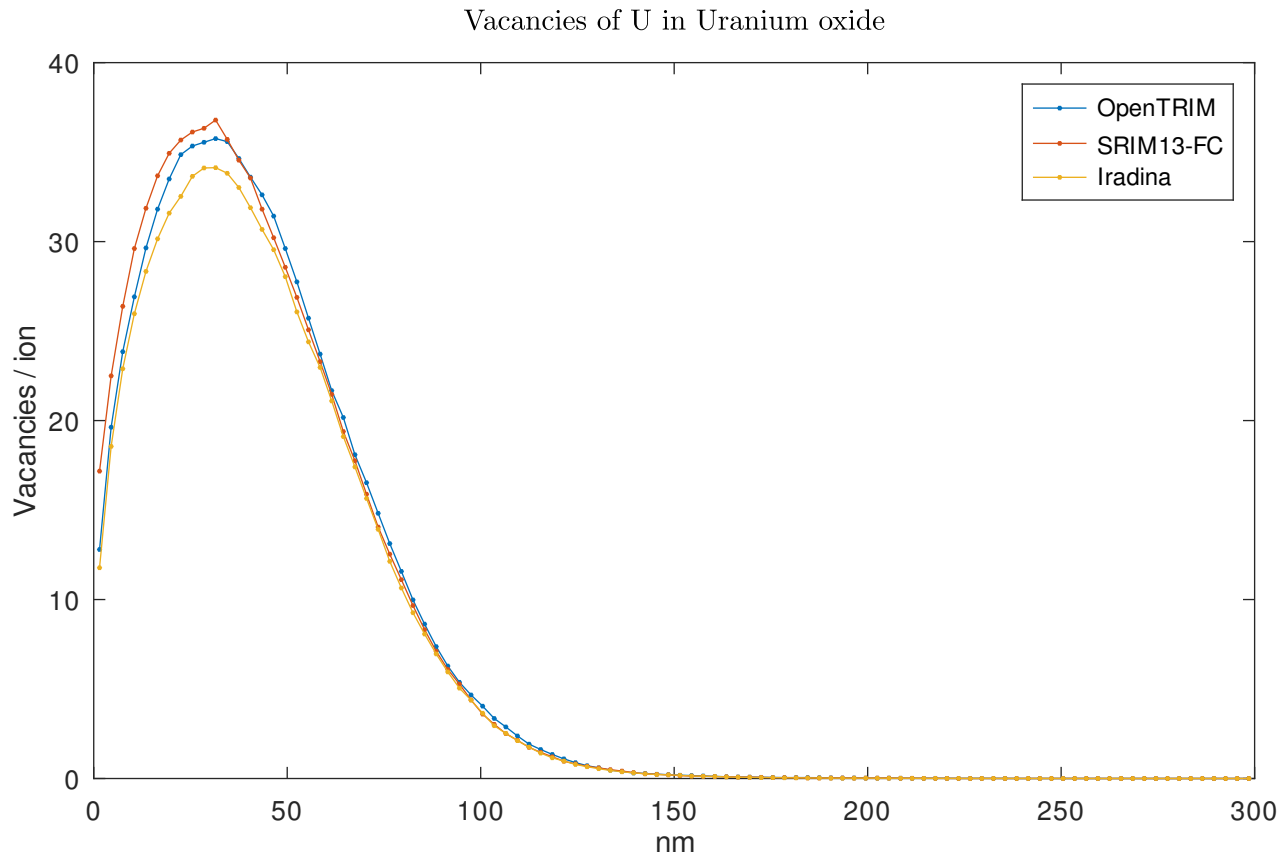
Benchmark #5
300keV Xe on UO2

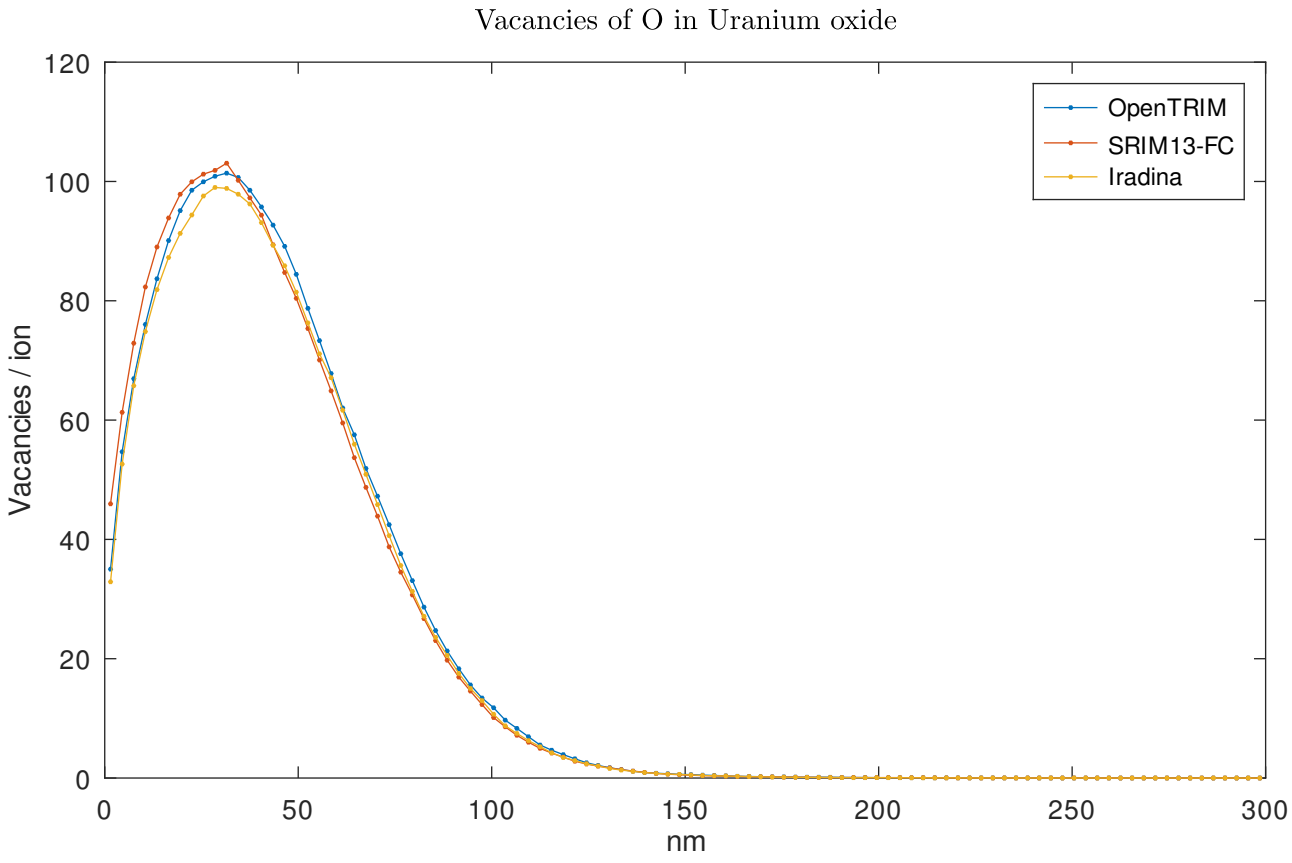
Ion energy E0 = 300000 eV

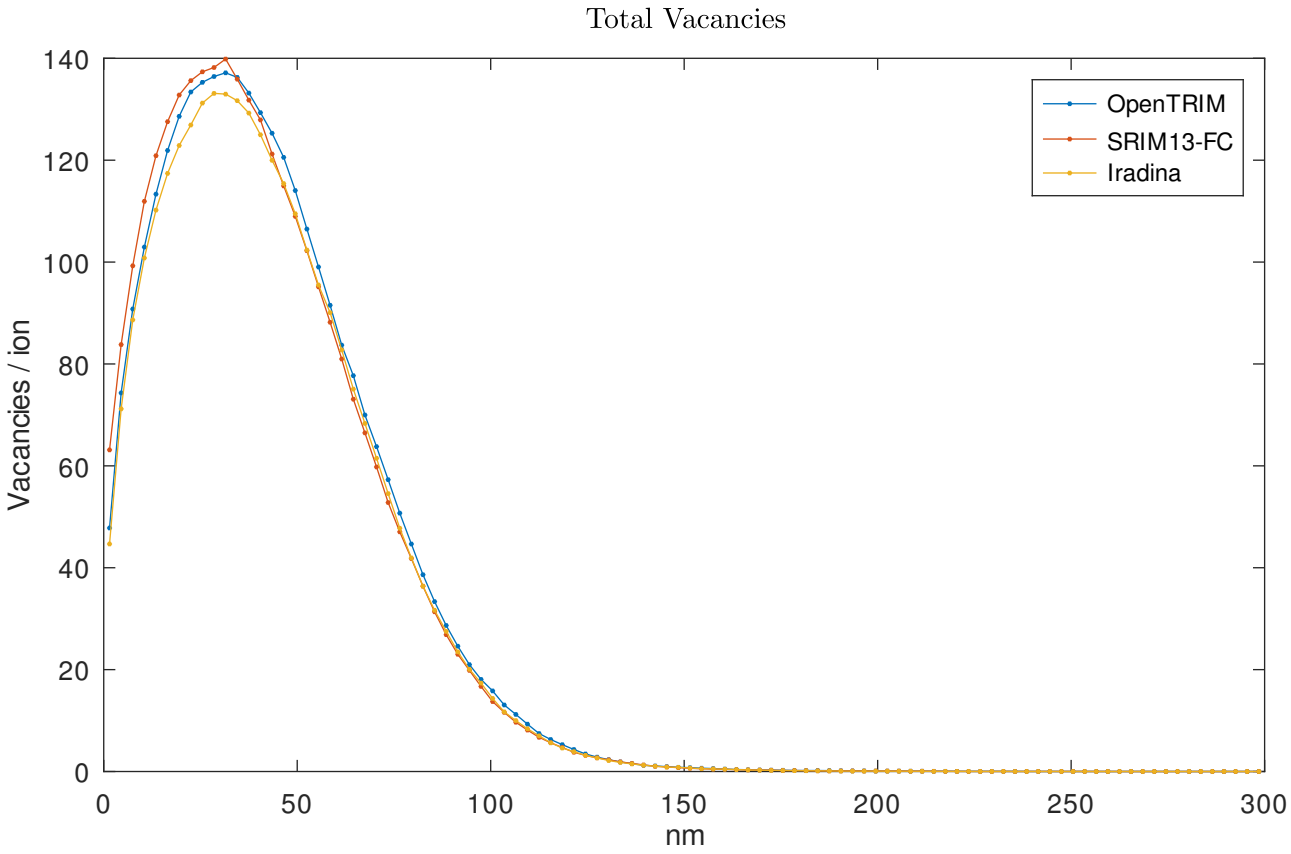
Target depth = 300 nm

