

PROJECT 10073 RECORD CARD

1. DATE 21 June 1963		2. LOCATION S of Midway (Pacific)		12. CONCLUSIONS ☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon ☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft ☐ Was Astronomical ☐ Probably Astronomical ☐ Possibly Astronomical ☒ Other <u>SATELLITE (ECHO)</u> ☐ Insufficient Data for Evaluation ☐ Unknown	
3. DATE-TIME GROUP Local _____ GMT 21/1440Z		4. TYPE OF OBSERVATION ☐ Ground-Visual ☐ Ground-Radar ☒ Air-Visual ☐ Air-Intercept Radar			
5. PHOTOS ☐ Yes ☒ No		6. SOURCE Military			
7. LENGTH OF OBSERVATION Not reported		8. NUMBER OF OBJECTS one		9. COURSE Easterly	
10. BRIEF SUMMARY OF SIGHTING Object shape and size of 1st mag star observed at 50 deg elevation Heading East.				11. COMMENTS At the reported time ECHO was about 10 deg N 175 deg W heading SE. Since the description of the object conforms with that of ECHO and ECHO was in the area the case is evaluated as a Satellite sighting.	

21/1440Z

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

Sumatra

SMB B155

INCOMING

VHQA598ZCECB333

..... YY RUEAHQ

DE RUHPF B041

ZNR

Y 211537Z

FM COMBARPAC

TO RUHPHH/COMHAWSEAFRON

RUHLKM/CINCPACAF

RUUAUAH/HADD KUNIA

ZEN/CINCNO RAD

INFO RUECW/CNO

RUEAHQ/COFS USAF

RUHPA/CINCPAC

RUHPB/CINCPACFLT

RUHAFS/CINCUSARPAC

RUHLKMP/PACAFBASECOM HICKAM

RUECW/SECNAV

NAVY GRNC

BT

UNCLAS

A. JANAP 146D

1. CIRVIS

2. N43205

3. UFO

A. ONE

B. APPROXIMATE SIZE AND SHAPE OF FIRST MAGNITUDE STAR SIGHTED

50 DEGREES ABOVE HORIZON

4. SOUTH OF MIDWAY

5. 211440Z

AF IN : 9236 (21 Jun 63) M/gf PAGE 1 of 2

INFO : NIN-9, XOP-1, XOPX-4, SAF-OS-3

JCS-35, ARMY-2, CMC-8, OSD-15,

NSA-7, DIA-25, DIA/CIIC-2 (112)

02

21/1345

330.07

155

175

10°N → SE

MIDWAY 30° 175° W

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

AF IN : 9236 (21 Jun 63)

2 of 2

PAGE TWO RUHPF B041

- 6. UNKNOWN
- 7. EAST BOUND
- 8. UNKNOWN
- 9. NONE

BT

21/1538Z

NOTE : Advance copies del to DIA, NIN & XOEX.
Readdressed to CIA #550

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

AF IN : 9243 (21 Jun 63) M/gf

INCOMING

INFO : NIN-9, XOP-1, XOPX-4, ~~SAF-OS-3~~, JCS-35, ARMY-2, CMC-8, OSD-15

NSA-7, DIA-25, DIA/CIIC-2 (112)

SMB C143

601ZCECB337

.....YY RUEAHQ

DE RUHPF B042

ZNR

Y 211557Z0

FM COMBARPAC

TO RUHPHH/COMHAWSEAFRON

RUHLKM/CINCPACAF

RUUAUAH/HADD KUNIA

ZEN/CINCNOAD

INFO RUECW/CNO

RUEAHQ/COFS USAF

RUHPA/INCPAC

RUHPB/CINCPACFLT

RQHAFS/CINCUSARPAC

RUHLKMP/PACAFBASECOM HICKAM

RUENW/SECNAV

NAVY GRNC

BT

UNCLAS

A. JANAP 146D

1. CIRVIS EVALUATION MY 211537Z. UNIDENTIFIED

BT

21/1558Z

NOTE : 211537Z is AFIN 9236 (21 Jun 63)
Adv cys del to XOPX, DIA & NIN
Readdressed to CIA #551.

