

October 23, 1986

PROPOSAL FOR LAYOUT OF OPERATIONS AREA IN AOC

A meeting to discuss a proposal for the layout of the operations area of the computer floor in the new AOC in Socorro was held on October 23, 1986.

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There was discussion on several details about the proposed layouts. I have incorporated the results or worries into both the diagrams (where appropriate) and the summaries. The attachments include three diagrams: Phase II, Phase I Early and Phase I Late. These figures and the following summaries reflect our best attempt at arriving at a specific proposal for the operations layout. We feel there is a reasonable chance that the final design of this area may need to be changed by the time Phase II becomes available since we anticipate both the details of the operational requirements and our experience in operating (especially the correlator) may change. It is hoped that there will be enough flexibility in the final design to accommodate any necessary changes.

Phase II

The proposed Phase II layout of the operations area was developed using the following considerations:

- (a) One operations room will hopefully promote good communications between the three operations group and make it easier to grow in a direction where duties might be shared.
- (b) The chief operator's offices are attached to the operations room to allow close supervision of daytime operations and operators. These three rooms would probably have windows "into" the operations room and possibly two doors each (one opens into the hall and the other into the operations room).
- (c) There is ready and easy access (double doors between #8 and #9) to the computer room from the operations room to allow good communications with computer operations.
- (d) The operations room has some windows.
- (e) The DPS tape drives are in one long line with the DPS tape storage on shelves either immediately adjacent or opposite the drives.

- (f) There are doors between every 8 DPS drives for access to the equipment rooms and the backs of the drives.
- (g) The design of the DPS tape storage shelves is flexible. The figure shows tapes racks that are 3 shelves high on the wall and 2 high on the open floor (this allows approximately 60 days storage for 2 tapes/station and 10 stations). This arrangement allows easy movement of tapes between storage and drives. The arrangement could be changed to allow a window exposure on the outside wall. The amount of storage capacity can grow as operational pressure grows up to about 60 days worth.
- (h) The tape staging area may consist of a table and carts or tables next to the operator's console and the tape storage shelves. In our current scheme the tapes would be packed/unpacked in the shipping/receiving room next to the elevator on the lower level. The tapes would be hauled between the receiving area and the tape staging area in the operations room on carts (which could be part of the staging "tables"?) where the on-duty operator would log in/out the tapes.
- (i) The DPS tape drives, DPS tape storage and staging areas could be isolated from the rest of the operations area should it prove necessary for better temperature and humidity control.
- (k) It is not clear where to locate the tape eraser but most probably within the operations room well away from the tape storage and staging areas is best.
- (l) The operators have easy access to the tape drives attached to their appropriate control computers.
- (m) At least two operators' offices and one maintenance coordinator's office would be located near (the latter within) the operations room.
- (n) Wall space will be a premium in the operations room because there will be a need for an antenna status board, book shelves and cabinets. Some of the space for shelves may naturally fall at the end of the tape storage racks.
- (o) The main operations room entrance from the hall is located as directly opposite the elevator as is practical to allow easy access for tape movement.
- (p) There was concern expressed for the availability of

a tool cart (to hold tools, test equip, etc). The only equipment in the operations room which might need such equipment are the tape drives and it is not clear how they will be serviced. It may be possible to accommodate some limited amount of equipment (perhaps a cart outside the operations room which could be easily rolled into the room when needed).

