

Subject: [allemploy] FYI: 5-19 May BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
From: Al Wootten <awootten@nrao.edu>
Date: 5/21/2008, 4:16 PM
To: allemploy@nrao.edu, alma-info@nrao.edu, anasac@nrao.edu

BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
5 May 2008 - 19 May 2008

***** THIS FORTNIGHT*****

ALMA Project Manager Tony Beasley leaves ALMA this period; Interim Project Manager Tetsuo Hasegawa takes the myriad reins in hand. Tony has led ALMA capably from its early days in Chile

NRAO sadly reported the death on 10 May, 2008 in Charlottesville, Virginia of Dr. Barry E. Turner, who was a member of its scientific staff from 1967 until 2006. In an era of increasingly large collaborations, Barry's career was marked by an exceptional number of one and two-author publications. During his career he was instrumental in the discovery of ten per cent of the interstellar molecules now known. His thesis dealt with the excitation of the OH molecule, whose discovery in 1963 kindled this astronomer's astronomical interests. With his passing, ALMA loses a champion.

Mars Phoenix Lander touches down on Mars Sunday, May 25, just after 8pm EDT. It is predicted to find a terrain much like that at the ALMA site.

This month in ALMA past: In May 2002 the Vertex prototype antenna was delivered to the ALMA Test Facility in New Mexico, where it continues service. In May 2004, the AEC prototype antenna made its first image, of a planet, at the ATF, where it also continues service.

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:

<http://www.alma.nrao.edu/almanews/almagallery/index.html>

Sky: Late in the month, Mercury puts on a good show in the evening sky. On May 22, Mars will traverse the Beehive cluster. Before dawn on June 30, the crescent moon passes through the Pleiades, best seen from North America. Mars and Saturn are nighttime objects, Jupiter is in Sagittarius and Venus in Aries. Full moon is on 19 May.

SCO: Management IPT meeting occurred in Charlottesville. The closing date for bids on the new building was further extended.

AOS (Array Ops Site, 16570ft altitude):

Grading of the Central Cluster area should be completed in May. Operations and Safety personnel completed training on the use of the fire detection and extinguishing system in the Technical Building.

OSF (Ops Support Facility, 9600ft altitude): Provisional acceptance for the ALMA Camp Extension was given 21 April, finishing this project. Exterior lights and walks are complete. A total of 130 beds are now available.

Vx Antenna No 1 informal pointing tests are continuing nightly with AIV support. Vx No2 and No3 will undergo photogrammetry 14-22 May. Antenna No 4 panels are being installed along with other work. Vx Antenna No 5 pedestal and BUS are en route to Chile. Transporters continuing toward acceptance expected later in the month. Provisional acceptance Site of

Front End No 1 is scheduled during this period.

AOC: BE personnel have returned to Socorro after a successful AA #1 delivery to the AIV Interim Lab.

ATF: Four pre-production IF Processors are in use at the ATF, with firmware identical to that of the production IF Processors. First interferometric pointing results by TelCal were demonstrated at the ATF. Interferometric phase calibrations and pointing calibration with TelCal reduction and QuickLook display is now working. On 17 May, a critical brake failure on the AEC antenna halted operations for an undetermined period. The Orion Spectrum mentioned in a previous version of this eNews may be viewed at: <http://www.cv.nrao.edu/~awootten/mmaimcal/OriLabeled.jpg> Scheduling Blocks created using the ALMA Observing Tool (OT) are being observed routinely at the ATF, using the Interactive mode of the Operator Master Client (OMC).

NTC (NRAO Technology Center): The second quadrant of the correlator is completely assembled except for the Data Port Interface installation; handover to the Computing IPT for systems verification will be in about 1 month.

EU: Elements of the Amplitude Calibration Device, calibration wheels and two hot loads have been received by ESO and the integration of the first prototype is progressing well.

NAOJ: K. Tatematsu stepped down as NAOJ CIPT manager effective 1 May, replaced by G. Kosugi. Thanks for a job well done, Ken!

NAASC: A face-to-face meeting of ALMA Operations personnel occurred this period in Santiago.

