

Site construction and observational researches at Ali observatory

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The Ali Observatory, located in the most west part of Tibetan plateau, has been newly established at an altitude above 5000 m, following a long term site survey over China. The original intention of selecting Ali site is just for detailed site characterization and small telescopes, but many projects tend to be especially optimistic about unique site qualities and constantly encourage to construct telescope facilities. The Ali site has been evaluated by East Asia Core Observatory Association(EACOA) and proposed to be a candidate site for East Asia Observatory(EAO). The site has also been reviewed as a candidate site for the Northern Cherenkov Telescope Array(CTA), for the Thirty Meter Telescope(TMT), and recently for the Chinese Large Optical and infrared Telescope(LOT). This talk will summarize the site characteristics and show site development of Ali observatory.

Apart from facilities of infrastructure and for site testing, a particular facility has been set up for experiments toward quantum teleportion from ground to satellite. There are also collaborations with Las Cumbres Observatory to set up an Ali knot of LCOGT, including two 1 meter telescopes with imaging and spectroscopy instruments, and with Hiroshima University to set up a 50cm telescope (HinOTORI) for follow-up observations of gravitational wave optical counterpart. There are on-going constructions on the summit for facility toward the primordial gravitational wave detection and for survey projects with telescope arrays by Nanjing University and Yunnan University. The talk will also briefly introduce observational researches of the collaborative projects and propose a plan toward observations to interstellar dust.