

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 Pennis Experiment name IFEX/TCSP
Date 7/9/05 Aircraft 43 Flight ID 050709B

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Mr. Black</u>	Flight Director	<u>Mary Mayeaux</u>
Radar	<u>P. Dodge</u>	Pilots	<u>Tom Shepherd</u> <u>Nelson, Tebeast</u>
Workstation	<u>↪</u>	Navigator	<u>Kevin Bratton</u>
Cloud Physics	<u>Paul Willis</u>	Systems Engineer	<u>Pew, Floyd</u>
Photographer/Observer		Data Technician	<u>Terry Lynch</u> <u>Jim Bear</u>
/Guests			
Dropwindsonde	<u>Krystal Valde</u>	Electronics Technician	
AXBT/AXCP	<u>Eric Uhlir</u>	Other	

B. Take-off and Landing Times and Locations:

Take-Off: 1413 UTC Location: San Jose

Landing: _____ UTC Location: JAX NAS

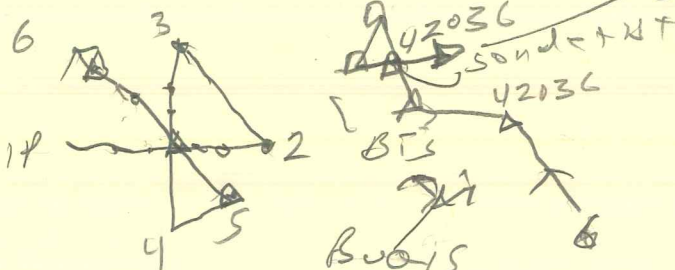
Number of Eye Penetrations: 3

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
09/18	25.3	84.1	969	90 kts

D. Mission Briefing:

See attached map, 3 legs at 12,000 ft
 75 mi length



Sondes at 75, 50, eye wall,
eye (1st and last)

BTS - NW 75 m.
eye 75 mm!
SE 75 m!

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	✓			
Ozone instrument	—			
Workstation	?			
Videography	✓			

REMARKS:

Dennis

Lead Project Scientist Event Log

Date 7/9/05 Flight 070905I LPS M. Black
050709I

Time	Event	Position	Comments
1411	Holding on Taxiway	San Jose Airport	
1413	Takeoff 10.0	84.1 San Jose	
1720	Eye visible on LF radar - plane west of A cube		
1750	Eye 100 nm to the NE		
1754	Descend to 12,000 ft, 80 mi WSW of eye		
1756	Turn to IP		
1800	Near IP ~ 70 miles west		
180252	Drop #1 50 mi west of ctr	5/4 10139 kts, 32 kts	SFMR
1800-1800	adjusting track to line up with eye		
1813	Drop #2	inside edge of eye - 50 kts	
181416	Eye	25.30 84.25 957 SF. 80 kts	
181605	Drop #3	eye wall SFMR - 80 kts	
1820	Radar Frozen - TAIL noisy		
182054	Drop #4	50 miles east of eye	
182750	Drop #5	75 miles east - no launch detect - 52 kts	
1830	In Rainband ~ 70-75 miles east		
1832	Drop #6	77 miles east 31 kts SFMR	
1843	Radar UP		
184450	Drop #7	75 NE - Downwind 19 1/2 kts	
1858	Drop #8	75 mi North - 26 mks SFMR	
190252	Drop #9	50 mile north - 60 kts SFMR	
1910	Triangulation eye		
1912	Drop #10	N eye wall - 90 kts SFMR	
191354	Drop #13	eye 25.43 84.450 - 954 kts	
191523	Drop #14	S eye wall - 70 kts SFMR	
1924	Drop #15	50 mi South - no launch detect	
193033	Drop #16	75 miles South	

turn to (2)
193935 - AXBT - 70 mi SW of eye
28.5 °C

TAIL Down
All Radar Down
Radar Up
Radar Up

no launch detect
AXBT 27.3

958 mb eye sonde

(2)

