e+03	2.14e+03
V(tot)	2.88e+03	2.98e+03	2.87e+03
R(tot)	683	970	666
I(Xe)	0.984	0.978	0.979
EI(Xe) / E0	0.0999	0.1	0
EI(r) / E0	0.335	0.325	0
EI/E0	0.435	0.425	0.43
EPH(Xe) / E0	0.00392	0.00366	0
EPH(r) / E0	0.547	0.518	0
EPH(tot) / E0	0.551	0.522	0.555
1 - (EI+EPH) / E0	0.014	0.0527	0.0151

Vacancies of U in Uranium oxide

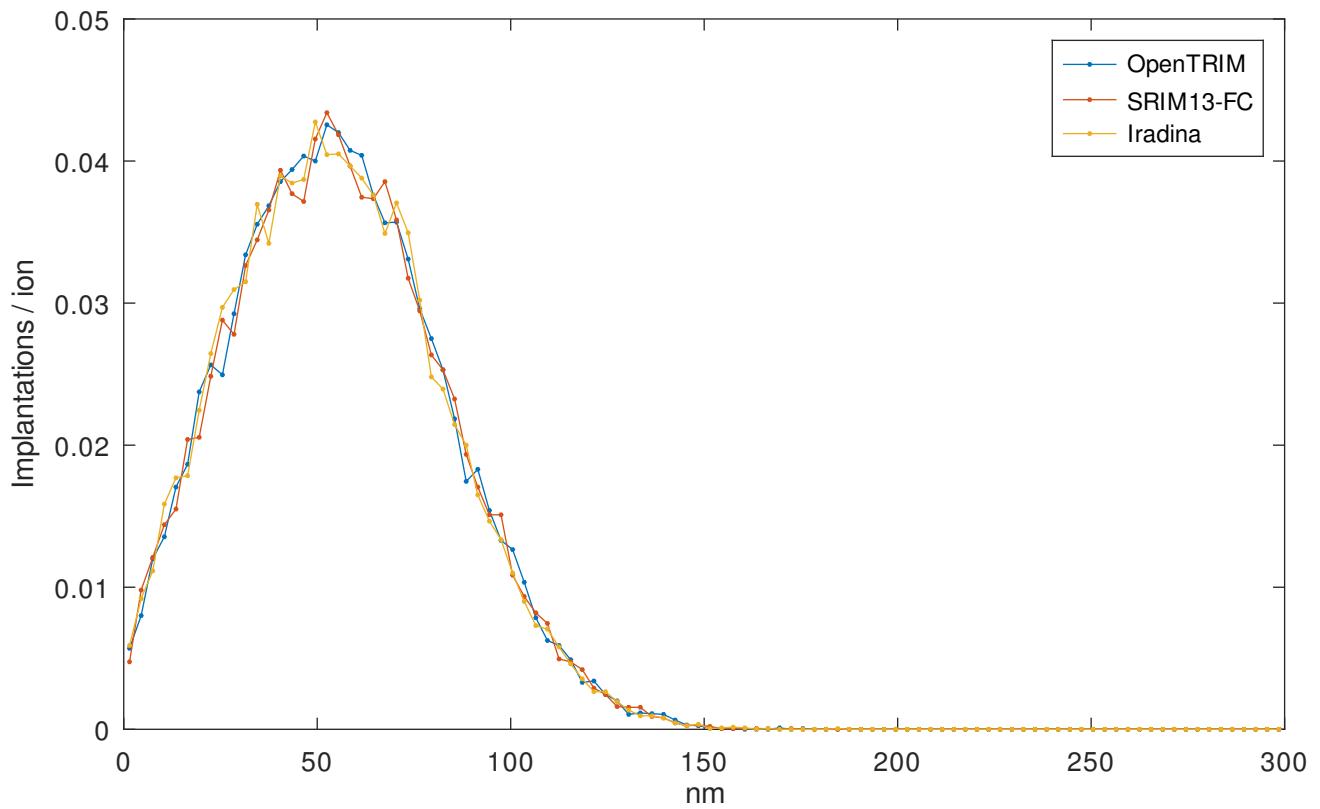


Vacancies of O in Uranium oxide

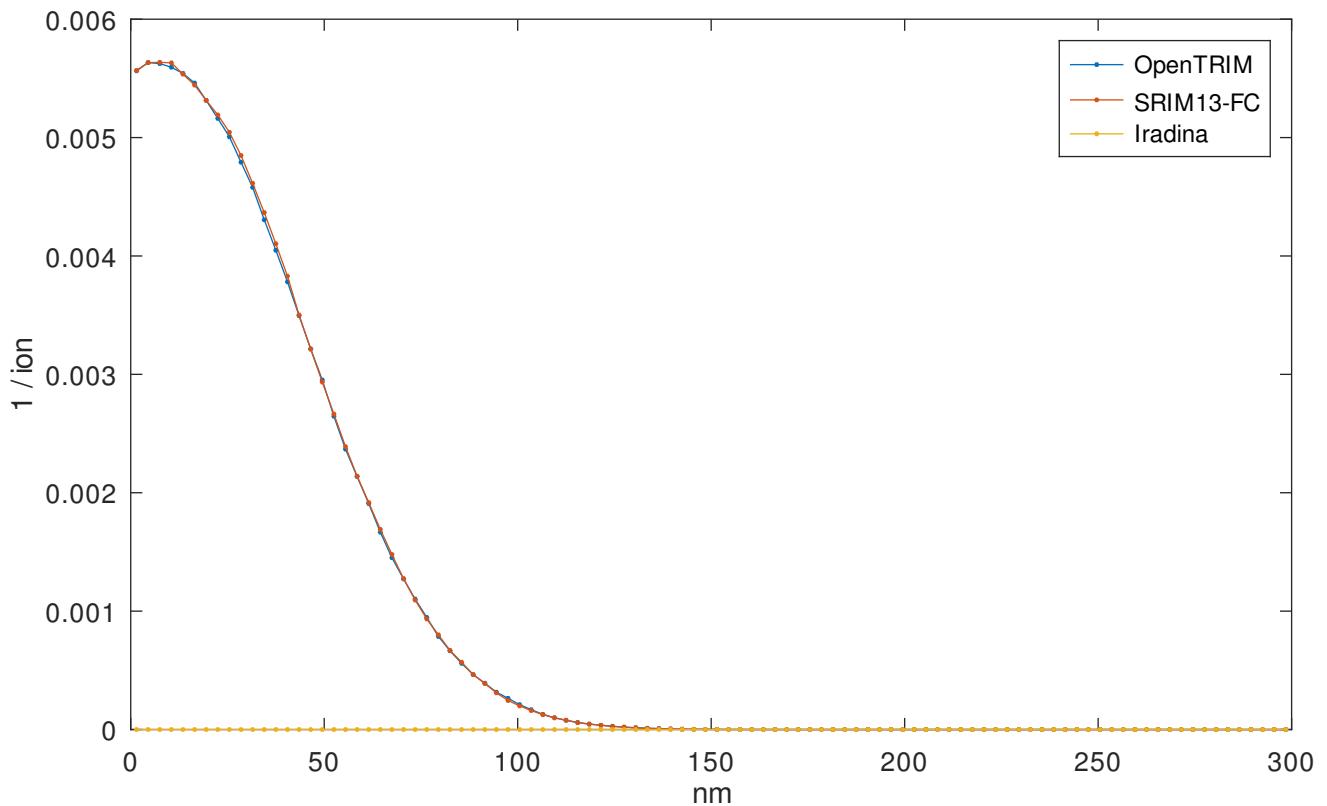




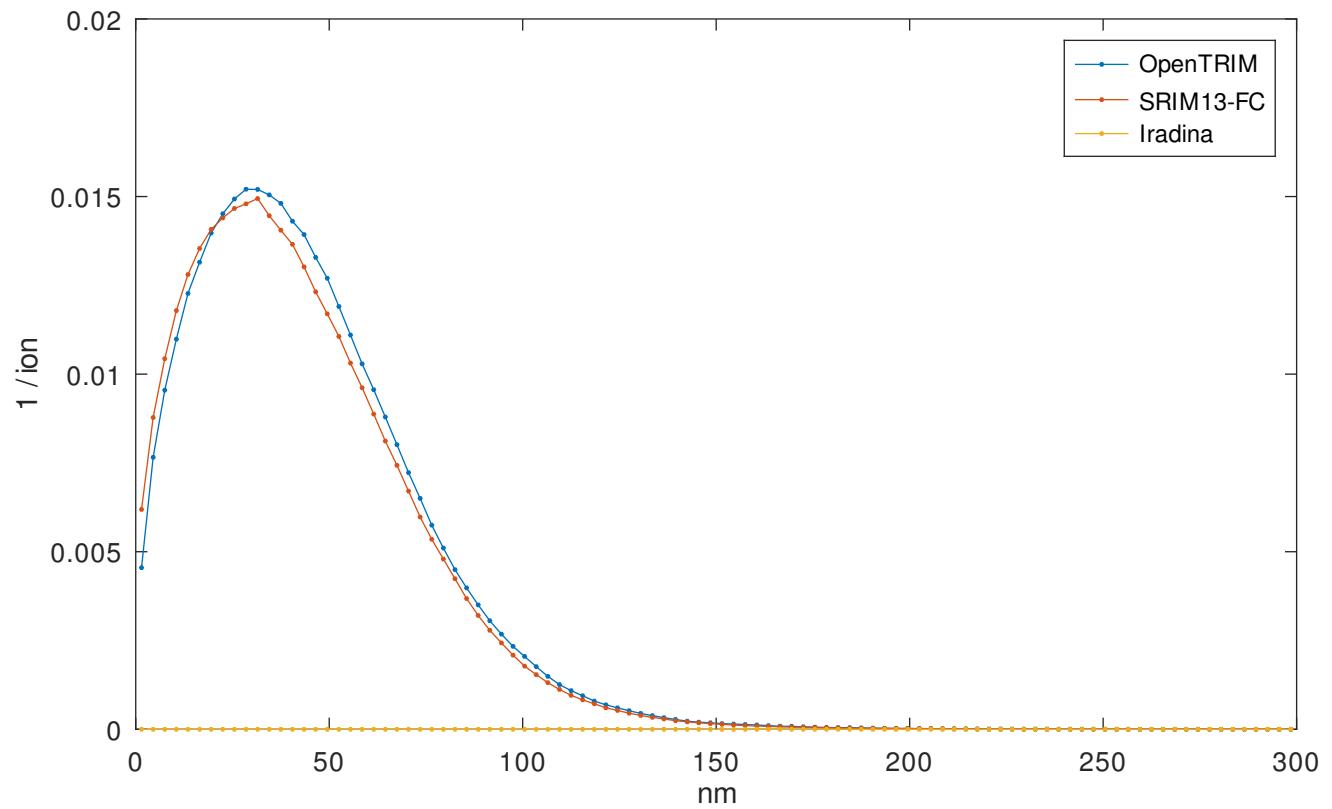
