

OTC Teleconference Meeting:

19:00 UTC, Tuesday, 12 October 04

Call-in (CV 209 Hub): 434-972-7268
NTC 200, CV 209, GB 241 --- 15:00
AOC 280 --- 13:00
TUC N505 --- 12:00

Present: Darrel Emerson, Rick Fisher, Brian Glendenning, Tony Kerr, Peter Napier, John Payne, Dick Sramek, Dick Thompson, & John Webber.

AGENDA:

- (1) Future OTC membership
- (2) R&D planning: see separate message from Tony Kerr
(included in these minutes, below)
- (3) Action Items

(1) Future OTC membership

It was noted that Larry D'Addario had now left the NRAO, removing a good deal of expertise from the OTC. After some discussion on a number of potential replacements, it was agreed to ask the Director to invite Marian Posieszalski to join the OTC.

It was also noted that, with Larry's departure, not just the OTC but the observatory overall was short of expertise in several areas, including especially cryogenics; it was thought to be very important for the observatory to keep abreast of future cryogenic developments in research and industry. If the need arises, the OTC will consult cryogenic experts outside of NRAO, but the general observatory lack is to be noted.

(2) R & D Planning.

Before the meeting, Tony Kerr had circulated to the OTC the following:

From: Anthony Kerr. 10/9/2004 9:36 PM

I have completed another revision of the NRAO 5-year R&D plan. Projects have now been assigned priority 1 (highest), 2, or 3, which seems clearer than the earlier *, Baseline, or Other. A number of changes have been made in the text and budget.

The new text, including the overall annual cost and manpower requirements, are at:

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dplan.ark05a.pdf> .

A condensed 5-year budget is at:

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget05c.5yr.pdf>

The detailed year-by-year budget sheets are at:

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget05c.pdf>

Please review the sections in which you have an interest. I hope we will be able to finalize the R&D plan at this Tuesday's OTC meeting.

Regards,

--Tony.

P.S. In case you want to refer to the previous version of the R&D plan, it is still at:

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dplan.ark04.pdf>

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget04.Totals.pdf>

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget04.annual.pdf>

The discussion centered on the R & D version 5 documents linked above. The following are specific changes agreed to:

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget05c.5yr.pdf>

TEXT

Figures: It was agreed that the figures are unnecessary for this internal proposal.

p. 3. §1.2.1 Dense Metrology Sensor Infrastructure for Radio Telescope Applications: "OOF" should be "OTF".

p. 4. §1.4 Physical Optics: I forgot to mention at today's teleconference that we still need some text for this section -- ****Peter could you come up with a brief paragraph?**** The physical optics program budgeted in this section is intended for Observatory-wide use. After initial discussion between Sri and the Ohio State consortium, it appears that we will be able to join the consortium, with limited rights, for ~\$15k/year. Sri is getting further details.

p. 5. §2.1.2 MMIC Technology: Replace "...at 86 GHz for the GBT, MMICs are unquestionably the only choice..." with "...at 86 GHz for the GBT, MMICs are a possible alternative to MIC designs..."

p. 7 §2.4.2 Photonic Local Oscillators, Test & Calibration Sources: ****John Payne will review and update this section and its budget****

p. 9. §3.3 Wide Bandwidth Digitization. This should be raised to priority [1]. John Webber has kindly agreed to take responsibility for this section on Larry's departure. ****John W. will review this section and its budget.****

p. 10. §3.4 RFI Mitigation Techniques has priority [1], but all its components have priority [2] or [3] -- ****Rick to review.****

p. 10. §3.4.3 Spatial Nulling should have priority [2], not [3].

p. 11. Table of annual total costs: Specify that the \$ columns are M&S.

BUDGET

With reference to the documents:

(condensed)

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget05c.5yr.pdf>

(detailed year-by-year budget sheets)

<ftp://ftp.cv.nrao.edu/NRAO-staff/akerr/hdn/R&Dbudget05c.pdf>

Section numbers will be reorganized so only the lowest level tasks contain budget entries.

§1.4 Physical Optics: No labor is assigned because the physical optics program will be an observatory-wide utility used by engineers working on various projects. We should add \$6k to the section 1.4 "Physical Optics" budget for a high-end computer.

§2.4 The line 60 budget entries appear redundant with line 61. The line 60 entries will be deleted.

****Rick, please check that budget lines 74 & 75 are what you intended.****

Also, please note that Brian asked us to review the software engineer labor in section 3 (Signal Processing & Transmission). It is currently 0 FTEs.

****All OTC Members:** Please review the software development effort for projects you are involved in, and let Tony know if the numbers in the budget spreadsheets need changing.

(3) Action items:

Darrel will inform Fred of the OTC decision on replacing Larry, in particular drawing attention to the lack of cryogenic expertise and the importance of the observatory keeping abreast of new developments.

We will continue refining the R & D plan via email, with the goal of having a near-complete draft in about 2 weeks. **Tony** is coordinating the details, and **Darrel** volunteered to draft the necessary covering text for our document. Hopefully we can complete the work via email without another teleconference, but if a further meeting is felt necessary Darrel will arrange it.

Other specific tasks:

****Peter could you come up with a brief paragraph on Physical Optics ?****

****John Payne will review and update Photonic LO, Test & Calibration source section and its budget****

****John W. will review the wide bandwidth digitization section and its budget.****

****Rick will review section on RFI Mitigation.****

****Rick, please check that budget lines 74 & 75 are what you intended.****

****All OTC Members:** Please review the software development effort for projects you are involved in, and let Tony know if the numbers in the budget spreadsheets need changing.

DTE.