~~SECRET~~

COMPARISON OF RECONNAISSANCE SYSTEMS

	OXCART	U-2	DISCOVERER	SAMOS E-1	SAMOS E-2	SAMOS E-5	SAMOS E-6
First Flight	30 Aug 61	1 Aug 55	28 Feb 59	11 Oct 60 1/	Mar 61	Aug 61	June 62
No. of Vehicles	10	15	37	3	2	7 camera 2 diag.	5
Status	Building	Obsolete	19 launches in 24 months between Feb 59 and now. 13 carried cameras. 2 film payloads and 1 diagnostic payload recovered. Failures involved various combinations of insufficient thrust to achieve orbit, camera failures, vehicle instability, inability to recover capsule, etc.				
Schedule			Two launches per month of CORONA and ARGON payloads through Oct 61.	Two launches in Jan-Feb 61	Mar 61, Feb 62	One per month Aug 61-May 62	One per month June-Oct 62
Expected Operational Date	Fall 1962	Spring 1956	Summer 1959 (Not considered operationally reliable as yet)	-	-	Not officially termed "operational"	

1/ Failed to orbit.

	OXCART	U-2	DISCOVERER	SAMOS E-1	SAMOS E-2	SAMOS E-5	SAMOS E-6
Best Expected Ground Resolution	½-1½ ft 1/	1-1½ ft	20-45 ft. New f3.5 lens in summer 1961 expected to produce 10-25 ft. resolution.	100	20	5	8½
Stereo	Yes	Yes	10%	No	No	Yes	Yes
Approximate coverage ignoring clouds:							
Lateral	70 mi.	72 mi.	175 mi.	100 mi.	17 mi. (steerable)	60 mi. (steerable)	200 mi.
Total per mission	175,000 sq.mi.	240,000 sq.mi.	5.1 mil.sq.mi.	42 mil. sq.mi.	6.7 mil. sq.mi.	15/20 mil. sq.mi.	14 mil. sq.mi.
Mission time	8 hrs.	12 hrs.	4 days 2/	30 days 3/	120 days	30 days	5 days
Operational Altitude	[redacted]	70,000 ft.	140 mi.	260 mi.	260 mi.	180 mi.	140 mi.
Payload Retrieval	Vehicle Return	Vehicle Return	Recoverable	Readout	Readout	Recover-able	Recover-able

Approximate Costs:

FY 1959	[redacted]	[redacted]	$190 mil. (FY 1959 & prior)
FY 1960			160 mil.
FY 1961			200 mil. (Requested by BMD)

1/ Eastman Kodak is making feasibility studies of convergent stereo camera installations for both OXCART and SAMOS programs. The EK OXCART camera is expected to give resolutions of 1½-2 feet. The [redacted] study for SAMOS is aimed at [redacted] resolution. A modified B camera could produce about [redacted] resolution in the OXCART aircraft.

2/ Limited by 2 days film supply. 3/ May be limited to 8-10 days by power supply.

4/ [redacted]