

Minutes of Teleconference on ALMA ATF & OSF Holography Planning

Friday, October 6th 2006, 15:30 UTC.

Minutes by DTE, last changed 2006-10-07

Participants: Crady, Emerson, Glendenning, Lucas, Mangum, Marson, Murowinski, Perfetto, Ramirez, Seeichi, Shepherd, Sramek, Tores & Wootten

All future meetings will use the same call-in details:

From USA: 866-814-1347

Outside USA: +1-517-444-3243

Participant Passcode: 3155752

(Leader Passcode: 1874599)

Minutes of our last (2006-09-22) meeting are at:

http://www.tuc.nrao.edu/~demerson/osfholo/mins2006-09-22_1+attach.pdf

AGENDA. 2006-09-22

I. Current Action Items

II. Schedule

III. AOB

AGENDA ITEM I. Current Action Items

See minutes of last meeting

1. Antonio will provide the holograph hardware user manuals, which had been expected on 2006-09-13. The ICD update on temperature monitor points would still be provided, no later than one month before shipment of receiver #2. In addition, Marson has found some minor items (which he will write up and distribute), which should be corrected in the next ICD issue.

Prior to the meeting, Antonio sent the following update:

We continued to work on the holography system #2:

- All parts for the transmitter have been ordered. Assembly will start in a couple of weeks. Antenna positioner has been tested with LabVIEW interface.
- Started looking for the receiver components.
- Started the redesign of the receiver's connector bulkhead plate to allow installation on the ACA antennas.
- Awaiting to receive mechanical parts for the support electronics chassis (Rodrigo Brito)
- Documentation: This is behind schedule. The users manuals are not ready but work will continue to make all required documentation available by the acceptance test meetings (PAI/PAS).

In the following discussion:

Rick asked if an outline of the Users' Manual might be available sooner; Antonio agreed that such an outline could be ready by Monday (Oct 9).

Dick asked about support for the holography transmitter during use; Antonio confirmed that Kirk or himself would be available to help with any problems.

Kirk reported that Robert had been talking to Mike McCarthy about some PCMCIA card interface problems with Labview.

There is an issue that the transmitter power may not be quite adequate and may not be sufficiently stable. That is being looked into.

There was a question about whether the holography receiver was at the right focal point to adequate precision, but it seems this is not a problem.

Prior to the meeting, Ralph had circulated the following:

Current status of the Computing Holography software testing at the ATF.

Active problems in priority order.

1. The major issue with the software is that I cannot read the data sent to the archive back and hence have no confidence that data is being written correctly or that it is in the correct format. A solution to this problem is imminent and I expect on Friday 2006-09-06 to be able to test the solution. If its fixed I will send a data file to Robert Lucas for verification.

2. The ABM is not detecting the timing event. Its been confirmed that the timing event is correctly being generated by the reference distributor and the suspected cause is a bad connector inside the ABM. This will, hopefully, be looked at on Friday 2006-09-06.

3. There is an intermittent problem with collecting data from the DSP processor. This is not a problem with small maps but may be more serious in larger maps. A solution to this problem is believed to be known (change a '<' to a '<=' when comparing some timestamps) but has not yet been tested at the ATF.

4. There appears to be an intermittent (but frequent) problem with collecting some monitor points that are used for flagging (it looks like the flag data is the wrong length). The exact cause is unknown at this could very well turn out to be a software logic problem as this problem was not seen in lab testing.

5. There are problems sending some monitor data to the archive. This is believed to have been fixed but has only partially been tested.

6. The tuning algorithm is sub-optimal as it adjusts the frequency of the synthesizer rather than the Gunn oscillator voltage to establish a lock. Solution to this problem is pending on some data from the FE IPT on what are reasonable ranges to adjust the Gunn oscillator voltage.

Ralph confirmed that the first 2 points in his list were the most important. We cannot yet get data from the archive. As soon as this is working, some preliminary data can be sent to Robert Lucas for validation.

The timing events; this is issue being investigated. It is very likely a wiring issue within the ABM as an oscilloscope verifies that the TEs are arriving at it.

Other problems are intermittent. Ralph is also waiting for details (precise numbers of tuning parameters) from Antonio to help with the phase locking. It was agreed that the receiver should be tuned to a fixed frequency and locked by tuning the Gunn voltage, rather than the other way round.

*2. Antonio will arrange for 2 more sets of holography feeds to be made, using the old feed design. This is expected to take 2 – 3 months.
Sri will work, at a low level, on whether a new feed design is still feasible. If it turns out to be, there will be further discussion then on whether or not to proceed with its manufacture.*

This is ongoing.

3. Site IPT will continue to investigate the tower equipment lift options and implementation.

Claus was unable to attend the meeting, but sent the following report:

For your info, the status of construction is as follows: Construction Contract started 02.Oct. All elements are prefabricated (usual for towers). Construction Contract will end beginning of December. Tower includes hoisting system and platform at the top for maintenance, installation of equipment. In the event of any delays I will inform you accordingly.

The only related issue that came up was that the weather monitoring equipment would be mounted on this same tower, at about a 15-meter height. If the tower ends up being moved to cover the other antenna pads at the OSF, the weather equipment would be moved with it. It must be ensured that the weather monitoring equipment does not get in the way of equipment being raised or lowered from the top of the tower with its hoist.

This Action Item is now closed.

4. Rick will update the schedule, which Darrel will distribute (with these minutes) and post to the web. The schedule will be updated frequently, probably daily, during the coming weeks. [In future the latest schedule will be made available via <http://www.nrao.edu/~demerson/osfholo/schedule/>]

This has been done, but there are relatively few changes to the schedule. Task #30 in Rick's schedule, the M/C checkout, has not yet been completed. However, there is still adequate margin within the schedule so that even if task #30 is slightly late, no other dates are currently affected.

Nevertheless, Rick will provide Darrel with an updated schedule, which will be made available at <http://www.nrao.edu/~demerson/osfholo/schedule/> .

AGENDA ITEM II. Schedule

See Action Item 4 above. The latest schedule will be available via <http://www.nrao.edu/~demerson/osfholo/schedule/>

NEW or CONTINUING ACTION ITEMS

1. Antonio will provide the holograph hardware user manuals, which had been expected on 2006-09-13. A template of the Users' Manual will be available on October 9th.
2. Continuing AI: The ICD update on temperature monitor points would still be provided, no later than one month before shipment of receiver #2. In addition, Marson has found some minor items (which he will write up and distribute), which should be corrected in the next ICD issue.
3. Continuing AI: Antonio will arrange for 2 more sets of holography feeds to be made, using the old feed design. This is expected to take 2 – 3 months. Sri will work, at a low level, on whether a new feed design is still feasible. If it turns out to be, there will be further discussion then on whether or not to proceed with its manufacture.
4. Rick will update the schedule, which Darrel will post to the web via <http://www.nrao.edu/~demerson/osfholo/schedule/> .
5. Next meeting: Thursday October 19th at 15:30 UTC. Darrel will send out a reminder, with an agenda, nearer the date.