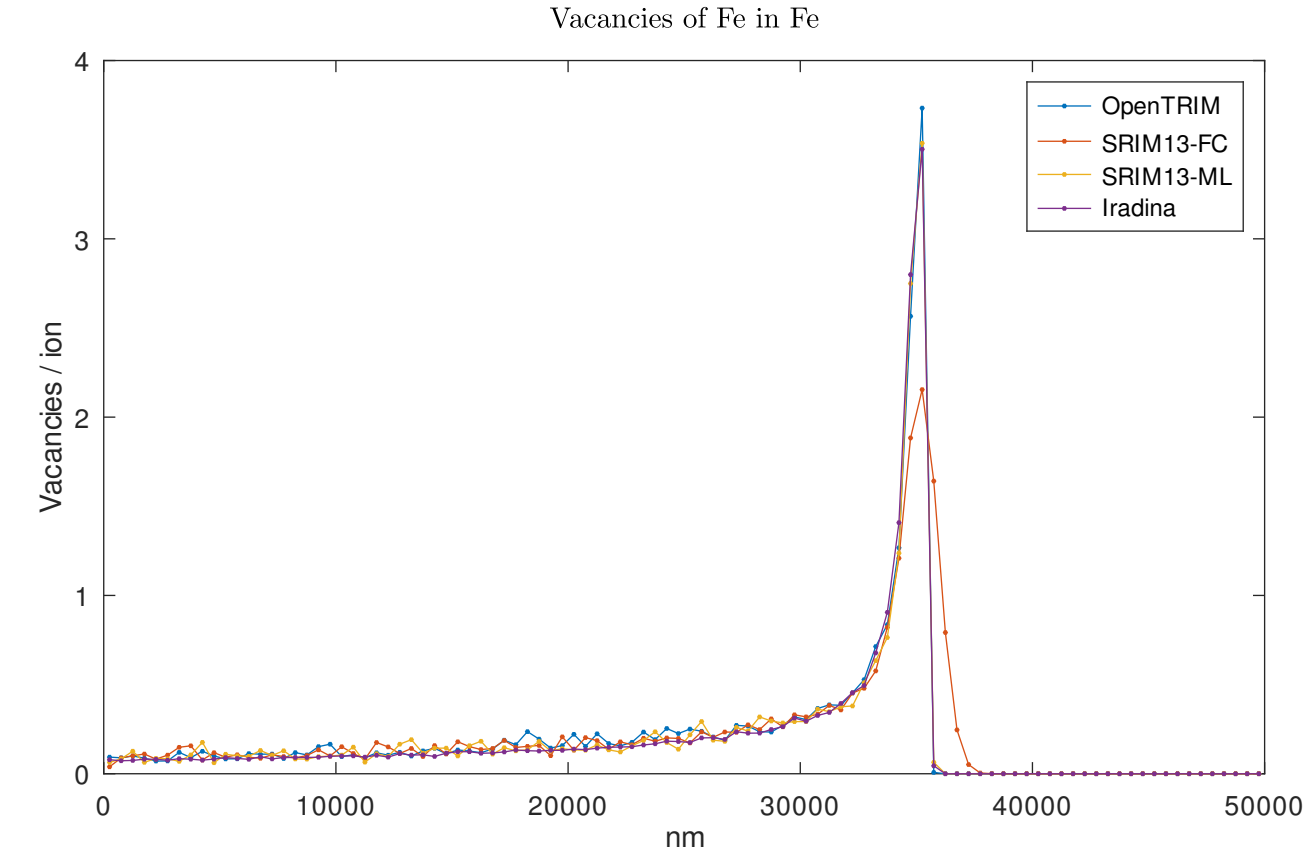
Benchmark #6
3 MeV H on Fe

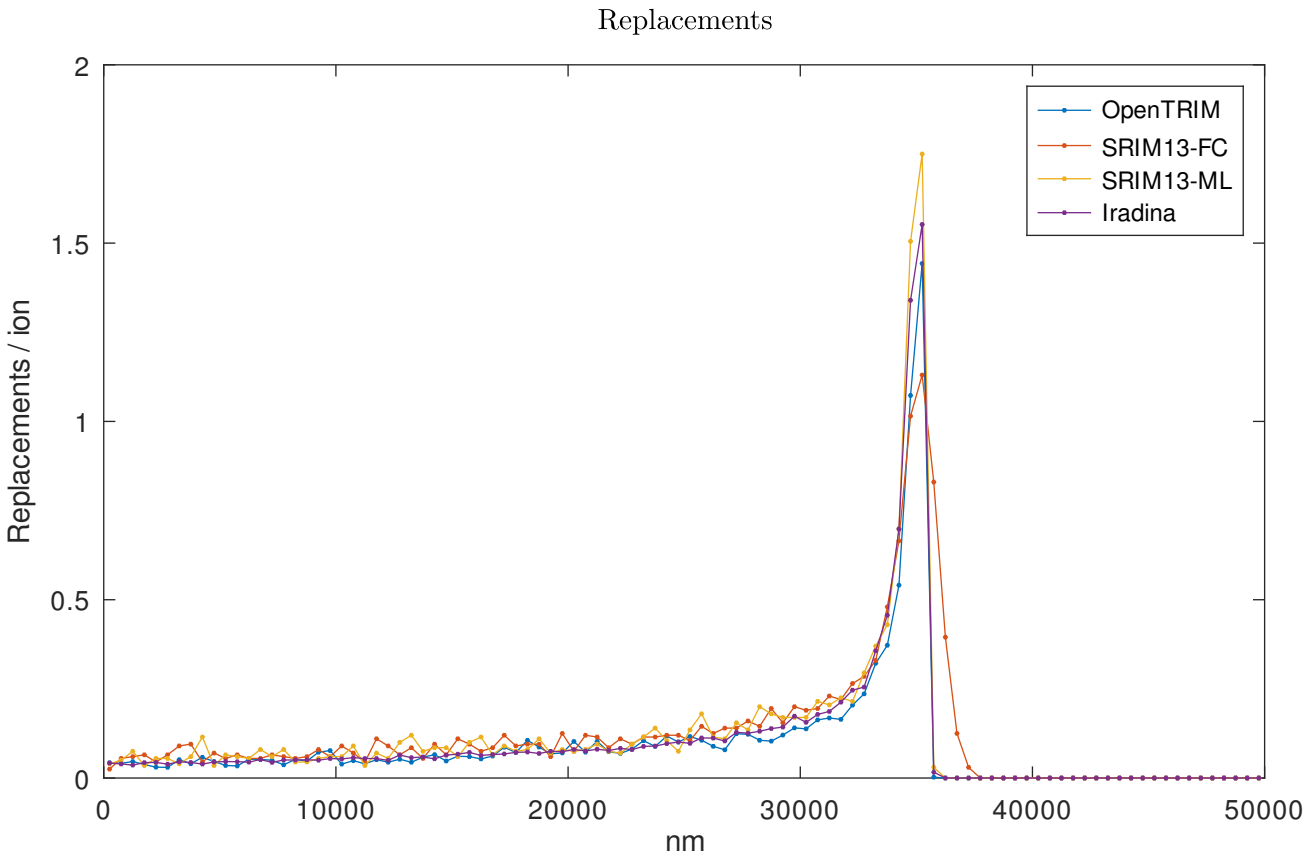
Ion energy E0 = 3e+06 eV

Target depth = 50000 nm

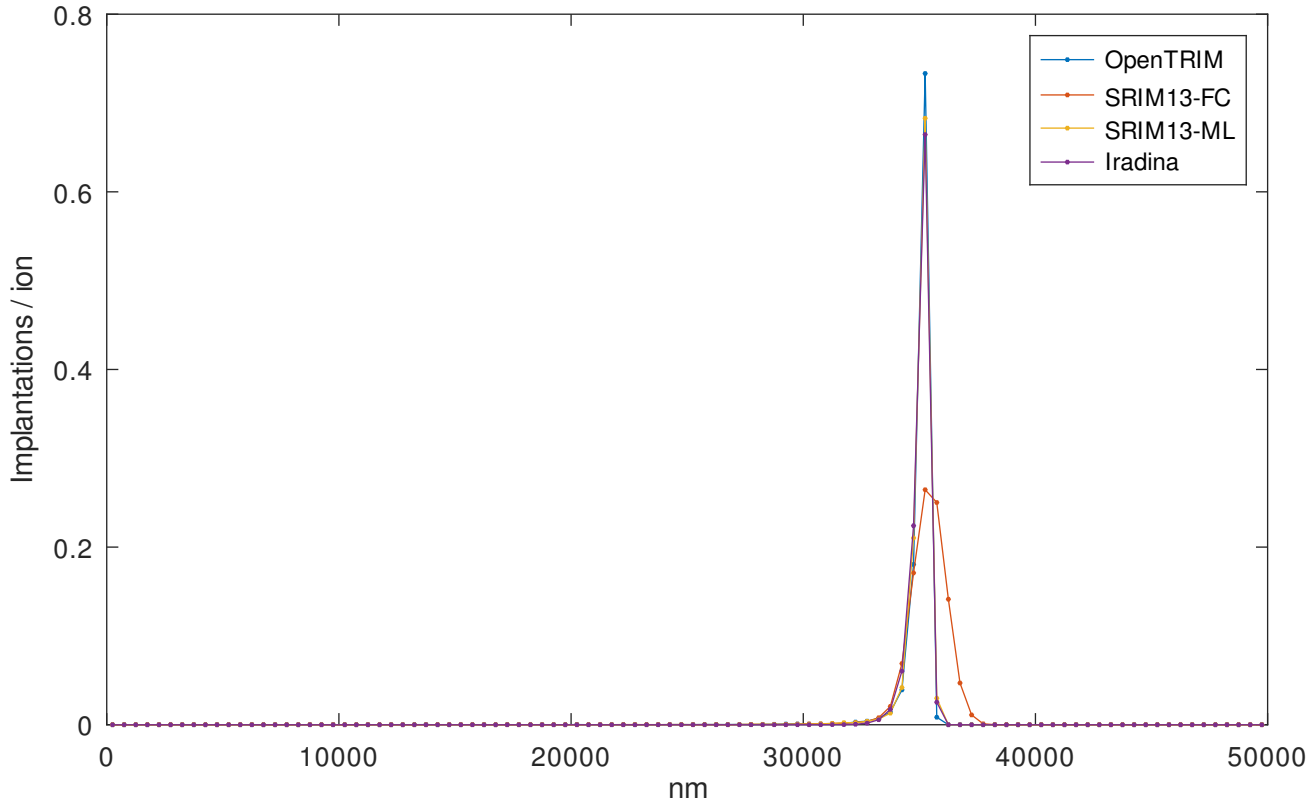
Summary Table

Quantity	OpenTRIM	SRIM13-FC	SRIM13-ML	Iradina
V(Fe)	20.8	20.9	20	19.5
R(tot)	9	11.9	11.4	9.95
I(H)	1	1	1	1
EI(H)/E0	0.999	0.999	0.999	0
EI(r)/E0	8.3e-05	7.53e-05	7.14e-05	0
EI/E0	0.999	0.999	0.999	0.999
EPh(H)/E0	0.000457	0.000316	0.000486	0
EPh(r)/E0	0.000549	0.000848	0.000994	0
EPh(tot)/E0	0.00101	0.00116	0.00148	0.000976
1-(EI+EPh)/E0	0	-0.000302	-0.000382	-4.77e-07

