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SIGINT RECONNAISSANCE FAILURES/ANOMALIES DURING PERIOD JUNE 1960 THRU MARCH 1973

PART I

Catastrophic Failures

Any component failure within launch or on-orbit vehicle which voided the mission.

PROGRAM	MISSION NUMBER	LAUNCH DATE	CAUSE OF FAILURE
GRAB II		Nov 60	Failed on launch.
TAKI	(1120)	13 Jan 62	AGENA failed to orbit.
GRAB IV		24 Jan 62	No orbit due to last stage failure.
GRAB V		23 May 62	Failed to achieve orbit.
RED VINO II	7206	28 Feb 63	Vehicle aborted on launch and was destroyed.
PUNDIT III	7303	8 Oct 64	Did not obtain orbit.
LIEGE/PLICAT	7310/11	14 May 66	Short circuit in command system precluded tape recorder readout.
MULTIGROUP-3/ SETTER1B	7163/ 7232	17 Jan 68	Abnormality in the vehicle command system significantly reduced payload operation. Failure occurred in the modulation amplifier of transmitter number 1.
LAMPAN/ SAMPAN	7322/ 7323	14 Mar 68	Links 3 and 4 so noisy that data cannot be processed.

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PART II

Severe Mission Impacts

Any failure which has a significantly degrading effect upon the planned mission.

PROGRAM	MISSION NUMBER	LAUNCH DATE	CAUSE OF SEVERE MISSION IMPACTS
GRAB I		22 Jun 60	Six-month expected life; 10-week actual life.
ROB	315-ID	31 Jan 61	Payload failed after first day.
TAKI I	(1107)	16 Jun 61	Payload failed to intercept radar due to circuit malfunction.
WILD BILL I	(1109)	7 Jul 61	Payload recorder malfunction. 40% loss of data.
TEXAS PINT I	(1112)	30 Aug 61	Command system failed after first orbit due to blown fuse. 75% data loss thereafter.
TOPSOC II	(1114)	18 Sep 61	400 cycles power failure end pass 34.
TOPSOC III	(1115)	13 Oct 61	2 KC power failure end pass 31.
GRAPE JUICE I	(1119)	12 Dec 61	Power failed first day. Lost T/M link end pass 9. Interference and spurious signal limited data.
ROB	7152 P315 III	18 Jun 62	Failure after 25 hours due to malfunction of stability mechanism.
NEW JERSEY I	(1131)	27 Jul 62	Locator finder technique proved unworkable due to clock failure.
RED VINO I	7203	5 Dec 62	Very low orbit achieved; went down on third day of 12-14 day mission.
WILD BILL II	7202	13 Dec 62	Eccentric orbit -- last R-O pass 254 suspect recorder failure.
TAKI III	7204	14 Dec 62	12-14 day expected life; actual 6 days.
NEW JERSEY II	7205	7 Jan 63	12-14 day expected life; actual 6 days.
ROB	7153 P315 IV	16 Jan 63	Tape recorder became inoperative on pass 24.
WILD BILL III	7207	12 Jun 63	Loss of power on Day 16 of 30-day mission.
POPPY	7102	15 Jun 63	The three satellites orbited on non-nominal orbit caused by no second burn of AGENA.
ROB	7154 698BK	29 Jun 63	17-day expected life; actual 11 days.
PLYMOUTH ROCK	7208	29 Jun 63	Inverter failed on Day 11 of 17-day mission causing loss of all 3 phase power to payload.

PROGRAM	MISSION NUMBER	LAUNCH DATE	CAUSE OF SEVERE MISSION IMPACTS
HAYLOFT	7201	11 Jan 64	Wideband 50KC became inoperative as of Rev 14.
ROB	7156 698BK	27 Feb 64	30-day expected life; actual 16 days.
BIRD DOG II	7212	27 Feb 64	Payload recorder noisy. The Amie recorder failed and the encryption was unreliable.
LONG JOHN IV	7224	13 Jun 64	50KC recorder failed after 16 days of 20-day mission.
102 GRP IID	7155	2 Jul 64	30-day expected life; actual 5 days.
BIRD DOG	7211	2 Jul 64	Approximately 130 revs could not be used due to beacon problems from Rev 75 to Rev 249.
NOAHS ARC	7304	6 Jul 64	6-month expected life; actual 1 month.
STEP 13	7305	23 Oct 64	Recorder malfunctioned during mission in random fashion.
BIRD DOG	7226	23 Oct 64	Malfunctioned Rev 1.
BIRD DOG III	7213	4 Nov 64	Batteries #2 and #1 failed; both payloads disabled on Rev 38.
SQUARE TWENTY	7225	28 Oct 65	Battery failed after Rev 183.
FANION II/ TRIPOS II	7317/ 7318	16 Sep 66	Tape recorder #1 malfunction; failed to read out.
MULTIGROUP I	7161	9 Dec 66	Temperature and battery problems throughout life. Collection reduced 50% due to power limitations.
MULTIGROUP II	7162/ 7230	25 Jul 67	High temperature problems throughout life.
SLEWTO FANION III	7316 7319	9 May 67	Downlink transmission precluded utilization of the one MHz recorder with the SLEWTO payload. SLEWTO payload inoperative from Rev 1367 thru Rev 1409 due to the inability to turn vehicle on. On Rev 1177, 14 Jul 67, oscillation of the FANION payload caused failure of the DC to DC converter on the payload.
ARROYO (989)	7337	16 Sep 71	Power control oscillator or synthesizer failure -- mission ended 12 Oct 71.

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PART III

Orbital Anomalies

Any equipment failure or partial failure which occurred during the mission, but was of minimal impact as a result of: (1) the nature of the failure, (2) the ability to switch to a redundant system, and (3) the development of work-around procedures.

PROGRAM	MISSION NUMBER	LAUNCH DATE	ANOMALIES

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LOW ORBITERS

WILD BILL	(1123)	27 Feb 62	Limited data acquired due to low TM signal strength.
WILD BILL IV	7216	15 Jun 63	Noisy data.
LONG JOHN II	7219	27 Nov 63	Wideband transmitter malfunction after MMD.
PUNDIT II	7302	21 Dec 63	Recorder failures made continuation impractical after 81 days of 90-day mission.
LONG JOHN III	7222	15 Feb 64	Recorder failed after MMD.
MAGNUM	7312	3 Aug 65	Payload antenna did not extend until approximately Rev 251.

LOW ORBITERS (continued)

PROGRAM	MISSION NUMBER	LAUNCH DATE	ANOMALIES
SAMPAN/ SOUSEA	7314 7315	16 Aug 66	Horizon sensor did not work during mission life.
SAVANT	7320	16 Jun 67	Noisy data link, tape recorder failure.
FACADE	7321	2 Nov 67	Various problems.
POPPY	7106	30 Sep 69	Failure of three sub-satellites prior to MMD. (Two failures within severely reduced capability.)
STRAWMAN IV	7240	16 Jul 71	HARVESTER payload antenna failure. 50% mission capability lost.
	7167/ 7236		THRESHER/REAPER tape recorder failures terminated TI capability.
MABELI	7339	20 Jan 72	Degraded sensitivity in one receiver. Phase encoder anomaly - 45-day loss of power data.
URSALA	7338	7 Jul 72	Payload overheating resulted in 6-day loss of pulse radar data.

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