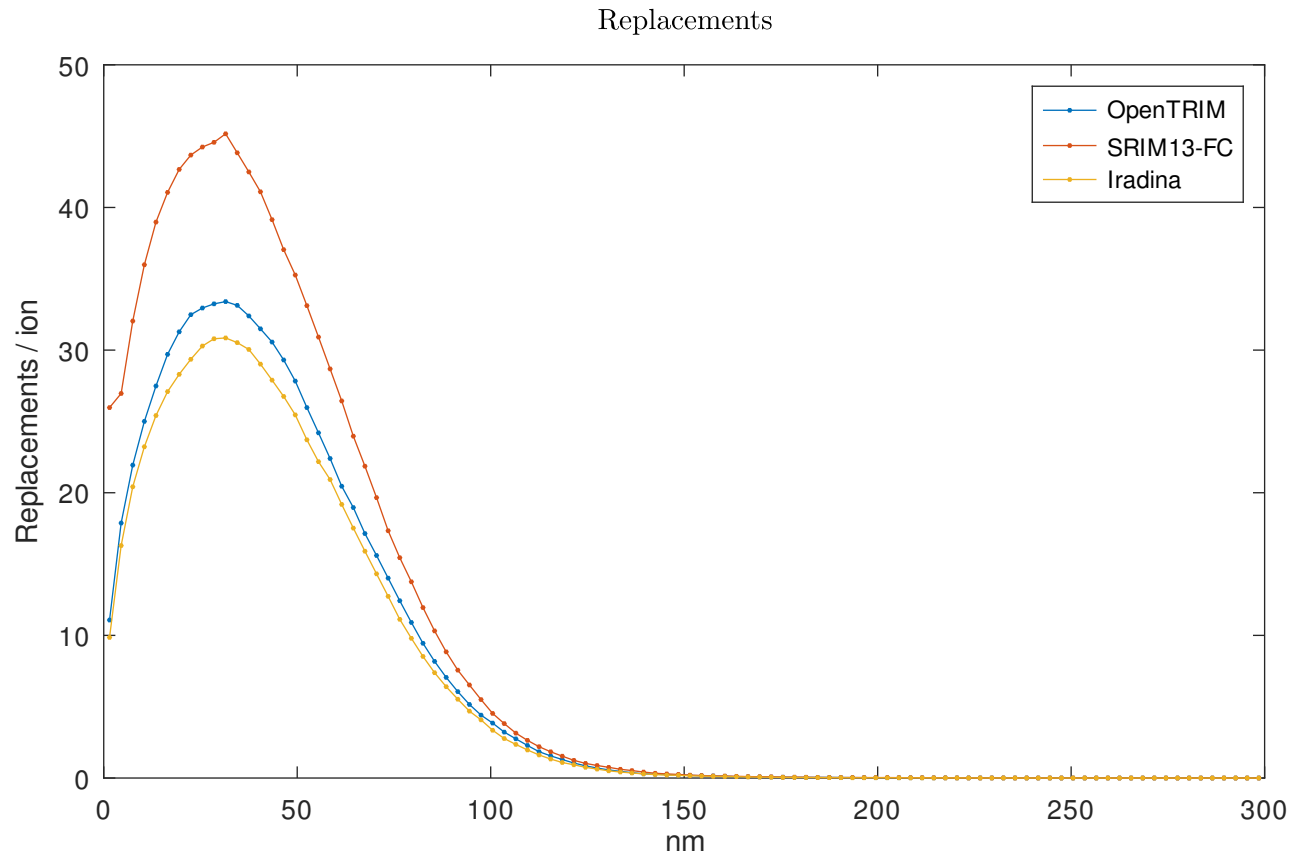
Summary Table

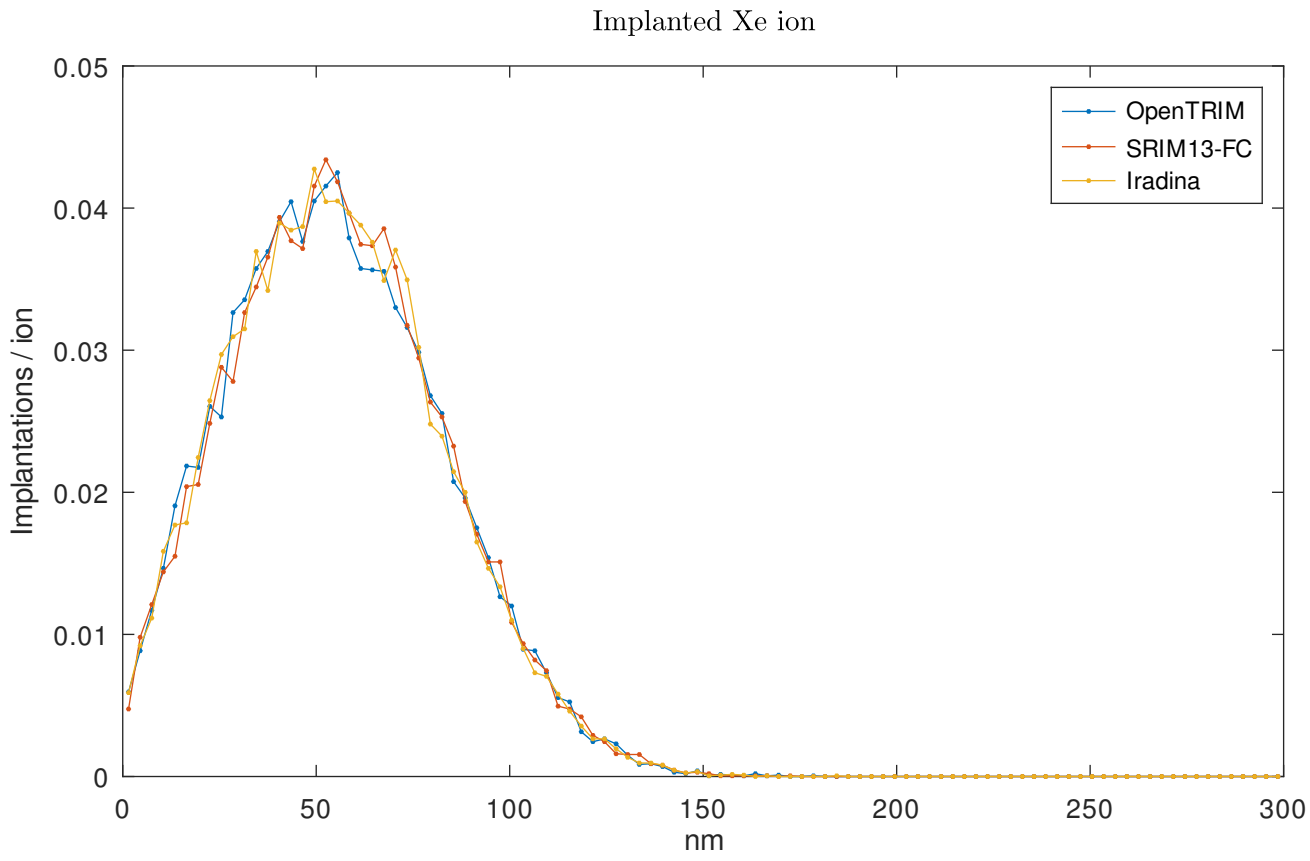
Quantity	OpenTRIM	SRIM13-FC	Iradina
V(U)	777	786	735
V(O)	2.21e+03	2.19e+03	2.14e+03
V(tot)	2.98e+03	2.98e+03	2.87e+03
R(tot)	727	970	666
I(Xe)	0.977	0.978	0.979
EI(Xe)/E0	0.0998	0.1	0
EI(r)/E0	0.346	0.325	0
EI/E0	0.446	0.446	0.425
EPh(Xe)/E0	0.0038	0.00366	0
EPh(r)/E0	0.535	0.518	0
EPh(r)/E0	0.539	0.539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

