## Abstract Submitted for the DNP06 Meeting of The American Physical Society

The new PHENIX Reaction Plane Detector at RHIC ERIC RICHARDSON, University of Maryland, PHENIX COLLABORATION — Determining event anisotropy is a key method used in the investigation of the hot dense partonic matter created at RHIC. The  $v_2$  measurements of rare observables such as electrons, photons,  $J/\psi$ , and high  $p_T$  particles provide rich information about the properties of this matter. Previous  $v_2$  studies have been limited by statistics and reaction plane resolution. The installation of the new reaction plane detector at PHENIX will improve the reaction plane resolution in heavy ion collisions by a factor of 2 to  $< cos 2\Delta\Psi > 0.7$ . This talk will give an overview of the new PHENIX reaction plane detectors components, and discuss the detector's design and expected results.

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