Friday 29<sup>th</sup> June 2012, L130 at 12:00 Yutaka Hayano, Subaru Observatory

Title: Overview on adaptive optics system at Subaru Telescope.

Abstract:

The summary of adaptive optics system at Subaru Telescope is introduced.

We started a curvature wavefront sensor based AO system with 36 elements (AO36).

After several year use of AO36, we upgraded to 188 elements AO system with single laser guide star (AO188/LGS). The AO188/LGS is the last phase of commissioning with a near infrared camera and spectrograph (IRCS).

Some scientific results are shown in my presentation.

Moreover, there are many instruments attached after the AO188.

High Contrast Imaging with AO (HiCIAO), Subaru Coronagraph with Extreme AO (SCExAO), and integral field unit spectrograph in visible wavelength developed by Kyoto University (Kyoto 3D II spectrograph) have already tested and produced some interesting results.

IR doppler spectrograph for planet search, integral field unit spectrograph dedicated to search a exoplanet (CHARIS) is under development.

On the other hand, feasibility study of wide field AO system for the future Subaru Telescope AO has been started.