09

EQUATOR S-N				SATELLITE 1960 IOTA 1 FOR OTHER LATITUDES			
TIME (UT)	LONG. (W)	LAT.		TIME CORR.	LONG. CORR.	HT. (MI)	BEAR. (N-E)
JUNE 16, 1963							
27.1	121.92	47.4	28.7	-82.72	1088	90.0°	28.7 -82.74 1088 90.0°
27.2	151.03	45.0	23.2	-60.86	1026	72.3°	34.3 -104.58 1135 107.7°
17.2	180.14	40.0	18.9	-45.65	969	60.7°	38.9 -119.73 1158 119.4°
12.3	209.24	35.0	15.7	-30.05	925	54.0°	42.3 -129.26 1166 126.1°
7.3	238.35	30.0	13.1	-26.73	887	49.4°	45.3 -136.51 1167 130.7°
2.4	267.46	20.0	8.4	-17.42	820	43.7°	50.7 -147.65 1153 136.5°
57.4	296.56	0.	0.	0.	720	40.0°	60.3 -164.75 1083 140.2°
52.5	325.67	-20.0	-8.1	17.49	664	43.8°	-45.6 148.94 974 136.4°
47.6	354.78	-30.0	-12.4	28.99	656	49.5°	-40.7 137.68 909 130.6°
42.6	383.88	-35.0	-14.9	30.23	654	54.1°	-38.0 130.33 872 126.0°
37.7	412.99	-40.0	-17.4	39.99	666	60.8°	-35.0 120.71 832 119.3°
32.7	442.09	-45.0	-21.4	41.32	688	72.4°	-31.0 105.43 782 107.6°
		-47.4	-26.1	43.37	728	90.0°	-26.1 83.41 728 90.0°
JUNE 17, 1963							
27.8	111.20	47.4	28.5	-82.76	1078	90.0°	28.5 -82.80 1078 90.0°
22.8	140.31	45.0	23.0	-60.90	1013	72.3°	34.2 -104.63 1129 107.7°
17.9	169.41	40.0	18.8	-45.68	951	60.7°	38.7 -119.77 1156 119.4°
12.9	198.52	35.0	15.7	-30.07	910	54.0°	42.2 -129.30 1167 126.1°
8.0	227.62	30.0	13.0	-26.75	871	49.5°	45.1 -136.55 1170 130.7°
3.1	256.73	20.0	8.3	-17.43	805	43.7°	50.5 -147.70 1159 136.5°
58.1	285.84	0.	0.	0.	709	40.0°	60.1 -164.78 1095 140.2°
53.2	314.94	-20.0	-8.0	17.50	648	43.8°	-45.6 148.92 989 136.4°
48.2	344.05	-30.0	-12.4	28.90	642	49.5°	-40.7 137.67 923 130.6°
43.3	373.15	-35.0	-14.9	30.20	640	54.1°	-38.0 130.34 886 126.0°
38.3	402.25	-40.0	-17.4	39.97	667	60.8°	-35.0 120.71 845 119.3°
33.4	431.36	-45.0	-21.4	41.31	692	72.4°	-31.0 105.44 793 107.6°
28.5	460.47	-47.4	-26.1	43.36	736	90.0°	-26.1 83.41 736 90.0°
JUNE 18, 1963							
23.5	129.57	47.4	28.4	-82.81	1067	90.0°	28.4 -82.84 1067 90.0°
18.5	158.67	45.0	22.9	-60.93	999	72.3°	34.0 -104.68 1127 107.7°
13.6	187.78	40.0	18.6	-45.71	939	60.7°	38.5 -119.82 1152 119.4°
8.6	216.88	35.0	15.6	-30.10	894	54.0°	41.9 -129.35 1165 126.1°
3.7	245.99	30.0	12.9	-27.76	855	49.4°	44.9 -136.60 1172 130.7°
58.7	275.09	20.0	8.1	-17.44	790	43.7°	50.3 -147.75 1166 136.5°
53.8	304.20	0.	0.	0.	696	40.0°	60.0 -164.82 1108 140.2°
48.8	333.30	-20.0	-8.0	17.51	651	43.8°	-45.7 148.90 1005 136.4°
43.8	362.40	-30.0	-12.3	28.91	650	49.5°	-40.8 137.85 949 130.6°
38.9	391.51	-35.0	-14.7	30.20	656	54.1°	-38.1 130.33 901 126.0°
33.9	420.61	-40.0	-17.5	39.98	674	60.8°	-35.0 120.71 859 119.3°
29.0	449.71	-45.0	-21.3	41.34	697	72.4°	-31.0 105.43 805 107.6°
		-47.4	-26.1	43.35	745	90.0°	-26.1 83.42 745 90.0°
JUNE 19, 1963							
19.0	119.82	47.4	28.2	-82.86	1056	90.0°	28.2 -82.88 1056 90.0°
