

PROGRESS ON THE BASELINE UPPER AIR NETWORK

Frederick Zbar
NOAA/National Weather Service
Silver Spring, Maryland

1. BACKGROUND

The concept for an upper air baseline network arose at the first meeting of the International TOVS Study Conference at Igls, Austria during September 1983. The concept centers on improving satellite calibrations from ground based observations. The WMO Commission for Basic Systems (CBS) decided, at the Extraordinary Session at Hamburg, FRG during October 1985, that a feasibility study should be undertaken.

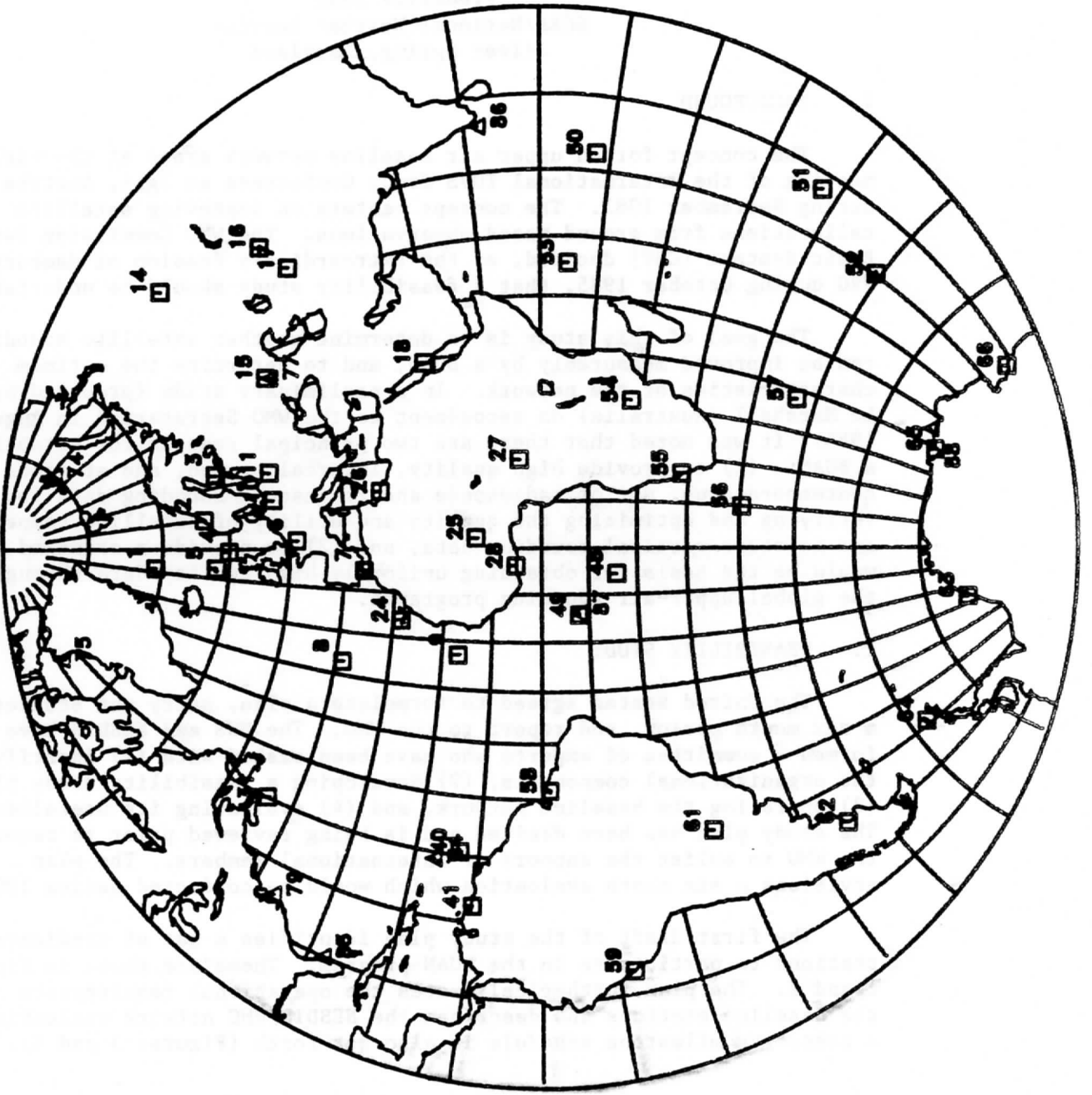
The goal of this study is to determine whether satellite soundings can be improved measurably by a BUAN, and to determine the optimum characteristics of the network. In a preliminary study (prepared by J. Le Marshall (Australia) on secondment to the WMO Secretariat in August 1985), it was noted that there are two principal reasons for establishing a BUAN: (1) to provide high quality, intercalibrated, and at times contemporaneous, set of radiosonde and rawinsonde sounding data for verifying and optimizing the quality and utility of satellite temperature and moisture vertical sounding data, and (2) to provide a standard which would be the basis for obtaining uniformly high quality data throughout the global upper-air sounding programme.

