Lead Project Scientist

Storm or Project Javier **Experiment name** Coyote/DWL
Flight ID 20160808I **Mission ID** _____

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.

  ~~236~~
- ✓ 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

Storm or Project TS Javier **Experiment name** Coyote/DWL

Flight ID 20160808I **Mission ID** _____

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Cione	Flight Director	Spears
Radar/Workstation	Ryan/Kalina	Pilots	
		Navigator	
Cloud Physics		Systems Engineer	
		Data Technician	
Dropwindsonde	Sellwood	Electronics Technician	
AXBT/AXCP	Cione	Other	
Photographer/Observers/Guests	—		

B. Take-off and Landing Times and Locations:

Take-Off: 1936 UTC Location: Harlingen, TX

Landing: 0320 UTC Location: " "

Number of Eye Penetrations: 0

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

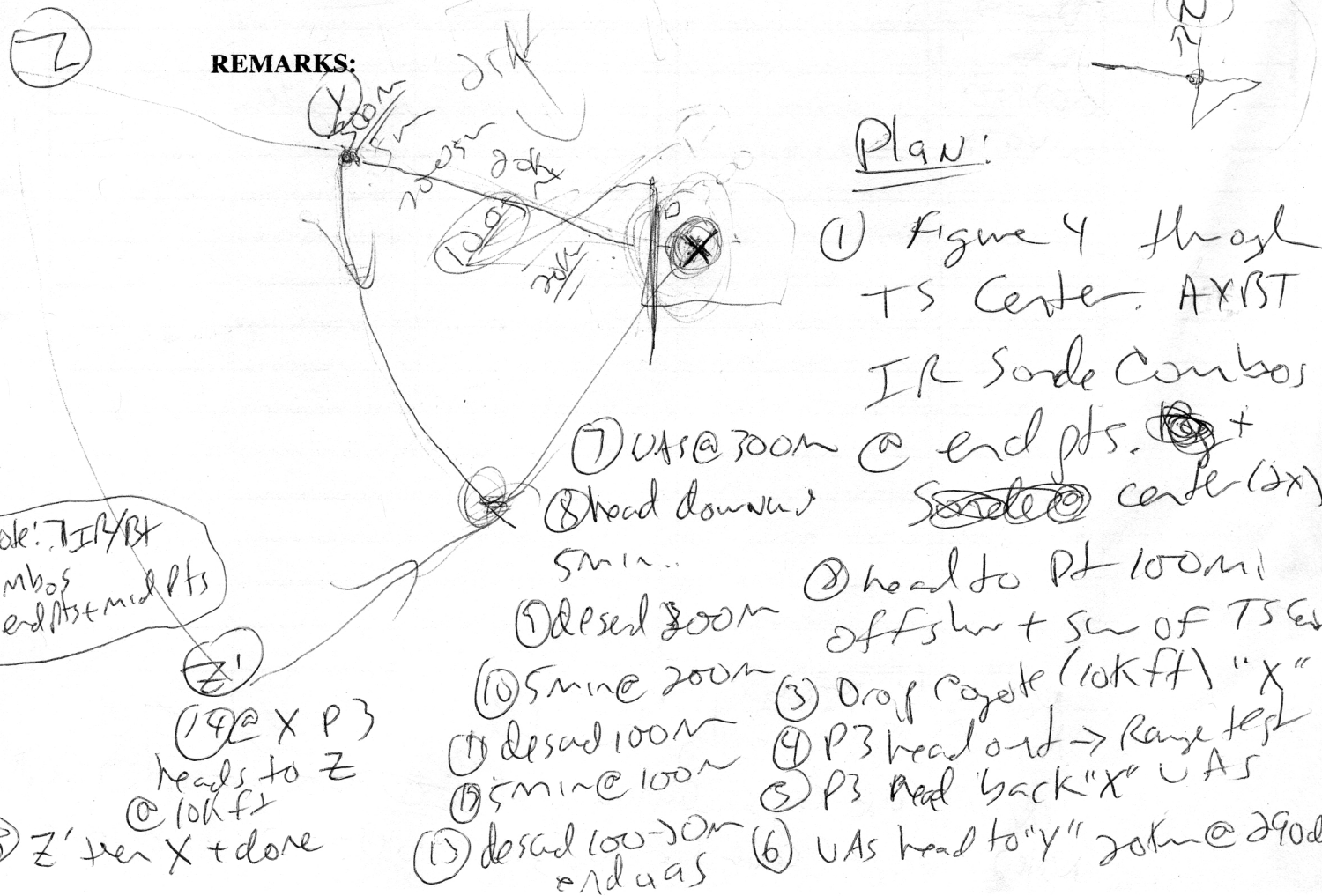
Storm or Project TS Javier **Experiment name** Coyote Drop

Flight ID 20160904I **Mission ID**

E. —Equipment Status (Up ↑, Down ↓, Not Available **N/A**, 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	✓	✓		
~~Cameras~~ Lidar	✓	✓		

REMARKS:



Set IR & BT data before leg
Radar
Lidar?
FL?
other?

2YA

Lead Project Scientist Event Log

Date ~~20160808I~~ 8/8/16 **Flight ID** 20160808I **LPS** Clare

Time	Event	Position	Comments
~~[illegible]~~			(BT fail) IR 28.5 C
2150	IP/Fig 4 int	23°11'44"/108°[illegible]	IP for DWL Fig 4
221203	Center TS	22°18'28"/109°51'[illegible]	IR/BT combo (BT) fail 24.7 IR
222910	SW End pt	21°19'41"/110°27'48"	" " Fail 27.0 D
Drop 2	Center "fix"	—	1002 mb 34 Kts
225200	SE Fig 4	212104/108°35'0"	SE Fig 4 23 Kt SFM
231150	Center Fix	22°14'07"/109°38'00	Center
232900	NW Fig 4	23°06'02"/110°38'00"	NW end pt
Drop 5	Center Fix	—	1002 mb 45 Kts
000200 ~~[illegible]~~	"UAS Anchor Pt"	212705/110 59 [illegible]	Coyote Drop yes
Comms issues.		In flight, lost	Comms
~~Drop 7~~			
~~Drop~~			
002800			Coyote IR 1
004938			" " 2

Note 3: No BTs but can compare
NOTE 1: BTs failing completely. Stopping IR drops (use Reg sondes) until ~~BTs~~ ~~[illegible]~~ Coyote malf[illegible]
Note 2: Drop 2 ("Center fix") had 3 Kt @ 10 Kft + 24 Kt @ sfc

Mission Summary
Storm name
YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)
Lead Project Scientist Clone
Radar Scientist Kalina/Ryan
Cloud Physics Scientist —
Dropwindsonde Scientist Sellwood/Fetman
Boundary-Layer Scientist Clone
Workstation Scientist —
Observers (affiliation) —

Mission Briefing: (include sketch of proposed flight track or page #)
Combo DWL (fig 4) + Coyote test/Range MISSION

Mission Synopsis: (include plot of actual flight track)
[illegible]

Evaluation: (did the experiment meet the proposed objectives?)
Partial. Fig 4 for DWL was successful. Coyote launch + 50 min flight was successful. Range/comms issue didn't meet objectives

Problems:(list all problems)
8 BT failures (no successes)
Coyote lost comms, reduced range (~50-60 min flight)

Expendables used in mission:
GPS sondes : 8 (5 TR)
AXBTs : 8 (all fail)
Sonobuoys: —