

**Report for ALMA Calibration and Imaging
December 2003 - January 2004
NA Progress Report**

Overview of Science IPT Activities

During December-January, Science Group activities centered around preparation of the ALMA Calibration Strategy Plan, completion of the Design Reference Science Plan, construction of an Operations Plan in concert with the Operations Group, and also how the ALMA Science Center will operate.

One level 2 milestone (9820) was met just after the period on 2004-Feb-15 with the submission of the Calibration Strategy Plan. Two level three milestones were completed—the draft ICD between Science and Site (98701) and the submission of the Design Reference Science Plan (9822), now available through the ALMA web pages to the general public.

Activities involving the ALMA Community in the U. S.

In conjunction with the ANASAC and NRAO, the NA Science IPT held a town meeting at lunchtime on January 8, 2004 during the American Astronomical Society meeting in Atlanta, about 70 people attended although it was the penultimate event of the meeting. Planning continued for a general North American ALMA Science Meeting to be held at the University of Maryland conference center on 14-15 May 2004.



Figure 1 Attendees at ALMA Town Hall at the Atlanta AAS Meeting learned about ALMA.

Interactions with Other IPTs

The Science IPT held discussions with the SE IPT on phase stability, agreeing on the project specifications. Implementation of sideband separation rather than sideband suppression was sought by way of a change request; previously its status had been unclear.

IRAM has refused to grant ALMA time to test the calibration device currently in place on the 30m telescope. The Science IPT has developed a backup plan, in which tests of the semitransparent vane may be concluded at the ATF and the final ALMA device can be tested in Madrid.

Anticipated activity in the next two months:

Early in March, the Science IPT will form the nucleus of the Review Committee at the System Review. Immediately following, during ALMA Week, the Science IPT will present the draft Calibration Plan, and the draft Commissioning and Verification Plan.

Science IPT ALMA Papers, Memos and Studies

LAMA Memo 803 Simulation of Atmospheric Phase Correction Combined With Instrumental Phase Calibration Using Fast Switching. M. Holdaway and L. D'Addario.

LAMA Memo 804 Effect of Global Warming on Precipitable Water Vapor Above Sub-millimeter Wavelength Astronomical Sites. M. A. Holdaway.