

BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
20 October - 4 November 2008

***** THIS FORTNIGHT*****
The First ALMA Front End in Chile, engineering model SN01 was to be installed on Melco 12m ACA antenna No 2 Oct 13-14; Denis Urbain is assisting and observing the installation. Previously, ALMA Calibration Device #1, a prototype, had been installed in a 12 m ACA antenna.

Abstracts have been received for the US annual meeting of URSI 2009 January 5-8 Boulder, CO See details and links at:
Commissiion J: <http://www.astro.caltech.edu/USNC-URSI-J/>
There will be sessions on THz Astronomy, ALMA, Wideband Instrumentation, Long Baseline Interferometry and New Telescopes, Techniques and Observations.

Erratum:

The first quadrant of the bilateral correlator can serve 16 antenna stations. The ACA correlator, also installed in the AOS TB, can serve 16 antennas also.

Past issues of this Calendar may be viewed at
<http://www.cv.nrao.edu/~awootten/mmailcal/ALMACalendars.html>

General Happenings

Photos of activity may be found at NRAO eNews:
<http://www.nrao.edu/news/newsletters/>
and at the *New* ALMA site <http://www.almaobservatory.org>

Sky: Jupiter is in the South, Venus low in the West. Asteroid 2008 TC3 hit Sudan last October 7 at around 5 :23 am local time. The annual Taurid meteor shower peaks Nov. 5th through 12th. Earth is due to pass through a swarm of gritty debris from parent comet 2P/Encke. New images were released of Enceladus, a moon of Saturn, taken on Halloween by Cassini with a resolution of 40 feet.

SCO (Santiago Central Office): Schedule review. Antonio Hales, Stuartt Corder and Tsuyoshi Sawada have arrived in Chile to join the Commissioning Team.

AOS (Array Ops Site, 16570ft altitude): Twenty six foundations have received concrete now. Soon work will begin on the 29 foundations within the Atacama Compact Array area. AOS Technical Building is finished and waiting for ALMA acceptance. The fiber optic link to the OSF will be presented to the ESO Finance Council in early November. Very low levels of precipitable water were measured, with most nights below a half millimeter of precipitable weather.

OSF (Ops Support Facility, 9600ft altitude): Safety Review 8-10 Oct. The ALMA Calibration Device #1, a prototype, has been installed on Melco 12 m ACA antenna No 2. The first ALMA Front End was later mounted on this antenna. The holography measurement of Melco ACA 12-m Antenna No 1 is going on, and data are being taken under a variety of weather conditions. The Melco ACA 12-m Antenna No 3 is now ready for Optical Pointing Telescope (OPT) measurements.

AOC: Construction of storage building is ongoing. A CASA tutorial was held at the AOC

ATF: Tests of total power observing modes gave way to a return to interferometry on 5 October. R. Laing arrived 7 October for science tests.

NTC (NRAO Technology Center): Mike Shannon, the new deputy project manager for Band 6 (1.3mm), started work Oct 1. Significant progress toward system validation for the NA Front End Integration Center (FEIC) beam scanner. Assembly of the third quadrant of the bilateral correlator continued.

Elsewhere: East Asia: The Test Readiness Review for the Band 4 (2mm)

and Band 8 (0.6mm) cold cartridge assemblies is tentatively scheduled for Nov 7. The Provisional Acceptance In-house (PAI) review meeting for the East Asian (EA) FE #1 assembly is scheduled for Oct 20.

Europe: The ACA Front End (FE) Optics Critical Design Review (CDR) is now scheduled on 13 and 14 Nov 2008, directly after the Band 7 (0.9mm) Cartridge Pre-Production Review (PPR), and will be held at IRAM in Grenoble, France. A PAI meeting for a Band 6 (1.3mm) Cartridge was held on 10 Oct 2008. With the delivery of this Band 6 Cartridge, incl. Warm Cartridge Assembly (WCA) and bias module, the European Front End Integration Center (FEIC) will shortly have one complete set of base line receivers.

NAASC:

A calendar of NAASC events may be found at:

<http://www.cv.nrao.edu/naasc/calendar/calendar.php>

DAILY CALENDAR (Times EDT/EST) see

<https://wikio.nrao.edu/bin/view/ALMA/AlmaCalendar>

***** UPCOMING EVENTS *****

Oct 8-10	Safety Review	Chile
Nov 12-14	ALMA Board	Chile
Nov 17-19	Software Review	Chile
Dec 9-11	ALMA Annual External Incremental Review	OSF

***** TECHNICAL NEWS *****

ALMA Memo 580 Frequency profile difference between ACA Correlator and 64-Antenna Correlator

Authors: Kamazaki, T., Okumura, S. K., Chikada, Y.

Abstract:

ACA Correlator and 64-Antenna Correlator adopt FX and XF architecture, respectively. This difference introduces different frequency responses between them. However, for combined imaging of the ACA and the 12m-Array data, their frequency profile compatibility is required, and one possible method is the convolution of weighting function in the frequency domain. We have studied this method and found that "a XF frequency response convolved with Hanning window function" is well synthesized by linear combination of "twelve FX frequency responses", when one frequency channel width of the 64-Antenna Correlator is two times as large as that of the ACA Correlator. Then, we have calculated frequency profiles by convolving synthesized and original frequency responses with several object profiles. The maximum profile difference between them is estimated to be small by 0.6 % or less except for the case of a function as an object profile.

View a pdf version of ALMA Memo #580 at:

<http://www.alma.nrao.edu/memos/html-memos/alma580/memo580.pdf>

*****ALSO OF INTEREST*****

Several ALMA positions are available at NRAO. Example:

The National Radio Astronomy Observatory invites applications for an ALMA Postdoctoral Fellow position with the Commissioning team in Chile. When completed in 2012, ALMA will be the most powerful (sub)millimeter interferometer ever constructed, and will transform our understanding of topics ranging from the formation of nearby protoplanetary disks to the earliest epochs of galaxy formation. This position is assigned to the ALMA project with operational duties in Chile. The position is funded by a grant from the National Science Foundation through the ALMA Construction Project and as an international staff position will exist during the construction period through 2011. There may be possibilities to transfer to the observatory science operations team during or after construction.

Details for all positions may be viewed at:

<http://members.aas.org/JobReg/JobDetailPage.cfm?JobID=25062>

or

http://www.nrao.edu/administration/personnel_office/careers.shtml#CV4917_ALMA_POSTDOC

The US National Radioscience Meeting (USNC/URSI) meets in Boulder on 5-8 Jan 2009. Among the Commission J topics is a session on ALMA Technology, Science and Status.

See: <http://www.astro.caltech.edu/USNC-URSI-J/> for abstracts of this and other sessions.

Please send information for upcoming calendars by Friday evening of the preceding biweekly period to Jennifer Neighbours or Al Wootten via e-mail (jneighbo at nrao.edu or awootten at nrao.edu).

The calendar will be issued between late Friday and sometime on Monday by e-mail to all NRAO scientific staff members and anyone else interested. A specific mailing list, alma-info, has been created for anyone wishing to receive it.

Past issues are available at

<http://www.cv.nrao.edu/~awootten/mmaimcal/ALMACalendars.html>