Implanted Xe ion



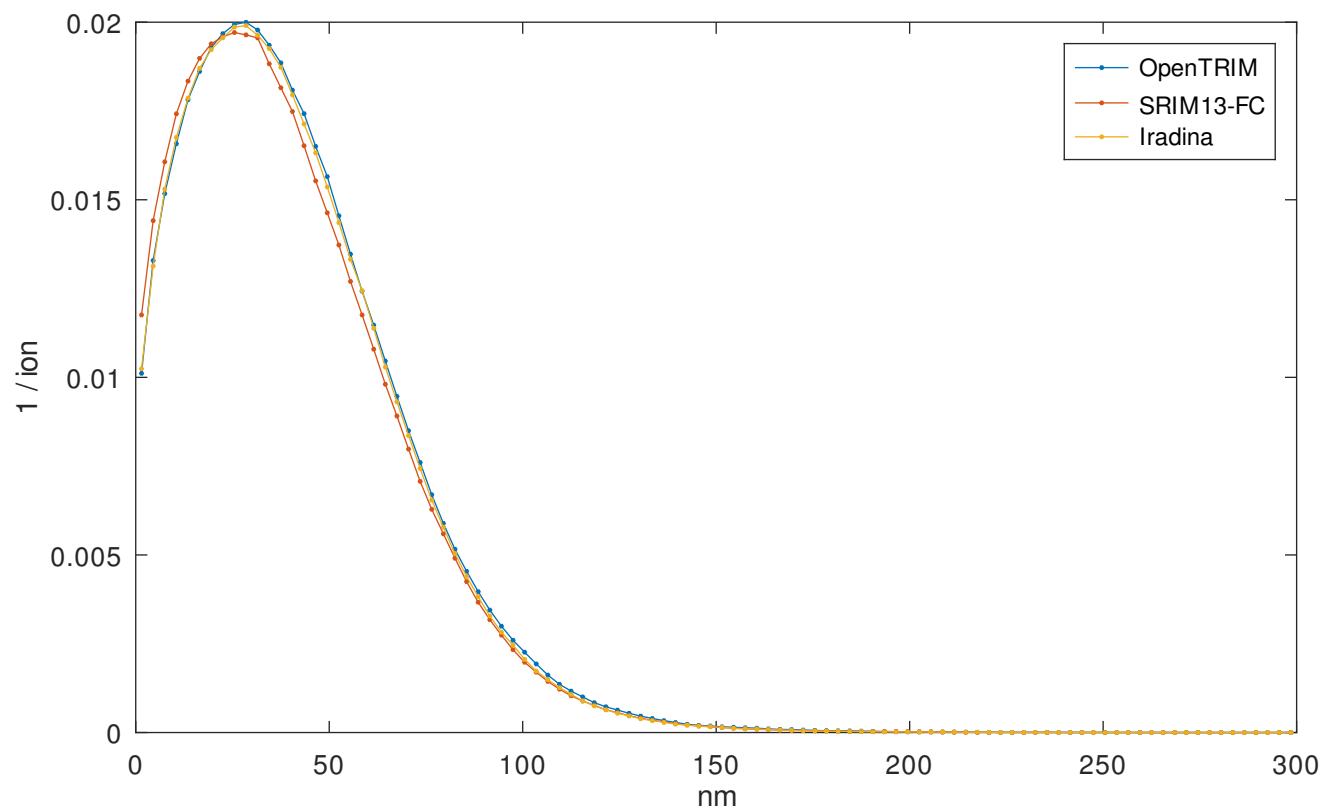
Ionization fraction E_I/E_0 by Xe ion



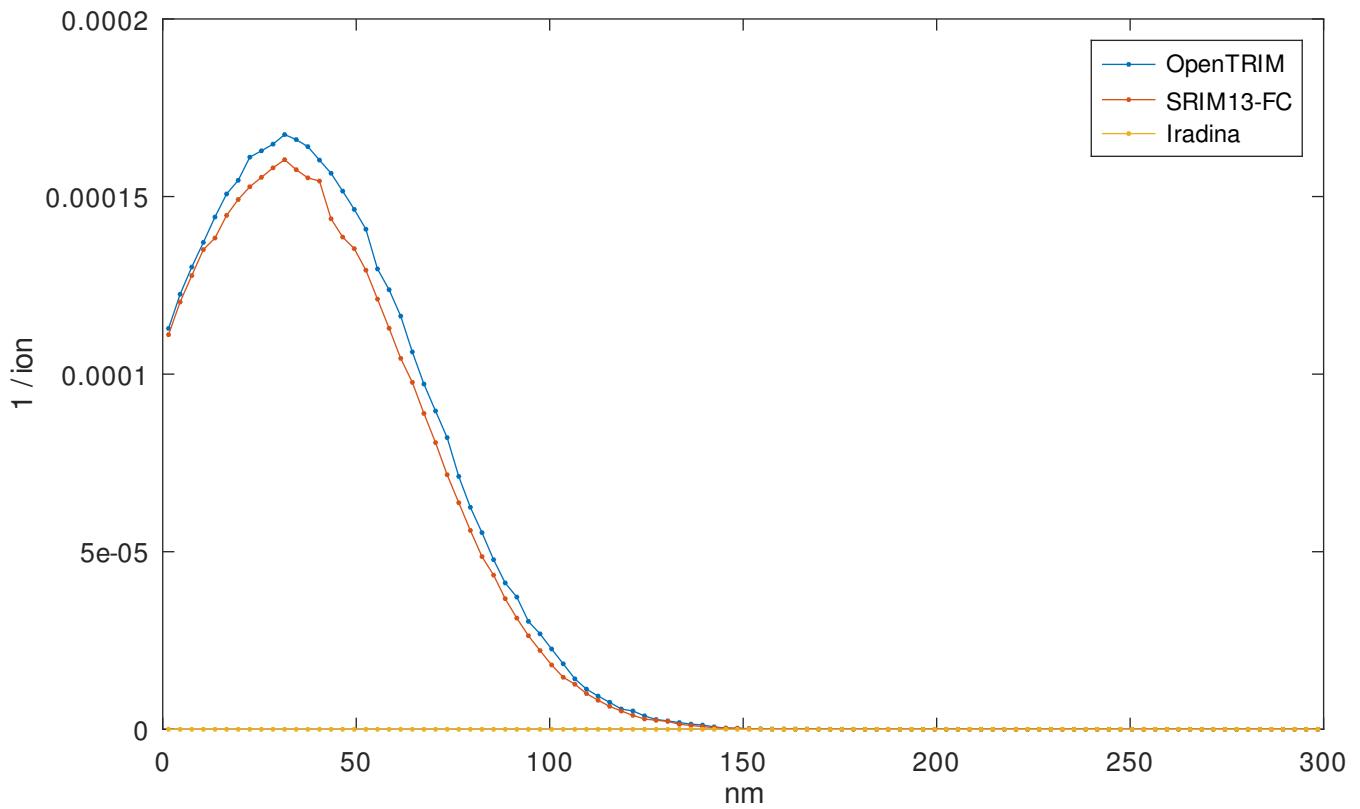
Ionization fraction E_I/E_0 by recoils



