

Establishment of absolute flux calibration scheme for ALMA: planets and asteroids as primary calibrators

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<http://www.nro.nao.ac.jp/alma/J/index2.html>

The Atacama Large Millimeter Array (ALMA) is an international astronomy project that consists of a system of radio telescopes in an array formation, located at the Atacama desert in northern Chile.

The telescopes are capable of detecting sub-millimeter and millimeter wavelengths. The design specification of ALMA demand a much higher calibration accuracy than achieved by the conventional techniques used at the existing millimeter arrays, which is typically no better than 10 %. Absolute flux calibration for ALMA requires standard astronomical objects whose fluxes are known to 5 % accuracy.

In order to achieve 5% accuracy calibrations, we propose to adopt Uranus and Ceres as primary calibrators.

Any comments and collaboration requests by not only astronomers and but planetary scientists are welcome.

