
ULTIMATE-START: Subaru Tomography Adaptive optics Research experiment

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Abstract

ULTIMATE-Subaru Tomography Adaptive optics Research experiment (ULTIMATE-START) is a laser tomography AO project on the Subaru telescope. The project targets to achieve AO corrections above 600nm and feed multiple instruments on the IR-side Nasmyth platform through the beam switching optics; infrared camera and spectrograph (IRCS), visible IFU (Kyoto-3DII), extreme AO (SCEXAO), and medium dispersion NIR spectrograph (NINJA). Tomography AO will be realized with 4 LGSs, corresponding four 32x32 Shack-Hartmann wavefront sensors, and 64x64 deformable mirror, which will be installed in the facility AO system, AO188. In the course of the project, we have conducted engineering observations with a prototype 32x32 SH-WFS and a turbulence profiling system. Overall status and the results of the observations will be reviewed.

Keywords: tomography, turbulence profiling

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