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5 September 1985

MEMORANDUM FOR THE DIRECTOR, NATIONAL RECONNAISSANCE OFFICE

SUBJECT: Semiannual Program Report

Attached is the Program A Semiannual Program Report for the period 1 January 1985 through 30 June 1985.

Ralph H. Jacobson

RALPH H. JACOBSON
Major General, USAF
Director

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Semiannual Program
Report, as of 30 Jun 85

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SEMIANNUAL PROGRAM REPORT

CONTENTS

SUBJECT	PAGE
Summary	3
Project HEXAGON	9
[redacted]	11
	30
	35
Project 989 (P989)	39
[redacted]	44
Satellite Operations and Tactical Support	49
Operations Support and Integration	52
Personnel and Administration	70
BYEMAN Policy and Security	79
Financial Management	88
Air Force Satellite Control Facility	89
Procurement	93

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SEMIANNUAL PROGRAM REPORT

PROJECT 989

Program Manager: Lt Colonel Jon H. Bryson

Summary:

Three 989 satellites were operational during this reporting period. The average combined tasking level for the six month period was 354 minutes per day. Operation of RAQUEL IA continued with no new anomalies. URSALA III was returned to on-orbit storage with the successful launch and on-orbit checkout of FARRAH II. Authorization to conduct real time transpond operations with URSALA III and RAQUEL IA at Oakhanger tracking station was suspended on 13 Jun 84 due to security reasons with transponding unencrypted data to Oakhanger. URSALA IV, which sustained a failure on 2 Sep 83, remains non-operational. FARRAH I sustained a CMOS memory latch-up in its data handler buffer memory on 15 Mar 84. Modifications to the processing system to compensate for this failure have been implemented and acceptable geopositioning accuracy is being maintained for FARRAH I. FARRAH II is fully operational.

Development activities continued on LORRI II with the emphasis on payload integration and test. The FARRAH III acquisition is proceeding on schedule.

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1. Specific Status

a. On-Orbit Spacecraft

(1) Mission 7343/URSALA III: URSALA III, in its 107th month on-orbit, continues in on-orbit storage.

(2) Mission 7345/RAQUEL IA: RAQUEL IA, in its 87th month of operation, continues to provide technical intelligence collection in the 4-18 GHz region. This vehicle continues to operate satisfactorily, but because only one recorder remains operational, the number of recorder cycles per day is limited to two. An average of nine transpond segments per day are being completed. RAQUEL IA supports 20-50 minutes of tasking per day.

(3) Mission 7344/URSALA IV: The mission of URSALA IV is general search, operational ELINT and technical intelligence over the 2-12 GHz spectrum. URSALA IV, which is in its 75th month on-orbit, sustained a failure on 2 Sep 83 and is inoperable. Repeated attempts to correct a short on the output of its payload power supply have failed to correct the problem. Redundant supplies, variation in temperature and spin rate, and switching of all possible loads were tried throughout this six-month reporting period. With the launch of FARRAH II, routine status passes were suspended and the vehicle is now relegated to test vehicle status for the P-989 Mission Control Team.

(4) Mission 7346/FARRAH I: The mission of FARRAH I consists of general and directed search, operational ELINT, and technical intelligence over the 2-18 GHz region. The vehicle is in its 37th month of operation and is supporting approximately 84 minutes of collection per day. Limitations on tasking remain in effect to avoid Low Voltage Cutoff. Battery capacity is measured periodically. Tape Recorder 1 is being operated in 1 to 1 mode only.

(5) Mission 7347/FARRAH II. FARRAH II completed one year of service with all systems fully

operational. Tasking is currently averaging 251 minutes per day.

b. Vehicles Under Development and Test

(1) Mission 7242/LORRI II: The LORRI II pallet development activities continued with the EHF, VHF and W-Band payload boxes completing all testing. The payload was delivered to the Prime Contractor in mid-December to begin integration into the pallet system and system test. Pallet integration testing was completed in May 85 and Host Vehicle compatibility tests were completed in June. Environmental tests will start in August.

