

Radar Scientist Form

(Updated 31 May 2019)

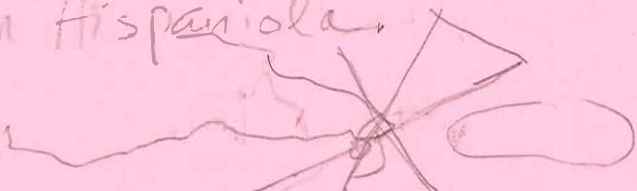
Flight ID 20210811T1 Storm Fred
HRD Radar Scientist (Aircraft/Ground) Marks/Peason
AOC Radar Operator Richards

The aircraft radar scientist is responsible for data collection from all radar systems on his/her assigned aircraft, working with the ground radar scientist to ensure successful transmission of all radar products from the aircraft in a timely manner, and contributing to mission science by communicating real-time radar products to the LPS. Specific responsibilities are detailed in the *Aircraft Radar Support Guide* located on the radar workstation desktop and in the flight bag.

§ Pre-flight Notes.

Indicate below any existing radar instrumentation issues, pre-flight radar repairs or other instrumentation issues (e.g., GPS swapout) that might impact radar data collection or analyses. If none, then simply write NONE below.

BMC TDR Mission as Fred makes
landfall in Hispaniola.



Also do 10 min leg to check TDR angle correction

§ Pre-flight Setup with Ground Radar Scientist.

Preferably before the planeside briefing, establish Xchat communication with the ground radar scientist on #radar. Check off the following tasks.

- ☒ Communicate any pre-flight issues noted above.
- ☒ Confirm latest flight pattern. Sketch to the right.
Indicate legs constituting proposed analyses.
- ☒ Go through Steps 1-3 of Aircraft Radar Support Guide.



§ In-flight Setup with Ground Radar Scientist.

0306A Fred

After radar recording has begun, reestablish Xchat communication with the ground radar scientist on #radar. Check off the following tasks.

- ☒ Go through Steps 4-7 of Aircraft Radar Support Guide.

Indicate below any issues identified during Steps 4-7, in particular any radar instrumentation issues evident in the radar displays. If none, then simply write NONE below.

We are working on finding new azimuth angle correction. Planned on 10 min leg in stratiform rain to evaluate. Suggested $+2.5^\circ$ correction. Tested that correction on mission.

§ In-pattern Radar and Weather Event Log.

Indicate below any radar down times or significant weather observations that might be helpful for interpreting radar analyses (e.g., flight through sparse shallow convection).

Time (HHMMSS)	Event (Radar or Weather)
0839	TO Aruba
0939	1st stratiform leg begins in rain bands of 5
0948	end stratiform leg - stratiform was suppressed
1010	1P start 1st leg looking at strat analysis
1029	5 th off shore ^{az cor +2.500} passed just N of it ^{inconclusive}
1100	end leg #1 turn TK 310 cut leg short to 90nm
1115	Start leg #2 TK 210 to point of the coast
1138	turn to catch 6 off shore west of our track
1142	6 turn to TK 180 to stay in precip
1206	end leg #2 start downwind leg in heavy strat
1236	end downwind doing final TDR analysis 1.9 th ^{strat red}
	end TDR analysis ^{corr.}

CNR Drop #1 20.5, 71.9 W
 CNR Drop #2 20.75, 72.27 W
 CNR Drop #3 21.0, 72.6 W

§ End-of-Flight Shutdown with Ground Radar Scientist.

Once the aircraft exits the system, reestablish Xchat communication with the ground radar scientist on #radar. Check off the following tasks.

- ☒ Go through "NEAR END OF FLIGHT" Steps 1-5 of Aircraft Radar Support Guide.

If you recorded 'N' for Analysis Sent at any point during the flight, please detail the situation below. If there are any other *mission-critical* issues pertaining to the radar systems not documented above, please note them here. If none, then simply write NONE below.

- No analyses were transmitted due to azimuth angle correction issue.
- test 2.5° az correction on 1st 2 analyses
- test 1.9° az correction on downwind strat leg
- Conclusion - is ambiguous as slope of bright band noted previous mission remained no matter what angle correction we put in to analyses.
- Impact - given software update just before mission and little impact by changing az cor means detailed analysis is needed before Xmitting TDR analyses from N43.

Jobfile Parameters for Automated TDR Analysis

FLIGHT ID:				Aircraft Radar Scientist:									
Leg Start Time	Leg End Time	Storm Motion		Center Fix			Inbound Track	Outbound Track	Event Type	Max Radius if not 250 km	Horiz. spacing if not 2 km	Accept. for Graphics?	Analysis Sent?
HHMMSS	HHMMSS	Deg	Kts	HHMMSS	Decimal Deg	Decimal Deg	Azimuth (deg)	Azimuth (deg)	IN/TS/H/MH			(Y/N)	(Y/N)
0939	0949			NA	NA	NA	065	NA				N	N
1010	1100			1029			065	065	TS			N	N
1115	1206			1142			210	180	TS			N	N
1206	1236			NA			080		TS			N	N

dummy start

start test log

see notes