Abstract Submitted for the DNP12 Meeting of The American Physical Society

A Heavy Ion Recoil Detector for the HELIcal Orbit Spectrometer (HELIOS)¹ CEDRIC WILLIAMS, J.C. BLACKMON, C.M. DEIBEL, J. LAI, L.E. LINDHART, K.T. MACON, M. MATOS, B.C. RASCO, Louisiana State University — The helical orbit spectrometer (HELIOS) is an instrument for studying nuclear reactions in inverse kinematics with radioactive ion beams at the Argonne Tandem Linac Accelerator System (ATLAS) facility at Argonne National Laboratory. We have developed a gas filled Ionization chamber for use with HELIOS to detect heavy reaction products in coincidence at forward angles. Detection of coincident heavy ions will help distinguish the reaction channel of interest from fusion evaporation and reactions induced by beam contaminants. The counter provides high acceptance and allows for counting rates over 1e5 ions/s with good particle identification. Construction of the counter and results from initial test will be presented.

¹Thanks to the United States Department of Energy, the LA-STEM Research Scholars Program, and the HELIOS collaboration.

> Cedric Williams Louisiana State University

Date submitted: 31 Jul 2012

Electronic form version 1.4