Issued: 15 November 1976

MONTHLY REPORT

for

OCTOBER 1976

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

Much of the VAS effort at SSEC for the past month has been focussed on preparation of the System Definition Review. The functional requirements of the system, the approach to satisfy these requirements, and the basic procedures involved were presented to the UW Meteorology department for preliminary review. The collection and assimilation of as complete a four dimensional description of the state of the atmosphere as possible was identified as a primary goal of the UW VAS effort. Techniques for system evaluation and optimization with man interaction were conceptually identified. The agenda for the review on November 9, 1976 was constructed (see enclosure).

II. Data Processing and System Development

The VAS antenna system is scheduled for completion on January 15, 1977. Progress in four areas of the antenna construction is as follows:

(a) The antenna mount design and fabrication have been completed. The mount is already in place. Actuating parts are almost all fabricated.

(b) The position control system has been designed, the parts have been ordered, and fabrication is scheduled to start in three weeks.

(c) The signal system feed has been designed and fabrication is nearly completed. Signal processors have been ordered. Frame and bit synchronizers are near design completion and fabrication will start soon.

(d) The antenna reflector is on order with delivery scheduled for December 15, 1976.

Agenda for System Definition Review

on November 9, 1976

at SSEC in Room 148

9:00 a.m.	I.	INTRODUCTION -- R. Krauss A. Objectives B. Description of Proposed Tasks C. SSEC Approach to VAS Demonstration
10:00 a.m.	II.	FRAMEWORK FOR SYSTEM DEFINITION -- L. Sromovsky A. Stages in System Development B. Structure of a System Definition C. General Definition of System Elements D. Role of Feedback Interactions E. Role of Man Interactions
11:00 a.m.		COFFEE BREAK
11:15 a.m.	III.	DATA COLLECTION -- P. Menzel A. What Sources and Why B. Concept for Selection of VAS Operating Mode C. Status of Data Collection Definition
Noon		LUNCH
1:30 p.m.	IV.	ANALYSIS -- H. Revercomb A. Inputs and Outputs B. Techniques
2:30 p.m.	V.	SYNTHESIS AND MODELLING -- L. Sromovsky and V. Suomi A. Basic Object of Synthesis B. Required Synthesis Functions C. Types of Models Used in Synthesis D. Addition of New Information E. A Process for Data Set Synthesis F. Status
3:30 p.m.		COFFEE BREAK
3:45 p.m.	VI.	PROGRAM PLAN -- V. Suomi

SPACE
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THE UNIVERSITY OF WISCONSIN

15 November 1976

Mr. Ray Hesson
Contracting Officer, Code 287
NASA--Goddard Space Flight Center
Greenbelt, MD 20771

Dear Mr. Hesson:

In accordance with Article III of Contract NAS5-21965, I am submitting the required Progress Report for the month of October, 1976.

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

Sincerely,

L. A. Sromovsky
Co-Investigator

LAS/rmk

Enclosure

cc: J. Moody, Code 726 (10 copies)