

Subject: [allemploy] FYI: Jan 2 BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
From: Al Wootten <awootten@nrao.edu>
Date: 1/4/2006, 3:08 PM
To: anasac@nrao.edu, alma-info@nrao.edu, allemploy@nrao.edu

BIWEEKLY CALENDAR OF THE ALMA PROJECT at NRAO
Jan 2, 2006 -- Jan 16, 2006

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

Happy New Year! The new year presents a good time for reflection on the old. Therefore, this Calendar presents a list of top ALMA achievements for 2005, in no particular order, and in my opinion only.

Dear Colleagues,

22 Dec 2005

I am very pleased to inform you that Dr. C. Cesarsky, Director General of ESO, and Mr. H.-J. Habernegg, President of Scheuerle Fahrzeugfabrik GmbH, have signed the contract for the manufacture and delivery of two antenna transporters for ALMA today.

Let me take this important event for ALMA to thank all of you for your dedicated efforts and qualified work for the ALMA project during this very important and critical year of ALMA. I think we are on a good track and ALMA is certainly facing an interesting and challenging year 2006.

Have a good Holiday Season and a Successful New Year.

Hans Rykaczewski
European ALMA Project Manager

***** THIS YEAR*****

Top Ten ALMA achievements of 2006:

- * Antenna contracts were signed for at least 53 production antennas.
- * A contract was signed for the antenna transporters.
- * A contract was signed for Construction of the foundation and shell of the Array Operations Site Technical Building; by year's end substantial progress was visible (see link to photo below).
- * Design Reviews were successfully held for all six first-light ALMA receiver bands, the water vapor radiometers, the Japanese 12m antennas, and the Atacama Compact Array.
- * ASIAA, Taiwan has entered the ALMA project through the signing of an agreement with ALMA-Japan.
- * ESO Council on 29-30 September, "...decides that the estimated increase ...in the cost to completion of the ESO share of the bilateral ALMA project is affordable and compatible with ESO's strategic priorities."
- * On 22 November President Bush signed into law H.R. 2862, directing that ALMA construction be funded for the eighth consecutive year.
- * A Cost Review of the rebaselined ALMA budget was held in Garmisch-Partenkirchen 13-16 October. The panel noted that "the science capability of the array was extremely exciting, and that ALMA remains an extremely exciting project for the future". The Report was presented to the ALMA Board but is not yet public.
- * Russell and Rykaczewski assume responsibilities as NA and EU Project Managers. The JAO complement was filled by institution of a turno Project Scientist system (Tom Wilson took over from A. Wootten on 1 Jan).
- * A Report was issued by the National Academy assessing the impact of the ALMA technical performance and scientific program, concluding that "Two of the three Level One requirements, involving sensitivity and high-contrast imaging of protostellar disks, will not be met with either

a 40- or a 50-antenna array."

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

AOS: Eduardo just sent along a photo taken today of AOS construction progress:

<https://wikio.nrao.edu/bin/view/ALMA/20Dec05A>

NAASC: The first of the ALMA Antenna Evaluation Group (AEG) results colloquia will be held 3 Jan at 4pm Eastern, with all sites connected.

1. ***Overview*** /(Mangum)/: General overview of the antenna evaluation performance results.

Al, noticing a deficit of video podcast material for the new Ipod, transformed our ALMA movie, previously available on scarce DVD copies, into NRAO's first Video Podcast. Viewable with iTunes, get it at

<http://www.cv.nrao.edu/~awootten/mmailcal/videopodcast.html>

It is about 77MB in size.

The ZMachines conference will occur next week.

<http://www.zmachines.net>

DAILY CALENDAR (Times EDT) see

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

Mon 2 January

Tue 3 Jan

4:00 PM: Colloquium on AEG antenna evaluation:

Overview /(Mangum)/: General overview of the antenna evaluation performance results.

Wed 4 Jan

4:00 PM: ASAC telecon.

8:00 PM: Rose Bowl; U. Tx. beats USC.

Thu 5 Jan

Fri 6 Jan

2:00 PM: ANASAC telecon.

Sat 7 Jan

Sun 8 Jan

Mon 9 Jan

12:30 PM: ALMA Town Meeting, AAS, Washington.

Tue 10

Wed 11

Thu 12 Jan

Opening Reception, ZMachines conference <http://www.zmachines.net/>

Fri 13 ZMachines conference

Sat 14 ZMachines conference

Sun 15 January

Sun 16 January

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

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

* Jan 4-7 -- URSI/NA, Boulder

* Jan 4 --- ASAC telecon

* Jan 6 -- ANASAC telecon

* Jan 9 -- ALMA Town Meeting, AAS

* Jan 9-12 -- AAS meeting, Washington

* Jan 12-14 -- ALMA Zmachines workshop

* Jan 26-27 -- ALMA Delta Cost Review, DC

* Jan 28-29 ASAC face-to-face

* Jan 30-Feb 2 -- NA ALMA Review, Charlottesville

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

ALMA Memo # 545: Design of the Cone at the Centre of the Subreflector

Author: Richard Hills

The distribution of the power reflected from the subreflector is calculated for a variety of cases. It is found that good suppression of the reflections can be obtained by placing a cone in the centre, but that this does need to be a good deal larger than is called for in the present specification. The size needed depends on whether or not the subreflector is tilted to optimise the gain when we use off-axis feeds. The question of whether the cone should be a separate component or made as an integral part of the subreflector is also discussed.

The recommendation is for a cone of 60mm diameter and for this to be built into the surface of the subreflector. This does however require that we use a slightly different alignment of the subreflector for each receiver. If this cannot be done then the diameter of the cone needs to increase to about 72mm. This larger size will produce a loss in gain which is of order 0.5%. Perhaps more importantly, however, this analysis has revealed that using off-axis feed positions (e.g. bands 5 and 6) without tilting the subreflector is already producing a significant loss of gain, as well as an increase in the spill-over onto the ground, which together will produce a loss in the sensitivity of ALMA of several percent. This means that having the ability to adjust the tilt of the subreflector is highly desirable anyway.

Finally it is noted that there is a significant reflection back to into the focal plane due to diffraction from the outer edge of the subreflector. This can be suppressed by giving this edge a slightly non-circular form and a variety of ways of doing this are discussed.

Abstract:

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

<http://www.alma.nrao.edu/memos/html-memos/alma545/memo545.pdf>

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

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/mmailcal/ALMCalendars.html>

Allemploy mailing list

Allemploy@listmgr.cv.nrao.edu

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