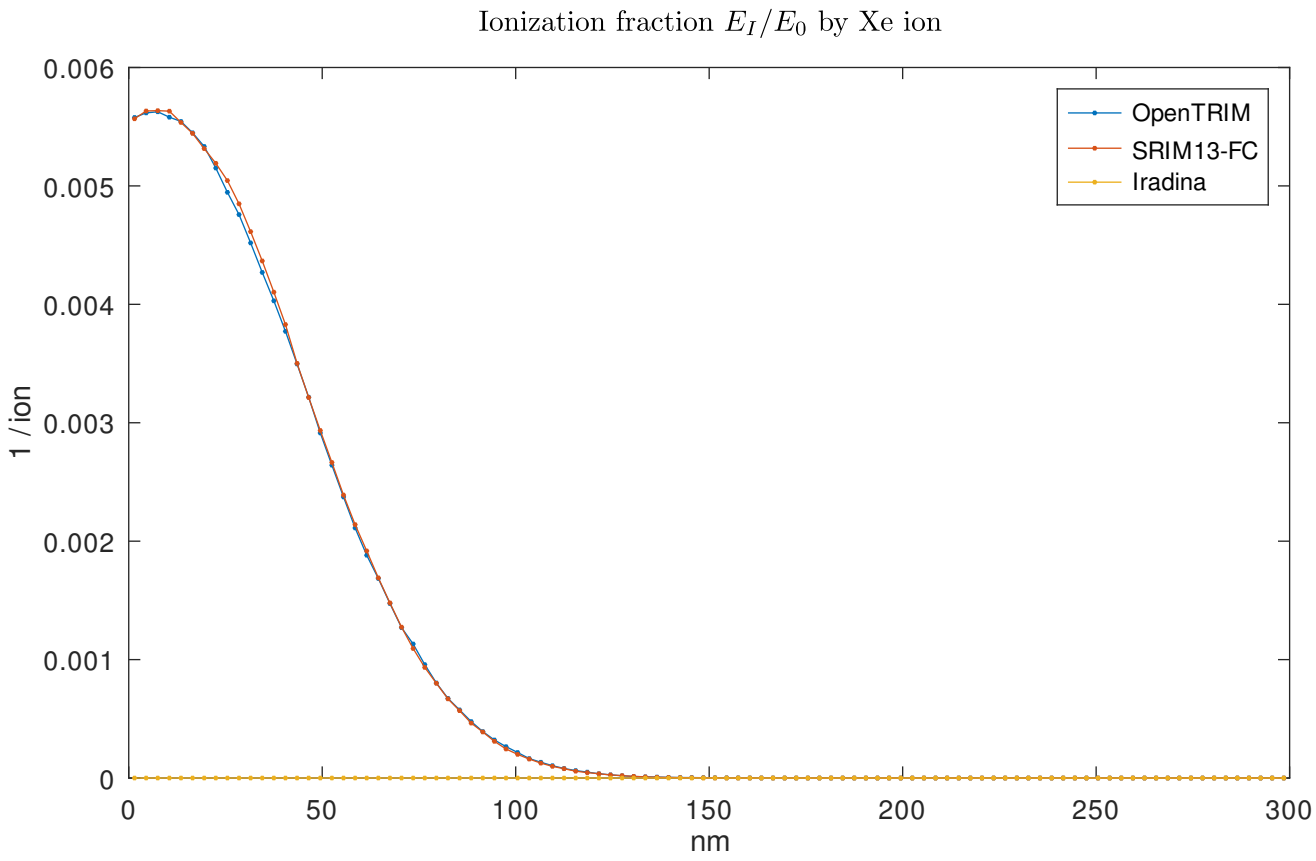

Vacancies of U in Uranium oxide
OpenTRIM
SRIM13-FC
Iradina
Vacancies / ion
nm
0
10
20
30
40
0
50
100
150
200
250
300