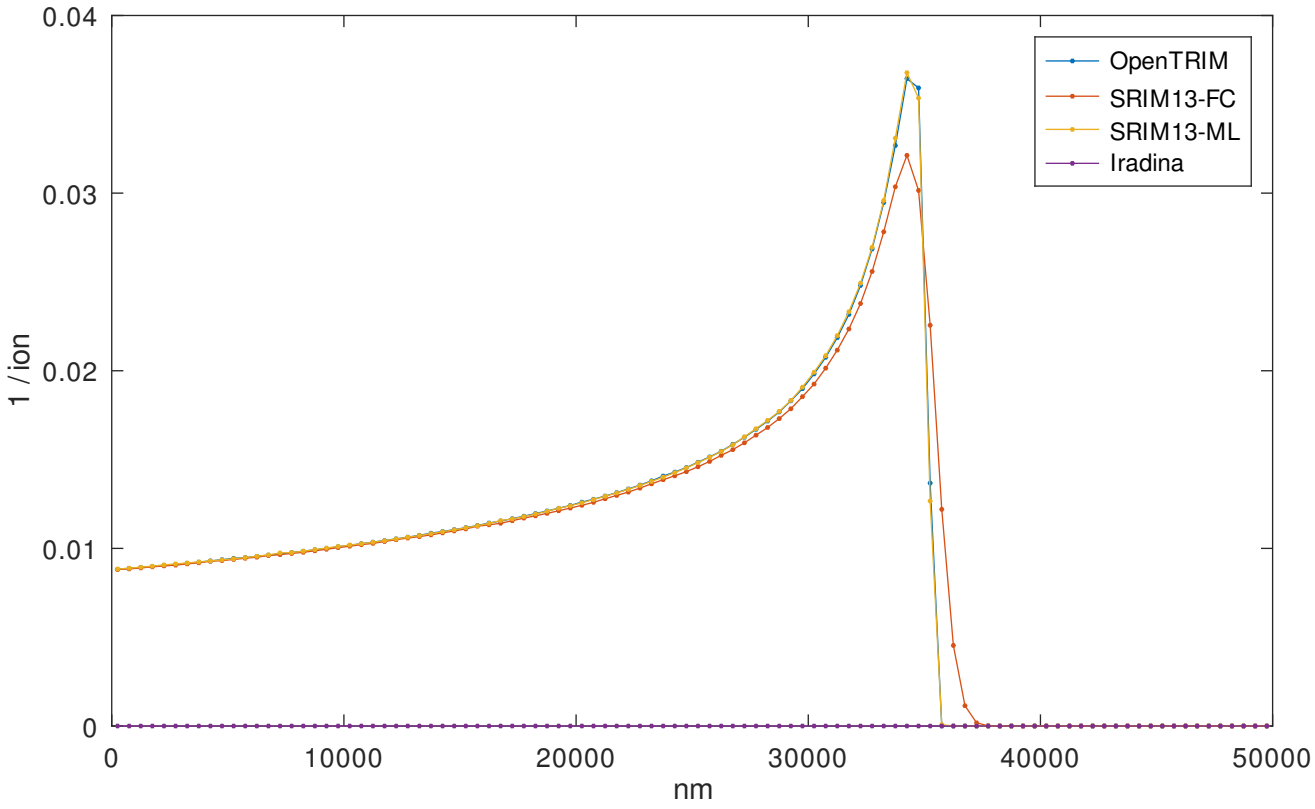

Vacancies of Fe in Fe
Vacancies / ion
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina
0
1
2
3
4
0
10000
20000
30000
40000
50000

