

## Antarctic Infrared Telescope

# Takashi Ichikawa[1]; Naruhisa Takato[2]; Makoto Taguchi[3]; Shoichi Okano[4]; Takeshi Sakanoi[5]

[1] Astronomical Institute, Tohoku Univ.; [2] Subaru Telescope, NAOJ; [3] NIPR; [4] PPARC, Tohoku Univ.; [5] PPARC, Grad. School of Sci., Tohoku Univ.

<http://www.astr.tohoku.ac.jp/~ichikawa>

For the study of wide-field survey of distant galaxies, search for extra solar planet, atmosphere of extra solar planet etc, we have been developing 2.5m infrared telescope. In the course of the project, we have studied various technical issues to construct the telescope at harsh environment such as Antarctica, and then constructed small infrared telescope for the site evaluation and preliminary astronomical research at Dome Fuji. The transparency at domes, located in inner Antarctica at high altitude should be very high. Clear nights more than 70% is reported. Therefore, domes is expected be the best place for astronomical observations. However, at Dome Fuji, there are few data related to astronomical observations. For the site evaluation, we have constructed 40cm infrared telescope and the instrument for the measurement of turbulence of surface layer, The comparison of the data at Dome Fuji with those of Dome A by Chinese and USA group and Dome C by Australian and European group is also very important to search for the best site in Antarctica.