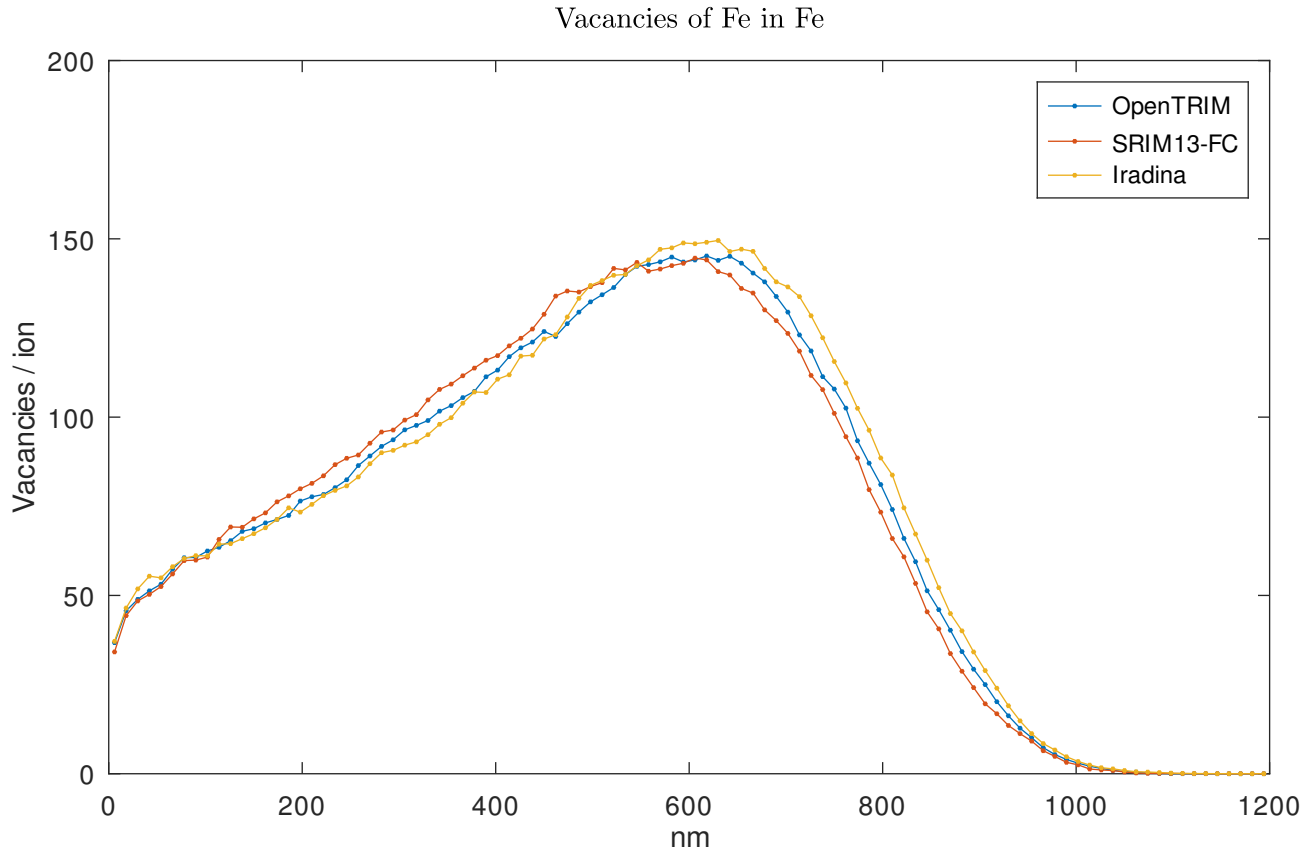
Benchmark #1
2MeV Fe on Fe

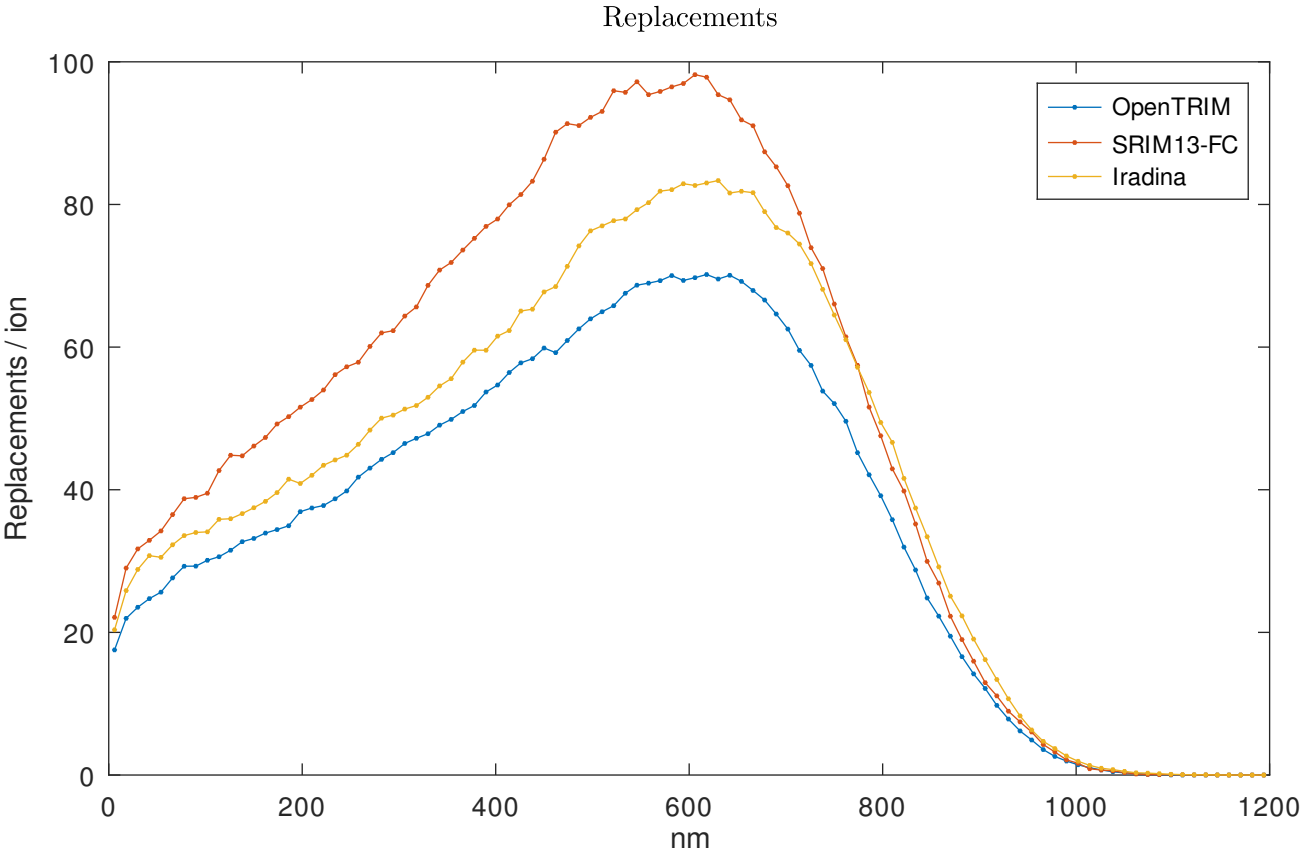
Ion energy E0 = 2e+06 eV