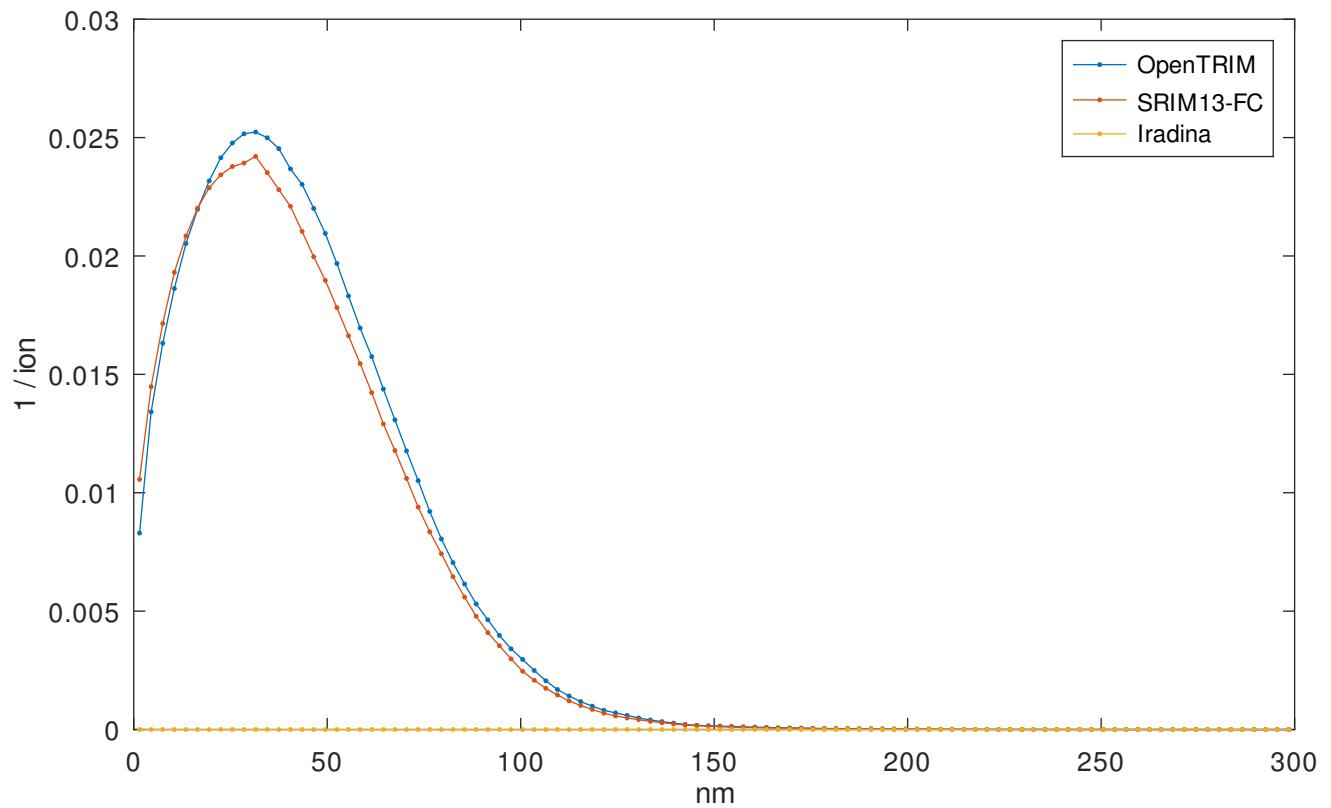
Total Ionization fraction E_I/E_0



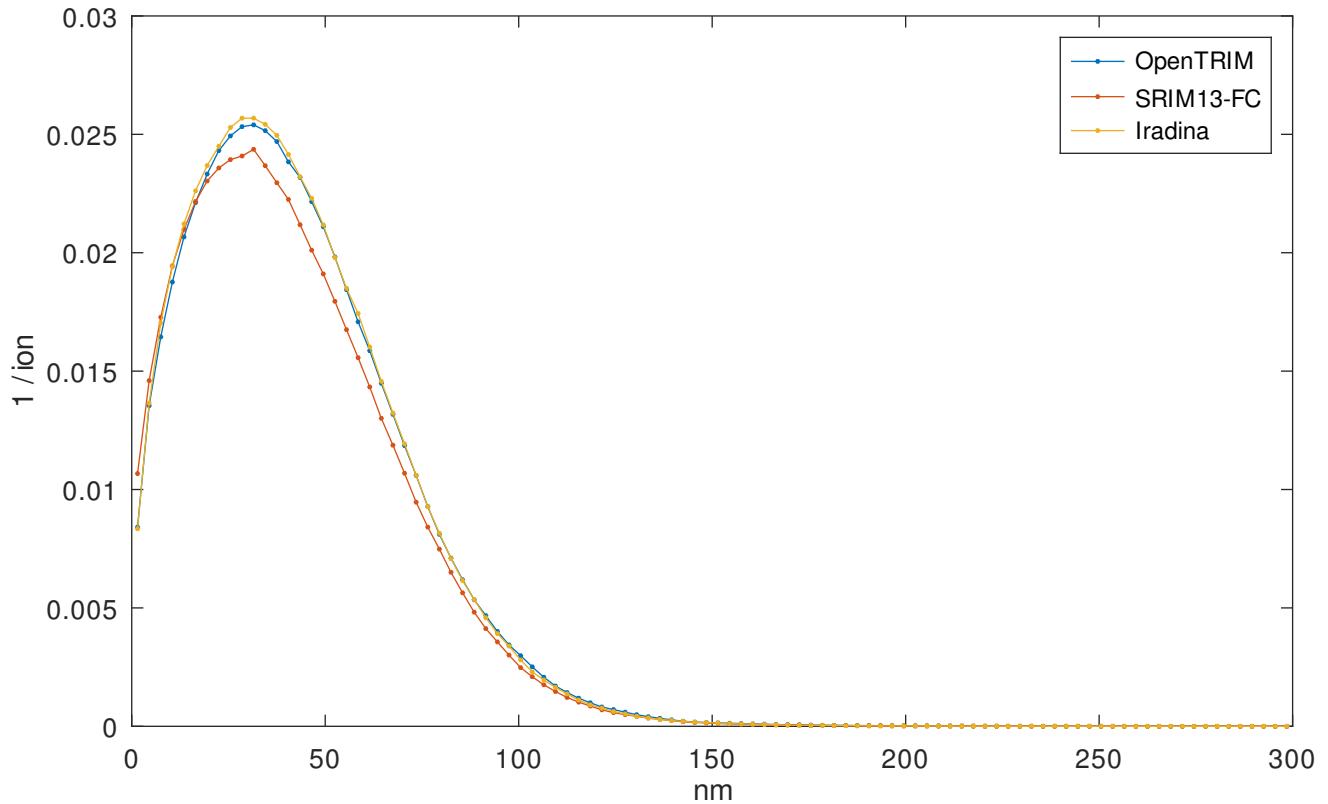
Phonon energy fraction E_{Ph}/E_0 by Xe ion



Phonon energy fraction E_{Ph}/E_0 by recoils



Total Phonon energy fraction E_{Ph}/E_0



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