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 *****

May 5	WVR review	Gothenburg
May 5-6	ESO FC meeting	Garching
May 5-9	Molecular Universe meeting	Bordeaux
May 16	ALMA Board Telecon	
May 21	ASAC Telecon	
May 23	2pm ANASAC Telecon	
May 28-29	1st LO and WCA Manufacturing Readiness Review	Charlottesville
June 2-5	AAS Meeting	St. Louis

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

Memo # 533 Title: Improving Accuracy of Superconducting Microstrip Line Modelling at Millimetre and Sub-Millimetre Waves

Authors: Victor Belitsky, Christophe Risacher, Miroslav Pantaleev, Vessen Vassilev

Abstract:

This paper presents a new model to calculate the characteristic impedance and wave propagation constant of a microstrip line made of a superconducting material. Modelling provides the only tool for designing superconducting microstrip - based circuits because no direct measurements of such a line can be made at millimetre and sub-millimetre waves and at cryogenic temperature of 4 K with required high accuracy. In contrast to a conventional microstrip, in the superconducting microstrip line, produced usually by a thin-film technology, the magnetic field penetration depth is comparable with the thicknesses of the dielectric and the superconductors comprising the line. As a result, the electromagnetic wave is propagating not only in the dielectric media but also partly inside the superconducting

strip and ground electrodes creating dramatic changes in the line performance that should be carefully accounted for by including the superconductor material properties into the model. Niobium, as the most commonly exploited superconducting material, was used for the modelling, though the same approach would work for any different BCS superconductor. In order to evaluate the proposed model accuracy, we have made an extensive comparison study of the previously presented models and included 3D numerical electromagnetic simulation. The modelling covers different geometries of the superconducting microstrip line and address material dispersion.

Eventually, you may view a pdf version of ALMA Memo #533 at:
<http://www.alma.nrao.edu/memos/html-memos/alma533/memo533.pdf>

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

Registration is now open for "Transformational Science with ALMA: The Birth and Feedback of Massive Stars, Within and Beyond the Galaxy" A workshop to be held at the North American ALMA Science Center National Radio Astronomy Observatory Charlottesville, Virginia September 25-27 2008

Please see: <http://www.cv.nrao.edu/php/meetings/massive08/>

Abstract submission is now closed.

A small workshop will be held at IRAM, Grenoble September 8 2008 on the topic of simulations of ALMA imaging. The goals are

- 1) To bring together the radio astronomy community with expertise in simulations of ALMA data to share experiences, ideas and code
- 2) To illustrate the power of ALMA in a small number of scientific fields through the presentation of simulations of ALMA science targets
- 3) To assess how simulations can be used to optimise the performance of ALMA once it is operational, by, for example, suggesting the optimal calibration strategies and observing modes

The workshop web-page is:

<http://www.mrao.cam.ac.uk/~bn204/almasim08/>

Proposals for observing time on the Caltech Submillimeter Observatory on Mauna Kea for the semester 1st September -31st Jan 2009 should be sent by 31st May 2008 to T. G. Phillips, Caltech 320-47, Pasadena, CA 91125. For further information please refer to the CSO web site at

<http://www.submm.caltech.edu/cso>.

The deadline for proposals to use NRAO telescopes (GBT, VLA, VLBA) is 1700 EDT Monday, 2 June 2008.

The Eleventh Synthesis Imaging Workshop will take place from June 10 through June 17 of 2008 in Socorro, NM. The school will comprise a week of lectures on aperture synthesis theory and techniques at a level appropriate for graduate students in astrophysics. Basic lectures on synthesis imaging, and advanced lectures on more specialized techniques, will be included. Practical tutorials demonstrating data collection, calibration and imaging of both VLA and VLBA data will be given. There will be a nominal registration fee, which will cover the cost of the meeting and a copy of ASP Vol. 180, "Synthesis Imaging in Radio Astronomy II", from the 1998 summer school. Please visit:

<http://www.aoc.nrao.edu/events/synthesis/2008/>

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>

Allemploy mailing list

Allemploy@listmgr.cv.nrao.edu

<http://listmgr.cv.nrao.edu/mailman/listinfo/allemploy>