

5 May 1975

MEMO TO: Harry Vaughan
VIA: Bob Serafin *Bob*
FROM: Walt Records *Walt Records*
SUBJECT: FOF Monthly Activities Report (April 75)

I. SYSTEMS DEVELOPMENT

- A. CP-3 Radar was at Marshall for the complete month. Some clean-up and painting were accomplished and will continue as weather permits. Storage cabinets were installed in the van and other convenience items added. Improvements to the air conditioning system and tube cooler ducting are under way. The rotary regulator was overhauled. The system will be set up and operated from about 15 May through 15 July to check out the new Doppler variance estimator, refine calibration techniques, cross train operators, check out the CP-4 Klystron tube and focus coil, and observe some local storm phenomena.
- B. CP-4 Radar remained under construction. The new 40 foot Freuhauf low bed trailer was received and the rebuilt electronics van was loaded on the trailer. The cabinets were mounted in the van and most electrical work was completed. The next major electronic construction phase will be the interwiring between the transmitter, receiver and operations console.

Machine Shop work continued on the mechanical portions of the pedestal after FOF completed the internal wiring. The antenna reflector and feed were ordered; the servo amplifiers were ordered. The forecast is for a June work order completion. Remainder of pedestal assembly will occur with arrival of components on order. Work orders were issued to begin modifying the pedestal trailer and build the radome erection crane. The only remaining major item to be recovered is the radome; one has been located and will be donated by the University of Washington.

Most of the design work is complete for the second Doppler data processing, recording and display system to be used with the CP-4 radar. Major components are on order or will be soon.

- C. Tethered Boundary Layer System work continued. Although one airborne sensor package was lost by the University of Colorado last month, three more are in construction and will be completed in May. Operational requests are on hand from Illinois State Water Survey, Moody College, Colorado State University, and one pending from the University of Washington.
- D. PAM testing continues with FOF personnel supporting the communication and remote station testing program.
- E. CP-2 Radar at Grover - Modifications and maintenance, in preparation for this summer's operations, are under way.
- F. K-band Radar development continues at a snail's pace. This set is planned for use as part of an experiment to refine rain-fall rate measurements.

II. SYSTEMS OPERATIONS

- A. 60 Inch Ruby Lidar was deployed to Oklahoma City near the instrumented WKY-TV tower in support of Project DUSTORM. Our support system is used to monitor tropospheric and stratospheric dust.
- B. GMD-1 Rawinsonde deployed to the University of Washington ended winter operations, however, the system will remain in Seattle to support their work next winter.
- C. Equipment Loans were made to the University of Miami consisting of 9 mesoscale stations, 6 mechanical weather stations and 4 cine time lapse cameras. A similar loan is pending to Colorado State University next month. Minor loans continue for 16 university and NCAR investigators.

III. TECHNIQUE DEVELOPMENT

- A. Morris continues to analyze data from the BP, rawinsonde and acoustic echo sounder taken in the Fraser Valley Study (NCAR-NOAA).
- B. Baynton continues his analysis and evaluation of mean velocity Doppler data obtained in Seattle last winter. Don Morris is expected to start writing software programs in May for processing the University of Washington data.
- C. The University of Chicago is preparing software routines to process the COPLAN data taken at Chanute in February and March 1975.

IV. OTHER ITEMS

- A. The FOF Advisory Panel met in Boulder on 17-18 April. Panel members present were Businger, Lhermitte, Lyons, Kyle, Stephens and Schotland. Boyer from NSF and various NCAR/FOF Staff were also in attendance.
- B. Gray presented a paper at the 16th Radar Meteorology Conference at Houston during the week of 21 April 1975.
- C. Al Morris attended an ASTM Committee meeting for Atmospheric Standards in Ft. Lauderdale, Florida during the week of 21 April 1975.

V. OUTLOOK

- A. Preparations are in progress to support NHRE during July at Grover in the operations, maintenance and modification of the CP-2 radar (DWL) and the Doppler processor and display system.
- B. Preparations and negotiations are being conducted to support Lhermitte with the CP-3 Doppler radar during August 1975 near Lake Okeechobee, Florida.
- C. Agreement is near for providing two BP systems and one operator to the Illinois State Water Survey near St. Louis in July 1975.
- D. Harold Baynton will attend the First AMS Conference on Regional and Mesoscale Modeling, Analysis and Prediction, May 6-9, 1975, Las Vegas, followed by a meeting of the AMS Committee for Atmospheric Measurements of which he is a member.