Minutes of Teleconference on ALMA ATF & OSF Holography Planning

Thursday, November 30th 2006, 16:30 UTC.

Minutes by DTE, last changed 2006-12-01

Participants: Beasley, DuVall, Emerson, Glendenning, Kern, Krady, Laing, Lucas, Mangum, Marson, Murowinski, Vila Vilaro, Perfetto, Ramirez, Ridgeway, Sramek, Webber

All future meetings will use the same call-in details:
From USA: 866-814-1347
Outside USA: +1-517-444-3243

Participant Passcode: 3155752
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Minutes of our last (2006-11-09) meeting are at:

http://www.tuc.nrao.edu/~demerson/osfholo/mins2006-11-16_1.pdf

AGENDA.

I. Status Report

II. Current Action Items

III. Schedule

(The order of discussion of items II and III was reversed, which is reflected in the following account.)

I, Status at the ATF

Darrel reported on results in the past week from the ATF. Most of the needed functionality was now there, although a significant problem remains the robustness of the computer system. Thanks to efforts from the CIPT this has progressively improved over the previous 2 or 3 weeks. Once a holography map is started, it usually completes without problem, although there are still occasional problems in trying to start the observation.

The loose connectivity between the main computer system and the Labview computers, which control the holography receiver and transmitter directly over the CAN bus, has sometimes caused lost time. For example, although the main system may know that the receiver is out of lock and so correctly prevent an observation from starting, there is no obvious message to indicate that that is the problem, and should the receiver go out of lock after an observation starts, then the control system allows the observation to continue nevertheless, without any warnings.

A serious problem over the previous few days has been the archive system. This has often prevented starting an observation and data taken have not always been written correctly. This has received attention from the CIPT, and the problem may have been solved by the time these minutes are distributed.

Some artifacts are appearing in the holography results, which may result from unwanted signal reflections. Tests are in progress involving extra attenuation around the transmitter and elsewhere, and using frequency changes. The standard "move a panel" test will be performed this week. As a check on possible systematic errors in the holographic measurements, a session of photogrammetry has been arranged for next week; both the AEC and the Vertex antennas will be measured.

III Schedule

Because of the uncertainties in the holographic testing, any necessary changes to the schedule, if any, will be made next week or later. The current outline of the immediate plans, week by week, is:

Dec 4th Software work and Photogrammetry, with BE installations in the Vertex antenna
Dec 11th Software
Dec 18th Computing and Science IPT continued testing.

Depending on results of photogrammetry, further holographic testing could be made during the week of Dec 11th, but this will be decided in the coming week.

II Action Items

1. Antonio hoped to have a summary of the holography DSP system available next week. *Still needed.*

Antonio will provide the remaining hardware user manuals and a template of the Users' Manual. *This is still pending.*

Details of the DSP algorithms need to be disseminated. *Still pending: promised the week of 2007-11-20.*

Continuing AI: ICD update on temperature monitors, no later than one month before shipment of receiver #2. Some minor items from Ralph to be corrected in the next ICD issue. *Still pending.*

2. Darrel volunteered to write up a list of "tricks" used in operating the tx & rx which helped to get good holography results. [Done, see https://wikio.nrao.edu/bin/view/Main/AlmaHolographyCribSheets for this and for other useful documentation.]

3. Feeds. We do need duplicate sets of holography feeds, to the current design – this was discussed in our meeting of 2006-09-07: see the minutes of that meeting at . http://www.tuc.nrao.edu/~demerson/osfholo/mins2006-09-07_1a.pdf
Pending, but ***long-term feed redesign*** *agreed previously to be of low priority.* Duplicate feed sets (a total of 9 feeds) to the existing design of ***very high priority***. Delivery expected Jan 2007, to be followed by 1 month of testing.

4.The current known problems at the ATF need to be fixed
In progress . *Testing continues*

5. **Next Meeting**
Darrel will organize the next teleconference for **December 14th at 16:30 UTC**. If thought necessary, this might be brought forward one week.