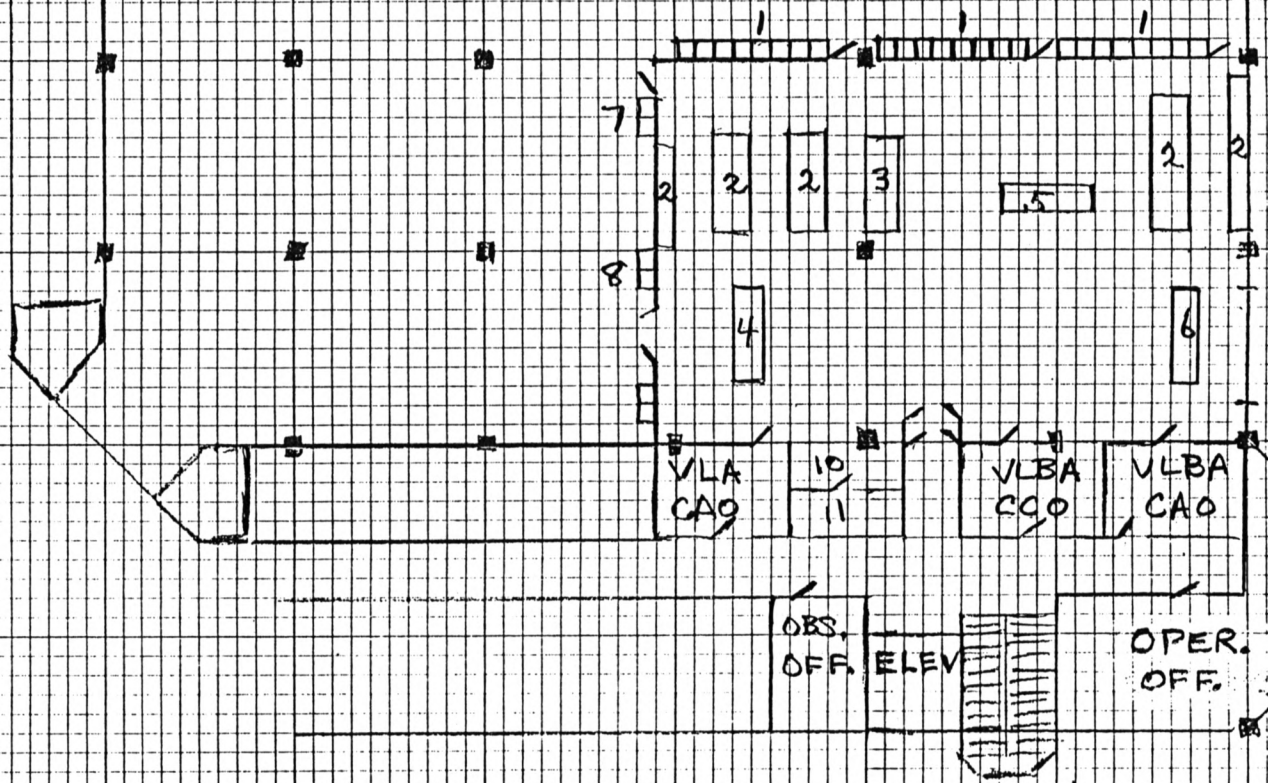
- (g) The overall concept of the operations room is based on the premise that a special sound proofing wall can be built for all tapes drives to allow easy access by the operators for mounting and dismounting tapes from the front of the drive. This wall will serve as a barrier for keeping the drive noise level in the operations room to a minimum and most of the dissipation of heat by the tape drives in the adjacent equipment room.

### Phase I

Two figures are presented for the Phase I layout possibilities. The basic distinction between the two is marked by the arrival of the VLBA correlator. Although there may be a need to move some equipment (correlator, etc) once Phase II becomes available it is hoped that the impact could be minimized by using cable lengths appropriate to the final layout and connectors in the correlator so it will be easier to move than the current VLA correlator is (it does have to be moved from CV to Socorro).



PHASE II



AOC SECOND LEVEL

Notes to PHASE II Layout Diagram

1. DPS tape drives
2. DPS tape storage
3. DPS tape staging
4. VLA array operations console
5. VLBA correlator operations console
6. VLBA array operations console
7. VLBA correlator control computer tape drives
8. VLBA array control computer tape drives
9. VLA array control computer tape drives
10. Operations kitchenette
11. Operations washroom

CCO = Chief correlator operator

CAO = Chief array operator

Operations Room Floor Space (sq.ft.) \*

VLA array control area	600
VLBA array control area	600
VLBA correlator control area	200
DPS tape storage	300
DPS tape staging	500
DPS tape mounting	250
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Total	2450

\*The size of the operations room shown is 2480 sq. ft.

Hardware (located outside of operations room)

VLBA correlator	600
DPS tape drives	350 (part of wall)
VLBA array control computer	600
VLBA correl. control computer	600
VLA array control computer	600
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Total	2750