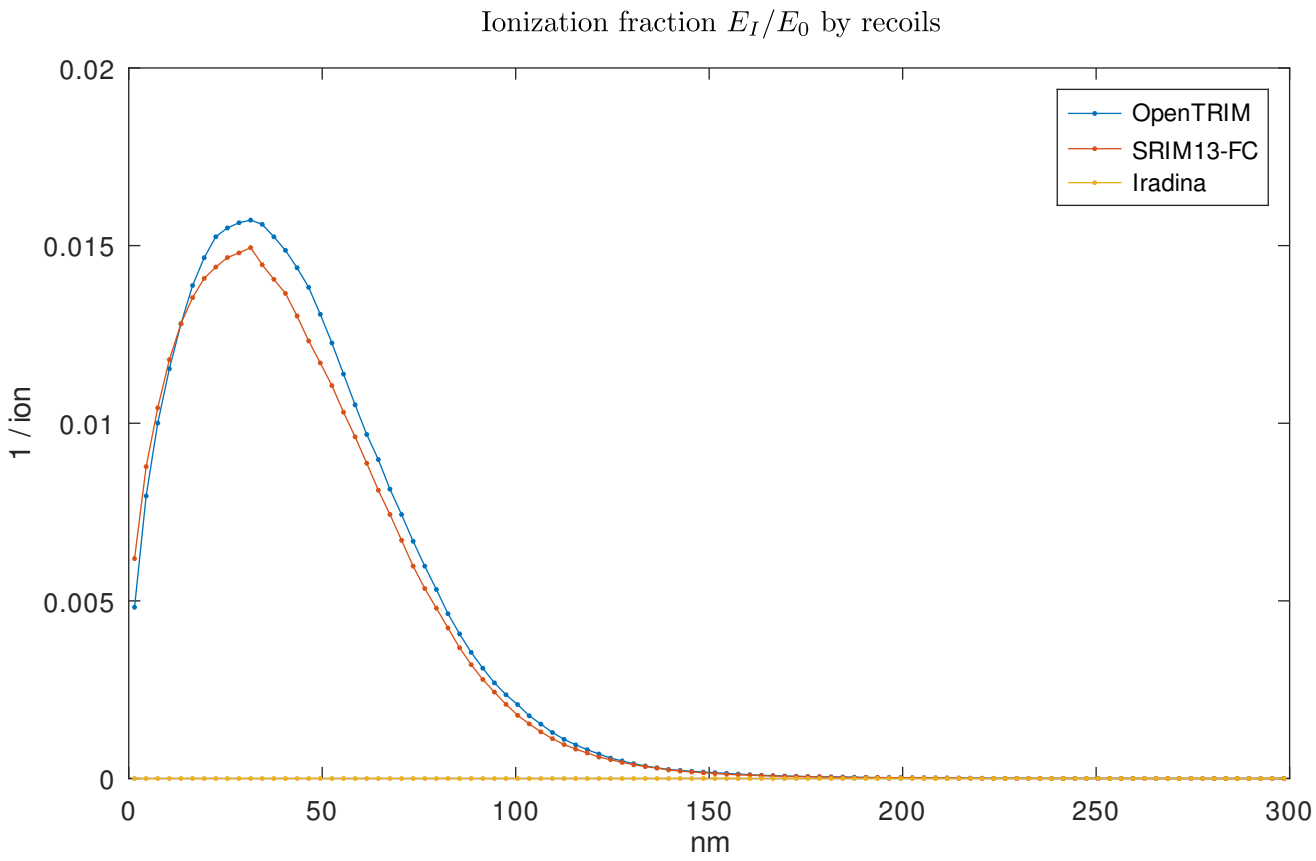

Vacancies of O in Uranium oxide
OpenTRIM
SRIM13-FC
Iradina
Vacancies / ion
nm
0
20
40
60
80
100
120
0
50
100
150
200
250
300

