

Abstract Submitted
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Charge State Measurements with Photocell Detectors CHRIS SCHMITT, MICHAEL CARILLI, PHILIPPE COLLON, ANDREAS HEINZ, JAY LAVERNE, DANIEL ROBERTSON, SEAN SULLIVAN, UNIVERSITY OF NOTRE DAME TEAM, YALE UNIVERSITY COLLABORATION — Measuring charge state distributions (CSD) of few electron systems, like lithium, through various targets can provide information to fill gaps in existing models. There is a need to look at target and ion velocity dependence for few electron systems and compare them with heavy ion interactions. Ultimately, there is a scientific need to probe the interactions between ion and target in order to understand the influences that each have on one another. The development, building, and characterizing of a photodiode array creates an effective tool for making measurements in ion beam experiments. Photodiodes as detectors provide distinct advantages over conventional silicon detectors in a laboratory setting. They are less sensitive to radiation damage, cost effective, easily replaceable, and a valuable teaching tool for undergraduates and graduate students alike. Other than a teaching tool their immediate experimental application will be as a beam monitor. The data presented shows test chamber results, the effects of beam induced damaged, and first CSD measurements.

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