

### E.5 Radar/Airborne Doppler Radar Scientist (On-Board)

The on-board radar scientist (RS) is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and check lists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

#### E.5.1 Preflight

- NMD 1. Determine the status of equipment and report results to the on-board lead project scientist (LPS).
- NMD 2. Confirm mission and pattern selection from the on-board LPS.
- NMD 3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.
- NMD 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

#### E.5.2 In-Flight

- NMD 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.

#### E.5.3 Postflight

- NMD 1. Complete the summary check lists and all other appropriate check lists and forms.
- NMD 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- NMD 3. Hand-carry all radar tapes and arrange delivery as follows:
  - a. Outside of Miami - to the HRD operations center (FGOC).
  - b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO flight director.]
- NMD 4. Debrief at the appropriate operations center (FGOC or MGOC).
- NMD 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

91280908891 - 1490909H1

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### Radar Scientist Check List

Flight ID 880909H1  
Aircraft # 42RF  
Operators DORST  
Radar Tech. DUGRANRUT

SEP 9 1983

Number of digital magnetic tapes on board 22

Number of tape labels on board ∞

Component systems up and checked:

RDSC	<u>✓</u>	DSC1	<u>✓</u>
Computer	<u>✓</u>	DSC2	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>SN 102</u>
TA	<u>✓</u>	R/T#	<u>SN 201</u>

Time correction between radar time and digital time + 2 SEC

### Radar Postflight Summary

Number of digital tapes used: DMTR 1 7  
DMTR 2 7

Significant recorder down time:

DMTR 1 \_\_\_\_\_ Radar LF \_\_\_\_\_  
DMTR 2 \_\_\_\_\_ Radar TA ~ 40 min

Other problems:

SEP 9 1988

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## HRD Radar Tape Log

Flight 880909H Aircraft 42RF Operator DORST Sheet 1 of     

[illegible]

NEW  
TAPE  
LABELS

DIT 34

DITC

DIT7

DI T8



SEP 9 1988

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Page 3 of 4

### HRD Radar Down-Time Log

Operator Derst

Sheet 1 of     

Item	Time Down	Time Up	Problem
TA	0033	0055	R/T PROBS
TA	0218	0241	PM

Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.



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### E.5.1 Preflight

- ☒ 1. Determine the status of equipment and report results to the on-board Lead Project Scientist (LPS).
- ☒ 2. Confirm mission and pattern selection from the on-board LPS.
- ☒ 3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.
- ☒ 4. Complete the appropriate preflight calibrations and checklists as specified in the radar operator's manual.

### E.5.2 In-Flight

- ☐ 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO/Flight Director or Aircraft Commander.

### E.5.3 Postflight

- ☐ 1. Complete the summary checklists and all other appropriate checklists and forms.
- ☐ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- ☐ 3. Hand-carry all radar tapes and arrange delivery as follows:
  - a. Outside of Miami - to the HRD operations center (FGOC).
  - b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO/Flight Director.]
- ☐ 4. Debrief at the appropriate operations center (FGOC or MGOC).
- ☐ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

Radar Scientist Checklist

Flight ID 880909H1  
Aircraft # N42RF  
Operators Gamache Radar: Dorst  
Radar Tech DuGranrut

Number of digital magnetic tapes on-board 19

Number of tape labels on-board Plenty

Component systems up and checked:

RDSC <u>✓</u>	DSC1 <u>✓</u>
Computer <u>✓</u>	DSC2 <u>✓</u>
DMTR1 <u>✓</u>	DMTR2 <u>✓</u>

LF ✓ R/T# 102

TA ✓ R/T# 201

Time correction between radar time and digital time Doppler is digital + 2.5 sec

Radar Postflight Summary

Number of digital tapes used DMTR 1 \_\_\_\_\_  
DMTR 2 \_\_\_\_\_

Significant recorder downtime:

DMTR 1 _____	Radar LF _____
DMTR 2 _____	Radar TA _____

Other problems:







OPERATOR \_\_\_\_\_

SHEET \_\_\_\_\_ OF \_\_\_\_\_

## HRD RADAR LOG

## RADAR DOWN-TIME LOG

[illegible]

ITEM LIST: VTR, DMTR1, DMTR2, COMP, ROSE, LF, NO, TA, DSC1, DSC2

880909H1

SEP 9 1988

RECCO INTO TS FLORENCE W/  
LONG TERM MONITOR EXP.

