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NATIONAL RECONNAISSANCE OFFICE

14675 Lee Road Chantilly, VA 20151-1715

19 February 2014

Mr. John Greenewald, Jr.

Dear Mr. Greenewald:

This is in response to your request dated 15 November 2013, received in the Information Management Services Office of the National Reconnaissance Office (NRO) by way of referral from the National Security Agency (NSA) on 6 January 2014. Pursuant to the Freedom of Information Act (FOIA), you are requesting "a copy of the Intellipedia entry for...CORONA."

Your request has been processed in accordance with the FOIA, 5 U.S.C. § 552, as amended. NSA provided to us nineteen (19) pages responsive to your request. These pages are being released to you in part.

Material redacted is denied pursuant to FOIA exemption (b)(3), specifically Section 6, Public Law 86-36 (50 U.S.C 3605, formerly 50 U.S.C. 402 <u>note</u>); and (b)(6), which applies to information which, if released, would constitute a clearly unwarranted invasion of the personal privacy of individuals.

The FOIA authorizes federal agencies to assess fees for record services. Based upon the information provided, you have been placed in the "other" category of requesters, which means you are responsible for the cost of search time exceeding two hours (\$44.00/hour) and reproduction fees (.15 per page) exceeding 100 pages. In this case, no assessible fees were incurred in the NRO's processing of your request. Additional information about fees can be found on our website at www.nro.gov.

You have the right to appeal this determination by addressing your appeal to the NSA/CSS Freedom of Information Act Appeal Authority. The appeal must be postmarked no later than 60 calendar days after the date of the initial denial. The appeal shall be in writing to the NSA/CSS FOIA Appeal Authority (DJ4), National Security Agency, 9800 Savage Road STE 6248, Ft. George C. Meade, MD 20755-6248. The appeal shall reference the initial denial of access and

shall contain, in sufficient detail and particularity, the grounds under which the requester believes release of information is required. The NSA/CSS FOIA Appeal Authority will endeavor to response to the appeal within 20 working days of receipt, absent unusual circumstances.

If you have any questions, please call the Requester Service Center at (703) 227-9326 and reference case number F14-0024.

> Sincerely, Dinned R. Dory for

Kimberley W. Condas

(Acting) Chief, Information Review

and Release Group

Enclosure: Corona (satellite) From Intellipedia

(b) (3)-P.L. 86-36

(U) Corona (satellite)

UNCLASSIFIED

From Intellipedia

Corona was a US military reconnaissance satellite system operated by the CIA Directorate of Science & Technology with substantial assistance from the US Air Force, used for photographic surveillance of the Soviet Union, China and other areas from June 1959 until May 1972. The project name is sometimes given as CORONA, but it is a codeword, not an acronym.

The project was accelerated after the U-2 incident in May 1960.

The satellites were designated KH-1, KH-2, KH-3, KH-4, KH-4A and KH-4B. KH stood for Key Hole or Keyhole (Code number 1010)^[1], and the incrementing number indicated changes in the surveillance instrumentation, such as the change from single-panoramic to double-panoramic cameras. The KH naming system was first used in 1962 with KH-4 and the earlier numbers were retroactively applied. There were 144 Corona satellites launched, of which 102 returned usable imagery.



KH-4B Corona satellite



Recovery of Discoverer 14 return capsule (typical for the Corona series)

Contents

- ! Technology
- 2 Ground support
- 3 Discoverer
- 4 Corona launches
- 5 Declassification
- 6 Launches
- 7 See also
- · 8 Popular culture
- 9 References
- 10 External links

Technology

The Corona satellites used 31,500 ft (9,600 m) of special 70 mm film with a 24 inch (0.6 m) focal length lens. Initially orbiting at 165 to 460 km, the cameras could resolve images on the ground down to 7.5 m. The two KH-4 systems improved the resolution to 2.75 m and 1.8 m respectively and used a lower altitude pass.

Ironically, the name Corona was more fitting than its originators had ever imagined. The initial missions of the program suffered from many technical problems, among them, mysterious fogging and bright streaks were seen on the returned film of some missions, only to disappear on the next mission. Eventually it was determined by a collaborative team of scientists and engineers from the project and from academia, (among them: Luis Alvarez, Sidney Beldner, Malvin Ruderman, and Sidney Drell) that electrostatic discharges (called corona discharge) caused by rubber components of the camera, were exposing the film. Recommended corrective actions solving the problem included better grounding of spacecraft components and outgassing testing of parts before launch. These practices are still used

on practically all US reconnaissance satellites today.

