PROJECT 10073 RECORD CARD

1. DATE 20 June 1963	**2. LOCATION** N of Midway (Pacific)	**12. CONCLUSIONS** ☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon ☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft ☐ Was Astronomical ☐ Probably Astronomical ☐ Possibly Astronomical ☐ Other_____ ☒ Insufficient Data for Evaluation ☐ Unknown
3. DATE-TIME GROUP Local _____ GMT 20/1132Z	**4. TYPE OF OBSERVATION** ☒ Ground-Visual ☐ Ground-Radar ☐ Air-Visual ☐ Air-Intercept Radar	
5. PHOTOS ☐ Yes ☒ No	**6. SOURCE** Military	
7. LENGTH OF OBSERVATION 10 minutes	**8. NUMBER OF OBJECTS** One	**9. COURSE** Eastbound

10. BRIEF SUMMARY OF SIGHTING

Object sighted to North of Eastbound Course. Object had reddish tint. Traveled through 40 deg arc in 10 minutes. Control Center indicated no a/c in area. No estimate on size altitude or speed.

11. COMMENTS

On June 20 at 1054Z ECHO crossed equator at 28266 and would be visible to observers on Midway at the reported time. At 20/1132Z ECHO at 40 deg N 161 deg W, to North of Midway heading SE.

ATIC FORM 329 (REV 26 SEP 52)

20/11322 DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

Friend

AF IN : 7425 (20 Jun 63) G/dug
INFO : NIN-9, XOP-1, XOPX-4, SAF-OS-3, DIA-25, DIA-CIIC-2 (45)

SMB B152

LKA726KHA734

OO RUEAHQ RUECW RUWGALB

DE RUHLKH 6

ZNR

O 201423Z

FM 326 AIR DIV KUNIA FACILITY HAWAII

TO RUHLKM/PACAF HICKAM AFB HAWAII

RUHPHH/COMHAWSEAFRON PEARL HARBOR HAWAII

INFO RUEAHQ/CSAF USAF WASH DC

RUECW/CNO WASH DC

RUECW/SECNAV WASH DC

RUWGALB/CINCNO

AD ENT AFB COLO

RUHPA/CINCPAC CAMP H M SMITH HAWAII

RUHAFS/CINCUSARPAC FT SHAFTER HAWAII

RUHPB/CINCPACFLT PEARL HARBOR HAWAII

RUAUAZ/COMUSJAPAN FUCHU AS JAPAN

RUAMC/COMUSKOREA SEOUL KOREA

RUAGFL/COMUSTDC TAIPEI TAIWAN

RUCSBRB/CINCSAC OFFUTT AFB NEBR

AF GRNC

BT

10.547 282.66
40°N SE −119.93
161°—

MIDWAY ABOUT 175°W 30°N.

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
[illegible]

INCOMING

AF IN : 7425 (20 Jun 63)

UNCLAS/UNIDENTIFKIED FLYING OBJECT

1. UNIDENTIFIED FLYING OBJECT SIGHTED IN VICINITY MIDWAY BY TWO OFFICERS. FOLLOWING FACTS ON UFO:(

-. TIME SIGHTED-201132Z

B. NORTH OF MIDWAY ON EASTBOUND COURSE

C. UFO GLOWED WITH REDDISH TINT.

D. TRAVERSED APPROXIMATELY 40 DEGREES OF ARC IN 10 MINUTES.

E. COULD NOT ESTIMATE ALTITUDE, SIZE OR SPEED

2. HONOLULU CENTER REPORTS NO TRAFFIC IN AREA.

REMARKS: NO EVALUATION AT THIS TIME.

BTM NOTE: Advance copies delivered to NIN & DIA.

