

Lead Project Scientist

Preflight

- ☒ 1. Participate in general mission briefing.
- ☒ 2. Determine specific mission and flight requirements for assigned aircraft.
- ☒ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.
- ☒ 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Review field program safety checklist
 - c. Arrange ground transportation schedule when deployed.
 - d. Determine equipment status.
- ☒ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- ☒ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.
- ☒ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGO in Miami).
- ☒ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- ☒ 7. Make sure each HRD flight crew members have life vests
- ☒ 7. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.
- ☒ 8. Collect "mess" fee (\$2.00) from all on-board HRD flight crew members.

In-Flight

- ☒ 1. Confirm from AOC flight director that satellite data link is operative (information).
- ☒ 2. Confirm camera mode of operation.
- ☒ 3. Confirm data recording rate.
- ☒ 4. Complete Lead Project Scientist Form.
- ☒ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

Post flight

- ☒ 1. Debrief scientific crew.
- ☐ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to MGO.
- ☐ 3. Gather completed forms for mission and turn in at the appropriate operations center. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- ☐ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- ☐ 5. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- ☐ 6. Obtain a copy of the all VHS videos from aircraft cameras (3-4 approx.). Turn in with completed forms.
- ☐ 7. Obtain a copy of CD with all flight data. Turn in with completed forms.
- ☐ 8. Determine next mission status, if any, and brief crews as necessary.
- ☐ 9. Notify MGO as to where you can be contacted and arrange for any further coordination required.
- ☐ 10. Prepare written mission summary using Mission Summary form (due to Field Program Director a week after the flight).

Lead Project Scientist Check List

Storm or Project IFEX - early phase Experiment name
 Date 7/3/05 Aircraft N43AF Flight ID 050703I

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Rogers</u>	Flight Director	<u>Mayeaux</u>
Radar	<u>Valde</u>	Pilots	<u>Tobias, Nelson</u>
Workstation	<u>Rogers</u>	Navigator	<u>Brakos</u>
Cloud Physics	<u>Willis</u>	Systems Engineer	<u>Lynch</u>
Photographer/Observer	<u> </u>	Data Technician	<u> </u>
/Guests	<u> </u>	Electronics Technician	<u> </u>
Dropwindsonde	<u> </u>	Other	<u> </u>
AXBT/AXCP	<u> </u>		

B. Take-off and Landing Times and Locations:

Take-Off: 160730 UTC Location: MacDill AFB

Landing: 2030 UTC Location: San Jose Int'l Airport, CR

Number of Eye Penetrations:

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

Ferry from MacDill to San Jose, CR to begin IFEX-
 Early phase partnership with NASA TCSP. System in NW Caribbean
 might be developing; we will be flying thru that system on the ferry down.
 We will drop 4 sondes: 2 on the NW side and 2 on the SE side. Also we will
 run TA radar in FIASI, and fly thru clouds to test microphysics probes.

E. — Equipment Status (Up ↑, Down ↓, Not Available —, Not Used O)

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / Cds /Expendables/ Printouts
Radar/LF	↑	↑		
Doppler Radar/TA	↑	↑		
Cloud Physics	↑	↑		
Data System	↑	↑		—
GPS sondes	↑	↑		
AXBT/AXCP	O	O		
Ozone instrument	O	O		
Workstation	↓	↓		
Videography	↑	↑		

REMARKS:

workstation still not working. will have to wait for Paul L. to look at it once we're in CR. Cloud physics probes seem to be working, but haven't flown through cloud yet. HPO SFMR is running; one of the frequencies is not being read (right-most on numerical display)

19°W
86°W
↓
NHC-identified
possible center
of system



Lead Project Scientist Event Log

Date 7/3/05 Flight 050703I LPS Rogers

Time	Event	Position	Comments
165730	T10	Manila AFB	takeoff from Manila, Army altitude of 20 kft
1725	lumps	22°27' 85°05'; NW of Cuba	lit some good lumps; probes seem to be working; good snow crystal images; about 12 m/s updraft
1733	CP probes	West of Cuba	CP probes working well; PIP has stuck diodes
1749	radar	20°57' 85°43'; thru Yucatan channel	areas of stratiform rain; rain reflectivities of about 20-25 dBZ
1750	drop 1 (20°55' 85°42')	NE of suspect system	sfc wind of 085, 21 kts; 10 m/s
1816	drop 2 (18°58' 84°43')	E of suspect system	sfc wind of 139, 15 kts; 10 m/s
1828	system comment	ESE of suspect system	involition system might be getting better organized; LF shows curvature to line of convection near suspected center; satellite imagery also indicates curvature; winds are southeasterlies, rather than what one would expect to be SW, but may indicate low-level convergence. No way to know, though, without more drops NW of here
1844	SFMR	17°0' 83°42'	HRD SFMR fill has high bias, even w/ all diagnostics working; now showing 36 kts sfc wind
1844	drop 3 (17°0' 83°44')	SE of suspect system	sfc wind 120, 17 kts, mb
1851	drop obs	16°12' 83°23'	winds above 700 at 195, below it switches to southeasterlies
1857	winds	16°0' 83°20'	no westerly winds at sfc, at least where we flew, only westerly winds were above 700 mb on SE side

Mission Summary

Storm name

YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist Rogers
Radar Scientist Walde
Cloud Physics Scientist Willis
Dropwindsonde Scientist —
Boundary-Layer Scientist —
Workstation Scientist —
Observers —

Mission Briefing: (include sketch of proposed flight track or page #)

Ferry to San Jose, included flying through
incipient system in NW Carib.

Mission Synopsis: (include plot of actual flight track)

Ferry was fine, instruments worked well. No indication
of a closed sfc circulation, but we stayed on SE side of suspect center.
Looked more like easterly wave still.

Evaluation: (did the experiment meet the proposed objectives?)

Yes

Problems: (list all problems)

workstation still has problems, probably w/ video card.
GPS sondes were transmitted but not received at WNC. Cloud
physics worked well, radar was good.

Expendables used in mission:

GPS sondes : 3

AXBTs : —

Sonobuoys: —