14.1	148.92	45.0	22.8	-60.97	985	72.3°	31.8 -104.72 1114 107.7°
9.1	178.02	40.0	18.5	-45.74	923	60.7°	38.3 -119.87 1145 119.4°
4.2	207.13	35.0	15.5	-30.12	878	54.0°	41.8 -129.40 1165 126.1°
59.2	236.23	30.0	12.8	-27.78	840	49.4°	44.7 -136.65 1173 130.7°
54.2	265.33	20.0	8.2	-17.45	775	43.8°	50.1 -147.79 1171 136.5°
49.3	294.44	0.	0.	0.	686	40.0°	59.8 -164.86 1120 140.2°
44.3	323.54	-20.0	-8.0	17.51	646	43.8°	-45.8 148.87 1019 136.4°
39.4	352.64	-30.0	-12.3	28.92	648	49.5°	-40.9 137.63 954 130.6°
34.4	381.74	-35.0	-14.7	30.21	657	54.1°	-38.1 130.32 916 126.0°
29.5	410.84	-40.0	-17.5	39.99	672	60.8°	-35.1 120.70 874 119.3°
24.5	439.94	-45.0	-21.3	41.35	702	72.4°	-31.0 105.42 817 107.6°
		-47.4	-26.1	43.36	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)
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 10.0	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 -129.46 1162 126.1°
9 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	760	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	369.96	-30.0	-12.3	28.93	647	49.5°	-40.9 137.61 970 130.6°
18 34.9	399.06	-35.0	-14.7	36.32	658	54.1°	-38.2 130.30 932 126.0°
20 29.9	428.17	-40.0	-17.5	46.01	676	60.8°	-35.1 120.69 888 119.3°
22 25.0	457.27	-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°
9 0.1	242.77	30.0	12.7	-28.82	808	49.5°	44.3 -136.76 1171 130.7°
9 55.2	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	17.53	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	388.27	-35.0	-14.7	36.33	660	54.1°	-38.3 130.28 948 126.0°
19 30.3	417.37	-40.0	-17.4	46.02	680	60.8°	-35.2 120.57 903 119.3°
21 25.3	446.47	-45.0	-21.2	61.35	717	72.4°	-31.1 105.41 844 107.7°
23 20.4	475.57	-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 1085 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°
9 55.5	261.06	30.0	12.6	-28.84	791	49.5°	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 140.2°
14 40.6	348.36	-20.0	-7.9	17.53	635	43.8°	-46.2 148.77 1066 136.4°
16 35.6	377.46	-30.0	-12.2	28.94	644	49.5°	-41.2 137.56 1003 130.6°
18 30.6	406.56	-35.0	-14.6	36.33	663	54.1°	-38.4 130.26 964 126.0°
20 25.6	435.66	-40.0	-17.4	46.02	686	60.8°	-35.3 120.65 919 119.3°
22 20.7	464.76	-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 IOTA 1

REFERENCE TIME 1963 Y. 6 M. 8 D. 1 H 17.66 M. UT
 INCLINATION 47.24 DEG.
 ASCENDING NODE LONG. 1 95.26 DEG. WEST
 PERIOD 144.93 MIN.
 ARGUMENT OF PERIGEE 288.04 DEG.
 RATE OF CHANGE 0.27079 DEG. PER PERIOD
 ANOMALISTIC PERIOD 115.187 MIN.
 RATE OF CHANGE 0.00046 MIN. PER PERIOD
 ECCENTRICITY 0.04747
 RADIUS OF PERIGEE 5441.1 MILES
 RADIUS OF APOGEE 5103.7 MILES
 RATE OF CHANGE -0.32 MILES PER DAY
 ASCENDING NODE LONG. 1 109.69 DEG.
 RATE OF CHANGE -3.29820 DEG. PER DAY
 LATITUDE OF PERIGEE -44.27 DEG.
 READ-IN EXPECTED MAG. 11