20/1426Z JUN RUHLKH

SATELLITE 1960 IOTA 1
FOR OTHER LATITUDES

JUNE 16, 1963

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
1 27.1	121.92	47.4	28.7	-82.72	1088	90.0*	28.7	-82.78	1088	90.0*
3 22.2	151.03	45.0	23.7	-60.84	1026	72.3*	34.3	-104.50	1185	107.7*
5 17.2	180.14	40.0	18.9	-45.65	969	60.7*	38.9	-119.73	1160	119.4*
7 12.3	209.24	35.0	15.7	-36.05	925	54.0*	42.3	-129.88	1166	126.1*
9 7.3	238.35	30.0	13.1	-28.73	887	49.4*	45.8	-136.51	1167	130.7*
11 2.4	267.46	20.0	8.4	-17.42	820	43.7*	50.7	-147.68	1153	136.5*
13 57.4	296.56	0.	0.	0.	720	40.0*	60.5	-164.75	1083	140.2*
14 52.5	325.47	-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	23.88	-35.0	-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

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
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	-104.69	1129	107.7*
4 17.9	169.41	40.0	18.8	-45.68	955	60.7*	38.7	-119.77	1154	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	658	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	-35.0	-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	83.38	736	90.0*	-26.1	83.41	736	90.0*

JUNE 18, 1963

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
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	-104.68	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	-35.0	-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	83.38	745	90.0*	-26.1	83.42	745	90.0*

JUNE 19, 1963

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
0 24.0	118.82	47.4	28.2	-82.85	1055	90.0*	28.2	-82.88	1056	90.0*
2 19.1	147.92	45.0	22.8	-60.97	985	72.3*	33.8	-104.72	1114	107.7*
4 14.1	177.02	40.0	18.5	-45.74	924	60.7*	38.3	-119.87	1148	119.4*
6 9.2	206.13	35.0	15.5	-36.12	878	54.0*	41.8	-129.40	1165	126.1*
8 4.2	235.23	30.0	12.8	-28.78	840	49.4*	44.7	-136.65	1173	130.7*
9 59.2	264.33	20.0	8.2	-17.45	775	43.8*	50.1	-147.79	1171	136.5*
11 54.3	293.44	0.	0.	0.	686	40.0*	59.8	-164.86	1120	140.2*
13 49.3	322.54	-20.0	-8.0	17.51	646	43.8*	-45.8	148.87	1019	136.4*
15 44.4	351.64	-30.0	-12.3	28.92	648	49.5*	-40.9	137.63	954	130.6*
17 39.4	20.74	-35.0	-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	702	72.4*	-31.0	105.42	817	107.6*
23 24.5	108.05	-47.4	-26.1	83.38	754	90.0*	-26.1	83.42	754	90.0*

SATELLITE 1960 IOTA 1
FOR OTHER LATITUDES

JUNE 20, 1963

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
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	-45.71	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*
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	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	9.96	-30.0	-12.3	28.93	647	49.5*	-40.9	137.61	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

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
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	49.5*	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	17.52	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

EQUATOR S-N TIME (UT)	EQUATOR S-N LONG. (W)	LAT.	SOUTH-NORTH TIME CORR.	SOUTH-NORTH LONG. CORR.	SOUTH-NORTH HT. (MI)	SOUTH-NORTH BEAR. (N-E)	NORTH-SOUTH TIME CORR.	NORTH-SOUTH LONG. CORR.	NORTH-SOUTH HT. (MI)	NORTH-SOUTH BEAR. (N-E)
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	202.88	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 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	140.3*
14 40.6	348.36	-20.0	-7.9	17.53	635	43.8	-46.2	148.77	1066	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	83.43	788	90.0*

MODIFIED ORBITAL ELEMENTS FOR EARTH SATELLITE 1960 IOTA 1

REFERENCE TIME 1963 Y 6 M 8 D 1 H 17.46 M UT
INCLINATION 47.24 DEG.
ASCENDING NODE (LONG.) 85.26 DEG. WEST
PRIME SWEEP INTERVAL ONE DAY -16.93 MIN.
ARGUMENT OF PERIGEE 288.04 DEG.
RATE OF CHANGE 0.27099 DEG. PER PERIOD
ANOMALISTIC PERIOD 115.187 MIN.
RATE OF CHANGE -0.00046 MIN. PER PERIOD
ECCENTRICITY 0.04747
RADIUS OF PERIGEE 4641.1 MILES
RADIUS OF APOGEE 5103.7 MILES
RATE OF CHANGE -0.32 MILES PER DAY
ASCENDING NODE (R.A.) 189.69 DEG.
RATE OF CHANGE -3.29820 DEG. PER DAY
LATITUDE OF PERIGEE -44.27 DEG.
READ-IN EXPECTED MAG. +1