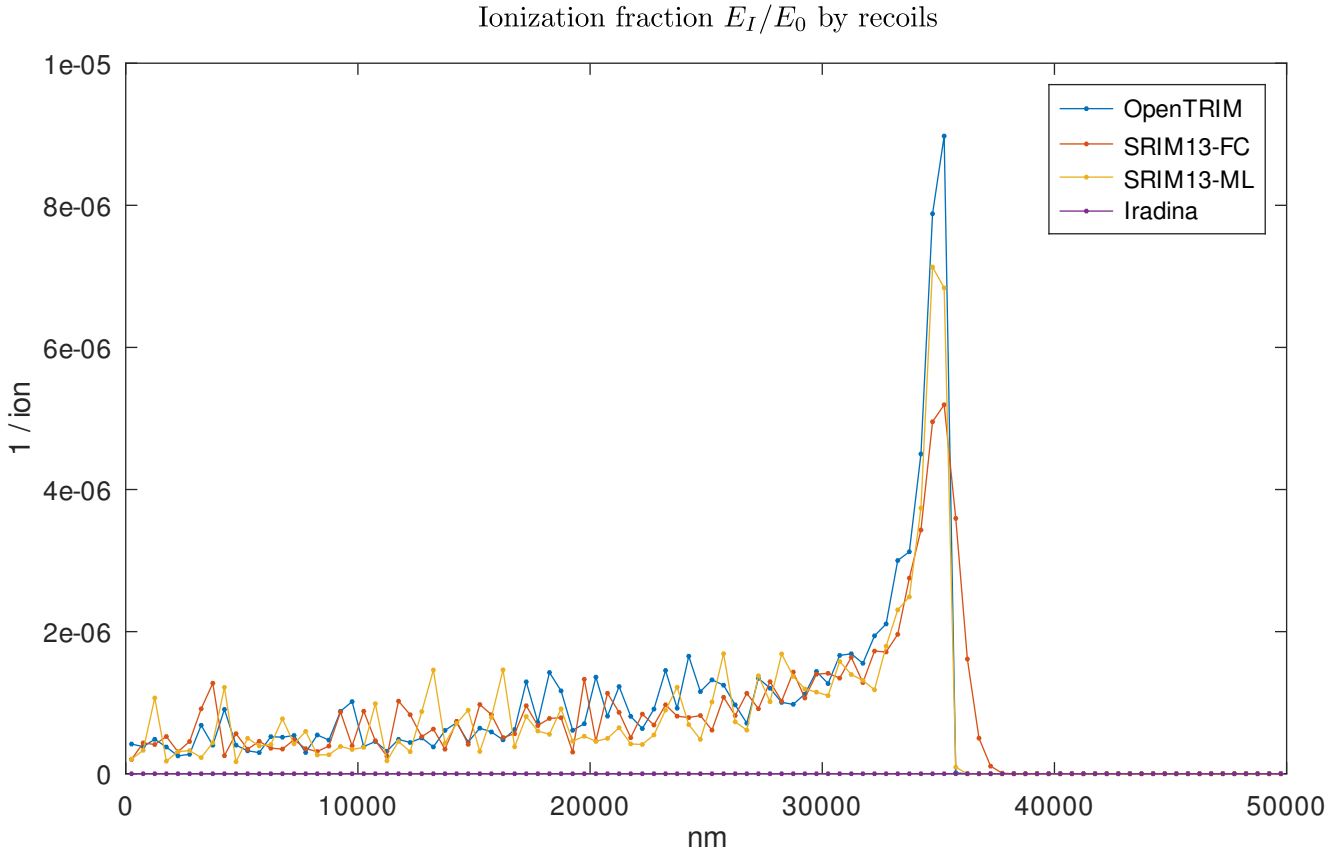

Replacements
Replacements / ion
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina
0
0.5
1
1.5
2
0
10000
20000
30000
40000
50000

