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Cross section measurements of the $^{78}\text{Se}(p,\gamma)^{79}\text{Br}$ and $^{80}\text{Se}(p,\gamma)^{81}\text{Br}$ reactions ¹

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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 $E_p=1.4\text{--}3.5$ MeV, by using high efficiency HPGe detectors with BGO shields for Compton background suppression. A preliminary analysis yielded total cross sections ranging from $10\text{ }\mu\text{b}$ to 3 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.

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