Ground support

The Air Force credits Onizuka Air Force Station as being the "birthplace of the Corona program." [2]

Discoverer

The initial Corona launches were obscured as part of a space technology program called **Discoverer**, the first test launches for which were in early 1959. The first launch with a camera was June 1959 as Discoverer 4, which was a 750 kg satellite launched by a Thor-Agena rocket. The satellites returned film canisters to Earth in capsules, called "buckets", which were recovered in mid-air by a specially equipped aircraft during their parachute descent (they were designed to float in water for a short period of time, and then sink, if the mid-air recovery failed).

The return capsule of the Discoverer 13 mission, which launched August 10, 1960, was successfully recovered the next day. [3] This was the first time an object had been successfully recovered from orbit. After the launch on August 18, 1960 of Discoverer 14, a film bucket was successfully retrieved two days later by a C-119. This was the first successful return of photographic film from orbit. In comparison, Sputnik 5 launched into orbit on August 19, 1960, one day after the launch of Discoverer 14. Sputnik 5 took into orbit and then safely returned to Earth the two Soviet space dogs, Belka and Strelka. [4]

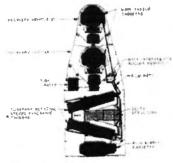


Diagram of "J-1" type stereo / penoramic reciprocating Corona reconnaissance satellite camera system used on KH-4A missions from 1963 to 1969.



Corona image of the Pentagon, 25 Sep 1967

At least two Discoverer launches were used to test satellites for the Missile Defense Alarm System, an early missile-launch-detection program that used infrared cameras to detect the heat signature of rockets launching to orbit.

The Corona film-return capsule was later adapted for the KH-7 GAMBIT satellite, which took higher resolution photos.

The last launch under the Discoverer name was Discoverer 38 on 1962-02-26; with a successful midair recovery of the capsule on the 65th orbit (13th recovery, 9th in midair). [5] After that, the launches were entirely secret. The last Corona launch was on 1972-05-25. The project was abandoned after a Soviet submarine was detected waiting below a Corona mid-air retrieval zone. The best sequence of Corona launches was from 1966 to 1971, when there were 32 consecutive launch-and-film-recoveries.

An alternative program named SAMOS included several satellite types that used a different method, taking an image on film, developing the film on board the spacecraft, and then scanning the image and transmitting it to the ground. The Samos E-1 and E-2 satellite programs used this technology, but it was not able to take many pictures and relay them to the ground each day. Later Samos programs, such as the E-5 and the E-6, used the film-return approach, but neither one was successful.

Corona launches

Source: USGS[6]

Time period	No.	Nickname	Resolution	Notes	Number
Jun 1959 Sep 1960	KH-1	"Corona", C [7]	7.5 m	First series of US imaging spy satellites. Each satellite carried a single panoramic camera and a single return vehicle.	10 systems; 1 recovery.
Oct 1960- Oct 1961	KH-2	Corona', C',(C-prime)*	7.5 m	Single panoramic camera and a single return vehicle.	7 systems; 4 recoveries.
Aug 1961- Jan 1962	KH-3	Corona", C",(C-triple- prime)	7.5 m	Single panoramic camera and a single return vehicle.	9 systems; 5 recoveries.
Feb 1962- Dec 1963	KH-4	Corona-M, Mural	7.5 m	Film return. Two panoramic cameras.	26 systems; 20 recoveries.
Aug 1963- Oct 1969	KH-4A	Corona J-1	2.75 m	Film return with two reentry vehicles and two panoramic cameras. Large volume of imagery.	52 systems; 94 recoveries.
Sep 1967- May 1972	KH-4B	Corona J-3	1.8 m	Film return with two reentry vehicles and two panoramic cameras.	17 systems; 32 recoveries.
Feb 1961- Aug 1964	KH-5	Argon	140 m	Low-resolution mapping missions; single frame camera.	12 systems; 5 recoveries.
Mar 1963- July 1963	KH-6	Lanyard	1.8 m	Experimental camera in a short-lived program.	3 systems; 2 recoveries.

[&]quot;(The stray "quote marks" are the original designations of the first three generations of cameras, as described in Perry's history.)

Declassification

Corona was officially secret until 1992. On February 22, 1995, the imagery acquired by the Corona and two contemporary programs (Argon and Lanyard) was declassified. Review of "obsolete broad-area film-return systems other than Corona" mandated by the order led to the 2002 declassification of the imagery from KH-7 and the KH-9 low-resolution camera system.

