

4 April 1975

MEMO TO: Harry Vaughan

VIA: Bob Serafin

FROM: Walt Records

SUBJECT: FOF Monthly Activities Report (March 1975)

I. ROUTINE PROGRAMS

A. C-Band Radar

1.) CP-3. The CP-3 operated at Chanutte Air Force Base through 20 March 1975 in support of the University of Chicago and the Illinois State Water Survey. It was operated both as a single Doppler and also in the COPLAN mode on a baseline with the CHILL radar at Champaign. Only one failure occurred when a pin sheared in the pedestal elevation drive system, but was soon repaired. The occasional loss of commercial power at Chanutte was solved when the Air Force provided a diesel generator. This again reminds us of the possible need to provide our own generating capacity at some locations.

The CP-3 arrived back at Boulder on the 29th and will be installed, checked over and upgraded until about 15 July when it will be deployed near Miami to support the University of Miami participation in Project FACE. This operational period will be for August.

2.) CP-4. Work continued on all phases of this radar. Wiring continued on the pedestal and plans call for it to go back to the Machine Shop in April for further work. Machine Shop work is scheduled for completion in June. With the release of division funds, expensive items such as the antenna and feed, rotary joints and servo amplifiers were placed on order. Work continues by RSF on the antenna control system and funds needed to finish this work will be transferred to them soon.

Modification to the electronics van is progressing on schedule and should be nearly ready when the new low bed trailer arrives about 18 April. Construction of the transmitter and receiver groups is also on schedule. It appears that with a little bit of luck, the set will be operational in October and ready for field test. Since the two systems are nearly identical,

some subsystems will be checked out on the CP-3 over the next several months.

B. Technique Development

Baynton continued to analyze and study Doppler data obtained in Seattle. Some very interesting events show on the false color TV Display system that make interpretation of wide area precipitation patterns easier. Data from the Chanute operation was turned over to the University of Chicago for copying and analysis. Chicago will prepare the computer software necessary to recover the dual Doppler data.

Processing and analysis of data obtained from the NOAA acoustic sounder, the FOF rawinsonde and boundary layer profile systems at Fraser, Colorado continued.

C. PAM

FOF continued its manpower support to the remote station field test.

D. GATE

Freight from Dakar was received in Boulder. Jones transferred funds to balance out the Logistics Support account (7511) and no further activities are anticipated.

E. LIDAR

Routine observations for Fernald continued through the first three weeks of the month. The system was then deactivated when the truck was moved to Denver to have a replacement engine installed. This action was a necessary preparation for moving the 60 inch ruby lidar to Norman, Oklahoma in early April to support Project DUSTORM. The lidar performed very well during this period.

Chuck Frush has been developing a dual wavelength lidar in his lab. He has achieved simultaneous transmission of high powered ruby and doubled ruby pulsed signals.

F. JMOF

This program remains active for FY 77 funding. Several planning discussions were held concerning tower and surrounding instrumentation.

G. Doppler Data Processing, Recording, and Display

The first system operated extremely well in Rantoul 1-20 March. It apparently survived the trip to Boulder when moved in its regular rack instead of packing in separate boxes. This is one more field test milestone. Work continued in the fabrication of the variance estimator needed in July to support the CP-2 Grover S-band radar.

The second system design was far enough along to proceed with purchasing action of major components. Projected funding and available manhours will permit us to have a satisfactory Doppler processor in operation by December 75 for use near Chicago, however, additional capability will be added after that time. In the Spring of 76, the first system must be upgraded to the design of the second system.

II. SIGNIFICANT EVENTS

A. Bob Serafin visited White Sands Missile Range to see their NIKE Hercules radar in operation and to determine what components would be useful to us. We plan to request transfer of 4 systems from the U. S. Army. They graciously supplied the needed information. As part of the same trip, he also visited the New Mexico School of Mines and Technology, exchanging information and learning about their plans for the thunderstorm program.

III. NEW REQUESTS FOR SUPPORT

A. Professor Hobbs, University of Washington, officially requested the use of the CP-3 Doppler radar for Seattle next November and December. The Panel will consider this request on 17-18 April 1975.

B. Dr. Bernice Ackerman (IWIS) made a telephone request for loan of the BLP and one operator for July 75. "Request for Support" forms were sent for completion and return.

C. Dr. William Clayton, Moody College, Galveston, made inquiry about using a BLP and one operator for up to 3 months this summer. A letter request is anticipated.

D. Minor meteorological equipment loan requests are about average for this time of year. Mesonet systems will be loaned to Miami and CSU for the summer.

IV. COMMENTS

A. The FOF Advisory Panel will meet in PSRB-3 on the afternoon of 17 and morning of 18 April 1975.

Harry Vaughan

-4-

4 April 1975

B. Professor Hobbs of the University of Washington has asked Firor to look at the possibility of full operational funding of FOF. This action is in its preliminary investigation stages.

- END OF REPORT -