

Subject: [allemploy] FYI: 26Sep2005 BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
From: "Alwyn Wootten" <awootten@nrao.edu>
Date: 9/27/2005, 2:39 PM
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BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
Sept 26, 2005 - Oct 10, 2005

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

Last week (of 9/12) an intense snowstorm battered Chajnantor for four days. By 20 Sept. the ALMA people had cleaned up the road to APEX, and ASTE had been reached. The Jama road remained closed but is expected to open for the APEX dedication.

The Dedication of the APEX telescope, which varies slightly from the Vertex antenna design contracted for ALMA by North America, will occur 25-26 September. The telescope arrived on Chajnantor in May, 2003.

The JAO, ESO, AUI/NRAO and NAOJ have reached agreement on an interim arrangement for the JAO Project Scientist. On a rotating basis, the 3 Regional Project Scientists will perform the duties of the JAO Project Scientist for 4-month periods. During each period, the incumbent will spend approximately 20-25 days in Chile. This arrangement will last until late 2007 when it is believed that recruitment of a Project Scientist will be facilitated by the beginning of antenna deliveries and commissioning. Al Wootten is heading to Santiago 26 September to initiate this system and will be performing JAO Project Scientist duties until the end of the year. Al's ALMA/JAO Phone: 56-2-467-6128

Daisuke Iono, currently a postdoc at SMA with much experience in sub-millimeter astronomy and SMA commissioning, will join the ALMA-J Science team Oct. 1st, 2005.

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

See also the JAO ALMA Calendar overview at:

http://www.alma.cl/alma_project

General Happenings

Santiago: The ASAC will gather for a meeting at the Holiday Inn Express 1-2 October.

OSF: OSF Bid analysis is under way.

AOS: APEX Inauguration, 25-26 September (see above).

The proposed road construction to the summit of Chajnantor was approved by CONICYT, then TAO (Tokyo Atakama Observatory) group in Univ of Tokyo will start the road construction for the new optical telescope to be located there.

B. Vila Vilaro is now visiting San Pedro to perform measurements using ASTE; one is pointing jitter measurements and another is OTF experiments.

ATF: During 17-Oct to 28-Oct, Vertex will be working on metrology development on the Vertex antenna in preparation for the manufacture of the production antenna.

NAASC: Andrew Markwick-Kemper will join the staff part-time this week. Bill Klemperer, one of the fathers of astrochemistry, visited U. Va. last week, giving a lecture on "The Chemistry of the Universe" in the Physics

Department.

DAILY CALENDAR (Times EDT) see

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

Mon 26 Sept APEX Inauguration
Tue 27
10:30 AM-11:30 AM: JAO IPT Telecon
11:30 AM-12:30 PM: Change Control Board
Wed 28
Thu 29

Physics and Chemistry of the Solar System and the ISM

Fri 30
Sat Oct 1 ASAC Face-to-face meeting, Santiago
Sun Oct 2 ASAC Face-to-face meeting, Santiago
Mon Oct 3

German Unity Day Holiday, Germany

Tue Oct 4
10:30 AM-11:30 AM: JAO IPT Telecon
Wed Oct 5
Thu Oct 6
Fri Oct 7
Sat Oct 8
Sun Oct 9

Travelers to ALMA Cost Review arrive Munich.

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

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

- * Sep 29-30 -- ESO Council
- * Oct 1-2 -- ASAC Meeting, Santiago
- * Oct 5 -- ESO Finance Committee
- * Oct 6 -- Rolling Stones come to Scott Stadium, Charlottesville
- * Oct 13-16 -- ALMA Cost Review proposed, Munich
- * Oct 26-27 -- AUI Board, Santiago
- * Nov 1-2 -- ALMA Board, Santiago
- * Nov 8-9 -- ESO Finance Committee
- * Nov 8-9 -- ALMA-J Antenna SRR, Osaka
- * Nov 10-11 -- ACA System Review, Tokyo
- * Nov 21-22 -- SSR Meeting, Charlottesville
- * Nov 30-Dec 1 -- National Science Board meets
- * Dec 7-8 -- ESO Council Regular Meeting
- * Jan 4-7 -- URSI/NA, Boulder
- * Jan 12-14 -- ALMA Zmachines workshop

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

ALMA Memo No. 537: Walsh Function Demodulation in the Presence of Timing Errors leading to Signal Loss and Crosstalk.

Author: Darrel Emerson

Abstract: In the ALMA system, switched phase offsets of pi/2 radians are added to the first LO signal at each antenna as a means to separate upper and lower sidebands; these offsets are put on the LO phase following a Walsh switching cycle, and are decoded following correlation. Additional phase offsets of pi radians are applied to the first LO at each antenna, as a means of reducing spurious correlations between unwanted coherent signals that find their way into the IF at the antenna; these pi phase steps are demodulated at the antenna by corresponding sign change at the digitizer.

If there is a timing offset between the modulating and demodulating Walsh waveforms, then in general there are 2 unwanted effects:

- (1) A loss of amplitude of the wanted signal, and
 - (2) Unwanted crosstalk introduced between otherwise orthogonal modulations.
- This memo investigates the magnitudes of these effects in the ALMA context, and how the magnitudes are dependent on the specific choice of Walsh

function.

A strategy for choosing the optimum Walsh functions is suggested.

A pdf copy of this memo is on edm.alma.cl and will eventually appear at:

<http://www.alma.nrao.edu/memos/html-memos/alma537/memo537.pdf>

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

James Lamb reports that on 19 Sept fringes were obtained with the OVR02, OVR04, and BIMA 3 antennas of CARMA on Saturn, Venus, and 3C273,

-----ALMA Postdocs-----

2006 Postdoc Position at the North American ALMA Science Center/ALMA Construction

The National Radio Astronomy Observatory expects to invite applications for a NRAO Postdoctoral appointment at the North American ALMA Science Center in Charlottesville, Va. These positions provide 50% time for independent research, with the remaining 50% assigned to project and operational duties at the sites.

The position is funded by a grant from the National Science Foundation through the ALMA Construction Project.

2006 ALMA Postdoc Positions at ESO

For the first time this year, four dedicated ALMA/ESO fellowships will be offered (two in Garching and two in Santiago) in addition to the several regular fellowships offered at both places. Please see:

<http://eso.org/gen-fac/adm/pers/vacant/fellows2005-6.html>

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