2. FEASIBILITY STUDY

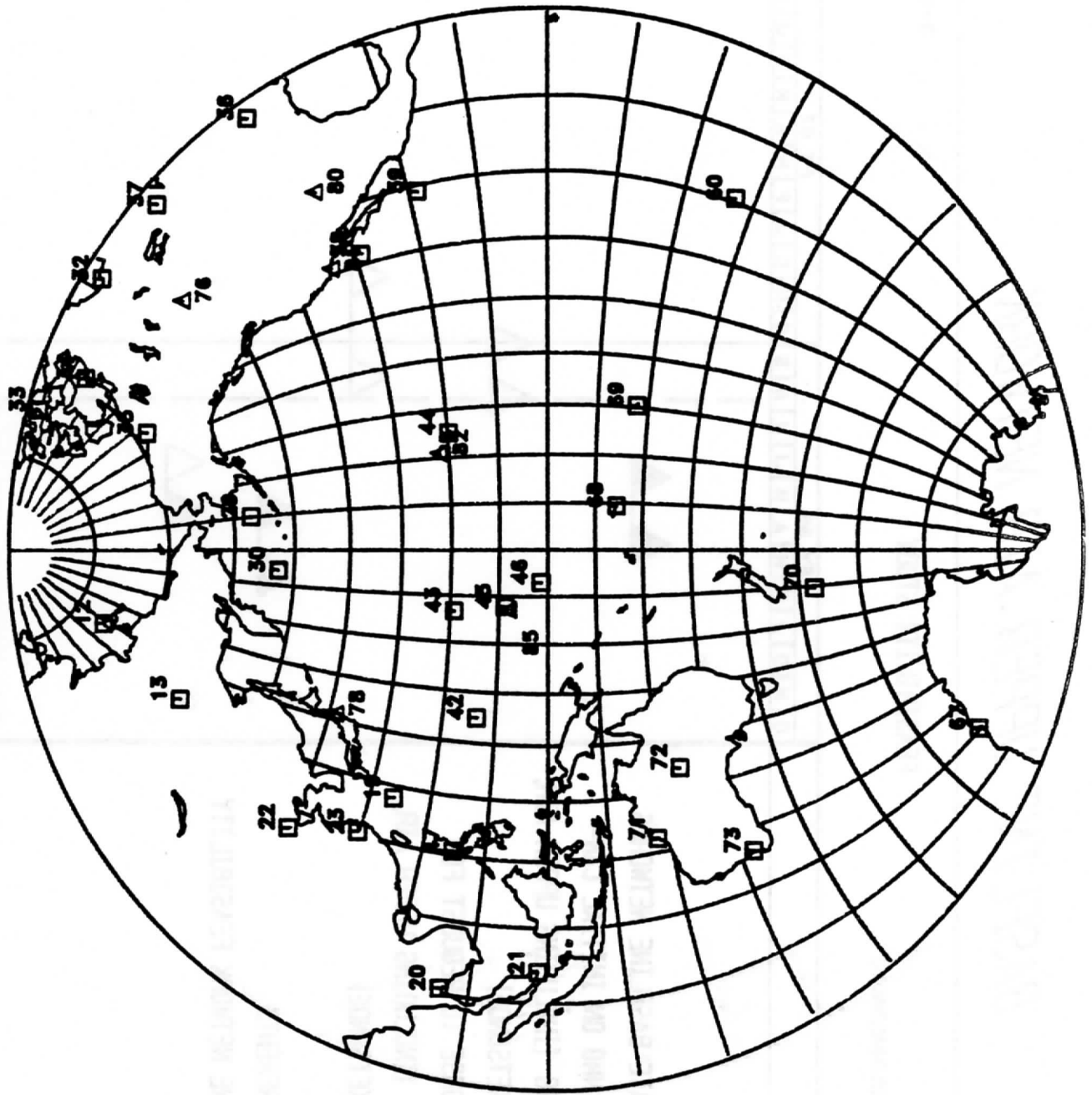
The United States agreed to formulate a plan, carry out studies for a six month period, and report to the WMO. The NWS and NESDIS have formed a committee of experts who have been tasked with (1) identifying the organizational components, (2) developing a feasibility study plan, (3) operating the baseline network, and (4) evaluating its usefulness. The study plan has been drafted and is being reviewed prior to requesting the WMO to enlist the support of international members. The plan envisions a six month evaluation which would be conducted during 1987.

