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April 1965

TECHNICAL PUBLICATION

PHOTOGRAPHIC EVALUATION REPORT
MISSION 1012-1 17-20 OCTOBER 1964
MISSION 1012-2 21-23 OCTOBER 1964

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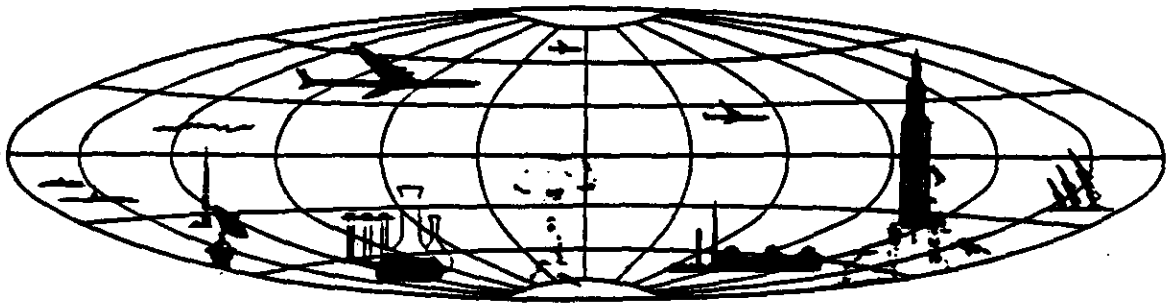

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SYNOPSIS

Mission 1012 (System No J-13), the twelfth of the "J" reconnaisance series, was launched 17 October 1964 and consisted of 2 operational phases, designated Missions 1012-1 and 1012-2, respectively. Mission 1012-1 accomplished 36 photographic revolutions, including 3 domestic and 3 engineering (dark side) passes. The first-phase payload was recovered by air catch on 20 October and second-phase operations were initiated on the following day. Mission 1012-2 accomplished 17 photographic revolutions, including 1 domestic and 1 engineering pass. Recovery of the second payload on 23 October terminated the mission. The capsule was retrieved from water but subsequent inspection of the contents revealed no immersion damage.

All cameras functioned satisfactorily except in Mission 1012-1, where the stellar/index unit was not operational due to a command system anomaly or program malfunction.

The quality of the panoramic photography is good and is considered comparable with the results achieved in Mission 1008. The next-to-last frames of most passes following 9AE contain light-struck areas. These traces resemble corona static discharges, but investigation has firmly established them to be light leak patterns. In any case, the resultant degradation is relatively slight. The horizon cameras associated with the panoramic instruments produced comparatively good images. Slight vignetting of the format corners does not hamper use of the horizon images for determination of vehicle attitude, which was normal until the terminal revolution, 73D, where an extreme departure from normal occurred.

The stellar/index unit operated satisfactorily in Mission 1012-2 and produced good-quality stellar and terrestrial photography. However, the vehicle attitude abnormality in the last photographic pass was responsible for gross overexposure of the last 5 stellar frames and distortion (off-axis photography) of the last 4 index frames, which contain images of the horizons.

Cloud cover obscured approximately 55 percent of the panoramic photography in Mission 1012-1 and 45 percent of Mission 1012-2. Solar elevations ranged from 3 degrees to 42 degrees.

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GENERAL FLIGHT DATA

Launch Date, Mission 1012-1 17 October 1964
Recovery Date, Mission 1012-1 20 October 1964

Activation Date, Mission 1012-2 21 October 1964
Recovery Date, Mission 1012-2 23 October 1964

Orbital Parameters

	Mission 1012-1		Mission 1012-2	
	Planned	Actual (Rev 10)	Planned	Actual (Rev 72)
Period	91.00 min	90.55 min	90.51 min	90.44 min
Perigee	96.28 nm	96.30 nm	98.78 nm	98.90 nm
Apogee	237.68 nm	237.60 nm	234.02 nm	235.79 nm
Eccentricity	0.0196	0.0196	0.0187	0.0188
Inclination Angle	75.05 deg	75.07 deg	74.99 deg	74.99 deg

Photographic Operations

	1012-1	1012-2
Operational Passes	30	15
Domestic Passes	3	1
Engineering Passes	3	1
Recovery Revolutions	49M	73D

*** Notice of Missing Pages ***

Pages 3 through 44 are missing from the original document.

APPENDIX E. MISSION COVERAGE STATISTICS

1. Summary of Plottable Photographic Coverage

MISSION 1012-1

Country	Master (FWD) Camera		Slave (AFT) Camera		Combined Coverage	
	Linear nm	Square nm	Linear nm	Square nm	Linear nm	Square nm
USSR	13,032	1,965,626	12,525	1,916,272	25,557	3,881,898
China	1,982	280,662	2,608	348,510	4,590	629,172
Algeria	326	47,264	428	62,116	754	109,380
Cuba	335	33,596	335	33,004	670	66,600
Mongolia	218	33,900	124	18,500	342	52,400
Rumania	203	30,464	123	18,204	326	48,668
Greece	144	13,724	137	20,112	281	33,836
Poland	147	29,414	106	16,292	253	45,706
Bulgaria	106	15,688	95	13,994	201	29,682
Yugoslavia	76	11,150	113	16,724	189	27,874
Sweden	--	--	123	15,288	123	15,288
North Korea	123	1,752	--	--	123	1,752
Mexico	81	9,360	39	5,040	120	14,400
Turkey	62	7,300	49	7,154	111	14,454
Nigeria	68	9,928	27	3,942	95	13,870
South Korea	82	1,168	--	--	82	1,168
Afghanistan	57	8,240	21	3,066	78	11,306
Albania	33	3,358	37	5,476	70	8,834
Czechoslovakia	25	8,008	20	3,040	45	11,048
Jamaica	29	4,292	--	--	29	4,292
Bahama Islands	--	--	25	3,700	25	3,700
Norway	--	--	12	900	12	900
East Germany	8	8,008	4	608	12	8,616
Cayman Island	9	148	--	--	9	148
TOTAL	17,146	2,523,050	16,951	2,511,942	34,097	5,034,992
Continental United States	548	78,912	568	81,792	1,116	160,704
GRAND TOTAL	17,694	2,601,962	17,519	2,593,734	35,213	5,195,696

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MISSION 1012-2

Country	Master (FWD) Camera		Slave (AFT) Camera		Combined Coverage	
	Linear nm	Square nm	Linear nm	Square nm	Linear nm	Square nm
USSR	6,968	980,322	7,173	988,770	14,141	1,969,092
China	2,096	292,298	2,029	283,270	4,125	575,568
Mongolia	243	34,020	291	40,878	534	74,898
Congo	203	31,668	215	33,540	418	65,208
North Korea	115	6,348	148	6,160	263	12,508
Morocco	83	11,454	116	16,008	199	27,462
Rhodesia	87	13,572	54	8,424	141	21,996
Algeria	83	11,454	50	6,900	133	18,354
North Vietnam	57	7,980	33	4,620	90	12,600
Nepal	41	5,658	25	3,450	66	9,108
India	41	5,658	12	1,656	53	7,314
South Korea	49	2,760	--	--	49	2,760
Finland	--	--	41	5,550	41	5,550
Bhutan	10	1,380	4	552	14	1,932
Pakistan	10	1,380	--	--	10	1,380
TOTAL	10,086	1,405,952	10,191	1,399,778	20,277	2,805,730
Continental United States	400	44,160	410	50,922	810	95,082
GRAND TOTAL	10,486	1,450,112	10,601	1,450,700	21,087	2,900,812