

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 15 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

Summers

SMB B155

INCOMING

VHQA598ZCECB333

..... YY RUEAHQ

DE RUHPF B041

ZNR

Y 211537Z

FM COMBARPAC

TO RUHPHH/COMHAWSEAFRON

RUHLKM/CINCPACAF

RUUAUAAH/HADD KUNIA

ZEN/CINCNORAD

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

RUAUAHH/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	LONG.	LAT.	TIME	LONG.	HT.	BEAR.	TIME	LONG.	HT.	BEAR.
(UT)	(W)		CORR.	CORR.	(MI)	(N-E)	CORR.	CORR.	(MI)	(N-E)
JUNE 16, 1963										
27.1	121.92	47.4	28.7	-82.72	1048	90.0°	28.7	-82.74	1088	90.0°
27.2	151.93	45.0	23.2	-60.84	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	-127.24	1166	126.1°
7.3	238.35	30.0	12.1	-14.73	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	-1.1	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	-18.9	38.23	658	54.1°	-38.0	130.35	872	126.0°
37.7	412.99	-40.0	-24.6	45.93	666	60.8°	-35.0	120.72	832	119.3°
32.7	442.09	-45.0	-31.4	51.32	688	72.4°	-31.0	105.43	782	107.6°
		-47.4	-36.1	53.37	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	-60.80	1013	72.3°	34.2	-104.63	1129	107.7°
17.9	169.41	40.0	18.8	-45.68	957	60.7°	38.7	-119.77	1156	119.4°
12.9	198.52	35.0	15.7	-30.07	910	54.0°	42.2	-127.30	1167	126.1°
8.0	227.62	30.0	12.2	-14.76	871	49.4°	45.1	-136.55	1170	130.7°
3.1	256.73	20.0	8.5	-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	-1.0	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	-18.9	38.29	647	54.1°	-38.0	130.34	886	126.0°
38.3	402.26	-40.0	-24.6	45.97	667	60.8°	-35.0	120.71	845	119.3°
33.4	431.36	-45.0	-31.4	51.33	692	72.4°	-31.0	105.44	793	107.6°
28.5	460.47	-47.4	-36.1	53.38	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	1122	107.7°
13.6	187.78	40.0	18.6	-45.71	939	60.7°	38.5	-119.81	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	12.6	-14.78	855	49.4°	44.9	-136.60	1172	130.7°
58.7	275.09	20.0	8.6	-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	-1.0	17.51	671	43.8°	-45.7	148.90	1005	136.4°
43.8	362.40	-30.0	-12.3	28.91	650	49.5°	-40.8	137.69	940	130.6°
38.9	391.51	-35.0	-18.7	38.30	656	54.1°	-38.1	130.33	901	126.0°
33.9	420.61	-40.0	-24.5	45.98	679	60.8°	-35.0	120.71	859	119.3°
29.0	449.71	-45.0	-31.3	51.34	697	72.4°	-31.0	105.43	805	107.6°
		-47.4	-36.1	53.38	745	90.0°	-26.1	83.42	745	90.0°
JUNE 19, 1963										
24.0	138.67	47.4	28.2	-82.86	1056	90.0°	28.2	-82.88	1056	90.0°
19.1	167.77	45.0	22.8	-60.97	985	72.3°	33.8	-104.72	1119	107.7°
14.1	196.87	40.0	18.5	-45.74	925	60.7°	38.3	-119.85	1148	119.4°
9.2	225.97	35.0	15.5	-30.12	878	54.0°	41.8	-129.40	1161	126.1°
4.2	255.07	30.0	12.5	-14.79	839	49.4°	44.7	-136.65	1173	130.7°
59.2	284.17	20.0	8.7	-17.45	775	43.7°	50.1	-147.79	1171	136.5°
54.3	313.27	0.	0.	0.	686	40.0°	59.8	-164.86	1120	140.2°
49.3	342.37	-20.0	-1.0	17.51	666	43.8°	-45.8	148.87	1019	136.4°
44.4	371.47	-30.0	-12.3	28.92	648	49.5°	-40.9	137.63	954	130.6°
39.4	400.57	-35.0	-18.7	38.31	657	54.1°	-38.1	130.32	916	126.0°
34.5	429.67	-40.0	-24.5	45.99	677	60.8°	-35.1	120.70	874	119.3°
29.5	458.77	-45.0	-31.3	51.35	702	72.4°	-31.0	105.42	817	107.6°
24.5	487.87	-47.4	-36.1	53.39	750	90.0°	-26.1	83.42	750	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 14.0	166.25	45.0	22.6	-61.00	969	72.3°	33.6	-104.77	1104	107.7°
5 9.4	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	-30.15	861	54.0°	41.5	-129.46	1162	126.1°
9 59.7	253.56	30.0	12.8	-20.80	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	-1.0	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	-18.7	36.32	658	54.1°	-38.2	130.30	932	126.0°
20 29.9	428.17	-40.0	-24.5	46.01	676	60.8°	-35.1	120.69	888	119.3°
22 25.0	457.27	-45.0	-31.3	61.35	710	72.4°	-31.0	105.42	831	107.6°
		-47.4	-36.1	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	-30.17	846	54.0°	41.3	-129.51	1158	126.1°
8 0.1	242.77	30.0	12.7	-20.82	808	49.4°	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	-1.0	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	388.27	-35.0	-18.7	36.33	660	54.1°	-38.3	130.28	948	126.0°
19 30.3	417.37	-40.0	-24.4	46.02	680	60.8°	-35.2	120.57	903	119.3°
21 25.3	446.47	-45.0	-31.2	61.35	717	72.4°	-31.1	105.41	844	107.6°
23 20.4	475.57	-47.4	-36.1	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	1016	90.0°	27.7	-83.01	1016	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	-30.19	829	54.0°	41.1	-129.57	1153	126.1°
9 55.5	261.06	30.0	12.6	-20.84	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	140.2°
14 40.6	348.36	-20.0	-1.0	17.53	635	43.8°	-46.2	148.77	1066	136.4°
16 35.6	377.46	-30.0	-12.2	28.94	648	49.5°	-41.1	137.56	1003	130.6°
18 30.6	406.56	-35.0	-18.6	36.34	663	54.1°	-38.4	130.25	964	126.0°
20 25.6	435.66	-40.0	-24.3	46.02	686	60.8°	-35.2	120.55	919	119.3°
22 20.7	464.76	-45.0	-31.2	61.36	726	72.4°	-31.1	105.40	859	107.6°
		-47.4	-36.1	83.38	788	90.0°	-26.1	83.41	788	90.0°

MODIFIED ORBITAL ELEMENTS FOR SATELLITE IOTA 1

REFERENCE TIME 1963 Y. 6 M. 20 D. 17.00 H. UT
 INCLINATION 47.39 DEG.
 ASCENDING NODE 120.01 DEG. WEST
 PERIOD 100.00 MIN.
 ARGUMENT OF PERIODE 288.00 DEG.
 RATE OF CHANGE 0.21074 DEG. PER PERIOD
 ANOMALISTIC PERIOD 115.187 MIN.
 RATE OF CHANGE -0.00056 MIN. PER PERIOD
 ECCENTRICITY 0.04747
 PERIODE OF PERIODE 451.11 HOURS
 RATE OF CHANGE -0.00056 HOURS PER DAY
 ASCENDING NODE 120.01 DEG.
 RATE OF CHANGE -0.00056 DEG. PER DAY
 LATITUDE OF PERIODE 47.39 DEG.
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