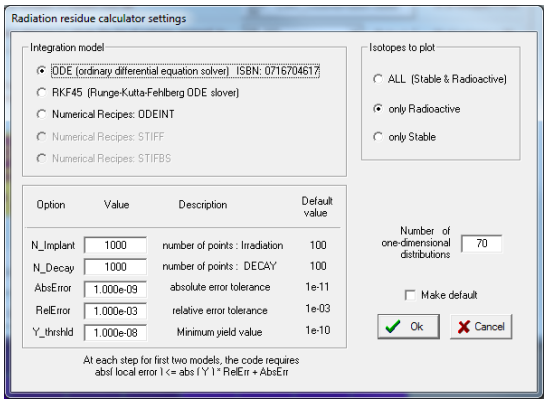
Radiation Residue Calculator : ^{44}Ti

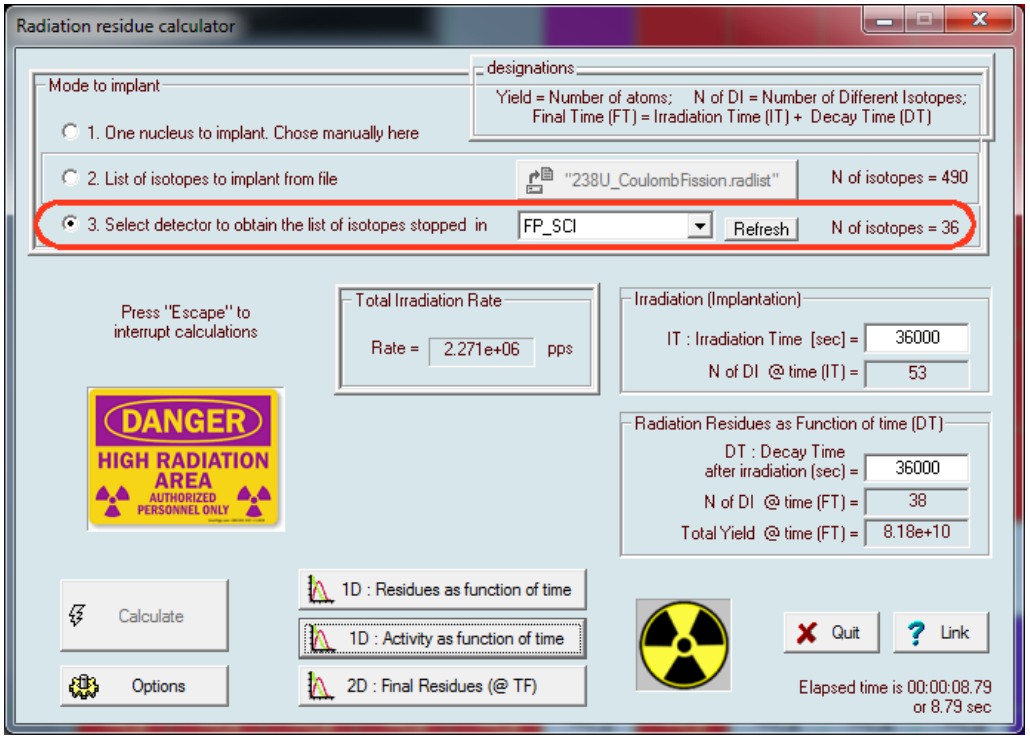
v.9.10.341
from 08/05/16

http://lise.nscl.msu.edu/9_10/radiation/44Ti%20from%2058Ni.lpp

Table 1. Priority isotopes for harvesting at FRIB. These isotopes were identified at the Working Group meeting in Santa Fe, NM September 30 – October 1, 2010.

Isotope	Half-life	Application
^{32}Si	160 y	Tracer; geology and botany
^{44}Ti	60 y	Medicine, astrophysics, nuclear structure
^{48}V	16 d	Stockpile Stewardship
^{67}Cu	2.6 d	Medicine
^{85}Kr	10.0 d	Astrophysics, stockpile stewardship
Eu*		Stockpile Stewardship
^{211}Rn	14.6 h	Medicine
^{225}Ra	14.9d	Medicine, Electric Dipole Moment
^{225}Ac	10.0 d	Medicine





