Subject: [allemploy] FYI: 6-20 Apr BIWEEKY CALENDAR OF THE ALMA PROJECT at NRAO
From: Al Wootten <awootten@nrao.edu>
Date: 4/17/2009, 10:16 AM
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BIWEEKY CALENDAR OF THE ALMA PROJECT at NRAO
6 Apr - 20 Apr 2009

********** THIS FORTNIGHT**********
In total power mode, the first spectra and on-the-fly images, of the Orion SiO maser, were made using full ALMA systems in Chile at the OSF.
First fringes, on the holography tower transmitter at 104 GHz, were seen from the OSF on the Vertex/Melco antenna duo operating at the OSF.

20th Intl Symp. on Space THz Technology, Charlottesville
The International Symposium on Space Terahertz Technology (ISSTT) has been held every year since 1990. The ISSTT was previously held in Charlottesville in 1996 and 1999. Next week, it returns during Historic Garden Week (vagardenweek.org). Only Pasadena has hosted the meeting more times than Charlottesville.
http://www.nrao.edu/meetings/ISSTT2009/

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

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General Happenings
Photos of activity may be found at NRAO eNews:
http://www.nrao.edu/news/newsletters/

Sky: Comet Lulin lies at Gemini's feet but you'll need binoculars to find it at 9th magnitude. Saturn does duty as Leo the Lion's navel, overhead much of the night. Its rings are nearly edge on, which makes finding its moons, which lie in the ring plane, fairly easy. For instance, on 16 April Titan will lie four ring lengths west of the big planet, the furthest it can get. The Moon occults (covers) Antares for parts of New Mexico during daytime Monday morning Apr 12th.

SCO (Santiago Central Office): The ESO Finance Committee has approved a contract for construction of the Santiago Central Office Building, to be located at Vitacura. A kickoff meeting was held on 2009 Apr 2.

AOS (Array Ops Site, 16570ft altitude): To date, 85 foundation have received structural concrete. 26 foundations have passed provisional acceptance. The 22 foundations for ACA antennas have structural concrete; earth fill and rock anchor installation is proceeding.

OSF (Ops Support Facility, 9600ft altitude): Recievers were locked to spectral lines in each of the four installed bands:
(Band 3: SiO J=2-1 (v=0), Band 6: CO J=2-1, Band 7: CO J=3-2, Band 9: CO J=6-5); SiO line observations were made.
The Call for Tender for power supplied by an overhead transmission line from Calama has been delared failed. An island mode liquid gas generator system similar to that used at the VLT is the currently favored design. Elements of the backup structure, the cabin, and the reflector for the AEM antenna have arrived at the AEM erection facility.
Elements of the backup structure for a second antenna also arrived 13 April.
The steel support for the antenna should arrive very soon.
New foundations (one at the AEM facility and two at the Melco facility) are being tendered. The new pad, No. 7 at the Vertex site erection facility, is ready for use. There are two accepted ALMA antennas,

three Melco antennas awaiting acceptance and eight Vertex antennas
in various stages of erection on the site. ALMA acceptance of the second
Vertex antenna is scheduled for the end of April. Thus the total number
of antennas which are partially or wholly assembled on the site is 13; a
fourteenth, the first AEM antenna, will be assembled shortly. Holography
runs are planned for Melco No 2 with the ALMA-J holography receiver for
May. The first Engineering Model FE assembly from the European FEIC
arrived safely at the OSF on 2 April 2009. FE Water Vapour Radiometer:
WVR #102 passed successfully PAS on 2 April 2009 (AIV System Integration
Lead commented that this was probably the first unconditionally accepted
unit by the Observatory). Installed in the Vertex antenna, it achieved
first light but has been moved to the AIV lab for further testing.
WVR #103 was delivered to ESO in Garching for software work. Amplitude
Calibration Devices No 3 and No 4 passed provisional acceptance In-House (PAI)
and will be shipped to the OSF. A working group has been formed
to establish the location, functional requirements and architectural form of
a Residence for the OSF.

