



## The Pupil Remapping Coronagraph: First Results from the Lab and Numerical Simulations

Raphael Galicher<sup>1</sup>, Olivier Guyon<sup>1</sup>, Stephen Ridgway<sup>2</sup>, Masashi Otsubo<sup>3</sup>, and Robert Woodruff<sup>4</sup>

(Email: galicher@naoj.org)

<sup>1</sup>Subaru Telescope, National Astronomical Observatory of Japan, Hilo, Hawaii

<sup>2</sup>National Optical Astronomy Observatory, Tucson, Arizona

<sup>3</sup>National Astronomical Observatory of Japan, Tokyo, Japan

<sup>4</sup>Lockheed Martin Corporation

By using aspheric optics, it is possible to “remap” the entrance pupil of a telescope into an apodized pupil suitable for high dynamical range imaging. This concept is very attractive for TPF since it makes it possible to directly image Earth-size planets at 10 pc with a 2-m visible telescope. We have recently demonstrated beam apodization with Pupil Remapping in the lab. This concept, and its suitability for the TPF mission, have also been studied through numerical simulations.