43RE ALREADY IN STORM; WE WILL  
RENDREVOUS IN THE EYE

T/O MIAMI 2010Z LAND MIAMI 0506Z

LPS - DR F MARKS DOPPLER - DR J. GAMACHE

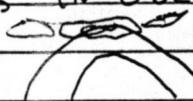
RADAR - N. DORST FIT DIR - B. DAMIANO

RADAR TECH - J. DUGRANROT / JR. ROLES

2052Z - START RECORDING RADAR DATA  
FERRY FLIGHT INTO GULF SOME SHOWERS  
WEST OF FLA

2119Z - Less THAN 30 MIN / TAPE

BANDS IN GULF AT 100 MI range



2130Z - DESCEND AT IP, 'EYE' IS  
APPROX 100 MI OUT

2141Z - CIRCLING, WAITING FOR WORD  
FROM 43RE.

AROUND 23Z LOADING DRIVE #1  
BOTH TAPES RAN AWAY. RESTARTED  
NEW TAPE ON DRIVE #2 BUT MISSING  
10-15 MIN OF DATA. ALSO THAT  
DARNED MINOLTA IS ACTING UP  
(LOW BATTERIES).

0032 - TAIL shut down

0033 - STOP RECORDING TA

0058 - Restart recording TA

DUG sez it aint perfect, but  
record it anyway!

0100Z - TA return looks lousy.  
poor, blocky resolution, levels are  
messed up.

0241Z - DUG Throws his hands up  
& sez there's nothing more he can  
do to help TA radar. So start  
recording, again.

0306 - DR FM sez he's gotten enough  
TAIL so stopped recording it, LF  
only.

0318Z - LAST TAPE, END RECORDING

880909H1

2008 T/O from MIA

We are doing Ed Rappaport's satellite intercept.  
Flight. This is a figure four pattern with two planes,  
both taking Doppler data

We will be using 300m range gates today.

2040 All system (radar) look go right now!

2210 180° from center

221345 start Doppler #1 tracking 275°

2229 saw a gust of 100 kts

223315 end Doppler #1

Doppler #2 will be in turn on west side

2248 Not enough reflectors out here to take data for  
this turn

2338 Getting ready for penetration heading 60°

234140 Doppler #2 starts track 060°

000000 Doppler #2 ends track 050°

This was a pass through the eye.

000450 Doppler #3 starts track 050°

~~000~~ 002000 Top ends in turn

002227 Doppler #4 starts track 180°

003230 Doppler #4 ends to allow time to  
fix tail K/T

005800 tail REF looks much better!

005900 Doppler #5 starts track 270°  
into center

0110 Passed through center. It's bumpy but  
don't see anything on tail display  
that looks like cells. Looks like area  
of overhang.

0112 now it looks more solid.

011730 Doppler #5 ends track 270° heading away  
from center

012010 Doppler #6 starts track 270°

0132?? Doppler #6 off in turn (90°-270° turn)

013400 Doppler #6 on after turn track 090°

013800 Doppler #6 ends

014021 Doppler #7 starts track 090° toward center

015140 Doppler #7 off early to get whole pass  
through center on Doppler #8



015327 Doppler #8 starts track 090° through ~~center~~ <sup>center</sup>  
021130 Doppler #8 ends track 090°

024155 Doppler #9 on track 315°  
investigated area to N of center

~~03035~~ 030035 Doppler #9 on track @ 180°  
~~Doppler #~~

221525

L/F

RNG MK

40 MI

0000000000

HDG

261

TIUT

18

DNTR

1-RDY

2-REC

Age group (years)	Number of cases	Number of deaths	Case-fatality rate (%)
0-4	10	0	0
5-9	15	0	0
10-14	20	0	0
15-19	30	0	0
20-24	40	0	0
25-29	50	0	0
30-34	60	0	0
35-39	70	0	0
40-44	80	0	0
45-49	90	0	0
50-54	100	0	0
55-59	110	0	0
60-64	120	0	0
65-69	130	0	0
70-74	140	0	0
75-79	150	0	0
80-84	160	0	0
85-89	170	0	0
90-94	180	0	0
95-99	190	0	0
100+	200	0	0

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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000000

245

Age group (years)	Number of cases	Number of deaths	Number of survivors
0-10	100	10	90
11-20	150	15	135
21-30	200	20	180
31-40	250	25	225
41-50	300	30	270
51-60	350	35	315
61-70	400	40	360
71-80	450	45	405
81-90	500	50	450
91-100	550	55	495

[illegible]

1-25C

2-077