

Call notes, 7/7/15

Participants: J. Doyle, J. Moskaitis, W. Komaromi, N. Laudier, R. Ferek, W. Miller, W Lewis, Alex R, B Sanabia, J Molinari, B McNoldy, D Herndon, J Cossuth, D Ryglicki, Greg, Lee Harrison, Mark B, P. Black, and others.

Upcoming Events:

- July 10 @ 1600 EDT: PATs training
- July 14 @ 1600 EDT: TCI science call
- July 14: Deadline for completion of shakedown flight plan
- July 16 @1930z: First science call for shakedown (subsequent calls @1930z on the 17th, 20th, 21st)
- July 22: Shakedown flight

Reminders:

- If you haven't already, review ops plan draft; send input/suggestions to Natalie Laudier
- EOL catalog will be up and running by the end of the week
- Later this month there will be another opportunity for MTS training in conjunction with SHOUT

11/20/14 Test flight analysis:

Recall from last week that compared to USAD sondes, pressure at given geometric height anomalously high for HDSS streamer sonde but not 2 fast fall sondes. From 11/20 flight, slow fall closer to BRO/CRP pressure/height trace for slow fall than for fast fall, slow fall pressure several mb lower than fast fall. About 50m (lower levels) to 80m (upper levels) total variability within drop region throughout flight, vs 10-20m variability per GFS analysis at time.

Lee – XDD detects pressure inside foam housing, depends upon how dropsonde is vented. Some variability based upon manufacturer. Need another test to find optimal static port position. Seems like static pressure port is necessary to fix the issue. Ground testing needed to do for optimal placement of static pressure port. Arming pin hole could be providing some of the intended effect of the static pressure port. Taped over for water tightness in the past, but it could come off on ejection. Pete – we should find out how NCAR mini-sonde handles this problem. Lee can apply a pressure offset based upon existing dataset, perhaps higher-order function / quadratic. We could then keep level 0 data, offset data would be level 1. Problem is dynamic pressure that results from rapid fall speed.

Mark and Lee (HDSS)

Sondes are ejecting from the dispenser fine for the test flight.

If one of the 4 receivers isn't receiving good data, it bogs the processing down (during the test flight). This has been rectified.

Tweaking receivers to get them in top form at the moment, as well as building sondes. Goal is to have 300 done by 3rd week of July.

Want to try to test on Twin Otter. Drop from 12K feet and throw out the door.

Think they have fixed the fall mode.

Shoot for 20 or so sondes for 7/22 shakedown flight (and enough dummies for full magazine). Ron – if we get much higher success rate with the sondes, we should be ok with fewer ~12. Want enough statistics to show that pressure port is reasonable and with low variability in pressure/height, although some of this work needs to be done from the ground.

Natalie (shakedown flight checklist)

- Goal of the actual flight is to test the HDSS, but with secondary goal to test and implement full planning and targeting of real TC
- Will need real-time forecasting and support from science on the day of the flight
- Some aircraft ops folks will be going to Ellington to gain some experience about the operation of HDSS
- Mark and Lee will arrive on July 20, install on Monday, test on Tuesday, fly on Wednesday.
- Flight priorities: Coordinate with NWS radiosondes, try to do some drops in rain.
- Ron suggests go after precip in the late afternoon and then go for upsonde intercomparisons.
- Pete: Plan B would be to fly east and compare with Lake Charles / New Orleans radiosondes
- Optional: Circles for signal detection (still need to analyze data from previous test flight).
- Plan is to fly at 60kft. HDSS tests could be done in 2h, but will need more time if we have additional targets (precipitation of a tropical wave, whether real or imaginary/scenario training)
- Parallel process for science team to exercise flight planning process. This begins on July 16, 1930z. Begin scenario on Friday, July 17, 1930z. Pick science calls back up on Monday, July 20, 1930z.
- HIRAD objectives – higher altitude and precipitation preferred, need to be straight and level.

Natalie: Review multi-day timeline

Ron wants roster of contact information. EOL building this.

Need to further discuss what we would do if SHOUT moves from Wallops to Armstrong.