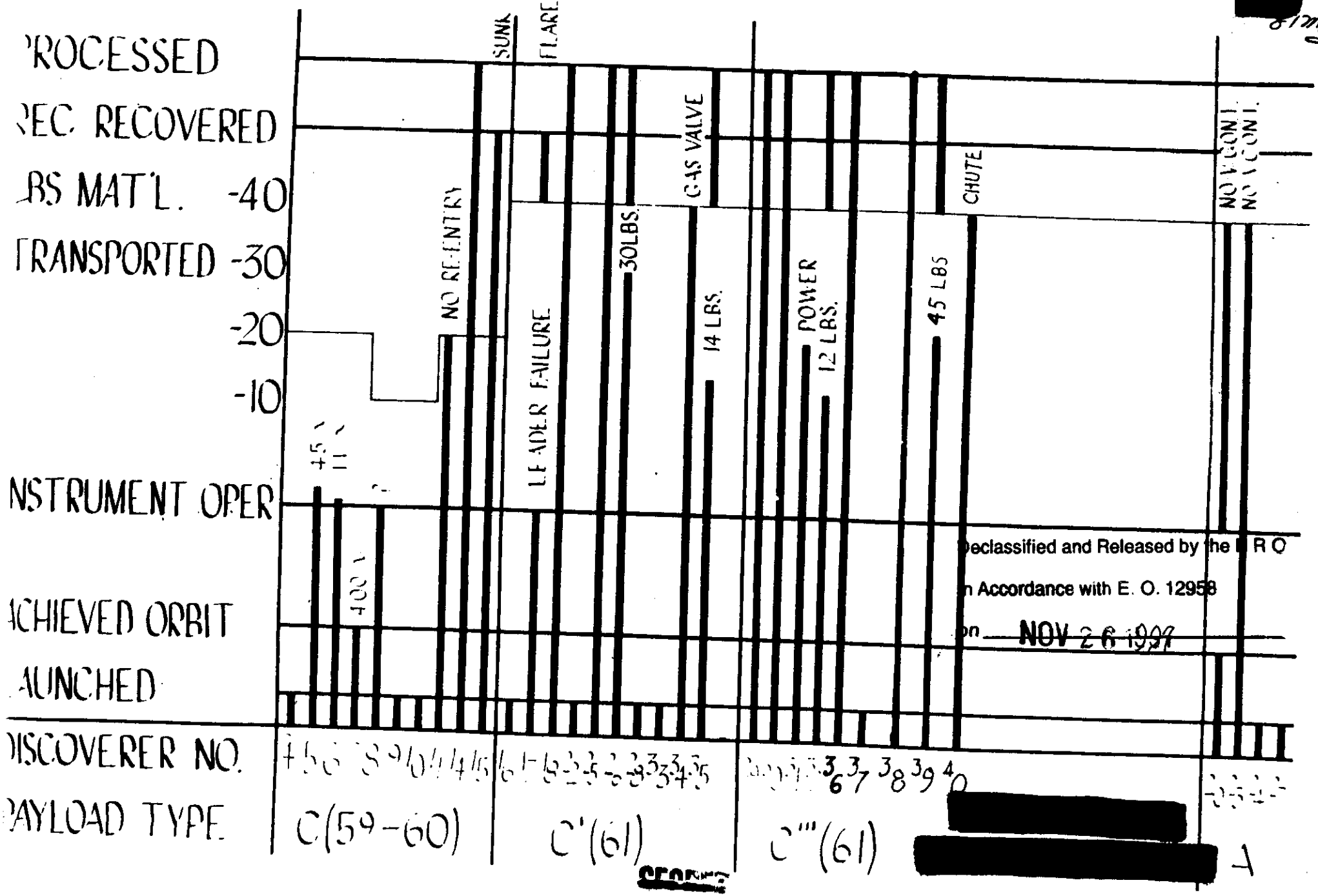
Discoverer Tech Data [redacted] 31 May

PAYLOAD OPERATION HISTORY



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L C'MERA SYSTEM

I P'NOR'MIC TERR'IN C'MERA, 22° SC 'N
30° CONVERGENT STEREO CONFIGUR'TION

66 INCH FOC'L LENGTH, f/5

7600 FEET OF 5" FILM

I MILLISECOND TIME RESOLUTION CLOCK

SELECTIVE I.C CONTROL BY SC'N R'TE

7 BIT BIN'RY FUNCTION R'MP
V'RI'BLE ST'RT R'MP C'P'BILITY
COM.'ND SELECTION

[redacted]

