

Release of the ALMA Prototype Antenna Engineering Design Concept

NRAO has unveiled the VertexRSI engineering design concept for the Atacama Large Millimeter Array (ALMA) prototype antenna.

ALMA is an international collaboration to build and operate a millimeter wavelength telescope comprised of 64 antennas located in the Chajnantor region of the Chilean Andes. NRAO - a facility of the National Science Foundation (NSF) operated under cooperative agreement by Associated Universities, Inc. (AUI)- oversees the U.S. portion of this project.

VertexRSI of Santa Clara, California, the AUI/NRAO antenna contractor, has made public an engineering rendering of the 12 meter (39 feet) diameter prototype antenna that is being fabricated to the very demanding ALMA specifications. In April 2002, this prototype antenna will be completed and delivered to the NRAO Very Large Array (VLA) site near Socorro, N.M., for tests.

The ALMA prototype antenna makes extensive use of carbon fiber reinforced plastic (CFRP) technology in order for the antenna to maintain a stable parabolic shape in the harsh thermal and wind environment characteristic of the ALMA site at 16,500 feet elevation in the Andes mountains of northern Chile.

This prototype antenna is the major deliverable of the design phase of the ALMA Project in the United States. Approval for ALMA construction in FY2002 is pending in the U.S. Congress.