(2) Mission 73XX/FARRAH III: FARRAH III development and acquisition continue on schedule. The

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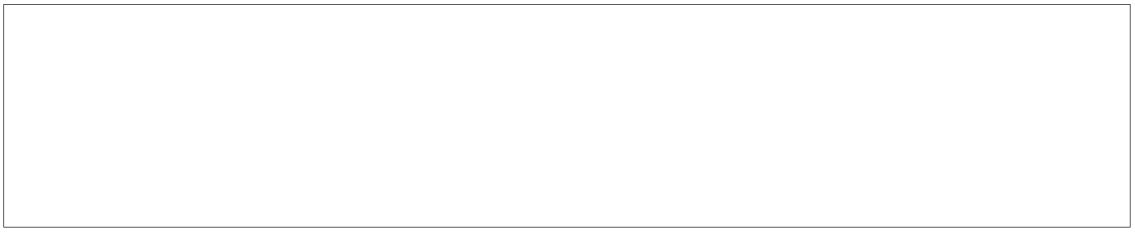

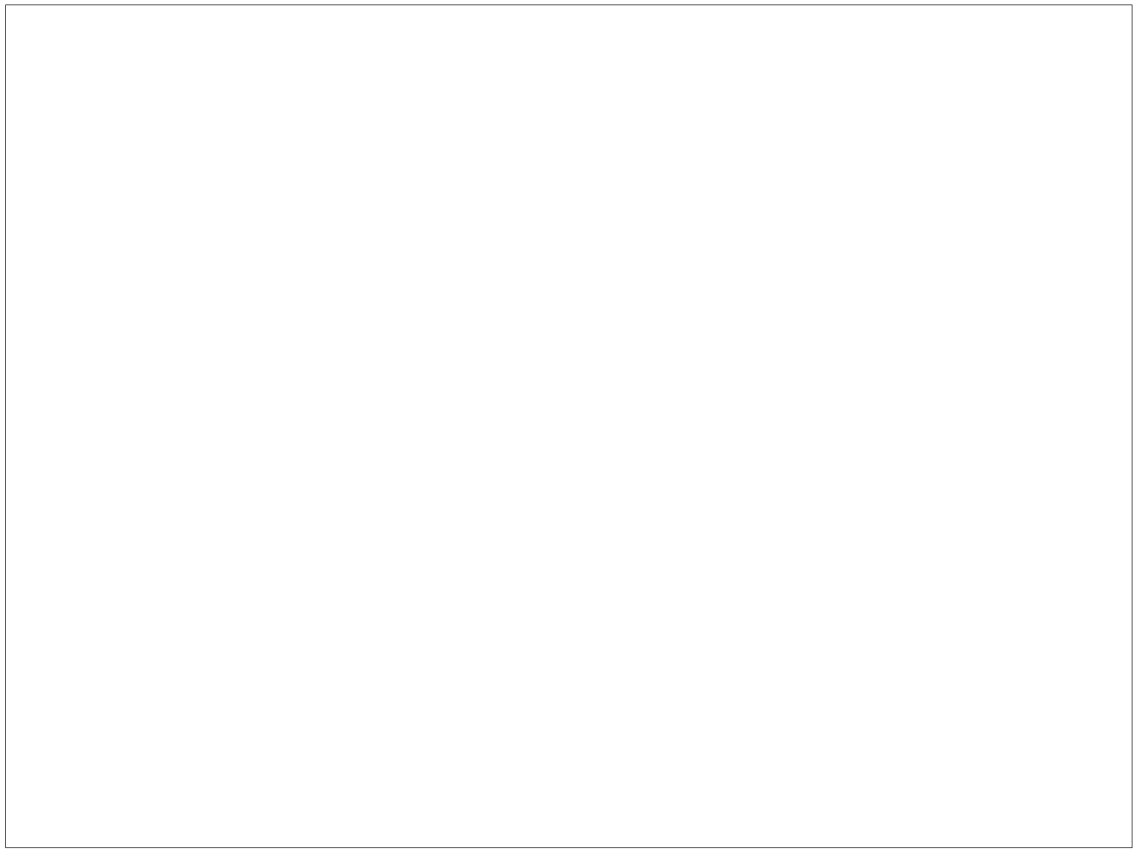

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d. Transportable Mission Planning System (TMPS)

(1) During this reporting period, the contract to provide a survivable, Transportable Mission Planning System (TMPS) was negotiated as of Apr 85 and is proceeding on schedule. TMPS will be capable of mission planning, recording mission data, generating

spacecraft tasking commands, and maintaining spacecraft state-of-health during contingency operations resulting from increasing levels of conflict or natural disaster. System Requirements Review was successfully conducted in Jun 85. PDR is scheduled for Sep 85 and CDR for Feb 86. Acceptance is scheduled for Apr 87 with an on-orbit initial operating capability in Jan 88.