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MONTHLY REPORT

for

NOVEMBER 1978

VISSR Atmospheric Sounder (VAS)
Development and Performance Evaluation

Contract No.: NAS5-21965

Prepared by

Space Science and Engineering Center
The University of Wisconsin
Madison, WI

for

National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, MD

I. General

Operation of the Data Base Manager (DBM)-Applications Processor (AP)-User Terminal (UT) configuration of the VAS Ground System is in its second month. System problems are being diagnosed and corrected as they are detected. Near real time TIROS-N processing is now being done on this system.

II. Data Processing System Development

The DBM-AP-UT down time is shrinking; problems with disc controllers, solid state refresh, system software, and memory parity errors have been overcome. The DBM-AP communications link is still not working at its rated capacity: further diagnosis is underway. Applications software has been loaded into the system so that VAS ingest needs for VISSR, TIROS-N, surface, and upper air data can be met. The software has been written so that all ingest constraints originate from the hardware; none are introduced by the software. The data base management of big areas and combinations of areas is being accomplished; the DBM simultaneously handles whole world images at 3 mile resolution, US images at half mile resolution, sounding data at 40 mile resolution and conventional weather data at synoptic scale.

The TIROS-N receiving system continues to track the NOAA polar orbiting sounder. Automatic tracking was achieved in this past month, after some initial difficulties with the antenna rotors were overcome. Reception and processing of HIRS data in addition to MSU data was realized as soon as the HIRS instrument problems cleared up. Near real time processing is being done daily on the DBM-AP-UT configuration, now that all the applications software has been transferred over from the McIDAS system.

III. Development of VAS Data Processing Techniques

An archive of sounding data has been started and a statistical study is

underway. Because of problems with the reflected sunlight correction in the short wave channels, the statistics are being separated into day and night categories. This is being accomplished with man interactive data analysis and quality control using coordination of sounder and conventional weather data. Coordination with VISSR data is awaiting some software changes.

Preparations are underway for a study of the impact of TIROS-N data on subjective weather forecasts.

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THE UNIVERSITY OF WISCONSIN

10 December 1978

Mr. J. B. Connor
Contracting Officer, Code 289
NASA--Goddard Space Flight Center
Greenbelt, MD 20771

Dear Mr. Connor

In accord with Article III of Contract NAS5-21965, I am submitting the required Progress Report for the month of December, 1978.

If you have any questions or desire further information, please contact me at (608) 262-0118.

Sincerely,

Paul Menzel

Paul Menzel
Program Manager

WPM/jal

Enclosure

cc: H. Montgomery, Code 942 (10 copies)