



$m_p$  25 amu  
 $m_t$  1 amu  
 $(m_p+m_t)/m_t$  26  
 $(m_p+m_t)/m_t m_p$  1.04 amu  
 $Q$  6306 keV  
 $N_0/m_t$   $6.0 \times 10^{20}$

$E_{cm}$ [keV]	$E_{lab}$ [keV]	$F_{1/2}$ [mrad]	NACRE	Arazi	Powell	from SRIM2003				
			$wg_{NACRE}$ [ $\mu\text{eV}$ ]	$wg_{Arazi}$ [ $\mu\text{eV}$ ]	$wg_{Powell}$ [ $\mu\text{eV}$ ]	$l^2$ [barn]	$dE/dx$ [keV/(mg/cm <sup>2</sup> )]	$Y_{NACRE}$	$Y_{Arazi}$	$Y_{Powell}$
92	2392	19.2	$(1.0 \pm 0.1) \times 10^{-4}$	$< 2 \times 10^{-2}$		86.2	71000	$0.95 \times 10^{-18}$	$< 1.9 \times 10^{-16}$	
189	4914	13.6	$(5.3 \pm 0.7) \times 10^{-1}$	$(1.1 \pm 0.2) \times 10^{-1}$		42.0	70000	$2.49 \times 10^{-15}$	$0.52 \times 10^{-15}$	
304	7904	10.9	$(2.7 \pm 0.2) \times 10^4$	$(2.1 \pm 0.2) \times 10^4$		26.1	65000	$0.85 \times 10^{-10}$	$0.66 \times 10^{-10}$	
374	9724	9.9	$(4.2 \pm 0.3) \times 10^4$	$(4.0 \pm 0.4) \times 10^4$		21.2	51000	$1.37 \times 10^{-10}$	$1.30 \times 10^{-10}$	
418	10868	9.5	$(11.1 \pm 0.6) \times 10^4$	$(7.1 \pm 0.2) \times 10^4$	$(9.0 \pm 0.6) \times 10^4$	19.0	27000	$6.11 \times 10^{-10}$	$3.91 \times 10^{-10}$	$4.95 \times 10^{-10}$

$E_{cm}$ [keV]	NACRE $rate_{recoil}$ [1/h]	Arazi $rate_{recoil}$ [1/h]	Powell $rate_{recoil}$ [1/h]
92	$5.1 \times 10^{-4}$	$< 0.1 \times 10^0$	
189	$1.3 \times 10^0$	$0.3 \times 10^0$	
304	$4.6 \times 10^4$	$3.6 \times 10^4$	
374	$7.4 \times 10^4$	$7.0 \times 10^4$	
418	$33.0 \times 10^4$	$21.1 \times 10^4$	$26.7 \times 10^4$

**beam** 100 pA  $^{25}\text{Mg}$   
 $6.25 \times 10^{11}$   $^{25}\text{Mg/s}$   
**CSF** 0.4  
**transmission** 1  
**BGO efficiency** 0.6