

[KAL-01] Current Status of the Korean ALMA Project

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Korea officially joined the ALMA (Atacama Large Millimeter/submillimeter Array) project on August 17, 2014. Korea was allowed to apply for the Cycle 2 call-for-proposal before joining the project. Korea submitted 17 proposals, and 4 of them were selected as high-priority. The fund of an 11-year Korean ALMA project in the KASI (Korea Astronomy and Space Science Institute) was approved. The project team formulated an ARC (ALMA Regional Center) node at the KASI and already started its supporting activities for the Korean Astronomical Society. The team also set up a future development plan for ASTE (Atacama Submillimeter Telescope Experiment) and ALMA. A couple of engineers are now doing concept design of a multi-beam receiver system for the ASTE. Because of the ALMA participation, Korea could also access open-use time of ASTE and Mopra telescopes organized by Japan. As of this writing, EACOA (East Asia Core Observatories Association) is now under discussion on making an organization called "East Asian Observatory" and the possible operation of JCMT (James Clerk Maxwell Telescope). I will briefly mention the future prospect of these activities.

[KAL-02] Korean ALMA Near-term Technical Activities: Development Plan of Focal Plane Array for ASTE

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As Korean engineering contribution to ALMA enhancement, development of focal plane arrays (FPAs) for the total power array in ALMA compact array has been projected mainly to increase mapping speed in interferometric multi-pointing observation (mosaicking). To tackle engineering issues expected in order to be compatible with the existing ALMA receivers, we plan to develop a prototype 300–500 GHz heterodyne FPA system including a software spectrometer using GPU clusters for ASTE (Atacama Submillimeter Telescope Experiment) telescope by 2017.