

BIWEEKY CALENDAR OF THE ALMA PROJECT at NRAO  
16 Jun - 30 Jun 2009

\*\*\*\*\* THIS FORTNIGHT\*\*\*\*\*  
Dynamic Fringes Achieved at the Operations Support Facility

Please see:

[http://www.nrao.edu/news/newsletters/enews/enews\\_2\\_6/enews\\_2\\_6.shtml#alma](http://www.nrao.edu/news/newsletters/enews/enews_2_6/enews_2_6.shtml#alma)

The first two ALMA antennas were pointed at an astronomical source, Mars, on April 30 and 'static' fringes were observed, i.e., software did not control or follow the changes in the fringes as the source followed its diurnal path. Updated ALMA software (v6.1) has now been installed, and on June 12 'dynamic' fringes were obtained, for which computations are continually updated to drive the electronics and track the changes in the fringes as the source treks across the sky. The spectral lines from the silicon monoxide (SiO) maser in the heart of the Orion Molecular Cloud were observed at 86 GHz by a team that included Jeff Kern, Robert Lucas, and Lewis Knee.

See Figures at link above. The two spectra differ because of the lack of calibration and because of intrinsic source structure. The interferometer is more sensitive to small-scale structure, and measuring these differences on many scales (baselines) leads to a high-resolution image of the source. In this case, the primary beamwidth of the 12m antenna is 72 arcsec, and the scales to which the interferometer is sensitive include those shorter than the baseline measured in wavelengths (3.5mm), or ~ 8 arcsec.

Meanwhile, the surface of the Vertex antenna accepted in April was set to well within specifications. This antenna has also undergone rigorous pointing tests and been equipped with an ALMA Front End received from the European Front End Integration Center at Rutherford Appleton Labs, a Back End from the NRAO Science Operations Center in Socorro, and other equipment. Radiometric measurements will be conducted soon.

ALMA equipment continues to be delivered to northern Chile. Vertex antenna No. 10 arrived in May and will be erected over the coming months. Figure 3 (link above) shows the exchange of two antennas at the Operations Support Facility using the two ALMA Transporters. Each loaded vehicle weighs about one-third million pounds. Water Vapor Radiometers are also arriving, and the fourth has now gone through acceptance. The second Test Correlator, the device used at the ALMA Test Facility in New Mexico, will arrive soon.

At the high elevation Array Operations Site, the antenna foundation nearest to the Technical Building is receiving its electrical power and optical fiber connections in preparation for the arrival of the first antenna.

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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:

A calendar of NAASC events may be found at:  
[http://www.cv.nrao.edu/naasc/alma\\_calendar.shtml](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 \*\*\*\*\*

May 18-19	EU-Front End Integration Center meeting, RAL
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
Jun 11-12	Front End Service Vehicle PDR, Taichung, Taiwan

Jun 17 Correlator Quadrant 2 Provisional Acceptance In-house  
(PAI)  
Jun 22-25 Band 4 and 8 FE CDR & PAI Tokyo  
Sep 2-3 CSV Review, Santiago  
Sep 21-25 Assembly, Gas Content and Star Formation History of  
Galaxies  
Sep 28-30 IRAM 30th  
Oct 4 Spectral Line workshop, Koln  
Nov 11-12 ALMA Board face-to-face meeting, Santiago  
Nov 16- Annual ALMA External Review, Santiago  
\*\*\*\*\* TECHNICAL NEWS \*\*\*\*\*

\*\*\*\*\*ALSO OF INTEREST\*\*\*\*\*  
CALL FOR OBSERVING PROPOSALS FOR NRAO TELESCOPES  
Deadline: 1 June 2009, 5:00 P.M., EST (21:00 UTC)  
Proposal preparation and submission are via the Proposal Submission  
Tool at <http://my.nrao.edu>. Several modifications to the PST have  
been made and will be in place starting 12:00 EDT (noon) Friday, 15  
May 2009.

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CALL FOR OBSERVING PROPOSALS FOR THE CALTECH SUBMILLIMETER OBSERVATORY  
The Caltech Submillimeter Observatory (CSO) encourages  
observing participation by astronomers from both U.S. and non-U.S.  
institutions. The observatory consists of a 10.4 m diameter telescope  
on Mauna Kea, Hawaii. Receivers are available from 200 to 400 GHz with  
noise temperatures of about 100 K (DSB) and, from 400 to 730 GHz at  
about 200 K (DSB). A receiver is available from 780 Å- 920 GHz with a  
noise temperature of about 250 K. AOS back-ends of about 1000 channels  
are available with 1 GHz and 50 MHz bandwidths. A new FFTS  
spectrometer with 8192 channels and a selectable bandwidth of 1  
GHz or 500 MHz is also available.  
For further information please refer to the CSO web site at  
<http://www.submm.caltech.edu/cso>.

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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>.

The 2009 JULS will run for a 10-week period from 15 July until 30  
September 2009. We expect that three CABB observing modes will be  
available by September 2009, including a high resolution zoom mode  
that is available for the first time. For the latest information it is  
essential to read the CABB documentation on the ATNF web pages.  
<http://www.atnf.csiro.au/observers/apply/avail.html>  
ATCA proposals not completely scheduled in the 2009 APRS semester that  
require further observing time should be resubmitted for consideration  
in the 2009 JULS semester.  
Please note that because of the need for local knowledge in using the  
new CABB systems, remote observing is expected to be restricted.  
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@nrao.edu](mailto:jneighbo@nrao.edu) or [awootten@nrao.edu](mailto: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/mmailcal/ALMACalendars.html>