The declassified imagery has since been used by a team of scientists from the Australian National University to locate and explore ancient habitation sites, pottery factories, megalithic tombs, and Palaeolithic remains in northern Syria. [9][10][11]

Launches

Corona (satellite) - Intelligedia 1

Mission No.	Cover Name	Launch Date	NSSDC ID No.	Alt. Name	Camera	Notes
R&D	Discoverer	21 Jan 1959	1959-E01 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-E01)	1959-E01	none	Mission Failed. Failed to achieve orbit
R&D	Discoverer 1	28 Feb 1959	1959-002A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-002A)	1959 BET	none	First object in polar orbit
R&D	Discoverer 2	13 Apr 1959	1959-003A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-003A)	1959 GAM	none	First three-axis stabilized satellite; capsule recovery failed
R&D	Discoverer 3	03 Jun 1959	DISCOV3 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISCOV3)	1959-F02	none	Failed to orbit
9001	Discoverer 4	25 Jun 1959	DISC4 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC4)	1959-U01	KH-1	Mission failed. Failed to achieve orbit.
9002	Discoverer 5	13 Aug 1959	1959-005A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-005A)	1959 EPS	KH-1	Mission failed. Power supply failure. No recovery.
9003	Discoverer 6	19 Aug 1959	1959-006A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-006A)	1959 ZET	KH- 1	Mission failed. Retro rockets malfunctioned negating recovery.
9004	Discoverer 7	07 Nov 1959	1959-010A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-010A)	1959 KAP	KH -1	Mission failed. Failed to achieve orbit. [citation needed]
2005	Discoverer 8		1959-011A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1959-011A)	1959 LAM	KH-1	Mission failed. Eccentric orbit negating recovery.
2006	Discoverer 9	04 Feb 1960	DiSC9 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DiSC9)	1960-F01	KH -1	Mission failed. Failed to achieve orbit.
9007	Discoverer 10	19 Feb 1960	DISC10 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC10)	1960-F02	KH-1	Mission failed. Destroyed just after launch due to erratic attitude.
8000	Discoverer 11	15 Apr 1960	1960-004A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-004A)	1960 DEL	KH-1	Mission failed. Attitude control system malfunctioned.
R&D	Discoverer 12		DISC12 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC12)	1960-F08	none	Failed to orbit

R&D	Discoverer 13	10 Aug 1960	1960-008A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-008A)	1960 THE	none	Tested capsule recovery system; first successful capture.
9009	Discoverer 14	18 Aug 1960	1960-010A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-010A)	1960 KAP	КН-1	First successful recovery of IMINT from space. Cameras operated satisfactorily.
9010	Discoverer 15	13 Sep 1960	1960-012A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-012A)	1960 MU	KH-1	Mission failed. Attained orbit successfully. Capsule sank prior to retrieval.
9011	Discoverer 16	26 Oct 1960	1960-F15 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-F15)	1960-F15	KH-2	Mission failed. Satellite failed to separate from booster. Failed to achieve orbit.
9012	Discoverer 17	12 Nov 1960	1960-015A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-015A)	1960 OMI	KH-2	Mission failed. Obtained orbit successfully. Film separated before any camera operation leaving only 1.7Expression error: Unrecognised word "abs"ft (Expression error: Unrecognised word "e"Expression error: Unrecognised word "ore "expression error: Unrecognised word "ore "in the separated word "abs"m) of film in capsule.
9013	Discoverer 18	07 Dec 1960	1960-018A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-018A)	1960 SIG	КН-2	First successful mission employing KH-2 camera system.

Corona (satellite) 4 Intellinedia 1

RM-1	Discoverer 19	20 Dec 1960	1960-019A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1960-019A)	1960 TAU	none	Test of Midas missile- detection system
9014A	Discoverer 20	17 Feb 1961	1961-005A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-005A)	1961 EPS	KH-5	See KH-5
RM-2	Discoverer 21	18 Feb 1961	1961-006A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-006A)	1961 ZET	none	Test of restartable rocket engine
9015	Discoverer 22	30 Mar 1961	DISC22 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC22)	1961-F02	KH-2	Mission failed. Second stage failed to obtain orbital velocity.
9016A	Discoverer 23	08 Apr 1961	1961-011A (http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1961-011A)	1961 LAM 1	KH-5	See KH-5
9018A	Discoverer 24	16 Jun 1961	DISC24 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC24)	1961-F05	KH-5	See KH-5
9017	Discoverer 25	16 Jun 1961	1961-014A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-014A)	1961 XI 1	KH-2	Capsule recovered from water on orbit 32. Streaks throughout film.
9019	Discoverer 26	07 Jun 1961	1961-016A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-016A)	1961 PI	KH-2	Main camera malfunctioned on pass 22.
9020A	Discoverer 27	21 Jun 1961	DISC27 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC27)	1961-F07	KH-5	See KH-5
9021	Discoverer 28	03 Aug 1961	DISC28 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC28)	1961-F08	KH-2	Mission failed. No orbit. Satellite guidance system failed.
9022	Discoverer 30	12 Sep 1961	1961-024A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-024A)	1961 OME	KH-3	Best mission to date. Same out-of-focus condition as in 9023.
9023	Discoverer 29	30 Aug 1961	1961-023A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-023A)	1961 PSI	KH-3	First use of KH-3 camera system. All frames out of focus.
9024	Discoverer 31	17 Sep 1961	1961-026A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-026A)	1961 A BET	КН-3	Mission failed. Power failure and loss of control gas on orbit 33. Capsule was

