

PROJECT 10073 RECORD CARD

1. DATE 18-24 June 1963		2. LOCATION Shimya, (Japan to San Pedro Pacific)		12. CONCLUSIONS ☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon ☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft ☐ Was Astronomical ☐ Probably Astronomical ☐ Possibly Astronomical ☒ Other Satellite ECHO I ☐ Insufficient Data for Evaluation ☐ Unknown	
3. DATE-TIME GROUP Local _____ GMT Various		4. TYPE OF OBSERVATION ☒ Ground-Visual ☐ Ground-Radar ☐ Air-Visual ☐ Air-Intercept Radar			
5. PHOTOS ☐ Yes ☒ No		6. SOURCE civilian			
7. LENGTH OF OBSERVATION not reported		8. NUMBER OF OBJECTS one		9. COURSE SE, NE	
10. BRIEF SUMMARY OF SIGHTING Seven observations of Satellite, presumed by observer to be same object. Had magnitude of VEGA. Observations made from British vessel MS Ascanius.				11. COMMENTS Observations conform with passage of Satellite ECHO I.	

UNITED STATES GOVERNMENT

Memorandum

TO : J. S. Lacey, OPI
NASA, Greenbelt

Code 5511: CW

DATE: 20 August 1963

FROM : Nautical Information Branch
U.S. Naval Oceanographic Office

SUBJECT: Satellite sighting; report of

Encl: (1) Ship Visit Report from MS ASCANIUS dtd 8 Aug 1963

1. Enclosure (1) forwarded for your information.

5000
GR
"Forwarded as a matter pertaining
to your organization. Your attention
to this matter will be appreciated."
Ed Mason

Ed Mason
Ed Mason
Public Information Officer
Goddard Space Flight Center

SHIP VISIT REPORT PRNC-NHO-3821 1 (Rev. 12-60)		Baltimore, Maryland.		18 AUG. 1963		290-63	
MS# ASCANIUS		British		769237		16 hrs	
TYPE ☒ CARGO ☐ PASSENGER ☐ TANKER ☐ OTHER		OPERATING LINE ALFRED HOLT & Co. LIVERPOOL		USUAL RUN Round the world. Eastbound.		33	
PORTS VISITED		MASTER E. W. ALKIN		OFFICER INTERVIEWED (Name and rank) [REDACTED] 3RD MAJ		HYDROGRAPHIC OFFICE EVALUATION	
RADAR EQUIPMENT (Type) KELVIN HUGHES		DISPOSITION					
LORAN EQUIPMENT (Type) N.C.							

THIS SPACE TO BE USED FOR RECORDING COLLECTED DATA

On a passage from Shimizu, Japan to San Pedro, California a satellite was observed as follows
all times are G.M.T.

June 18th 0100 Position 39° 18' N 161° W { Echo 0903 245.99 }

Observed between clouds W. W. / E. { Echo 1058 275 }

June 19th 1120 First observed altitude about 55° Passing between Albatross and Phoenix, but never Albatross Last from view 1145, bearing 080°, altitude about 15°

June 20th 0930. Observed through cloud passing just north of Albatross going W/E. Posn. 39° 18' N. 175° 28' W { Echo 0859 253.56 }

1130. Posn. 39° 18' N 174° 39' W observed again through cloud traveling NW/SE. { Echo 1054 282.66 }

June 23rd 0640. Posn. 39° 18' N. 152° 20' W Observed passing between Albatross and Phoenix. Posn. 39° 18' N 151° 34' W Observed passing between Albatross and Phoenix traveling WNW/ESE on both occasions.

June 24th 0738. Observed through cloud alt approx 55° bearing about 10° north of Vega.

From the regularity of observations it is presumed to be the same satellite on all occasions. It had about the same magnitude as Vega.