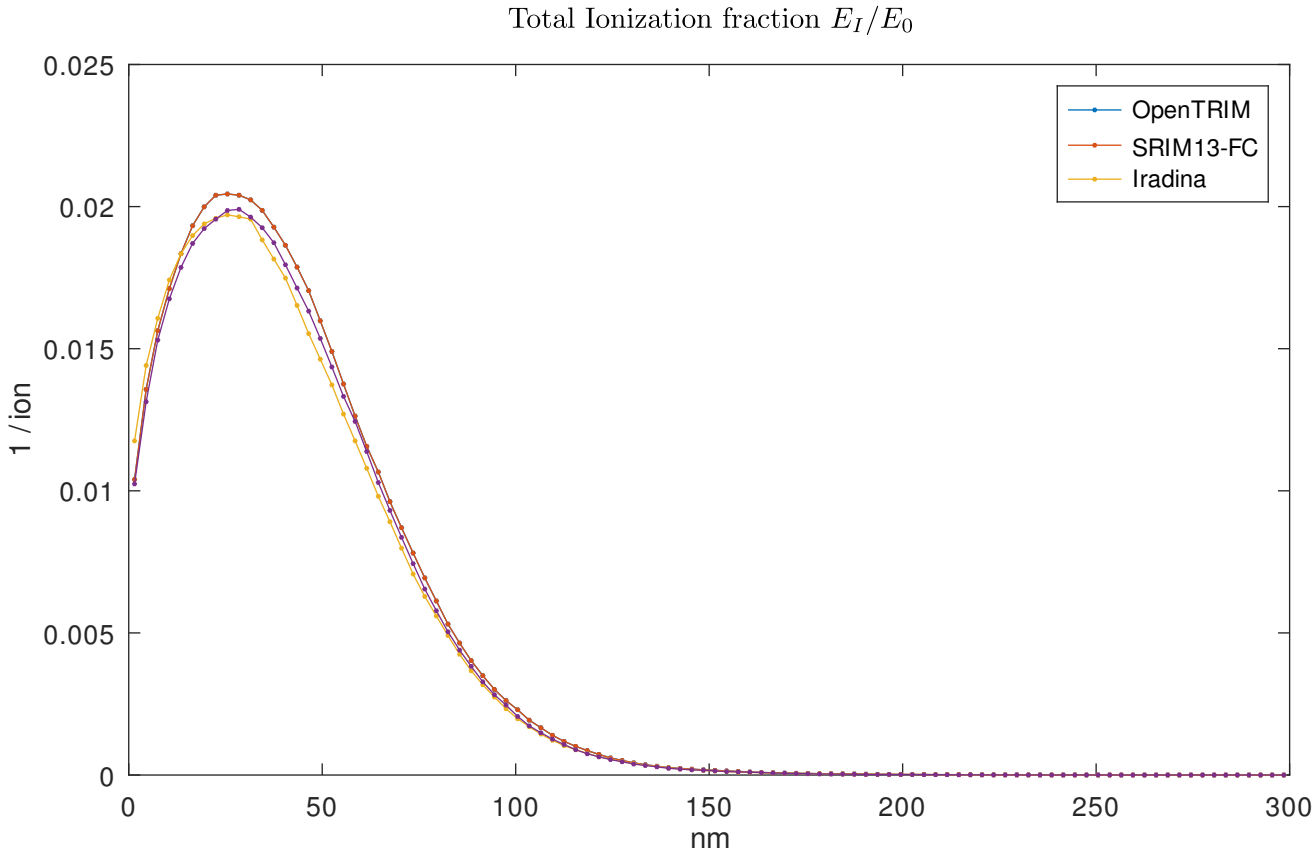

Total Vacancies
Vacancies / ion
nm
OpenTRIM
SRIM13-FC
Iradina
0
20
40
60
80
100
120
140
0
50
100
150
200
250
300

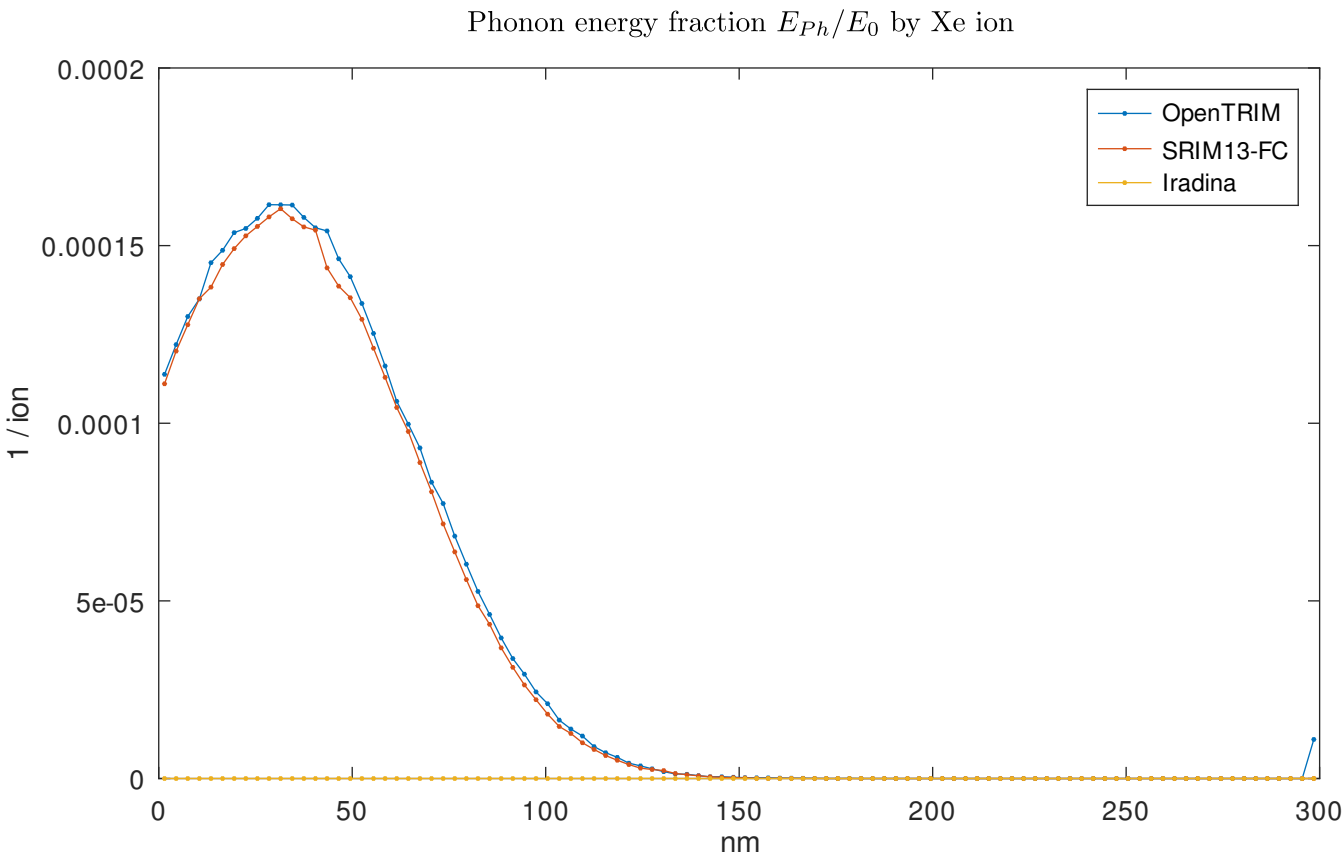

Replacements
Replacements / ion
nm
OpenTRIM
SRIM13-FC
Iradina
0
10
20
30
40
50
0
50
100
150
200
250
300

