

ALMA IPT BI-WEEKLY UPDATE FORM

Name of IPT: Science

Name of IPT Leader/Deputy: Wootten/Wilson

Date: 28 July 2004

Major Critical Areas Summary:

The Calibration Group has held its second telecon in as many weeks organizing working groups; it includes members of System Engineering, Computing and Front End IPTs.

Others please join at <http://listmgr.cv.nrao.edu/mailman/listinfo/almacal>

Events in the Last 2 Weeks: ALMA European newsletter appeared (edited by DeBreuck Zwaan, and Wilson) available on <http://www.eso.org/projects/alma/newsletter/>. Conway continued work on baseline calibration. Wootten and Wilson worked on the report from the Computing CDR2 in Boulder. Wootten visited Submillimeter and Astronomy Groups at Caltech, the new ASAC Vice Chair Jean Turner, and the IfA, JCMT, CSO and SMA on Mauna Kea, and used the CSO, conferring with Director Phillips and Site Director Chamberlain on techniques planned and employed there. Wootten met with van den Bout, Beasley and the EPO IPT to plan the ALMA Town Meeting at the AAS Meeting in San Diego; the Town Hall will occur on Tuesday 12 Jan at 1pm. Mangum now as Calibration Group Head is organizing the group work. Mangum addressed issues of TPBE digitizer dynamic range, passband gain flatness, sideband separation and digitizer offset; see ALMA Calibration Group page at <http://www.nrao.edu/~jmangum/ALMA/Calibration> Tests of absolute calibration horn at BIMA antenna are now complete. A request (CRE) for sideband separation with the use of 90 degree phase switching (ALMA-56.00.00.00-001-A-CRE) has been approved. The request for the increase of the Band 7 upper frequency to 373 GHz (ALMA—40.02.07.00-003-A-CRE) has been approved. Emerson worked with the BE Group to develop technical aspects of a CRE covering redesign of the total power backend to be deployed on all 80 ALMA antennas. Holdaway worked on a paper on Multiscale CLEAN, a technique expected to be important for ALMA Imaging and on WVR/Fast Switching simulations in three dimensions. He also produced a display of ALMA site topography with antenna locations and CLOUDSAT footprints. Reports written these two weeks include: Quarterly Report for the JAO, NSF Bimonthly report for Apr-May, NSF Bimonthly report for Jun-Jul and this report. Wootten began work on codifying the Early Science Modes for ALMA. Science IPT discussions on backup plans for the ALMA digitizer took place.

Milestone Activity (Please list milestones by number, if milestone will not be met, please list anticipated completion date)

Level 2 milestones:

35	9818	9.380.9818	ICD between Science and Site Approved 2004-Apr-30	2	Process
37	9820	9.380.9820	Calibration strategy submitted 2004-Feb-15	2	Done
47	9825	9.380.9825	Science aspects of operations plan complete 2004-Jun-30	2	Done; pending Ops
Plan completion					
48	9830	9.380.9830	Plan for early science configurations complete 2004-Jun-30	2	Done

Items to Discuss at Next IPT Teleconference: