Workshop

Imaging of Stellar Surfaces

ESO Garching, March 5-9, 2018

Anders Jorgensen New Mexico Tech, Socorro, USA

Title:

Imaging with New Classic and VISION at the NPOI

Abstract:

The Navy Precision Optical Interferometer (NPOI) is unique among interferometric observatories for its ability to position telescopes in an equally-spaced array configuration. This configuration is optimal for interferometric imaging because it allows the use of bootstrapping to track fringes on long baselines with signal-to-noise ratio less than one. When combined with coherent integration techniques this can produce visibilities with acceptable SNR on baselines long enough to resolve features on the surfaces of stars. The stellar surface imaging project at NPOI combines the bootstrapping array configuration of the NPOI array, real-time fringe tracking, baseline- and wavelength bootstrapping with Earth rotation to provide dense coverage in the UV plane at a wide range of spatial frequencies. In this presentation, we provide an overview of the project and an update of the latest status and results from the project.