The first draft of the study plan identifies a set of candidate stations to participate in the BUAN program. These are shown in Figures 1 and 2. The plan further delineates the operational requirements of the baseline stations and describes the NESDIS/NMC network evaluations. A tentative milestone schedule is also set forth (Figures 3 and 4).

**BASELINE NETWORK UPPER AIR PROGRAM
CANDIDATE STATIONS**



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CANDIDATE STATIONS**



BASELINE UPPER AIR NETWORK

8-11-86

FEASIBILITY STUDY

REQUIREMENTS (NESD/S/NMC/NWSH)

MILESTONES
MAJOR ACTION

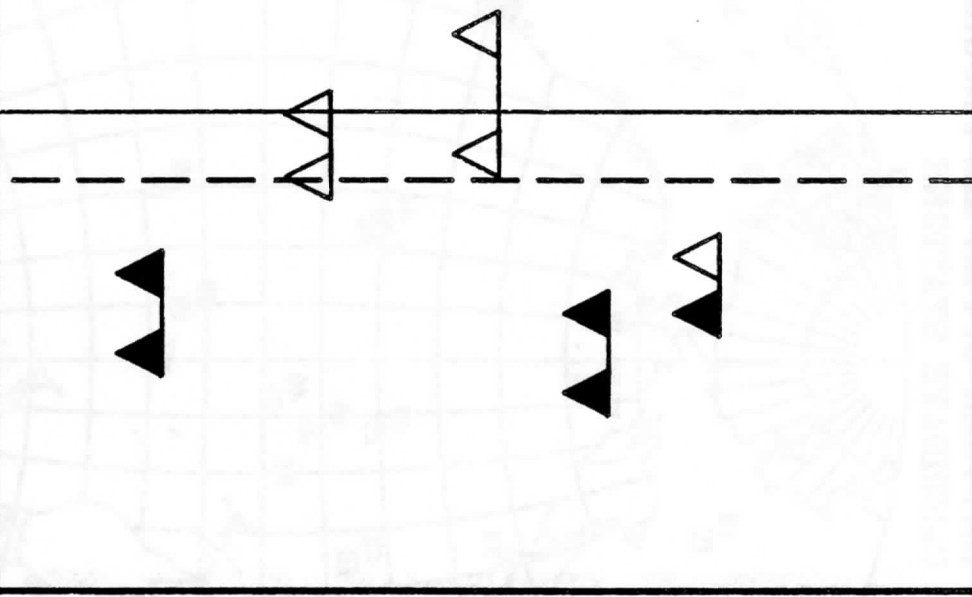
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NETWORK DESIGN:

- IDENTIFY CANDIDATE BASELINE NETWORKS
- COORDINATE WITH WMO ON INITIAL CANDIDATE STATIONS (INCLUDING UPPER AIR, ASAP, AND ROCKETSONDE)
- WMO MEMBER RESPONSE TO REQUEST FOR PARTICIPATION (INCLUDING UPPER AIR, ASAP, AND ROCKETSONDE)

