Cross section measurements of the $^{78}\text{Se}(p,\gamma)^{79}\text{Br}$ and $^{80}\text{Se}(p,\gamma)^{81}\text{Br}$ reactions

G. Kriembardis, S. Galanopoulos, P. Demetriou, and S. Harissopulos
Inst. of Nuclear Physics, NCSR "Demokritos", 153.10 Aghia Paraskevi, Athens, Greece.

M. Fey, R. Kunz, and J.W. Hammer
Institut für Strahlenphysik, Universität Stuttgart, 70569 Stuttgart, Germany.

Gy. Gyürky, Zs. Fülop, and E. Somorjai
Institute of Nuclear Research (ATOMKI), Debrecen, Hungary

R. Julin
Department of Physics, University of Jyväskylä, POB 35, Jyväskyla, Finland

In beam cross section measurements of the $^{78}\text{Se}(p,\gamma)^{79}\text{Br}$ and $^{80}\text{Se}(p,\gamma)^{81}\text{Br}$ reactions have been carried out at $E_p=1.4\text{-}3.5\text{ MeV}$, by using high efficiency HPGe detectors with BGO shields for Compton background suppression. A preliminary analysis yielded total cross sections ranging from $10\ \mu\text{b}$ to $3\ \text{mb}$. By means of the statistical compound nucleus theory of Hauser-Feshbach cross sections have also been calculated. A comparison between experimental data and theoretical predictions is presented.

---

1Work supported by NATO CRG Programme, Contr. No. CRG961086