C05098568

~~TOP SECRET~~   ~~HEXAGON~~   25X1

P-11/P-770B/P-989   25X1

I

    (7301 through 7347, and 7241, 7242)
    Date of Inception - 1962
    Date of Termination - Ongoing

II

Major Project Milestones

First launch, non-NRO - Hitch Hiker, 18 Mar 1963
First launch, NRO mission - Pundit, 29 Oct 1963
First heavy P-11 - Tivoli II, 19 Mar 1969
First subsat launch from HEXAGON - Mabeli, 20 Jan 1972

III Number and date of flights - See Attachment

IV System Description

    The [   ] system was built originally as piggy back racks 25X1
on the Agena aft racks of host spacecraft, to provide low
altitude SIGINT collection of denied areas. The system evolved
into piggyback satellites being ejected from the HEXAGON
spacecraft starting in January 1972. The systems provide single
satellite geolocation ELINT and selected communications mapping
intelligence. The products support S&T intelligence and timely
operational needs. The S&T exploitation is used for development
of threat assessments, countermeasures and tactics. The
operational needs supported are I&W, threat recognition and
support of force application decisions. This last information is
provided in wide area ELINT general search mode. The boosters
used besides HEXAGON were Thor, Thrust Augmented Thor (TAT), the
Long Tank TAT (LTTAT). The altitude flown began at about 275 NM
altitude and the inclinations were polar and nearly sun-
synchronous when launched from HEXAGON. The weights of the
packages have frown from 270 lbs. to about 2000 for the latest
spacecraft. Two recent pallet payloads of this system have
investigated Soviet signals at the higher frequencies in the GHz
ranges.

V Principal Contractors

LMSC - spacecraft   Conic
Aerospace Labs   Watkin-Johnson
Sylvania, EDL   Teledyne
Stanford (SEL)   Itek/ATI
AVCO - command system   HRB Singer
ESL   AIL
LTV   Motorola
E-Systems (LTV)

VI AF Requirements and Impact - See other Attachment

~~TOP SECRET~~

Handle Via
BYEMAN
Control System Only

HISTORY OVERVIEW

SYSTEM	LAUNCH DATE	FREQUENCY COVERAGE	MISSION	DURATION (MONTHS)
4201	7/63		VAN ALLEN BELT	2
4001	10/63		SOV TLM	19
4101	12/63		" "	3
4301	7/64		GS	1
4202	8/64		VAN ALLEN BELT	15
4302	10/64		RADAR GS	4
4401	4/65		SOV TLM	21
4402	6/65		RADAR – DF	21
4403	8/65		" "	20
4404	5/66		DF	–
4405	8/66		GS – DF	14
4406	9/66		GS – DF	4
4408	5/67		RADAR DF	3
4409	6/67		SOV TLM	16
4410	11/67		RADAR	3
4412	1/68		RADAR	15
4411	3/68		RADAR	12
4420	6/68		GS – EOB	18
4413	9/68		GS – RADAR	12

Frequency coverage scale (MHz): 100, 300, 500, 700 — (GHz): 3, 5, 7, 10, 30, 50, 70

GS = GENERAL SEARCH

EOB = ELECTRONIC ORDER OF BATTLE

SECRET 25X1

HISTORY OVERVIEW (Cont'd)

SYSTEM	LAUNCH DATE	FREQUENCY COVERAGE		MISSION	DURATION (MONTHS)
		MHz (100, 300, 500, 700)	GHz (3, 5, 7, 10, 30, 50, 70)		
4418	3/69			RADAR - DF - PRE D	18
4417	5/69			GS - RADAR	10
4419	9/69			SOV TLM	20
4407	9/69			COMM SEARCH	11
4422	3/70			RADAR SEARCH	20
4421	5/70			RADAR - EOB - GS	28
4423	11/70			TROPO - TI - GEO	45
4427	9/71			MICROWAVE - GEO	1
4424	1/72			TI - POL - PWR	72
4425	7/72			GS - EOB	48
4426	11/73			EOB	36
4428	4/74			TROPO	7
4429	11/74			GS - TI	64
4430	7/76			EOB - GS	96
4432	3/78			GS - TI - EOB	OPER
4431	3/79			EOB - GS	54
FI 4433	5/82			GS - TI - EOB	OPER
FII 4434	6/84			GS - TI - EOB	OPER
LII	(85-86)			GS -	

SECRET 25X1