BASELINE PLAN:

- IDENTIFY REQUIREMENTS
- DEVELOP BASELINE NETWORK FEASIBILITY STUDY PLAN



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BASELINE UPPER AIR NETWORK

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FEASIBILITY STUDY

EVALUATIONS AND REPORTS (NESDIS/NMC)

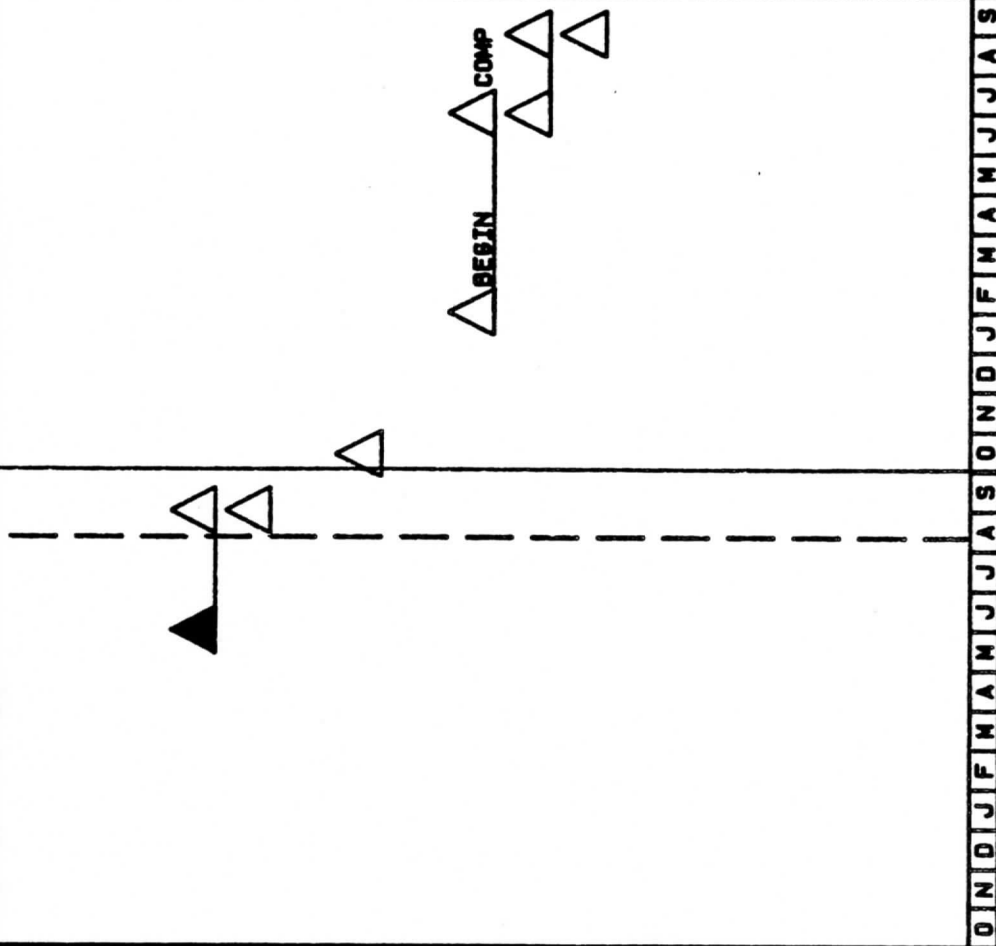
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PHASE I -- PRELIMINARY EVALUATION OF
BASELINE DATA QUALITY AND
SAMPLE SIZE

WRITE EVALUATION REPORT
SUBMIT REPORT TO AD HOC
COMMITTEE

PHASE II-- BASELINE FEASIBILITY STUDY
PERFORM STUDY
WRITE EVALUATION REPORT
SUBMIT REPORT TO WMO



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W. P. Menzel

Cooperative Institute for Meteorological Satellite Studies
Space Science and Engineering Center
University of Wisconsin
1225 West Dayton Street
Madison, Wisconsin 53706
(608) 262-0544

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