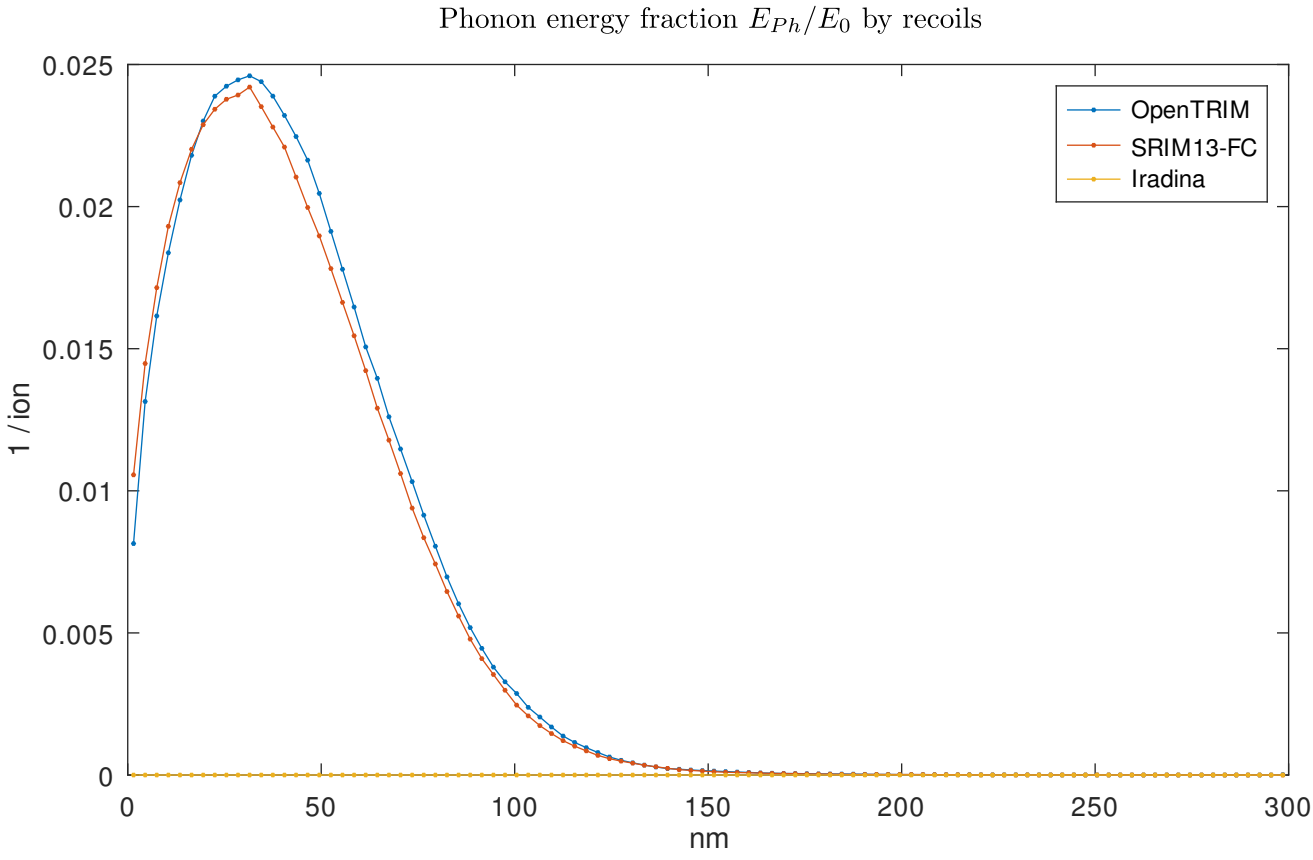

Implanted Xe ion
OpenTRIM
SRIM13-FC
Iradina
Implantations / ion
nm
0.05
0.04
0.03
0.02
0.01
0
0
50
100
150
200
250
300

