

What is ALMA?

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ALMA (=Atacama Large Millimeter/submillimeter Array) is a radio telescope to be built at a high altitude (5,000 meters) site in the Andes in northern Chile by an international collaboration among Japan, North American and European countries. It observes in wavelengths ranging from 10 to 0.3 millimeters. Its outstanding features are a very high spatial resolution (as high as 0.01 arcseconds at its maximum), a large collecting area and high sensitivity, full support for submillimeter-wave observations, and a very high spectral resolution (as high as 5 kHz at its maximum). The construction budget has been approved in the North America (USA and Canada) and Europe (European Southern Observatory), and the construction will begin this year. National Astronomical Observatory of Japan is seeking for an approval of the construction budget starting from FY2004. The full operation is planned to start in the first quarter of 2012. The present paper describes the instrument and expected performances of ALMA, which should have a big impact to planetary science.

ALMA完成予想図（国立天文台）

