5 March 1975

MEMO TO: Harry Vaughan

VIA: Bob Serafin

FROM: Walt Records

SUBJECT: FOF Monthly Activities Report (Feb. '75)

I. ROUTINE PROGRAMS

A. C-Band Radar

1. CP-3 Radar

The CP-3 Doppler radar operations were discontinued in Seattle effective 7 February. Wrap-up in Seattle, move to Rantoul, Illinois, and set up there were completed by 21 February 1975. This project is a pilot dual Doppler radar experiment in preparation for later studies of frontal storms in Chicago. Data will be obtained using both chaff and snow as Doppler tracers. Intercoordination procedures between the CP-3 radar in Rantoul and the CHILL radar in Champaign are working extremely well. A good storm system was observed for about 10 hours. The CP-3 radar will cease operations in Illinois about 20 March and return to Boulder for a period of maintenance and calibrations.

There are requests for use of the CP-3 in Florida during August 1975 and near Chicago for three months during the winters of 75-76 and 76-77. We also anticipate a request from Peter Hobbs for two months next winter in Seattle.

2. CP-4 Radar

Development progress continues on the CP-4 which will complete the Dual Doppler Radar system. Completion before December 1975 is still planned if sufficient funds are made available.

B. Technique Development

Al Morris and Bob McBeth spent three weeks near Fraser, Colorado operating our new tethered Boundary Layer Instrumentation System and a rawinsonde station. This was a cooperative program with NOAA-Boulder. NCAR will receive complementary acoustic sounder data

for our analysis. Our next phase will be to analyze, compare and evaluate all data.

C. PAM

FOF continues to provide manpower resources to RSF for field testing of the remote station built by our personnel.

D. GATE

Freight from Dakar, Africa was returned to the Port of New Orleans on 24 February and should be in Boulder before the end of March 1975.

E. LIDAR

The 60 inch ruby lidar collected data at least twice weekly for Fernald with some system cleanup work accomplished. Plans call for using the system at Norman, Oklahoma in support of Project Dustorm from 6 April through 6 May 1975.

F. JMOF

NCAR presented a briefing to NSF on 14 February concerning the FY 1977 budget plan and JMOF was listed as one of the above-level funding requests. No decision expected or received this month.

G. Doppler Data Processing, Recording and Display

The "false color" radar processing and display system was retained with the CP-3 radar in Seattle and Rantoul, Illinois. Work is in progress to add a variance estimator to the system before July of this year. Planning work continued on the design for the second data processing and display system.

The first system will be operated at Grover, Colorado during July, in Florida during August, and at Seattle next winter. The second system will be operational, although not necessarily complete, in Chicago starting in December.

II. SIGNIFICANT EVENTS

The continued successful operation of the CP-3 C-band Doppler Radar and the associated Data Processing and Display systems on field programs is proving the value of this equipment. Continued refinements of hardware and operational techniques show that this new tool has substantially

improved our ability to quantitatively observe and interpret the reflectivity and velocity fields. The apparent reliability and quality of the system is evidence of the technical capabilities of the FOF and RSF staffs and their willingness to cooperate in major development programs. We would not have achieved this initial success without RSF's help.

III. NEW REQUESTS FOR SUPPORT

Professor Hobbs has requested the rawinsonde station for operation at Seattle and has verbally requested the CP-3 for two months next winter. The FOF Advisory Panel will consider these requests during April.

IV. COMMENTS

We are experiencing some major problems now. Because of the very heavy support effort, our manpower and funding is insufficient to continue the development and support activities at full potential. The funding problems can be corrected in part by the release of ATD or NCAR Directors' reserves to keep the CP-4 on schedule. The manpower deficiency is most seriously felt in the area of off-line data processing and analysis. This can be solved in part by granting FOF the programmer requested last fall and also giving serious consideration to our request for a two-year visitor.

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