						not recovered.
9025	Discoverer 32	13 Oct 1961	1961-027A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-027A)	1961 A GAM 1	KH-3	Capsule recovered on orbit 18. 96% of film out of focus.
9026	Discoverer 33	23 Oct 1961	DISC33 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC33)	1961-F10	КН-3	Mission failed. Satellite failed to separate from Thor booster. No orbit.
9027	Discoverer 34	05 Nov 1961	1961-029A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-029A)	1961 A EPS I	КН-3	Mission failed. Improper launch angle resulted in extreme orbit. Gas valve failed
9028	Discoverer 35	15 Nov 1961	1961-030A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-030A)	1961 A ZET 1	KH-3	All cameras operated satisfactorily. Grainy emulsion noted.
9029	Discoverer 36	12 Dec 1961	1961-032A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1961-032A)	1961 A KAP 1	KH-3	Best mission to date.
9030	Discoverer 37	13 Jan 1962	DISC37 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=DISC37)	1962-F01	KH-3	Mission failed. No orbit.
9031	Discoverer 38	27 Feb 1962	1962-005A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-005A)	1962 EPS	KH-4	First mission of the KH-4 series. Much of film slightly out of focus.
9032	Discoverer 39	18 Apr 1962	1962-011A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-011A)	1962 LAM 1	KH-4	Best mission to date.
9033	FTV 1125	28 Apr 1962	1962-017A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-017A)	1962 RHO 1	KH-4	Mission failed. Parachute ejector squibs holding parachute container cover failed to fire. No recovery.
9034A	FTV 1126	15 May 1962	1962-018A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-018A)	1962 SIG 1	KH-5	See KH-5
9035	FTV 1128	30 May	1962-021A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-021A)	1962 PHI 1	KH-4	Slight corona static on film.

Corona (satellite) Albtellipedia 1 DOCID: 4088581

		1962	\$ box	-		
9036	FTV 1127	02 Jun 1962	1962-022A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-022A)	1962 CHI 1	KH-4	Mission failed. During air catch
9037	FTV 1129	23 Jun 1962	1962-026A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-026A)	1962 A BET	KH-4	Corona static occurs on some film.
9038	FTV 1151	28 Jun 1962	1962-027A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-027A)	1962 A GAM	KH-4	Severe corona static.
9039	FTV 1130	21 Jun 1962	1962-031A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-031A)	1962 A ETA	KH-4	Aborted after of photo passes. Heavy corona and radiation fog.
9040	FTV 1131	28 Jun 1962	1962-032A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1962-032A)	1962 A THE	KH-4	No filters on slave horizon cameras. Heavy corona and radiation fog.
9041	FTV 1152	02 Aug 1962	1962-034A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-034A)	1962 A KAP 1	KH-4	Severe corona and radiation fog.
9042A	FTV 1132	01 Sep 1962	1962-044A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-044A)	1962 A UPS	KH-5	See KH-5
9043	FTV 1133	17 Sep 1962	1962-046A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-046A)	1962 A CHI	KH-4	Capping shutter malfunction
9044	FTV 1153	29 Aug 1962	1962-042A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-042A)	1962 A SIG	KH-4	Erratic vehicle attitude. Radiation fog minimal.
9045	FTV 1154		1962-050A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-050A)	1962 B BET	KH-4	First use of stellar camera
9046A	FTV 1134	09 Oct 1962	19762-053A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=19762-053A)	1962 B EPS	KH-5	See KH-5
9047	FTV 1136	05 Nov 1962	1962-063A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-063A)	1962 B OMI	KH-4	Camera door malfunctioned
9048	FTV 1135	24 Nov 1962	1962-065A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-065A)	1962 B RHO	KH-4	Some film exposed through base.
9049	FTV 1155	04 Dec 1962	1962-066A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-066A)	1962 B SIG	KH-4	Mission failed. During air catch chute tore
9050	FTV 1156	14 Dec 1962	1962-069A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1962-069A)	1962 B PHI	KH-4	Best mission to date.