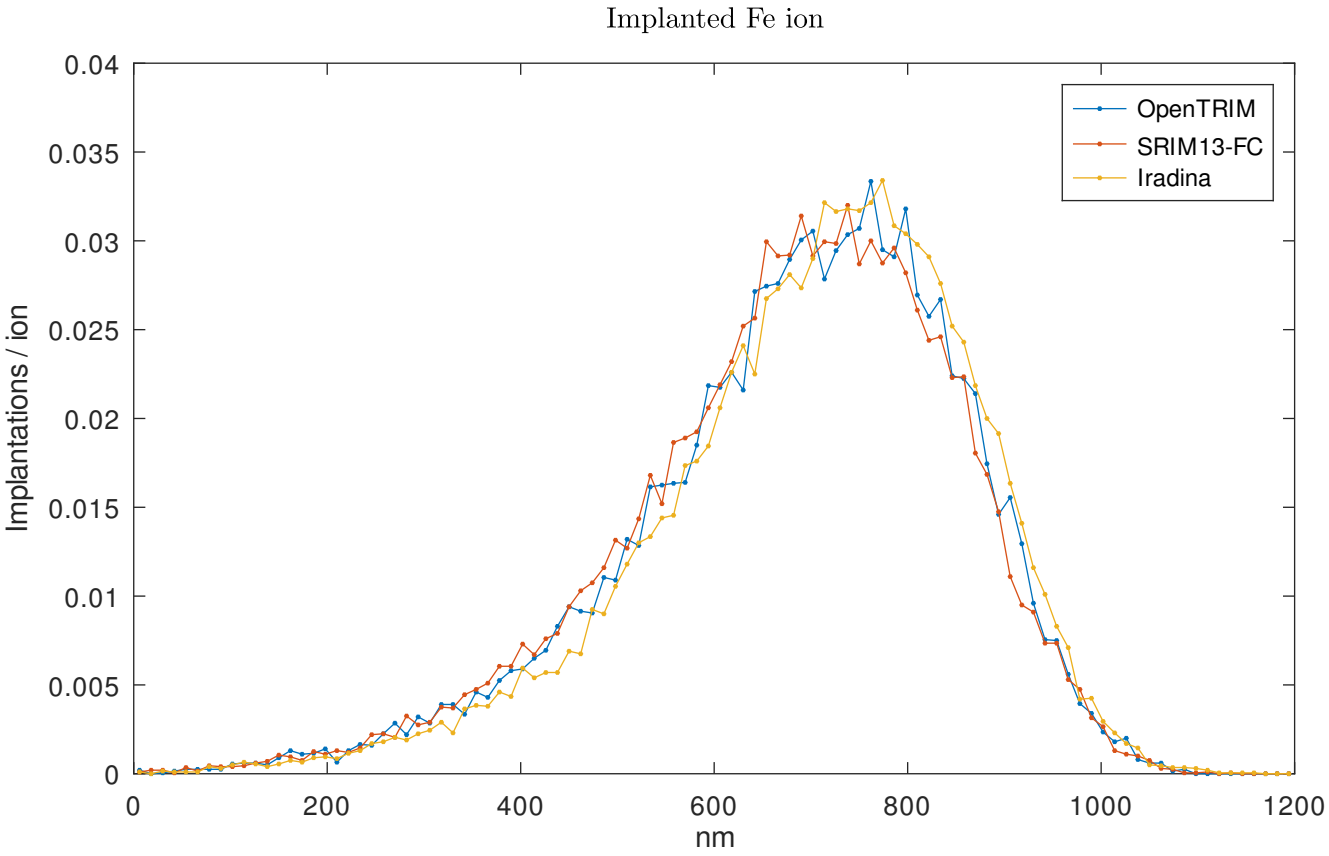
Target depth = 1200 nm

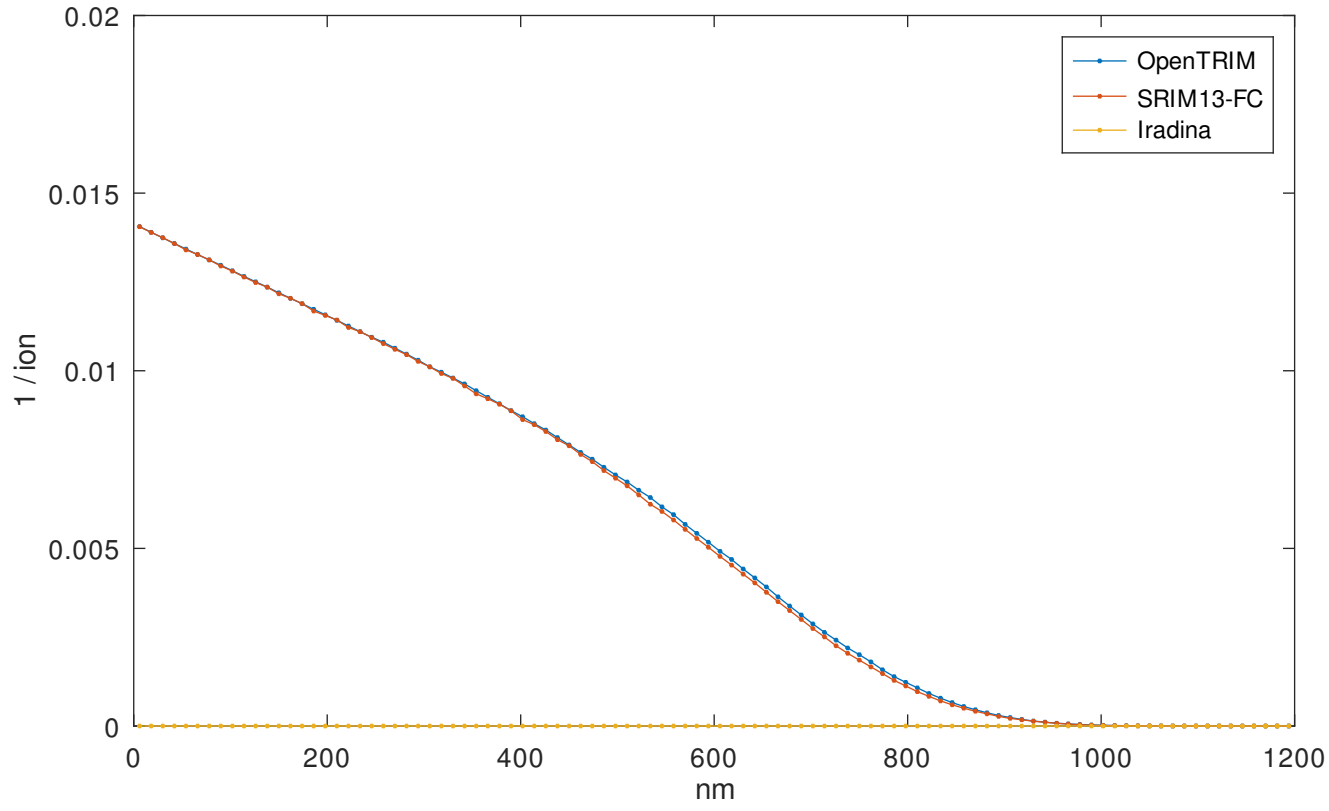
Summary Table

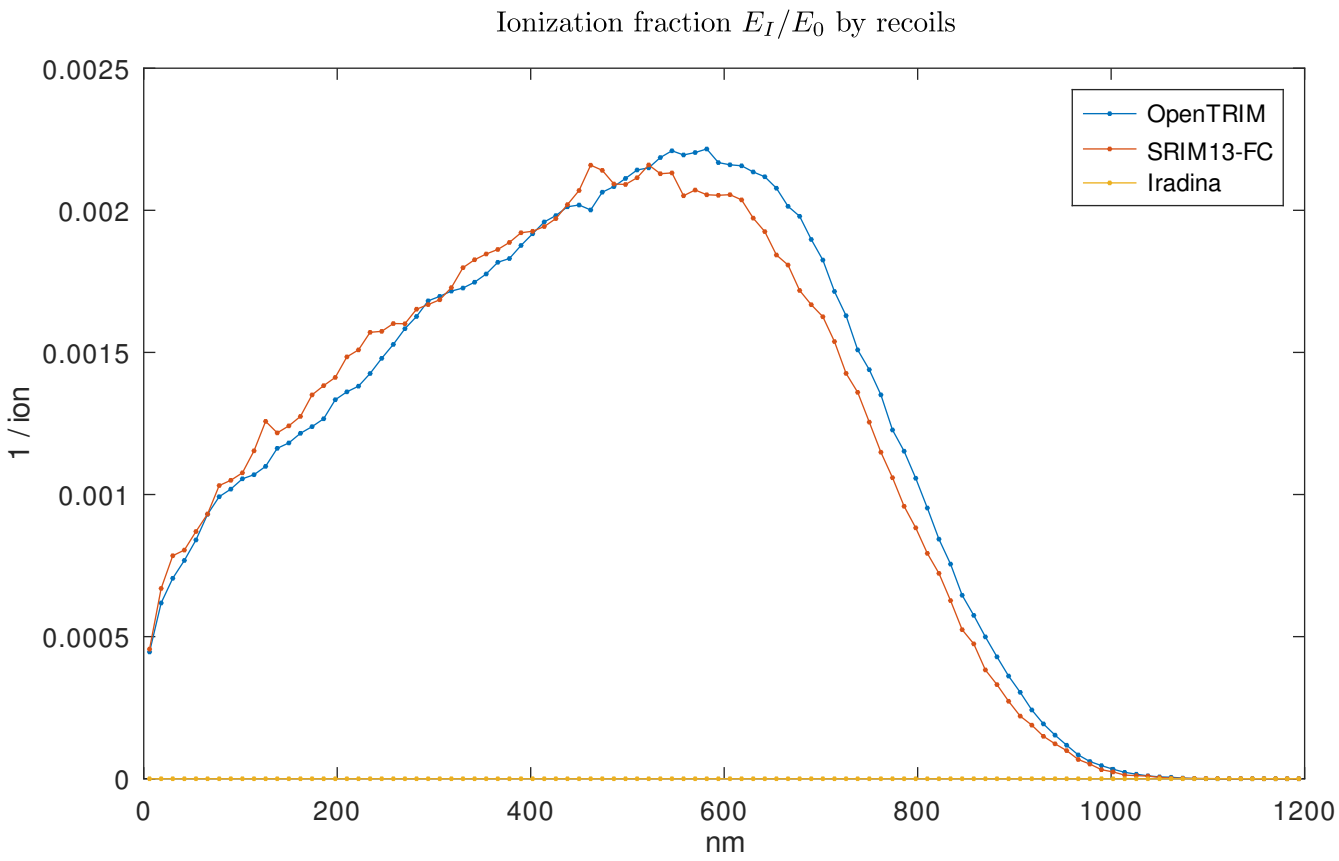
Quantity	OpenTRIM	SRIM13-FC	Iradina
V(Fe)	7.37e+03	7.35e+03	7.53e+03
R(tot)	3.56e+03	4.87e+03	4.19e+03
I(Fe)	1	1	1
EI(Fe)/E0	0.557	0.552	0
EI(r)/E0	0.115	0.112	0
EI/E0	0.671	0.663	0.681
EPh(Fe)/E0	0.00348	0.0034	0
EPh(r)/E0	0.325	0.325	0
EPh(tot)/E0	0.328	0.329	0.319
1-(EI+EPh)/E0	0.000311	0.00772	0.000285

