

## Cross Section Measurements of Deuteron-induced Reactions

#John Michel Gahl, Peter Norgard

Sidney Kimmel Institute for Nuclear Renaissance, University of Missouri, USA

The results of the cross section measurements of deuteron-induced reactions  $^{108}\text{Pd}(d,p)^{109}\text{Pd}$ ,  $^{110}\text{Pd}(d,p)^{111}\text{Pd}$ , and  $^{110}\text{Pd}(d,n)^{111}\text{Ag}$  have been obtained at incident energies below the Coulomb barrier. The experiments were performed using a GE PETrace cyclotron with an external beam at the University of Missouri Research Reactor Center. The cyclotron is capable of delivering 60 mA of 8.4 MeV deuterons, with no more than 20 mA used in these experiments. The cross sections were obtained using a stacked-foil technique, utilizing titanium foil monitors. Experimental data are compared to published calculated cross sections and results discussed.