OPS 0583 OPS 0720	28 Feb 1963	1963-F02 (http://nssdc.gsfc.nasa.gov			Mission failed.
OPS 0720		/nmc/spacecraftDisplay.do?id=1963-F02)	1963-F02	KH-4	Destroyed by range safety officer
	01 Apr 1963	1963-007A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-007A)	1963-007A	KH-4	Best imagery to date.
OPS 0954	954 12 Jun 1963	1963-019A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-019A)	1963-019A	KH-4	Some imagery seriously affected by corona.
OPS 1008	008 26 Apr 1963	1963-F07 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-F07)	1963-F07	KH-5	See KH-5
OPS 0999	999 26 Jun 1963	1963-025A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-025A)	1963-025A	KH-4	Experimental camera carried. Film affected by light leaks.
OPS 1266	266 18 Jun 1963	1963-029A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-029A)	1963-029A	KH-4	Best mission to date.
OPS 1561	561 29 Aug 1963	1963-035A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-035A)	1963-035A	KH-5	See KH-5
OPS 2437	29 Oct 1963	1963-042A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-042A)	1963-042A	KH-5	See KH-5
OPS 2268	268 09 Nov 1963	1963-F14 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-F14)	1963-F14	KH-4	Mission failed. No orbit.
OPS 2260	27 Nov 1963	1963-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-048A)	1963-048A	KH-4	Mission failed. Return capsule separated from satellite but remained in orbit.
OPS 1388	388 21 Dec 1963	1963-055A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-055A)	1963-055A	KH-4	Corona static fogged much of film.
OPS 2739	739 21 Aug 1964	1964-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-048A)	1964-048A	KH-5	See KH-5
OPS 3236	236 13 Jun 1964	1964-030A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-030A)	1964-030A	KH-5	See KH-5
•			,		First mission of KH-4A. Some film was
	OPS 2 OPS 2 OPS 2 OPS 2	OPS 1381 1963 OPS 2437 29 Oct 1963 OPS 2268 09 Nov 1963 OPS 2260 27 Nov 1963 OPS 1388 21 Dec 1963 OPS 2739 21 Aug 1964 OPS 3736 13 Jun	OPS 1361 1963 /nmc/spacecraftDisplay.do?id=1963-035A) OPS 2437 29 Oct 1963-042A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-042A) OPS 2268 09 Nov 1963-F14 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-F14) OPS 2260 27 Nov 1963-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-048A) OPS 1388 21 Dec 1963-055A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-055A) OPS 2739 21 Aug 1964-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-048A) OPS 3236 13 Jun 1964-030A (http://nssdc.gsfc.nasa.gov	OPS 1361 1963 /nmc/spacecraftDisplay.do?id=1963-035A) 1963-035A OPS 2437 29 Oct 1963-042A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-042A) 1963-042A OPS 2268 09 Nov 1963-F14 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-F14) 1963-F14 OPS 2260 27 Nov 1963-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-048A) 1963-048A OPS 1388 21 Dec 1963-055A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-055A) 1963-055A OPS 2739 21 Aug 1964-048A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-048A) 1964-048A OPS 3736 13 Jun 1964-030A (http://nssdc.gsfc.nasa.gov /nssdc.gsfc.nasa.gov /nsc/spacecraftDisplay.do?id=1964-048A) 1964-030A (http://nssdc.gsfc.nasa.gov /nssdc.gsfc.nasa.gov	OPS 1361 1963 /nmc/spacecraftDisplay.do?id=1963-035A) 1963-035A 1963-042A 1963-14 1963-14 1963-14 1963-14 1963-14 1963-14 1963-14 1963-14 1963-14 1963-048A 1963-048A

						recovered.
1002	OPS 1353	23 Sep 1963	1963-037A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1963-037A)	1963-037A	KH-4A	Severe light leaks
1003	OPS 3467	24 Mar 1964	1964-F04 (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-F04)	1964-F04	KH-4A	Mission failed. Guidance system failed. No orbit.
1004	OPS 3444	15 Feb 1964	1964-008A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1964-008A)	1964-008A	KH-4A	Main cameras operated satisfactorily. Minor degradations due to static and light leaks.
1005	OPS 2921	27 Apr 1964	1964-022A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-022A)	1964-022A	KH-4A	Mission failed. Recovery vehicle impacted in Venezuela.
1006	OPS 3483	04 Jun 1964	1964-027A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-027A)	1964-027A	KH-4A	Highest quality imagery attained to date from the KH-4 system.
1007	OPS 3754	19 Jun 1964	1964-032A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-032A)	1964-032A	KH-4A	Out-of-focus area on some film.
1008	OPS 3491	10 Jun 1964	1964-037A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-037A)	1964-037A	KH-4A	Cameras operated satisfactorily
1009	OPS 3042	05 Aug 1964	1964-043A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-043A)	1964-043A	KH-4A	Cameras operated successfully.
1010	OPS 3497	14 Sep 1964	1964-056A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-056A)	1964-056A	KH-4A	Small out of focus areas on both cameras at random times throughout the mission.
1011	OPS 3333	05 Oct 1964	1964-061A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-061A)	1964-061A	KH-4A	Primary mode of recovery failed on second portion of the mission (1011-2). Small out of focus areas present at random on both cameras.