SECRET

[redacted]

[redacted]

INSTRUMENT PERFORMANCE

	C-C'	C'''	M
Lens Aperture	f/5	f/3.5	f/3.5
Static Resolution	130 l/mm	220 l/mm	220 l/mm
Dynamic Resolution	100 l/mm	180 l/mm	180 l/mm
Usable Film	SO-130	SO-132	SO-132
Ground Resolution*			
High Contrast	14-17 Ft.	7-9 Ft.	3.5-4.5 Ft**
Low Contrast	20-25 Ft.	10-13 Ft.	5-6.5 Ft.
Total System Expected Performance			
High Contrast	19-22 Ft.	10-12 Ft.	6-7 Ft.
Low Contrast	25-30 Ft.	13-16 Ft.	8-10 Ft.

* -Based on 150 mi altitude

** -Based on stereo enhancement factor of 2

[redacted]

[redacted]

COMPARISON OF MAPPING SYSTEMS

[redacted]

	Argon	[redacted]
Resolution (2:1 contrast, SO-132 film)	35	
Distortion Nominal maximum	<18u	
Format (terrain) inches	4½ x 4½	
Film Size	4000 ft. of 5"	
Film Weight (lbs)	40	
Camera Weight (less film) (lbs)	139	
Perigee Altitude Statute Miles	190	
Ground Coverage per stereo pair sq.mi	51,000 (1)	
Number of Photos	6,800	
Square Miles per Photo	85,000	
Ground Resolution Expected (ft)	380 (3)	
Contour Interval (ft)		
90% Probability	1500 (4)	
50% Probability	800 (4)	
Elevation Accuracy (90% Probability)(ft)	500 (4)	
Positional Accuracy (90% Probability)(ft)	750 (4)	

(1) Assumes 60% endlap
(2) Based on expected lens-film resolution 2:1 contrast
(3) Based on 1000:1 contrast, static
(4) Based on current Argon data reduction system

[redacted]

[redacted]

C O N F I G U R A T I O N S

STER	E-6 current	E-5 follow-on	M Thor/Agena B	M_1 Thor/Agena D	M_2 Thorad/Agena D	M_3 Thorad/Agena D	C_4 Thor/Agena D
ayload Diameter			50½"D	60"D	60"D	60"D	60"D
ayload Orbit Capability (lb)			900	940(marginal)	1150	1190	841
IT CONDITIONS							
ltitude at Perigee			113	113	113	113	113
centricity			.033	.015	.015	.015	.015
nclination			81.6°	75°	75°	75°	75°
)ANCE			BTL in Thor	BTL in Thor	BTL in Agena(?)	BTL in Agena(?)	BTL in Agena(?)
)RAMIC INSTRUMENTS			Two 24" f/3.5	Two 24" f/2.8	Two 40" f/3.5 (or single lens	Two 48" f/4	48" f/4 stereo)
'ICAL FRAME INSTRUMENT			1.5" f/4.5	1.5" f/4.5	1.5" f/4.5	1.5" f/4.5	1.5" f/4.5
LAR INSTRUMENT			-	1.5" f/4.5	1.5" f/4.5	1.5" f/4.5	1.5" f/4.5
LUTION	7-9'	3-5'	9 ft.	7-9 ft.	4-6 ft.	3-5 ft.	5-7 ft.
: TYPE/FORMAT SIZE							
noramic Instrument			S0-132/70 mm	S0-132/70 mm	S0-132/5 in	S0-132/5 in	S0-132/9 in
ame Instrument			S0-130/70 mm	S0-130/5 in	S0-130/5 in	S0-130/5 in	S0-130/9 in
			descending Photos only	Ascending & Descending Photos	Ascending & Descending Photos	Ascending & Descending Photos	Ascending & Descending Photos

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