^{44}Ti's case : Residues

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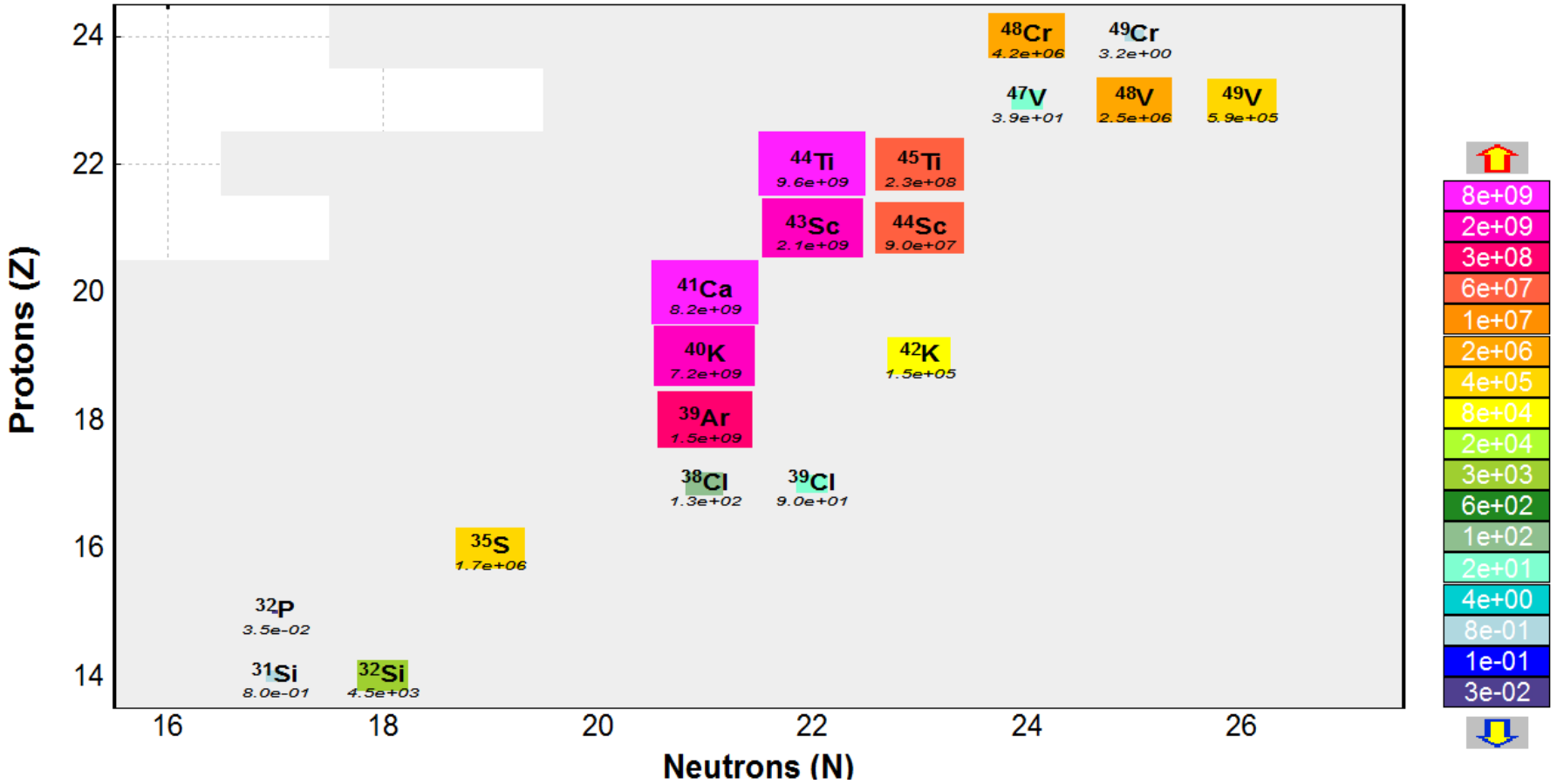
10 hours of irradiation, 10 hours of decay : ^{44}Ti's number of atoms is highest!