Corona (satellite) 4 Intellipedia 1

1012	OPS 3559	17 Oct 1964	1964-067A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-067A)	1964-067A	KH-4A	Vehicle attitude became erratic on the second portion of the mission necessitating an early recovery.
1013	OPS 5434	02 Nov 1964	1964-071A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-071A)	1964-071A	KH-4A	Program anomaly occurred immediately after launch when both cameras operated for 417 frames. Main cameras ceased operation on rev 52D of first portion of mission negating second portion. About 65 % of aft camera film is out of focus.
1014	OPS 3360	18 Nov 1964	1964-075A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-075A)	1964-075A	KH-4A	Cameras operated successfully.
1015	OPS 3358	19 Dec 1964	1964-085A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1964-085A)	1964-085A	KH-4A	Discrepancies in planned and actual coverage due to telemetry problems during the first 6 revolutions. Small out-of-focus areas on film from aft camera.
1016	OPS 3928	15 Jan 1965	1965-002A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-002A)	1965-002A	KH-4A	Smearing of highly reflective images due to reflections within camera.

1017	OPS 4782	25 Feb 1965	1965-013A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-013A)	1965-013A	KH-4A	Capping shutter malfunction occurred during last 5 passes of mission.
1018	OPS 4803	25 Mar 1965	1965-026A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-026A)	1965-026A	KH-4A	Cameras operated successfully. First KH-4A reconnaissance system to be launched into a retrograde orbit.
1019	OPS 5023	29 Apr 1965	1965-033A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-033A)	1965-033A	KH-4A	Cameras operated successfully. Malfunction in recovery mode on 1019-2 negated recovery.
1020	OPS 8425	09 Jun 1965	1965-045A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-045A)	1965-045A	KH-4A	All cameras operated satisfactorily. Erratic attitude caused an early recovery after the second day of 1020-2.
1021	OPS 8431	18 May 1965	1965-037A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-037A)	1965-037A	KH-4A	Aft camera ceased operation on pass 102.
1022	OPS 5543	19 Jun 1965	1965-057A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-057A)	1965-057A	KH-4A	All cameras operated satisfactorily.
1023	OPS 7208	17 Aug 1965	1965-067A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-067A)	1965-067A	KH-4A	Program anomaly caused the fore camera to cease operation during revolutions 103-132.
1024	OPS 7221	22 Sep 1965	1965-074A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-074A)	1965-074A	KH-4A	All cameras operated satisfactorily. Cameras not

		3 3 3 3 3				operated on passes 88D-93D.
1025	OPS 5325	05 Oct 1965	1965-079A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-079A)	1965-079A	KH-4A	Main cameras operated satisfactorily.
1026	OPS 2155	28 Oct 1965	1965-086A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1965-086A)	1965-086A	KH-4A	All cameras operated satisfactorily.
1027	OPS 7249	09 Dec 1965	1965-102A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-102A)	1965-102A	KH-4A	Erratic attitude necessitated recovery after two days of operation. All cameras operated satisfactorily.
1028	OPS 4639	24 Dec 1965	1965-110A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1965-110A)	1965-110A	KH-4A	Cameras operated satisfactorily.
1029	OPS 7291	02 Feb 1966	1966-007A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-007A)	1966-007A	KH-4A	Both panoramic cameras were operational throughout.
1030	OPS 3488	09 Mar 1966	1966-018A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-018A)	1966-018A	KH-4A	All cameras operated satisfactorily.
1031	OPS 1612	07 Apr 1966	1966-029A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-029A)	1966-029A	KH-4A	The aft-looking camera malfunctioned after the recovery of bucket 1. No material was received in bucket 2 (1031-2).
1032	OPS 1508	3 May 1966	1966-F05A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-F05A)	1966-F05	KH-4A	Mission failed. Vehicle failed to achieve orbit.
1033	OPS 1778	24 May 1966	1966-042A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-042A)	1966-042A	KH-4A	The stellar camera shutter of bucket 2 remained open for approximately 200 frames.