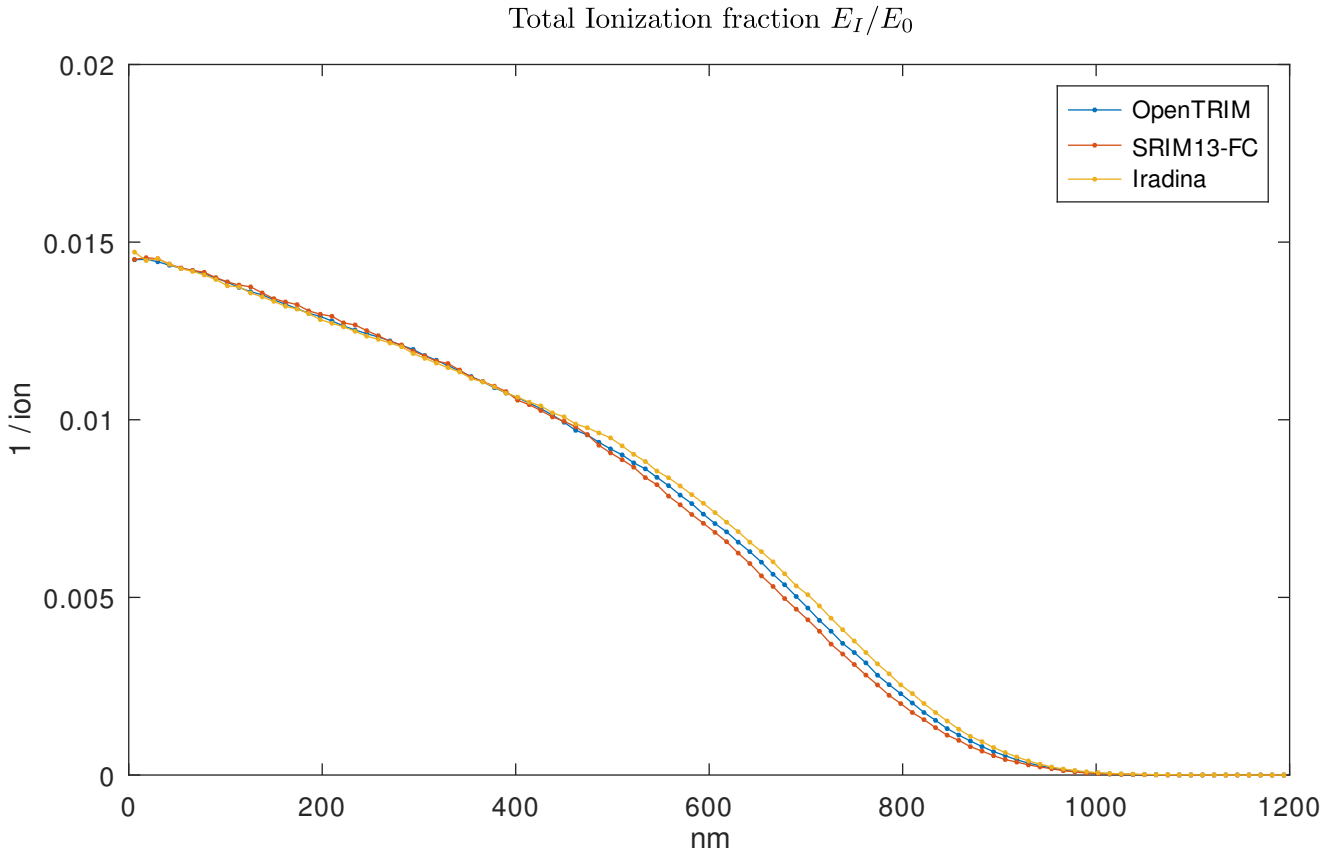

Vacancies of Fe in Fe
OpenTRIM
SRIM13-FC
Iradina
Vacancies / ion
nm
0
50
100
150
200
0
200
400
600
800
1000
1200