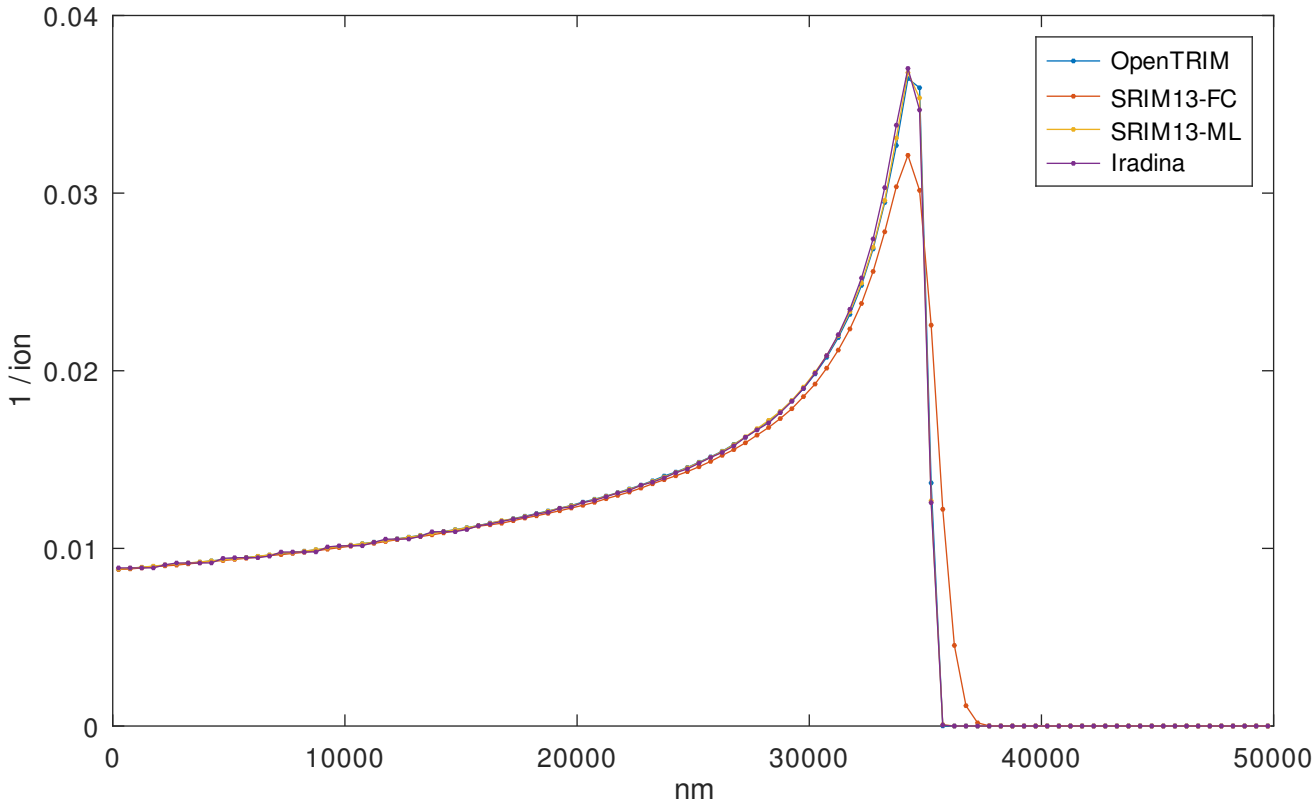
Implanted H ion

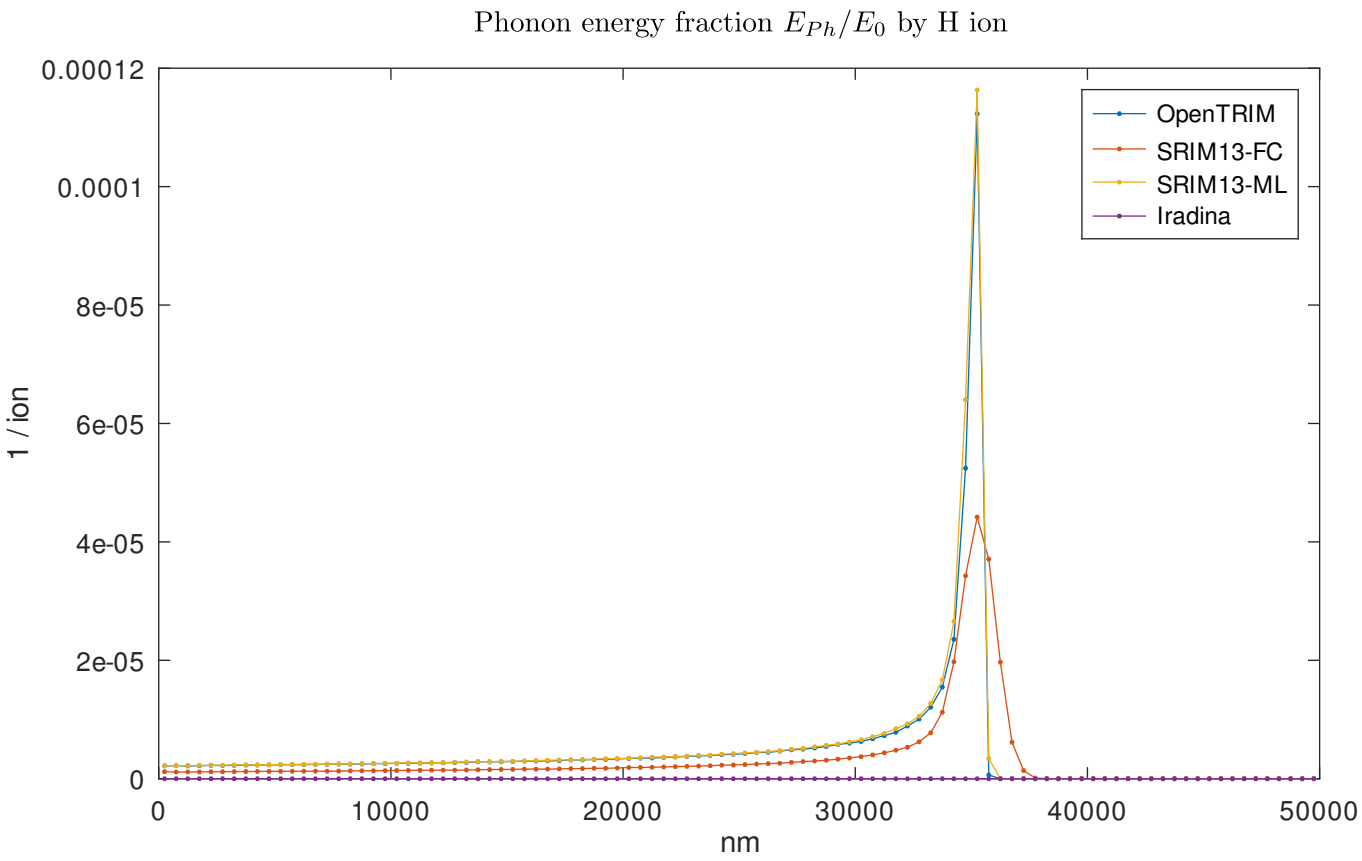


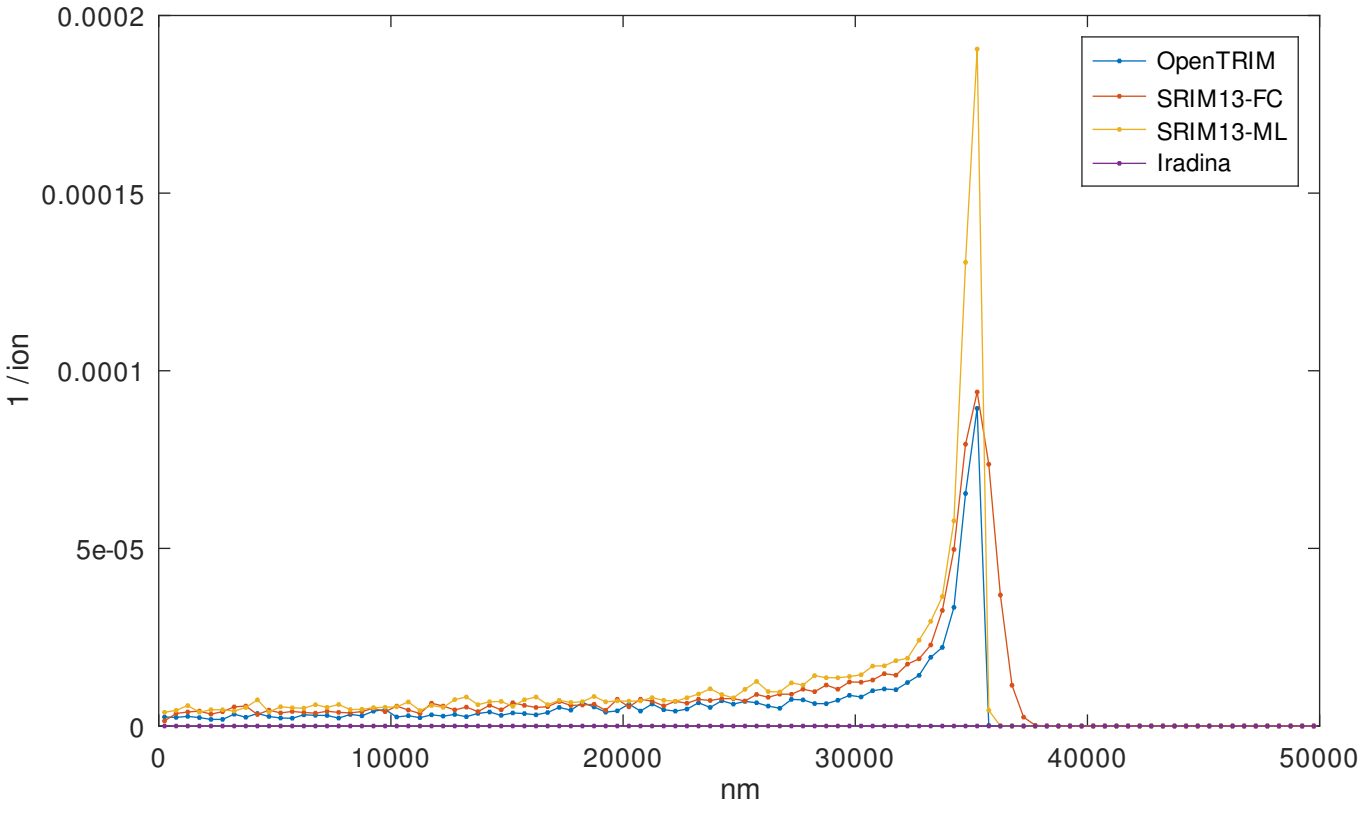
Ionization fraction E_I/E_0 by H ion

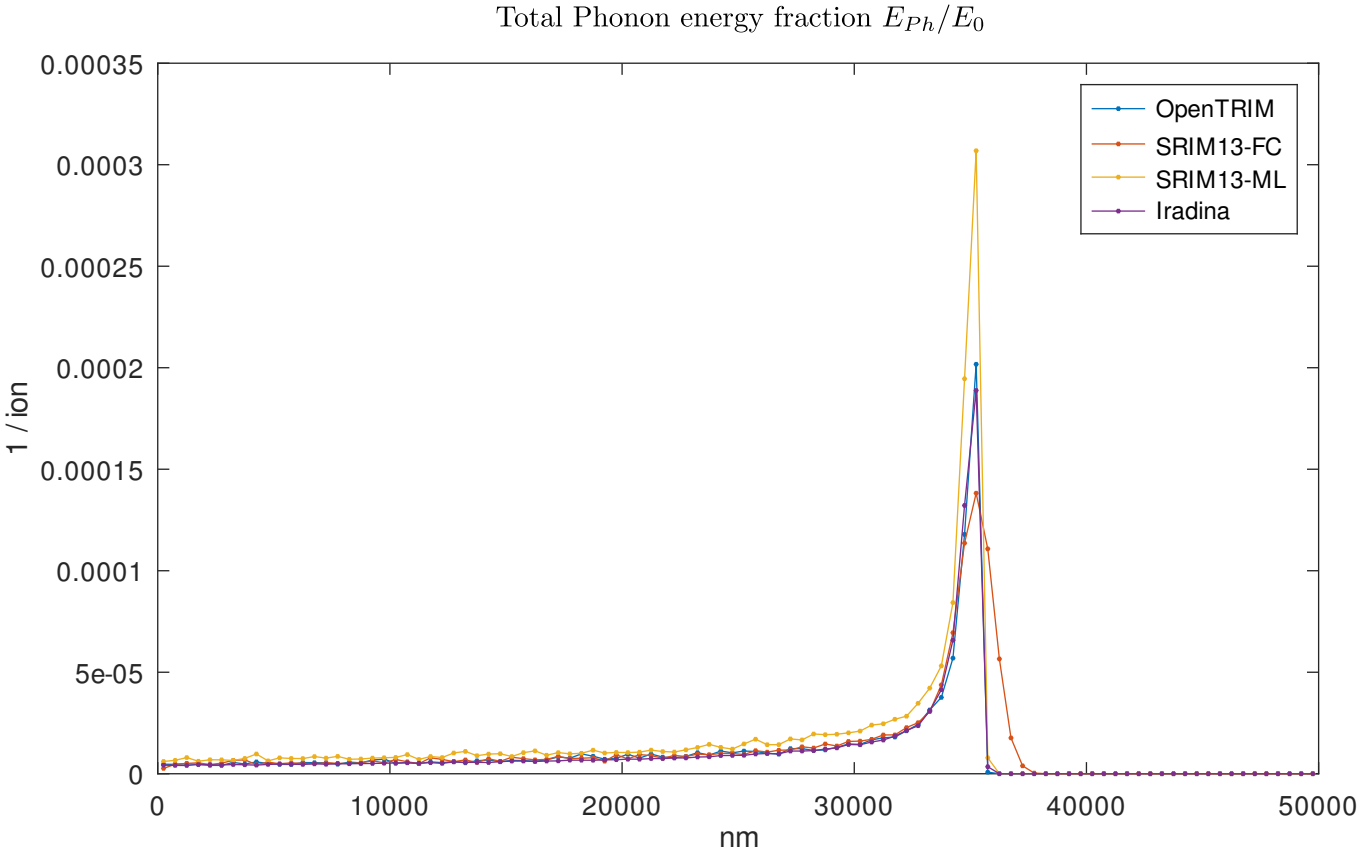


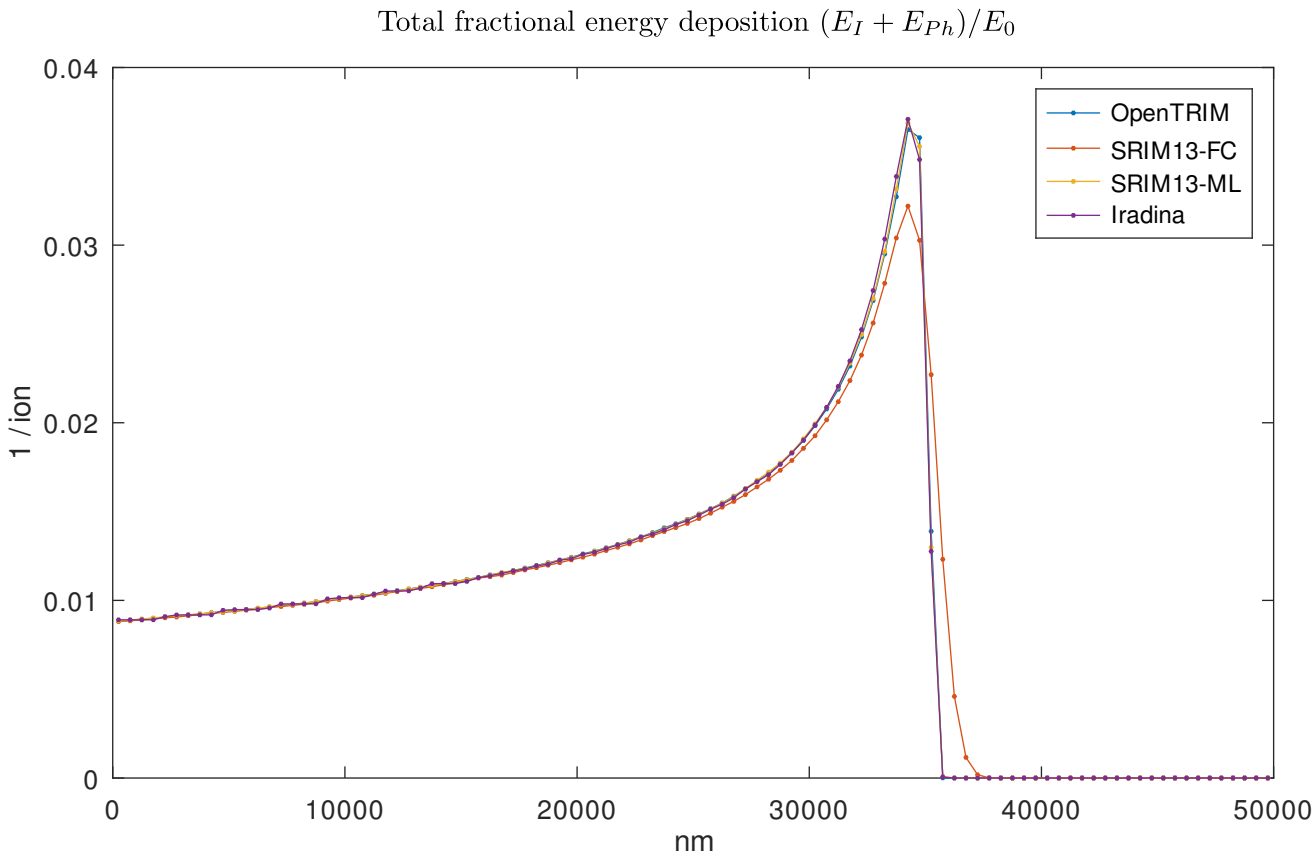

Ionization fraction E_I/E_0 by recoils
1e-05
8e-06
6e-06
4e-06
2e-06
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina


Total Ionization fraction E_I/E_0
0.04
0.03
0.02
0.01
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina


Phonon energy fraction E_{Ph}/E_0 by H ion
0.00012
0.0001
8e-05
6e-05
4e-05
2e-05
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina


Phonon energy fraction E_{Ph}/E_0 by recoils
0.0002
0.00015
0.0001
5e-05
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina


Total Phonon energy fraction E_{Ph}/E_0
0.00035
0.0003
0.00025
0.0002
0.00015
0.0001
5e-05
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina


Total fractional energy deposition $(E_I + E_{Ph})/E_0$
0.04
0.03
0.02
0.01
0
1 / ion
0
10000
20000
30000
40000
50000
nm
OpenTRIM
SRIM13-FC
SRIM13-ML
Iradina