(Over)

EQUATOR S-N				SATELLITE 1960 IOTA 1 FOR OTHER LATITUDES							
TIME (UT)	LONG. (W)	LAT.		TIME CORR.	LONG. CORR.	HT. (MI)	BEAR. (N-E)	TIME CORR.	LONG. CORR.	HT. (MI)	BEAR. (N-E)
JUNE 16, 1963											
1 27.1	121.92	47.4		28.7	-82.72	1088	90.0°	28.7	-82.76	1088	90.0°
3 22.2	151.03	45.0		23.2	-60.86	1026	72.3°	34.3	-104.98	1135	107.7°
5 17.2	180.14	40.0		18.9	-45.65	969	60.7°	38.9	-119.73	1158	119.4°
7 12.3	209.24	35.0		15.7	-36.05	925	54.0°	42.3	-129.26	1166	126.1°
9 7.3	238.35	30.0		13.1	-28.73	867	49.4°	45.3	-136.91	1167	130.7°
11 2.4	267.46	20.0		8.4	-17.42	820	43.7°	50.7	-147.65	1153	136.5°
12 57.4	296.56	0.		0.	0.	720	40.0°	60.3	-164.75	1083	140.2°
14 52.5	325.67	-20.0		-8.1	17.49	664	43.8°	-45.6	148.94	974	136.4°
16 47.6	354.78	-30.0		-12.4	28.89	656	49.5°	-40.7	137.68	909	130.6°
18 42.6	23.85	-45.0		-14.8	36.28	658	54.1°	-38.0	130.35	872	126.0°
20 37.7	52.99	-40.0		-17.6	45.98	666	60.8°	-35.0	120.72	832	119.3°
22 32.7	82.09	-45.0		-21.4	61.32	688	72.4°	-31.0	105.43	782	107.6°
		-47.4		-26.1	83.37	728	90.0°	-26.1	83.41	728	90.0°

JUNE 17, 1963											
0 27.8	111.20	47.4		28.5	-82.76	1078	90.0°	28.5	-82.80	1078	90.0°
2 22.8	140.31	45.0		23.0	-60.90	1013	72.3°	34.2	-104.83	1129	107.7°
4 17.9	169.41	40.0		18.8	-45.68	955	60.7°	38.7	-119.77	1156	119.4°
6 12.9	198.52	35.0		15.7	-36.07	910	54.0°	42.2	-129.30	1167	126.1°
8 8.0	227.62	30.0		13.0	-28.74	871	49.4°	45.1	-136.55	1170	130.7°
10 3.1	256.73	20.0		8.3	-17.43	805	43.7°	50.5	-147.70	1159	136.5°
11 58.1	285.84	0.		0.	0.	708	40.0°	60.1	-164.78	1095	140.2°
13 53.2	314.94	-20.0		-8.0	17.50	558	43.8°	-45.6	148.92	989	136.4°
15 48.2	344.05	-30.0		-12.4	28.90	652	49.5°	-40.7	137.67	923	130.6°
17 43.3	13.15	-45.0		-14.8	36.29	657	54.1°	-38.0	130.34	886	126.0°
19 38.3	42.26	-40.0		-17.6	45.99	667	60.8°	-35.0	120.71	845	119.3°
21 33.4	71.36	-45.0		-21.3	61.33	692	72.4°	-31.0	105.43	793	107.6°
23 28.4	100.47	-47.4		-26.1	83.48	736	90.0°	-26.1	83.41	736	90.0°