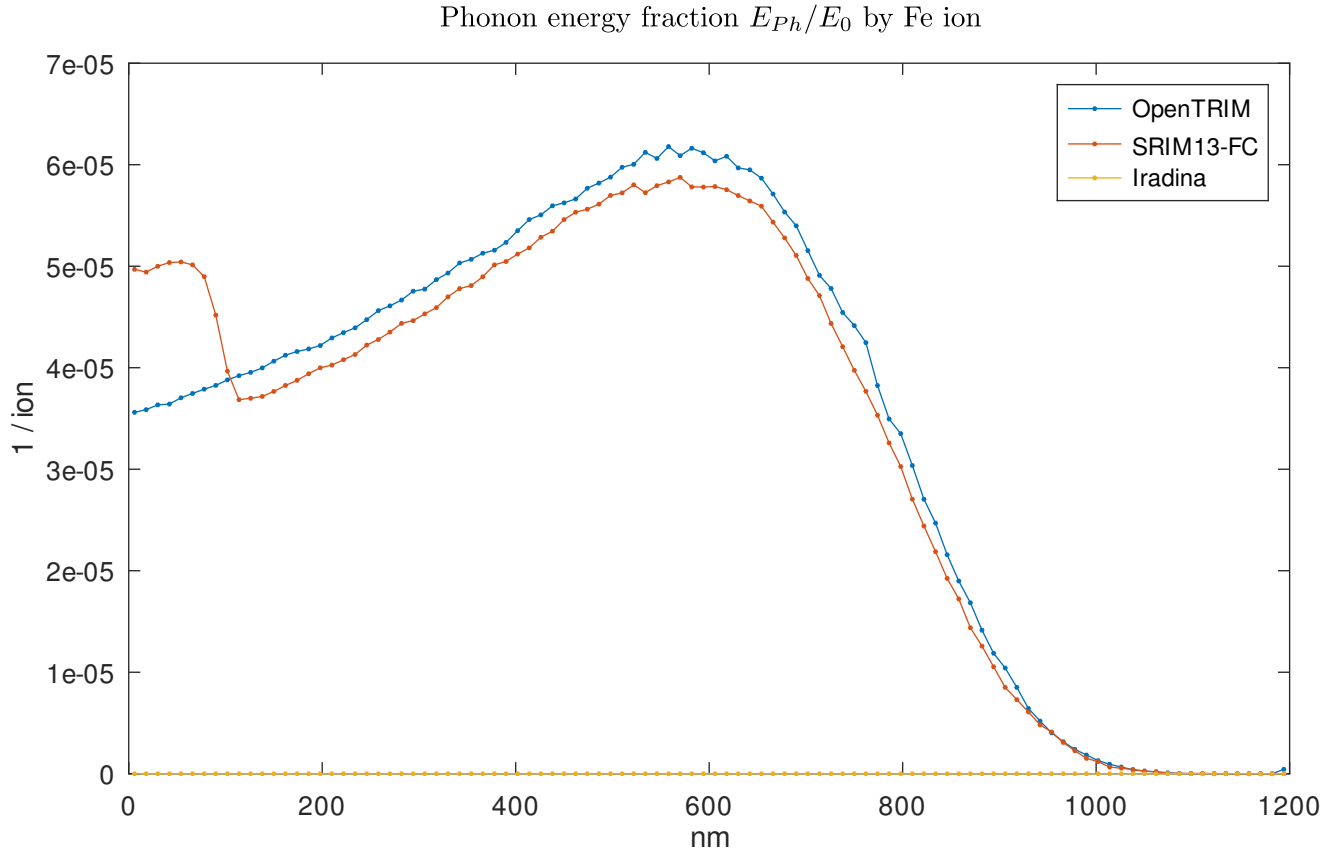

Replacements
OpenTRIM
SRIM13-FC
Iradina
Replacements / ion
nm
0
20
40
60
80
100
0
200
400
600
800
1000
1200

