

Rutgers Parametrization (transrut) for MK target TA1.4-11 June 2009

1.	2.	3.	4.	5.	6.	# of the layer
C	Gd	Ti	Cu	Cu		Element
0.44	3.34	1.40	4.49	5.60	0.00	thickness in mg/cm**2

In layer # 1 (C) the excitation occurs,
 layer # 2 (Gd) is the ferromagnet.

Beam energy : 210.0 MeV
 Angle of det. part. : from 0.00 to 26.00 degrees (slit-detector)
 Level energy : 562.9 keV
 mean lifetime : 18.20 ps
 B(E2) value : 0.3964 eb**2
 g-factor : 1.000
 Target magnetization: 0.1860 Tesla

Values averaged over the different ion scattering angles and
 depths within the target layer where the excitations occur :

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Diff. excitation cross section : 821.97 mbarn/sr
 Excitations/sec for 1pnA beam current : 6553
 Average velocity when entering the ferromagnet : 7.40 v0
 Average energy when entering the ferromagnet : 103.12 MeV
 Average velocity when leaving the ferromagnet : 5.17 v0
 Average energy when leaving the ferromagnet : 50.34 MeV
 Mean velocity within the ferromagnet : 6.24 v0
 Mean velocity of deexciting probe nuclei : 0.30 v0
 Time when entering the ferromagnet : 0.06 ps
 Time when leaving the ferromagnet : 0.37 ps
 Effective time period when TF is acting : 307.86 fs
 Precession angle : 27.30 mrad

100.0 % of the probe ions stop within layer # 4 (Cu).
 Mean range within this layer : 3.40 mg/cm**2

All ions to be detected reach the detector.
 Their mean energy is : 64.74 MeV

The beam is stopped in layer # 5 (Cu).
 Range within this layer : 2.44 mg/cm**2