JUNE 18, 1963											
1 23.5	129.57	47.4		28.4	-82.81	1067	90.0°	28.4	-82.84	1067	90.0°
3 18.5	158.67	45.0		22.9	-60.93	999	72.3°	34.0	-104.88	1122	107.7°
5 13.6	187.78	40.0		18.6	-45.71	939	60.7°	38.5	-119.82	1152	119.4°
7 8.6	216.88	35.0		15.6	-36.10	894	54.0°	41.9	-129.35	1166	126.1°
9 3.7	245.99	30.0		12.9	-28.76	855	49.4°	44.9	-136.60	1172	130.7°
10 58.7	275.09	20.0		8.3	-17.44	790	43.7°	50.3	-147.75	1166	136.5°
12 53.8	304.20	0.		0.	0.	696	40.0°	60.0	-164.82	1108	140.2°
14 48.8	333.30	-20.0		-8.0	17.51	651	43.8°	-45.7	148.90	1005	136.4°
16 43.8	2.40	-30.0		-12.3	28.91	650	49.5°	-40.8	137.65	939	130.6°
18 38.9	31.51	-45.0		-14.7	36.30	656	54.1°	-38.1	130.33	901	126.0°
20 33.9	60.61	-40.0		-17.5	46.00	669	60.8°	-35.0	120.71	859	119.3°
22 29.0	89.71	-45.0		-21.3	61.34	697	72.4°	-31.0	105.43	805	107.6°
		-47.4		-26.1	83.39	745	90.0°	-26.1	83.42	745	90.0°

JUNE 19, 1963											
0 24.0	118.67	47.4		28.2	-82.85	1055	90.0°	28.2	-82.88	1056	90.0°
2 19.1	147.77	45.0		22.8	-60.97	985	72.3°	33.8	-104.72	1114	107.7°
4 14.1	176.87	40.0		18.5	-45.74	924	60.7°	38.3	-119.87	1148	119.4°
6 9.2	205.97	35.0		15.5	-36.12	878	54.0°	41.8	-129.40	1165	126.1°
8 4.2	235.07	30.0		12.5	-28.78	840	49.4°	44.7	-136.65	1173	130.7°
9 59.2	264.17	20.0		8.2	-17.45	775	43.8°	50.1	-147.79	1171	136.5°
11 54.3	293.27	0.		0.	0.	686	40.0°	59.8	-164.86	1120	140.2°
13 49.3	322.37	-20.0		-8.0	17.51	646	43.8°	-45.8	148.97	1019	136.4°
15 44.4	351.47	-30.0		-12.3	28.92	646	49.5°	-40.9	137.63	954	130.6°
17 39.4	20.74	-45.0		-14.7	36.31	657	54.1°	-38.1	130.32	916	126.0°
19 34.4	49.85	-40.0		-17.5	46.00	672	60.8°	-35.1	120.70	873	119.3°
21 29.5	78.95	-45.0		-21.3	61.35	707	72.4°	-31.0	105.42	817	107.6°
23 24.5	108.05	-47.4		-26.1	83.40	754	90.0°	-26.1	83.42	754	90.0°

EQUATOR S-N				SATELLITE 1960 IOTA 1 FOR OTHER LATITUDES							
TIME (UT)	LONG. (W)	LAT.		TIME CORR.	LONG. CORR.	HT. (MI)	BEAR. (N-E)	TIME CORR.	LONG. CORR.	HT. (MI)	BEAR. (N-E)
JUNE 20, 1963											
1 19.6	137.15	47.4		28.0	-82.89	1042	90.0°	28.0	-82.93	1042	90.0°
3 14.6	166.25	45.0		22.6	-61.00	969	72.3°	33.6	-104.77	1104	107.7°
5 9.6	195.36	40.0		18.4	-45.77	907	60.7°	38.1	-119.93	1142	119.4°
7 4.7	224.46	35.0		15.4	-36.15	861	54.0°	41.5	-129.44	1162	126.1°
8 59.7	253.56	30.0		12.8	-28.80	823	49.4°	44.5	-136.71	1172	130.7°
10 54.8	282.66	20.0		8.2	-17.47	740	43.8°	49.9	-147.85	1176	136.5°
12 49.8	311.76	0.		0.	0.	675	40.0°	59.6	-164.91	1132	140.2°
14 44.8	340.86	-20.0		-8.0	17.52	641	43.8°	-46.0	148.84	1036	136.4°
16 39.9	9.96	-30.0		-12.3	28.93	647	49.5°	-40.9	137.81	970	130.6°
18 34.9	39.06	-35.0		-14.7	36.32	658	54.1°	-38.2	130.30	932	126.0°
20 29.9	68.17	-40.0		-17.5	46.01	676	60.8°	-35.1	120.69	888	119.3°
22 25.0	97.27	-45.0		-21.3	61.35	710	72.4°	-31.0	105.42	831	107.7°
		-47.4		-26.1	83.38	765	90.0°	-26.1	83.42	765	90.0°