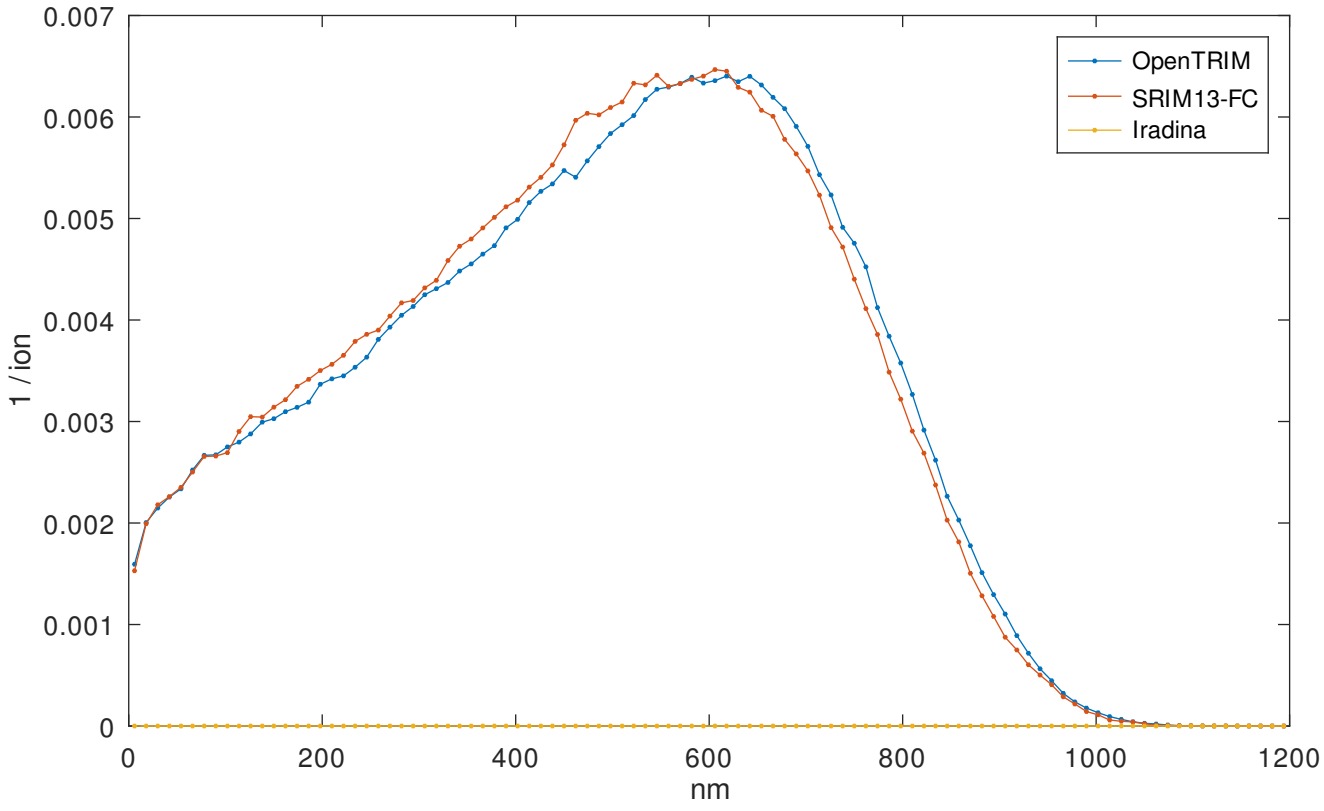

Implanted Fe ion
OpenTRIM
SRIM13-FC
Iradina
Implantations / ion
nm
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200

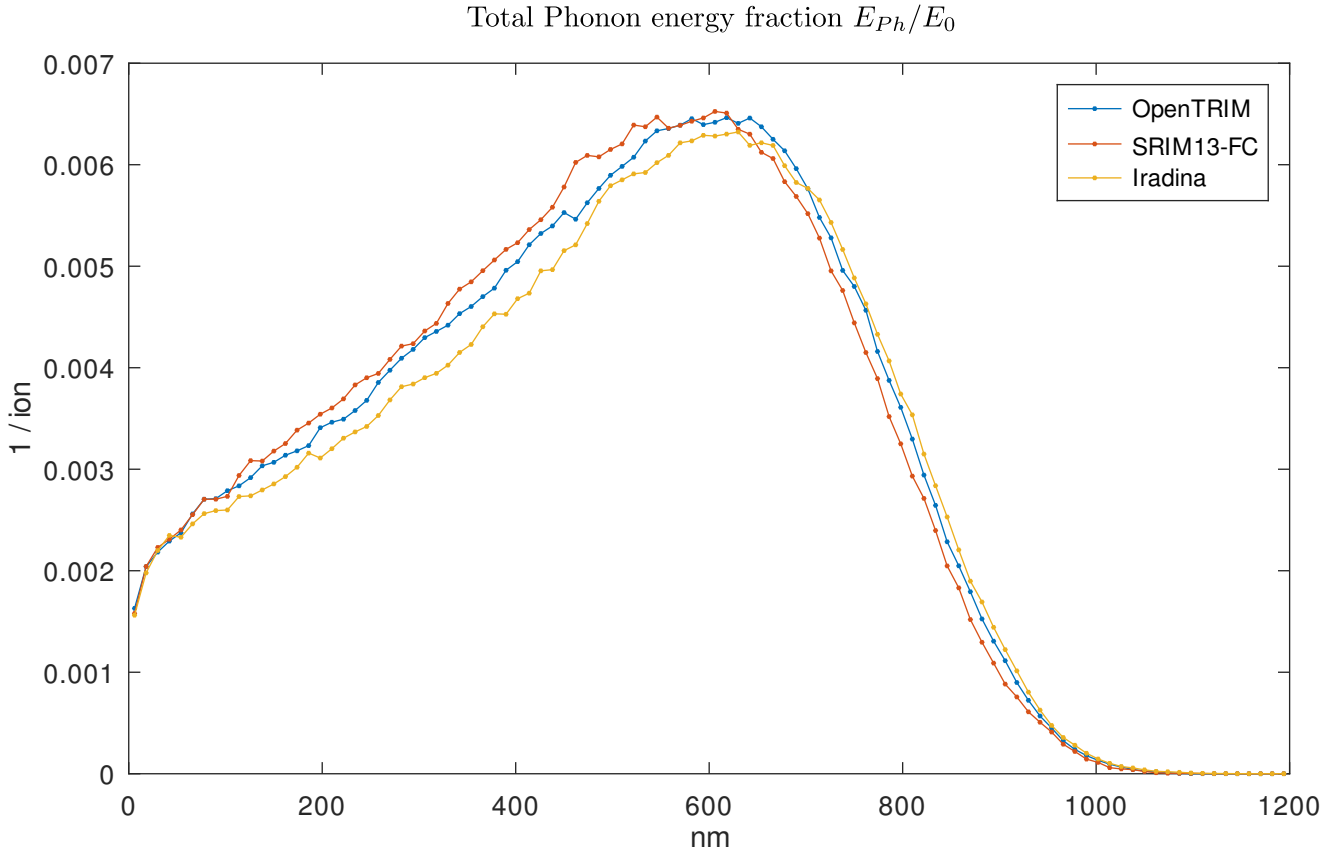

Ionization fraction E_I/E_0 by Fe ion
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200