NTC: The almost continuous flow of front end parts into and out
of the NTC continues. Operational Readiness Review meeting to be held
16-17 April for the NA FEIC.

NAASC: The "white paper" on ALMA Development for the US decadal
review was submitted; it is available at the NRAO website. Instrumental
White Papers on high frequency receivers, radio phase correction and
array receivers were also submitted. A SciOps meeting was held in Garching.

Elsewhere: ALMA-ELT synergies workshop took place in Garching. A presentation
on ALMA was made at the Ast. Soc. of Japan. Science data
converter (filler) to the ASAP format (ASAP: single dish reduction tool
on CASA) for some existing telescopes (NRO 45m, ASTE, and APEX) has been
developed in collaboration with both the NRO group in Japan and APEX group
at MPIfR in Germany. APEX data taken in several observation modes have
been successfully calibrated and filled in the ASAP format.

A calendar of NAASC events may be found at:
http://www.cv.nrao.edu/naasc/alma_calendar.shtml
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DAILY CALENDAR (Times EDT/EST) see
https://wikio.nrao.edu/bin/view/ALMA/AlmaCalendar
********** UPCOMING EVENTS **********

Apr 15-16	NA FEIC Operational Readiness Review (Charlottesville)
Apr 20-22	20th Intl Symp. on Space THz Technology, Charlottesville
May 6	Herschel launch
May 26-29	Advancing Chemical Understanding thru Astronomical Observations
Jun 1-2	Ops software requirements review, Santiago
Jun 8-12	mm and submm Astronomy at High Angular Resolution, ASIAA
Sep 21-25	Assembly, Gas Content and Star Formation History of Galaxies

********** TECHNICAL NEWS **********
ALMA Memo # 587: Inference of Coefficients for Use in Phase Correction I
Author: B. Nikolic

We present a Bayesian approach to calculating the coefficients that convert
the outputs of ALMA 183 GHz water-vapour radiometers into estimates of path
fluctuations which can then be used to correct the observed interferometric
visibilities. The key features of the approach are a simple, thin-layer,
three-parameter model of the atmosphere; using the absolute measurements
from the radiometers to constrain the model; priors to incorporate physical
constraints and ancillary information; and a Markov Chain Monte Carlo
characterisation of the posterior distribution including full distributions
for the phase correction coefficients. The outcomes of the procedure are
therefore estimates of the coefficients and their confidence intervals. We

illustrate the technique with simulations showing some degeneracies that can arise and the importance of priors in tackling them.We then apply the technique to an hour-long test observation at the Sub-Millimetre Array and find that the technique is stable and that, in this case, its performance is close to optimal. The modelling is described in detail in the appendices and all of the implementation source code is made publicly available under the GPL.

View a pdf version of ALMA Memo #587 at:
http://www.alma.nrao.edu/memos/html-memos/alma587/memo587.pdf
**********ALSO OF INTEREST**********
Several ALMA positions are available at the JAO (Santigo).

Details for all positions may be found through:
http://www.alma.cl
or
http://www.nrao.edu/admin/hr/careers-old.shtml

This is a special ATNF call for proposals for the Australia Telescope Compact Array (ATCA) for the 2009 JULS. This semester is for ATCA proposals ***ONLY***. The CLOSING DATE for ATCA applications for 2009 JULS is 15 May 2009. Applications must arrive no later than midnight, Australian Eastern Standard Time (equivalent to 14:00 UT).
All applications must be submitted using OPAL. See
http://opal.atnf.csiro.au.
A further announcement will be made in mid-May 2009 for the 2009 OCTS. This will be a standard six-month semester and applications will be invited for all ATNF facilities.

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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

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Allemploy mailing list
Allemploy@listmgr.cv.nrao.edu
http://listmgr.cv.nrao.edu/mailman/listinfo/allemploy