JUNE 21, 1963											
0 20.0	126.37	47.4		27.9	-82.93	1029	90.0°	27.9	-82.97	1029	90.0°
2 15.0	155.47	45.0		22.5	-61.04	954	72.3°	33.4	-104.82	1095	107.7°
4 10.1	184.57	40.0		18.3	-45.80	891	60.7°	37.9	-119.98	1136	119.4°
6 5.1	213.67	35.0		15.3	-36.17	846	54.0°	41.3	-129.51	1158	126.1°
8 0.1	242.77	30.0		12.7	-28.82	808	49.4°	44.3	-136.76	1171	130.7°
9 56.2	271.87	20.0		8.1	-17.48	746	43.8°	49.7	-147.90	1179	136.5°
11 50.2	300.97	0.		0.	0.	665	40.0°	59.5	-164.96	1143	140.2°
13 45.2	330.07	-20.0		-7.9	17.52	638	43.8°	-46.1	148.81	1050	136.4°
15 40.3	359.17	-30.0		-12.2	28.93	647	49.5°	-41.0	137.59	986	130.6°
17 35.3	28.27	-35.0		-14.7	36.33	660	54.1°	-38.3	130.28	948	126.0°
19 30.3	57.37	-40.0		-17.4	46.02	680	60.8°	-35.2	120.67	903	119.3°
21 25.3	86.47	-45.0		-21.2	61.35	717	72.4°	-31.1	105.41	844	107.7°
23 20.4	115.57	-47.4		-26.1	83.38	775	90.0°	-26.1	83.42	775	90.0°

JUNE 22, 1963											
1 15.4	144.67	47.4		27.7	-82.98	1014	90.0°	27.7	-83.01	1015	90.0°
3 10.4	173.77	45.0		22.3	-61.07	937	72.3°	33.2	-104.87	1083	107.7°
5 5.5	202.86	40.0		18.2	-45.82	874	60.7°	37.7	-120.03	1128	119.4°
7 0.5	231.96	35.0		15.2	-36.19	829	54.0°	41.1	-129.57	1153	126.1°
8 56.5	261.06	30.0		12.6	-28.84	791	49.4°	44.1	-136.82	1169	130.7°
10 50.5	290.16	20.0		8.1	-17.49	731	43.8°	49.4	-147.96	1182	136.5°
12 45.6	319.26	0.		0.	0.	655	40.1°	59.3	-165.01	1154	140.3°
14 40.6	348.36	-20.0		-7.9	17.53	635	43.8°	-46.2	148.77	1068	136.4°
16 35.6	17.46	-30.0		-12.2	28.94	648	49.5°	-41.2	137.56	1003	130.6°
18 30.6	46.56	-35.0		-14.6	36.33	663	54.1°	-38.4	130.26	964	126.0°
20 25.7	75.65	-40.0		-17.4	46.02	686	60.8°	-35.3	120.65	919	119.3°
22 20.7	104.75	-45.0		-21.2	61.36	726	72.4°	-31.1	105.40	859	107.7°
		-47.4		-26.1	83.38	788	90.0°	-26.1	83.41	788	90.0°

MODIFIED ORBITAL ELEMENTS FOR EARTH SATELLITE 1960 IOTA 1

REFERENCE TIME 1963 Y 0 M 0 D 1 H 17.00 M UT
 INCLINATION 47.24 DEG.
 ASCENDING NODE (LONG.) 95.26 DEG. WEST
 PRIME SWEEP INTERVAL ONE DAY -16.93 MIN.
 ARGUMENT OF PERIGEE 208.04 DEG.
 RATE OF CHANGE 0.27099 DEG. PER PERIOD
 ANOMALISTIC PERIOD 115.187