Lead Project Scientist Event Log

Date 7-9-05 Flight 050709I LPS m. Black

Time	Event	Position	Comments
1942	Drop 17	19 miles S SE	- 19 mb 9 nd
1943	Turn to	eye hdg NW	
194836	Drop 18	50 miles S SE	~
200030	Drop 19	Eye SE	- 77 kts SFMR
200235	eye	Drop 20	- 950 ext. up
200748	NW eye	eye	
201158	Sonde	50 nm NW	Drop 20
202109	Sonde	Drop 21 75 mi NW	SFMR - 35 kts
202445	Turn to	Bouy 42039	
203419	Descend to	30 mi south of bouy, depressurize	
204711	30 miles south of Bouy	42039	280C
205403	Sonde	Drop 22 Bouy	28.81 86.05
210107	AXBT #5	30 mi N of Bouy	- 280C
211243	AXBT #6	30 m W of Bouy	- 280C - 20 m
212012	Sonde #23	at Bouy	- SFMR 30 kts
212308	Sonde #24	10 mi east of bouy	Fit - 102 40
	BACK UP		25 kts SFMR - 40 ft
212827	AXBT #8	30 m E of Bouy	FA-101-40 kts
214420	AXBT #9	Bouy #1	42036
214503	AXBT Sonde #25	just east of Bouy	- 45 kts
2148	Climb out	head to sea	Fit 101
2230	Climbing	STAX	- 25 kts SFMR