1034	OPS 1599	21 Jun 1966	1966-055A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-055A)	1966-055A	KH-4A	Failure of velocity altitude programmer produced poor
						imagery after revolution 5.
1035	OPS 1703	20 Sep 1966	1966-085A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1966-085A)	1966-085A	KH-4A	All cameras operated satisfactorily. First mission flown with pan geometry modification.
1036	OPS 1545	09 Aug 1966	1966-072A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1966-072A)	1966-072A	KH-4A	All cameras operated satisfactorily.
1037	OPS 1866	08 Nov 1966	1966-102A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1966-102A)	1966-102A	KH-4A	Second pan geometry mission. Higher than normal base plus fog encountered on both main camera records.
1038	OPS 1664	14 Jan 1967	1967-002A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-002A)	1967-002A	KH-4A	Fair image quality.
1039	OPS 4750	22 Feb 1967	1967-015A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-015A)	1967-015A	KH-4A	Normal KH-4 mission. Light from horizon camera on both main camera records during 1039-1.
1040	OPS 4779	30 Mar 1967	1967-029A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-029A)	1967-029A	KH-4A	Satellite flown nose first.
1041	OPS 4696	9 May 1967	1967-043A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-043A)	1967-043A	KH-4A	Due to the failure of the booster cut-off switch, the satellite went into a highly eccentric orbit. There was significant image degradation.
1042	OPS 3559	16 Jun 1967	1967-062A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-062A)	1967-062A	KH-4A	Small out-of-focus area in forward

						camera of 1042-1.
1043	OPS 4827	07 Aug 1967	1967-076A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-076A)	1967-076A	KH-4A	Forward camera film came out of the rails on pass 230D. Film degraded past this point.
1044	OPS 0562	02 Nov 1967	1967-109A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-109A)	1967-109A	KH-4A	All cameras operated fine.
1045	OPS 2243	24 Jan 1968	1968-008A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-008A)	1968-008A	KH-4A	All cameras operated satisfactorily.
1046	OPS 4849	14 Mar 1968	1968-020A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-020A)	1968-020A	KH-4A	Image quality good for 1046-1 and fair for 1046-2.
1047	OPS 5343	20 Jun 1968	1968-052A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-052A)	1968-052A	KH-4A	Out-of-focus imagery is present on both main camera records.
1048	OPS 0165	18 Sep 1968	1968-078A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-078A)	1968-078A	KH-4A	Film in the forward camera separated and camera failed on mission 1048-2
1049	OPS 4740	12 Dec 1968	1968-112A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-112A)	1968-112A	KH-4A	Degraded film
1050	OPS 3722	19 Mar 1969	1969-026A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-026A)	1969-026A	KH-4A	Due to abnormal rotational rates after revolution 22
1051	OPS 1101	2 May 1969	1969-041 A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-041 A)	1969-041A	KH-4A	Imagery of both pan camera records is soft and lacks crispness and edge sharpness.
1052	OPS 3531	22 Sep 1969	1969-079A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-079A)	1969-079A	KH-4A	Last of the KH-4A missions
1101	OPS 5089	15 Sep 1967	1967-087A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-087A)	1967-087A	KH-4B	First mission of the KH-4B

						series. Best film to date.
1102	OPS 1001	09 Dec 1967	1967-122A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1967-122A)	1967-122A	KH-4B	Noticeable image smear for forward camera
1103	OPS 1419	1 May 1968	1968-039A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-039A)	1968-039B	KH-4B	Out-of-focus imagery is present on both main camera records.
1104	OPS 5955	07 Aug 1968	1968-065A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1968-065A)	1968-065A	KH-4B	Best imagery to date on any KH-4 systems. Bicolor and color infrared experiments were conducted on this mission.
1105	OPS 1315	03 Nov 1968	1968-098A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1968-098A)	1968-098A	KH-4B	Image quality is variable and displays areas of soft focus and image smear.
1106	OPS 3890	05 Feb 1969	1969-010A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-010A)	1969-010A	KH-4B	The best image quality to date.
1107	OPS 3654	24 Jun 19 6 9	1969-063A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-063A)	1969-063A	KH-4B	Forward camera failed on pass 1 and remained inoperative throughout the rest of the mission.
1108	OPS 6617	04 Dec 1969	1969-105A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1969-105A)	1969-105A	KH-4B	Cameras operated satisfactorily and the mission carried 811Expression error: Unrecognised word "abs"ft (Expression error: Unrecognised word "e"Expression error:

						Unrecognised word "abs"m) of aerial color film added to the end of the film supply.
1109	OPS 0440	04 Mar 1970	1970-016A (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1970-016A)	1970-016A	KH-4B	Cameras operated satisfactorily but the overall image quality of both the forward and aft records is variable.
1110	OPS 4720	20 May 1970	1970-040A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1970-040A)	1970-040A	КН-4В	The overall image quality is less than that provided by recent missions and 2
1111	OPS 4324	23 Jun 1970	1970-054A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1970-054A)	1970-054A	KH-4B	The overall image quality is good.
1112	OPS 4992	18 Nov 1970	1970-098A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1970-098A)	1970-098A	KH-48	The forward camera failed on pass 104 and remained inoperative throughout the rest of the mission.
1113	OPS 3297	17 Feb 1971	1971-F01A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1971-F01A)	1971-F01	KH-4B	Mission failed due to failure of Thor booster. Destroyed shortly after launch.
1114	OPS 5300	24 Mar 1971	1971-022A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1971-022A)	1971-022A	KH-4B	The overall image quality is good and comparable to the best of past missions. On-board program failed after pass 235
1115	OPS 5454	10 Sep 1971	1971-076A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1971-076A)	1971-076A	KH-4B	Overall image quality is good.

