

Activity Report of Commission J September 2008 – February 2009

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ALMA project

One of major radio astronomy project in the world is ALMA (Atacama Large Millimeter and sub-millimeter Array), which will be 66-element radio interferometer at Atacama Desert in Chile. It uses millimeter and sub-millimeter bands at 5000 meter high site. It is an ambitious system under international collaboration project with North America, Europe and East Asia. A Japanese 12-m radio telescope was accepted as the first accepted telescope on December 2008, which was achieved the surface error with 20 microns under day and night time. Following it, an US radio telescope was accepted on January 2009. And ALMA will start commissioning observations to verify the performance of the array.

Activities of meetings

- Workshop for Interstellar Matter 2008

 - Date: 4-6, September, 2008

 - Place: Hokkaido University

 - Aims: Review experimental and theoretical developments of bulk, atomic, and molecular levels at the field of the chemistry in space and discussions for applications to present and future astronomical observations.

- SKA workshop 08

 - Date: 1-2, November, 2008

 - Place: National Astronomical Observatory of Japan

 - Aims: Overview of science and technology for SKA and discussion for Japanese activities

- Workshop: ISM and star formation in the nearby galaxies: Magellanic Clouds and M33

 - Date: 17, November, 2008

 - Place: Nagoya University

 - Aims: Overview of observation results of M33 and Magellan clouds to study the star formation process and interstellar matter evolution

- The 5th Japan–Taiwan ALMA Science Meeting, “Star Formation and Astrochemistry”
 - Date: 5–6 December 2008,
 - Place: National Tsing–Hua University, Taiwan
 - Aims: Promotion of the science and collaboration for ALMA between Japan and Taiwan at the field of Star formation and Astrochemistry field

- ASTE Science Workshop “Sub–mm spectroscopy with ASTE in the ALMA era”
 - Date: 11–12, December, 2008
 - Place: National Astronomical Observatory of Japan
 - Aims : Review the results of ASTE spectroscopy observations and discussion fro future research and development

- ALMA–JT extra galaxy sub WG meeting
 - Date: 13 December, 2008
 - Place : University of Tokyo
 - Aims : Discussion for observation plan of ALMA deep survey

- Millimeter and sub–millimeter receiver workshop
 - Date: 15–16, January, 2009
 - Place: Osaka Prefecture University
 - Aims: Review the developments of millimeter and sub–millimeter wavelength receiver and discussion of future works

Others

On January 5–8m 2009, URSI North American meeting was held at Border, Minnesota, US. The activity report of Japanese VLBI researches was invited. At the meeting, new technology for SKA (Square Kilometer Array) project was introduced. Especially ultra wide band receiving system, for example from 1.4 GHz to 22GHz, is discussed as very important key technology.