

Lead Project Scientist

Storm or Project TD KARL Experiment name RAPX
Flight ID 20160922 I 1 Mission ID WF12A KARL
Preflight

- ___ 1. Participate in general mission briefing.
- ___ 2. Determine specific mission and flight requirements for assigned aircraft.
- ___ 3. Determine from AOC flight director/meteorologist whether aircraft has operational fix responsibility and the mission designation.
- ___ 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.
- ___ 6. 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.
- ___ 7. Report status of aircraft, systems, necessary on-board supplies and crews to MGOC in Miami.
- ___ 8. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- ___ 9. Make sure each HRD flight crew member has a life vest.
- ___ 10. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.

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. Gather completed forms for mission and turn in to data manager at HRD.
- ___ 3. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- ___ 4. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- ___ 5. Obtain a copy of serial flight data on thumb drive. Turn in with completed forms.

[Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

- ___ 6. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to MGOC.
- ___ 7. Determine next mission status, if any, and brief crews as necessary.
- ___ 8. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- ___ 9. Prepare written mission summary using **Mission Summary** form.

Lead Project Scientist Check List

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A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Bucci</u>	Flight Director	<u>SEARS / BELSON</u>
Radar/Workstation	<u>KLOTZ</u>	Pilots	<u>PRICE</u> <u>KAHN, REES</u>
Cloud Physics	_____	Navigator	<u>SIEGEL</u>
Dropwindsonde	_____	Systems Engineer	<u>HEYTEK</u>
AXBT/AXCP	_____	Data Technician	<u>NAEHER</u>
Photographer/Observer	_____	Electronics Technician	<u>PEEK, HORTBERGER</u>
s/Guests	_____	Other	<u>SAPP</u>

B. Take-off and Landing Times and Locations:

Take-Off: 1731 UTC Location: STX

Landing: 0037 UTC Location: STX

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

TD Karl is at 30 kts, ~400 miles north of St. Croix moving NW at 17 kts. It is embedded in a region of 25-15 kts of SE shear (higher shear on the west side). The plane is for a rotated figure-4, dropping sondes at mid and diagonal end pts. no AXBTs or IR sondes. Fly 8000 ft radar altitude w/ 90 nm legs

Mission Summary

Storm name

YYMMDDA# Aircraft 43RF

Scientific Crew (43RF)

Lead Project Scientist Bucci

Radar Scientist KLOTZ

Cloud Physics Scientist _____

Dropwindsonde Scientist CHRISTOPHERSEN

Boundary-Layer Scientist _____

Workstation Scientist _____

Observers (affiliation) _____

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

Mission Synopsis: (include plot of actual flight track)

Completed pattern up until the N-S pass and ended early due to equipment smoking. Dropped a center sonde on 1st and 3rd pass to find a pressure decrease of 4-5 mb. Dry air in the S and W with convection to the N and E. Max winds 35 kts at surface, 50 kts on FL

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

storm appears to be deepening as the SE shear decreases. was not able to sample convection to the east side due to the incomplete pattern. Based on radar composites, the 2 km and 5 km vortices appear to be aligning.

Problems: (list all problems)

Aoc server was up & down, Brad had to process radar on plane
cooling fan fried and circled around N endpoint

Expendables used in mission:

GPS sondes : 12

AXBTs : 0

Sonobuoys: _____