Radioactive decay residues

Implantation detector : "FP_SCI" (36 different isotopes)

Irradiation Time (IT) = 3.60e+04 sec; Decay Time (DT) = 3.60e+04 sec; Plot only Radioactive

N_Implant=1000, N_Resid=1000, Abs.Error=1.0e-09, Rel.Error=1.0e-03, Threshold=1.0e-08, Model="OI



^{44}Ti : Evolution

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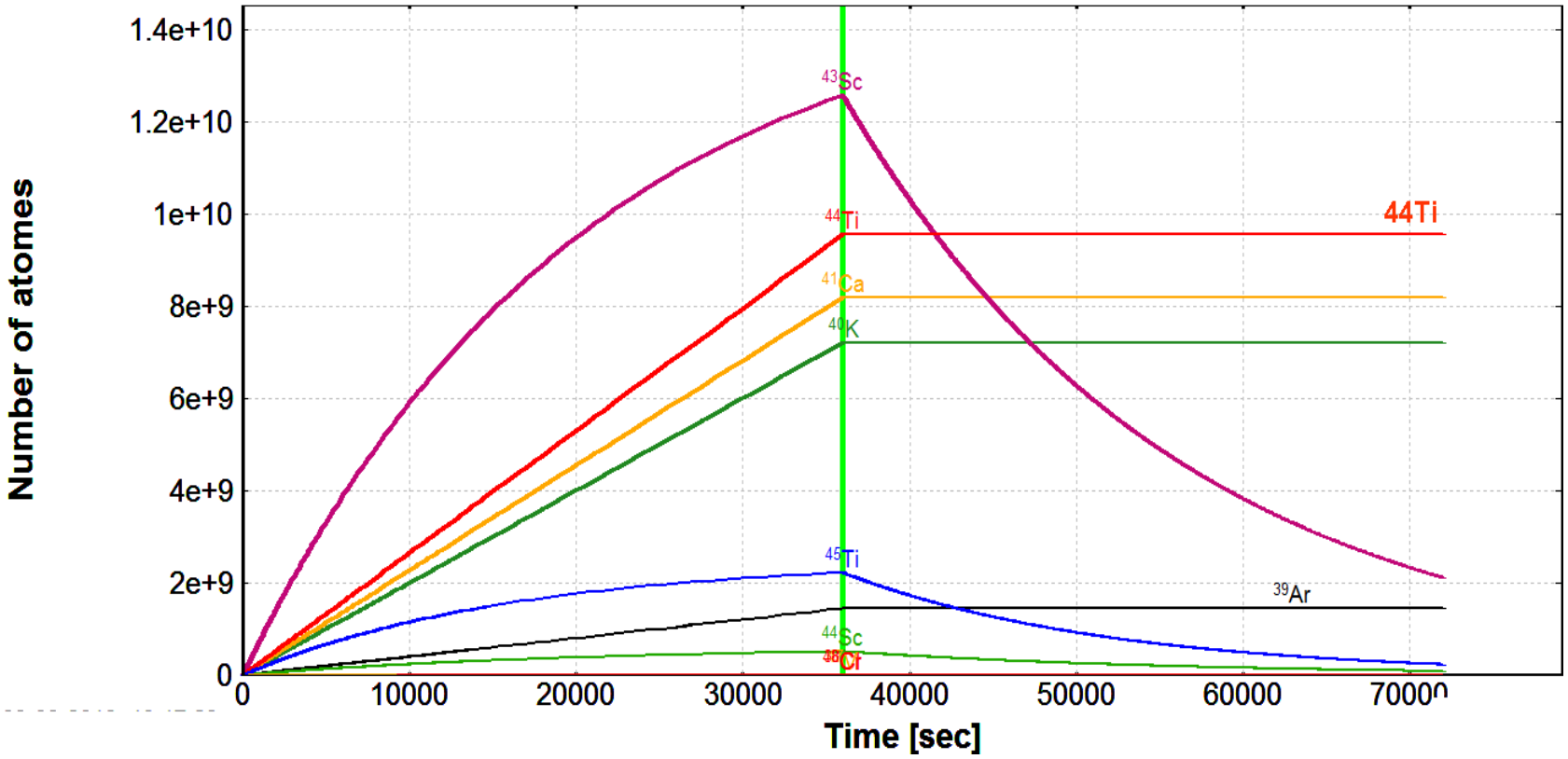
Evolution of Radiation Residue Yield

Implantation detector : "FP_SCI" (36 different isotopes)

Irradiation Time (IT) = 3.60e+04 sec; Decay Time (DT) = 3.60e+04 sec; Plot only Radioactive

N_Implant=1000, N_Resid=1000, Abs.Error=1.0e-09, Rel.Error=1.0e-03, Threshold=1.0e-08, Model=



^{44}Ti : Activity

http://lise.nscl.msu.edu/9_10/radiation/44Ti%20from%2058Ni.lpp