

To: VLBA Configuration Group

From: R. C. Walker

VLB ARRAY MEMO No. 226

Subject: Restructuring the Configuration Group

The primary job of the configuration committee is now done. The next step is to examine the sites in detail to make sure that there are no serious problems with any of the general regions specified by the configuration and to identify the exact location of each antenna. Examination of the sites is properly the job of the site committee chaired by Buck Peery. The configuration group, as such, only need get involved if the site examinations show that the basic configuration needs to be changed or if any site needs to be moved by a significant amount. Therefore we plan to merge the site and configuration groups for the duration of the project. There is no real need for all of the rather large number of people currently on the configuration committee to remain involved. As of the May meeting, the configuration group will be dissolved. Anyone who is interested is invited to join the newly structured configuration/site group and can do so by informing myself or Buck Peery. Some members of the group who wish to remain involved in the project but are not in other groups may wish to join the scientific group. If so, contact Ken Kellermann. As usual, anyone may attend any meeting, regardless of committee membership.

It has been several months since I have provided a summary of the activities of the configuration group so I will do so here. The important aspects of the activities, namely the actual selection of a configuration, has been covered in specific memos (Primarily VLBA Memos 194, and 205).

The meetings that have occurred since the last memo have been:

1. Dec. 17, 1982. Attendees: Cotton, Hogg, Hvatum, Kellermann, Legg, Linfield, Mutel, Peery, Schwab, Swenson, Walker. Peery suggested the site at Haleakala on Maui for the Hawaii station (The interference has since been determined to be bad.). It was decided that the urgency for a final configuration by this meeting was not as great as previously thought. A final configuration was not chosen; Memos 143 and 157 were thought to be sufficient. Kellermann reported that Tom Clark claims that operations in the Fairbanks area of Alaska do not require extreme precautions. Swenson agrees. Discussion continued on the Puerto Rico water vapor problem. K. Johnston (NRL) and K. Turner (Arecibo) are trying to get data from the Navy and from local sources in PR respectively (We don't have either yet).
2. Jan. 26, 1983. Attendees: Jones, Kellermann, Cotton, Walker, Peery, Brundige, Gaume, Benson, Hvatum, Legg, Linfield, Schwab, Backer. The possibility of covering a wider range of spacings with 10 antennas was discussed. There was not a great deal of support for the idea. Tom Legg

described the Canadian investigation of coverage vs. source complexity. They concluded that an exponential spacing with 10 percent incremental spacings is good.

3. Mar. 4, 1983. Attendees: Cotton, Benson, Bridle, Hogg, Reid, Peery, Kellermann, Walker, Schwab, Mutel, Linfield, Legg, Jones, Swenson, Hvatum. Dave Hogg reported that JPL will probably loan a water vapor device for use in Puerto Rico. Members of the group were encouraged to provide information on the phase stability experienced with actual VLBI observations to Arecibo, especially at 6 cm. Benson will prepare a memo on the subject. The Iowa group reported that they were fine tuning the configuration suggested by Walker earlier. Mutel reported that he will contact a member of the U. N. delegation from Equador that is known by Van Allen about a possible site in Equador. There is a NASA tracking station there that has been in operation since the IGY. There was some discussion of the possible collaboration with Canada.
4. Mar. 30, 1983. Attendees: Reid, Jones, Hogg, Bridle, Benson, Mutel, Kellermann, Peery, Hvatum, Brundige, Walker, Readhead. Jones promised a memo on the 7 mm performance of the OVRO 130' antenna (it's not here yet). Dave Hogg reported that the loan of the JPL water vapor device has been approved but that there may be delays. Benson described some 6cm VLBI results from Arecibo which had sufficient coherence time that it was not clear if they were limited by the atmosphere or by the Rubidium standard. Expect a memo on the subject soon. Mutel mentioned Equador again. The NASA site near Quito has been in operation since 1958 and is 50 km from an Intelsat and Minisat station. Kellermann and Readhead prefer to consider the Equador site as a possible future addition to the array and avoid the international complications for now.
5. Apr. 27, 1983. Attendees: Benson, Bridle, Cotton, Hogg, Kellermann, Peery, Schwab, and Walker. Most of the discussion was on the problem of obtaining atmospheric data for Puerto Rico. It looks like there will be significant delays in sending the JPL water vapor radiometer to Puerto Rico. The delays will put the measurements into the summer. We may wish to postpone the measurements until the Fall when the weather will be better. There is a general feeling that the 6 cm VLBI results are sufficiently good to justify placing a site in Puerto Rico. The major question that needs to be answered with measurements is where in Puerto Rico to put the antenna. The decision to combine the meetings of the configuration and site groups was made.