

Urrego Juan Pablo**A New 'Spin' for Reactions with Radioactive Ion Beams: Development of a Polarized Solid Target**

abstract: The study of nuclei with extreme neutron to proton ratios has provided us with a wealth of new information on basic properties of nuclear matter. As we expand our horizons on the chart of nuclides towards the drip lines new experimental equipment and techniques will be required. A polarized target would be a novel tool in the study of the dependence of the spin—orbit and tensor interactions with isospin. By studying reactions between radioactive ion beams (RIB) and a polarized target of light particles, spin observables like the analyzing powers are accessible. We have started to develop dynamically polarized proton and deuterium solid targets for experiments with RIBs which are of interests in areas as diverse as resonant elastic scattering, transfer reactions and nuclear matter distributions. Here we describe the main features of our target. Initial tests to characterize the system have been performed with the Philips Cyclotron at PSI and with the 25MeV HRIBF Tandem at Oak Ridge using the elastic scattering of 38MeV ^{12}C by protons in inverse kinematics.