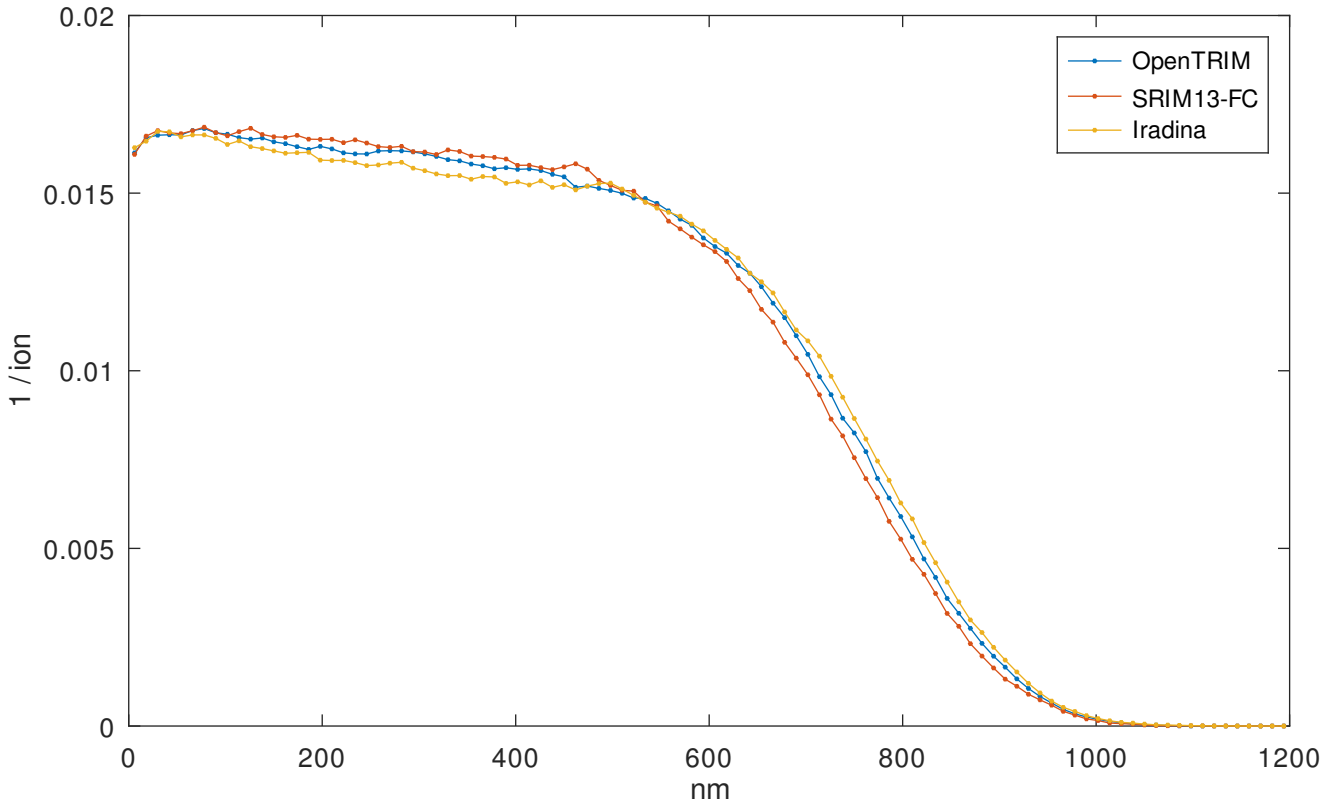

Ionization fraction E_I/E_0 by recoils
0.0025
0.002
0.0015
0.001
0.0005
0
1 / ion
0
200
400
600
800
1000
1200
nm
OpenTRIM
SRIM13-FC
Iradina


Total Ionization fraction E_I/E_0
0.02
0.015
0.01
0.005
0
1 / ion
0
200
400
600
800
1000
1200
nm
OpenTRIM
SRIM13-FC
Iradina


Phonon energy fraction E_{Ph}/E_0 by Fe ion
7e-05
6e-05
5e-05
4e-05
3e-05
2e-05
1e-05
0
1 / ion
0
200
400
600
800
1000
1200
nm
OpenTRIM
SRIM13-FC
Iradina


Phonon energy fraction E_{Ph}/E_0 by recoils
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
1 / ion
0
200
400
600
800
1000
1200
nm
OpenTRIM
SRIM13-FC
Iradina


Total Phonon energy fraction E_{Ph}/E_0
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
0
200
400
600
800
1000
1200


Total fractional energy deposition $(E_I + E_{Ph})/E_0$
OpenTRIM
SRIM13-FC
Iradina
1 / ion
nm
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200