10 nm eye

no 1900 BT detected

(3) AXBT 28°C

(4) AXBT 19XBT

(5) 40 kts / 17 ft / 30 kts / 10 ft

no 59 kts

28°C shallow 280C shallow

SFMR 25 m/s

45 kts

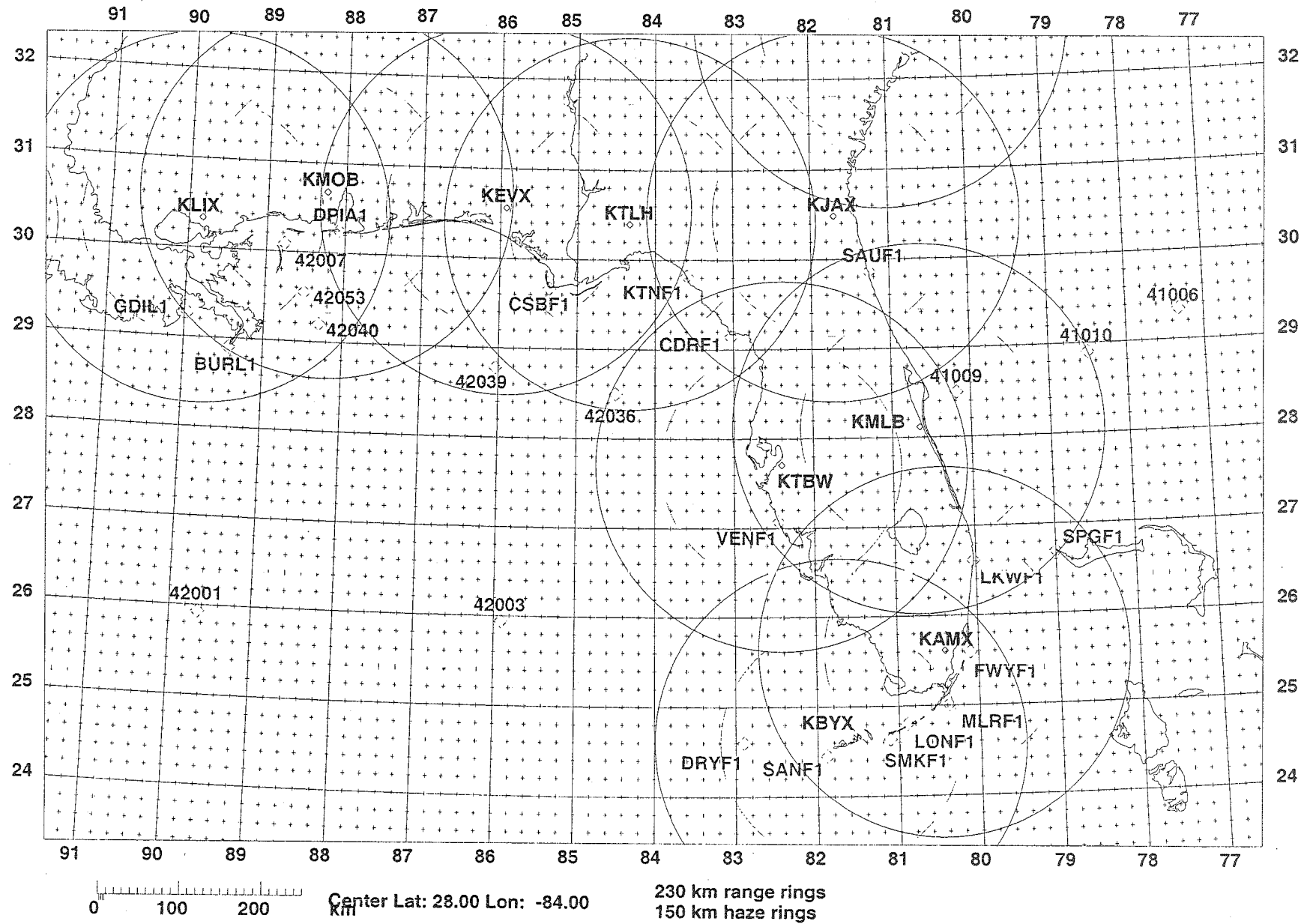
Shallow 20 kts

mixed layer

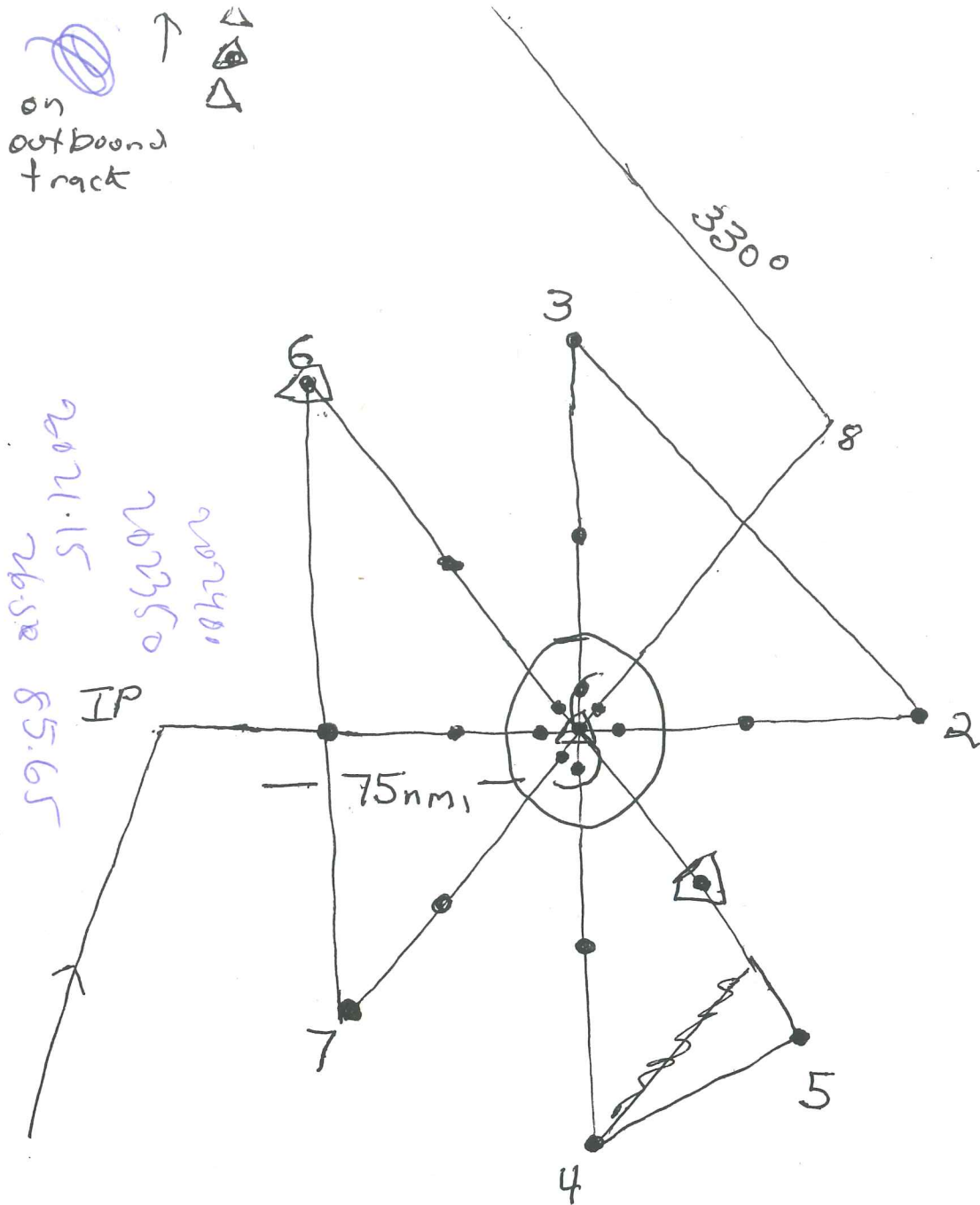
101 ft

30 m

1700110011 9541-648-0274



on
outbound
track



• = sonde
Δ = BT

18Z $\bar{g} = 25.3 \ 84.1$

$F) + A) = 12 \text{ K ft}$

25 Drops

6 BTs

No Backups xcept eyedrops on subsequent pass.
1 first pass 1 last pass