1116	OPS 5640	19 Mar 1972	1972-032A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1972-032A)	1972-032A	КН-4В	Very successful mission and image quality was good.
1117	OPS 6371	25 May 1972	1972-039A (http://nssdc.gsfc.nasa.gov /nmc/spacecraftDisplay.do?id=1972-039A)	1972-039A	KH-4B	Last KH-4B mission. Very successful mission

See also

- KH-5-ARGON, KH-6-LANYARD, KH-7, KH-8-GAMBIT
- KH-9-HEXAGON "Big Bird"
- KH-10-DORIAN or Manned Orbital Laboratory
- KH-11, KH-12, KH-13.
- Satellite imagery
- Cold War

Popular culture

The 1963 thriller novel *lce Station Zebra* and its 1968 film adaptation were inspired, in part, by news accounts from April 17, 1959, about a missing experimental **Corona** satellite capsule (Discoverer II) that inadvertently landed near Spitsbergen on April 13 and was believed to have been recovered by Soviet agents. [12][13]

References

- Corona page at NASA (http://samadhi.jpl.nasa.gov/msl/Programs/corona.html) primary article source
- 1. † Yenne, Bill (1985). The Encyclopedia of US Spacecraft', Exeter Books (A Bison Book), New York.p.82 Key Hole
- 2. † "Mission accomplished for NRO at Onizuka AFS" (http://www.schriever.af.mil/news/story.asp?id=123050054), 4/23/2007
- 3. † "Discoverer 13 NSSDC ID: 1960-008A" (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1960-008A)
- 4. ↑ "Sputnik 5 NSSDC ID: 1960-011A" (http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1960-011A)
- Yenne, Bill (1985). 'The Encyclopedia of US Spacecraft', Exeter Books (A Bison Book), New York.p.37 Discoverer
- 6. † "Declassified intelligence satellite photographs fact sheet 090-96" (http://erg.usgs.gov/isb/pubs/factsheets /fs09096.html), February 1998
- † Robert Perry (1973-10-01). A History of Satellite Reconnaissance Volume 1--CORONA, Central Intelligence Agency.
- 8. † Executive Order 12951
- 9. † ::: CARresearch Syria ::: (http://car.anu.edu.au/researchsyria.html)
- Satellite images spy ancient history in Syria (http://www.physorg.com/news73840698.html)
- 11. † Ancient Syrian Settlements Seen in Spy Satellite Images | LiveScience (http://www.livescience.com/history/060807 syria satellite.html)
- 12. † Chronology of Spy Satellites @ Totse.com (http://www.totse.com/en/technology/space_astronomy_nasa/satchron.html)
- 13. † Taubman, Secret Empire, p. 287.
 - Dwayne A. Day, John M. Logsdon, and Brian Latell (Eds.), Eye in the Sky: The Story of the Corona Spy

(b)(3) PL 86-36

Satellites. Washington, DC: Smithsonian Books. ISBN 1-56098-773-1 (paperback) or ISBN 1-56098-830-4 (hardcover).

- Robert McDonald, ed., Corona: Between the Sun & the Earth, The First NRO Reconnaissance Eye in Space.
 Bethesda, MD: ASPRS, 1997, ISBN 1-57083-041-X.
- Curtis Peebles, The Corona Project: America's First Spy Satellites. Annapolis: Naval Institute Press. ISBN 1-55750-688-4.
- Phil Taubman, Secret Emptre: Eisenhower, the ClA, and the Hidden Story of America's Space Esptonage. New York: Simon & Schuster, 2003 ISBN 0684856999

External links

- US Geological Survey overview and image search (http://edc.usgs.gov/products/satellite.html)
- Corona page at NRO (http://www.nro.gov/corona/facts.html)
- GlobalSecurity.org: Imagery Intelligence (http://www.globalsecurity.org/space/systems/imint.htm)
- A Point in Time (http://www.archive.org/details/point_in_time), an hourlong CIA film documenting the program
- Declassified Military Films on the Corona Program (http://www.theblackvault.com/modules.php?name=Video& op=category&vidmod_cat=11)

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(b) (3) -P.L. 8

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