

Rogers

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 (MGOC 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 MGOC.
- ☒ 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 MGOC 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/TCSP Experiment name E Pac Suspect
 Date 7/16/05 Aircraft N42RF Flight ID 050216 H

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Rogers</u>	Flight Director	<u>Flaherty</u>
Radar	<u>Leighton</u>	Pilots	<u>Kennedy / Choy</u>
Workstation	<u>Murillo / Leighton</u>	Navigator	<u>Crallagher</u>
Cloud Physics	<u> </u>	Systems Engineer	<u> </u>
Photographer/Observer	<u>Montgomery CSU</u>	Data Technician	<u>Mc Millan, Hill, Rogers</u>
/Guests	<u>Raymond NMT</u> <u>McMillan CSU</u>		
Dropwindsonde	<u>Murillo</u>	Electronics Technician	<u> </u>
AXBT/AXCP	<u>Whithorn</u>	Other	<u> </u>

B. Take-off and Landing Times and Locations:

Take-Off: UTC Location: MPOC

Landing: UTC Location:

Number of Eye Penetrations:

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

Daytime follow-on mission to suspect area in the eastern Pacific. System shows some possible signs of a cyclonic circulation in the mid- and low-levels, as identified by drops on previous night's mission. Fly square spiral pattern on suspected circulation center at 14,000 ft. There was not the flare-up of convection overnight that was hoped for, but the drops did reveal at least the possibility of a circulation. The flight today should reveal that.

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	O			
Data System	↑			-
GPS sondes	↑			
AXBT/AXCP	↑			
Ozone instrument	↑			
Workstation	↑			
Videography	↑			

REMARKS:

Lead Project Scientist Event Log

Date 7/16/05 Flight 050716H LPS Rogers

	Time	Event	Position	Comments
	183030	takeoff	MROC	takeoff from MROC;
				convection surrounding airport
				along mountain peaks
	190304	FL winds	9°23' 85°59'	FL winds from south (170°) @ 10 m/s
	191509	FL obs	9°9' 86°52'	entering stratiform shield
	192910	FL winds	8°52' 87°36'	FL winds turned to SSW, SE of suspect vortex
	193109	turn	8°51' 87°59'	turn to 360 track
①	193217	drop 1 (combo)	8°56' 88°1'	FL 188° @ 20 kt; SST 27.9; sfc 220 @ 7 kt
	194624	FL winds	10°3' 88°	FL winds turning to SE
②	194759	drop 2 (combo)	10°10' 88°2'	FL 190° @ 23 kt; SST 28.5; sfc 287 @ 10 kt
	195746	radar	10°45' 88°32'	line of heavy rain surrounding a/c, curved shape
③	195804	drop 3	10°42' 88°33'	FL 158° @ 10 kt; sfc 236 @ 10 kt; rotation echoes, but may just be rain radar
	201218	turn		turn to 270
④	201246	drop 4 (combo)	11°29' 89°23'	FL 115° @ 10 kt; sfc 91 @ 25 kt; SST 28.4
	201644	st winds	11°30' 89°38'	st winds @ 25-30 kts, mostly easterly flow
	202400	FL winds	11°30' 90°13'	strong updraft, ~ 8 m/s updraft
	202930	turn	11°29' 90°39'	turn to track 225
⑤	203001	drop 5 (combo)	11°25' 90°40'	FL about 75 @ 5 kt; sfc 122 @ 5 kt; SST 28.5
	203500	radar	11°13' 90°56'	NW-SE oriented line of strong storms ahead
⑥	204253	drop 6	10°44' 91°20'	FL 14° @ 2 kt; sfc 270 @ 14 kt; SST 27.8
	205513	turn		turn to 226, new track out 1° to the west from position on outer octagon
⑦	205547	drop 7 (combo)	10°9' 92°2'	FL 130° @ 2 kt; sfc 251 @ 12 kt
	210156	FL winds	9°54' 92°24'	FL winds very weak
⑧	211241	drop 8	9°26' 92°58'	no sfc. winds

Lead Project Scientist Event Log

Date 7/16/05 Flight 050716 H LPS Rogers

	Time	Event	Position	Comments
⑨	212816	drop 9 (concluded)	8°50' 91°57'	BT didn't launch, sfc. 218° @ 11 kt
⑩	214032	drop 10	8°10' 91°20'	sfc. 234° @ 10 kt
	214408	FL winds	7°59' 91°7'	FL winds show a shift axis
⑪	215426	drop 11 (concluded)	7°30' 90°33'	SST 27.3, sfc. 226° @ 8 kt.
	220750	FL obs	7°32' 89°35'	under anvil debris
⑫	221130	drop 12 (concluded)	7°34' 89°19'	no BT, sfc. 242° @ 12 kt
⑬	222410	drop 13	8°15' 88°42'	sfc. 283° @ 10 kt
⑭	223558	drop 14	8°54' 89°19'	no winds
⑮	225220	drop 15	10°11' 89°20'	sfc. 257° @ 12 kt
	225323	pattern change	10°18' 89°20'	changing pattern; no longer closing off box but extending
				further north and east, where most of the convection was found earlier
⑮		drop 16		
	230340	FL obs	11°4' 89°20'	near white-out conditions on NE edge of outer box,
				perhaps anvil debris from earlier convection
	230939	turn	11°30' 89°20'	turn to 36 track
⑯	231017	drop 16		sfc. 140° @ 17 kt
	232835	FL wind	12°29' 88°20'	SE FL winds
	233640	turn	12°41' 87°53'	turn to 130 track, head home
⑰	233455	drop 17	12°46' 87°58'	sfc. 137° @ 12 kt

Mission Summary

Storm name

YYMMDDA# Aircraft 42RF

Scientific Crew (42RF)

Lead Project Scientist Rogers
Radar Scientist Leighton
Cloud Physics Scientist —
Dropwindsonde Scientist Murillo
Boundary-Layer Scientist Uhlhorn
Workstation Scientist Murillo/Leighton
Observers Raymond, Montgomery, Searay, Mallon, Lin

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

See previous

Mission Synopsis: (include plot of actual flight track)

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

Problems: (list all problems)

Expendables used in mission:

GPS sondes :

AXBTs : 8

Sonobuoys: 0