

Cross section measurement of the reaction $^{96}\text{Ru}(p,\gamma)$ via the activation method

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^{96}Ru is one of about 35 neutron deficient nuclides, that can not be produced in neutron capture processes like the s(low)- or the r(apid)-process. In two different experiments the reaction cross section of $^{96}\text{Ru}(p,\gamma)^{97}\text{Rh}$ has been measured with two different methods. Bork et al. (1998) performed an experiment by means of the activation method at proton energies between 2-3 MeV. In 2015, Bo Mei et al. measured the cross section of the same reaction in inverse kinematics at the ion storage ring ESR at GSI (Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany) at proton energies from 9 to 11 MeV. The luminosity was determined with two different methods, both based on electron capture events which occur in the H_2 gas. As part of this work, the $^{96}\text{Ru}(p,\gamma)^{97}\text{Rh}$ cross section has been measured at 3.2 MeV to compare with a previous activation experiment as well as between 9 and 11 MeV, again in an activation experiment. The experimental setup and preliminary results of this experiment are presented.