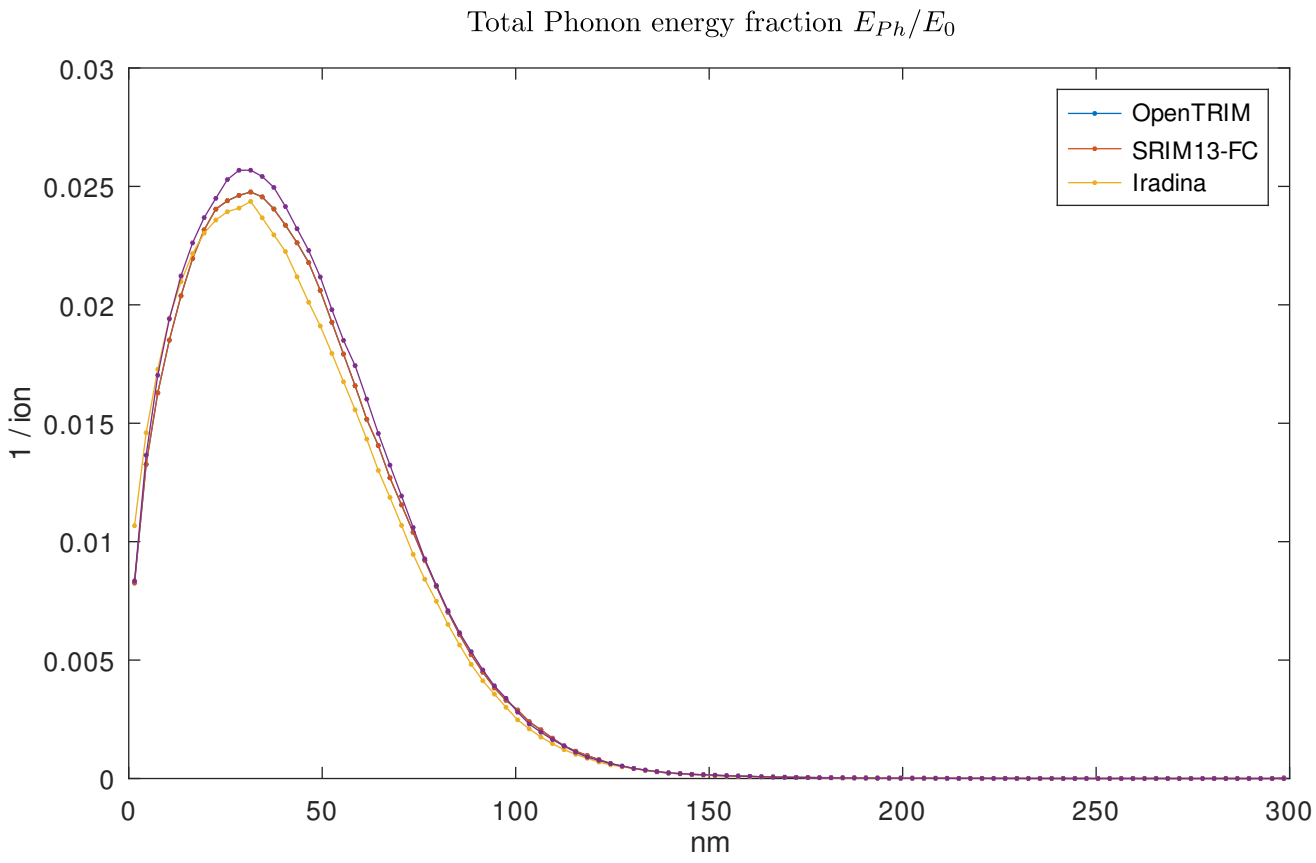

Ionization fraction E_I/E_0 by Xe ion
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.006
0.005
0.004
0.003
0.002
0.001
0
0
50
100
150
200
250
300

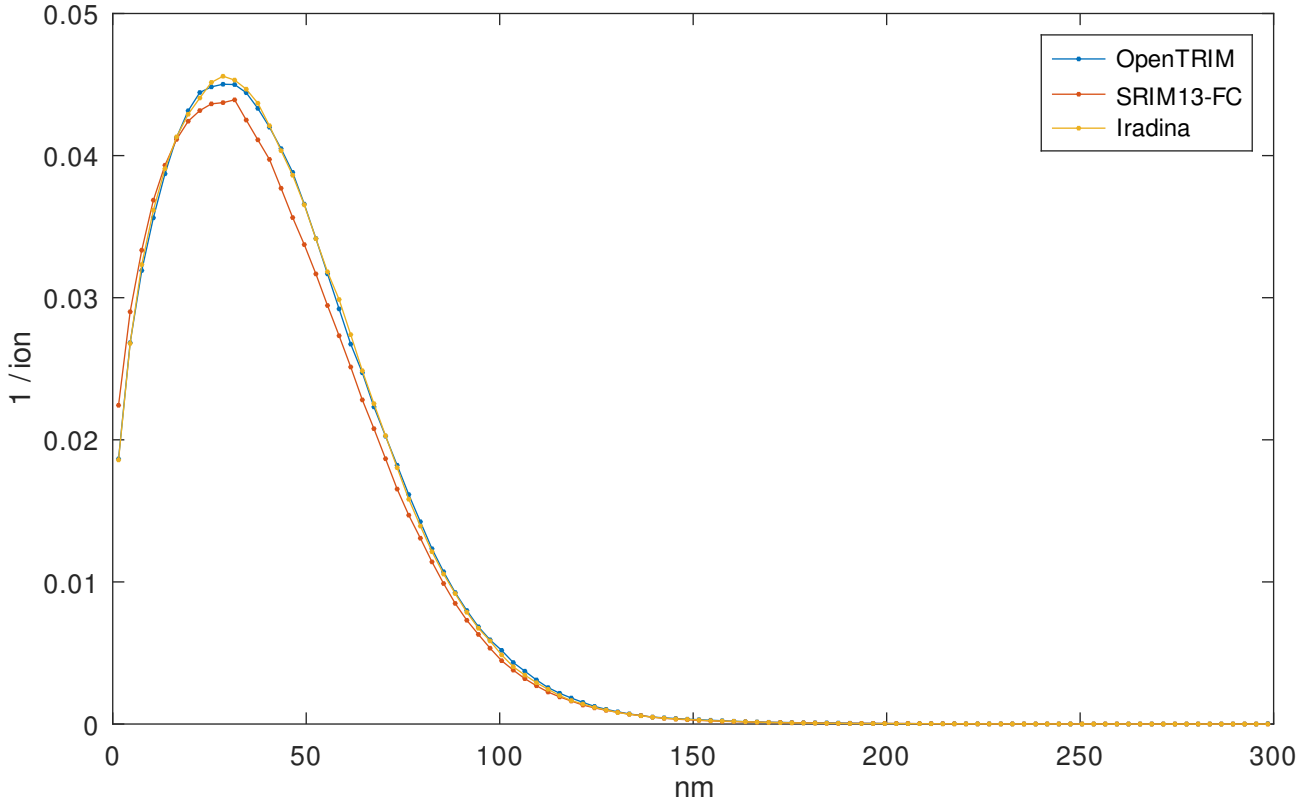

Ionization fraction E_I/E_0 by recoils
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.02
0.015
0.01
0.005
0
0
50
100
150
200
250
300


Total Ionization fraction E_I/E_0
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.025
0.02
0.015
0.01
0.005
0
0
50
100
150
200
250
300


Phonon energy fraction E_{Ph}/E_0 by Xe ion
0.0002
0.00015
0.0001
5e-05
0
1 / ion
0
50
100
150
200
250
300
nm
OpenTRIM
SRIM13-FC
Iradina


Phonon energy fraction E_{Ph}/E_0 by recoils
0.025
0.02
0.015
0.01
0.005
0
1 / ion
0
50
100
150
200
250
300
nm
OpenTRIM
SRIM13-FC
Iradina


Total Phonon energy fraction E_{Ph}/E_0
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.03
0.025
0.02
0.015
0.01
0.005
0
0
50
100
150
200
250
300


Total fractional energy deposition $(E_I + E_{Ph})/E_0$
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.05
0.04
0.03
0.02
0.01
0
0
50
100
150
200
250
300