

GV Operations in MPEX

Schedule

Daily schedule

Drop locations

Constraints

Project Schedule

- Initial dropsonde discussions with the ATC
- Drop locations analyzed, optimized for flight ops
- Presentation by the RAF to ATC: January 2013
- SAANGRIA test flights: 11-28 February 2013
- Upload begins 22 April, 2013
- Test flight(s): week of 6 May
- Project flight ops: 15 May – 15 June, 2013

Upload Schedule

- Schedules will be developed and uploaded to project web site
- AVAPS will remain onboard if testing goes well
- MTP installed ~25 April
- Additional cabin equipment? TBD

Communications

- E-mail list: mpex@eol.ucar.edu
- In flight: X-chat (instructions at a later time)
- Any data products needed onboard? -> data discussion
- Telephone hot line available if needed
- On the ground: cell phones, list will be compiled
- Data: separate discussion

Crew Duty Limitations

- Max flight hours in 24 hr window: 10
- Max flight hours in 7 day window: 40
- Max flight hours in 30 day window: 120
- Max continuous work days: 6
- Max duty day: 14 hours
- Consecutive duty days over 10 hrs, NTE: 2
- Min crew rest: 12 hours
- Max flight duration on subsequent nights: 6 hours
- Day / night ops changeover time: 36 hours

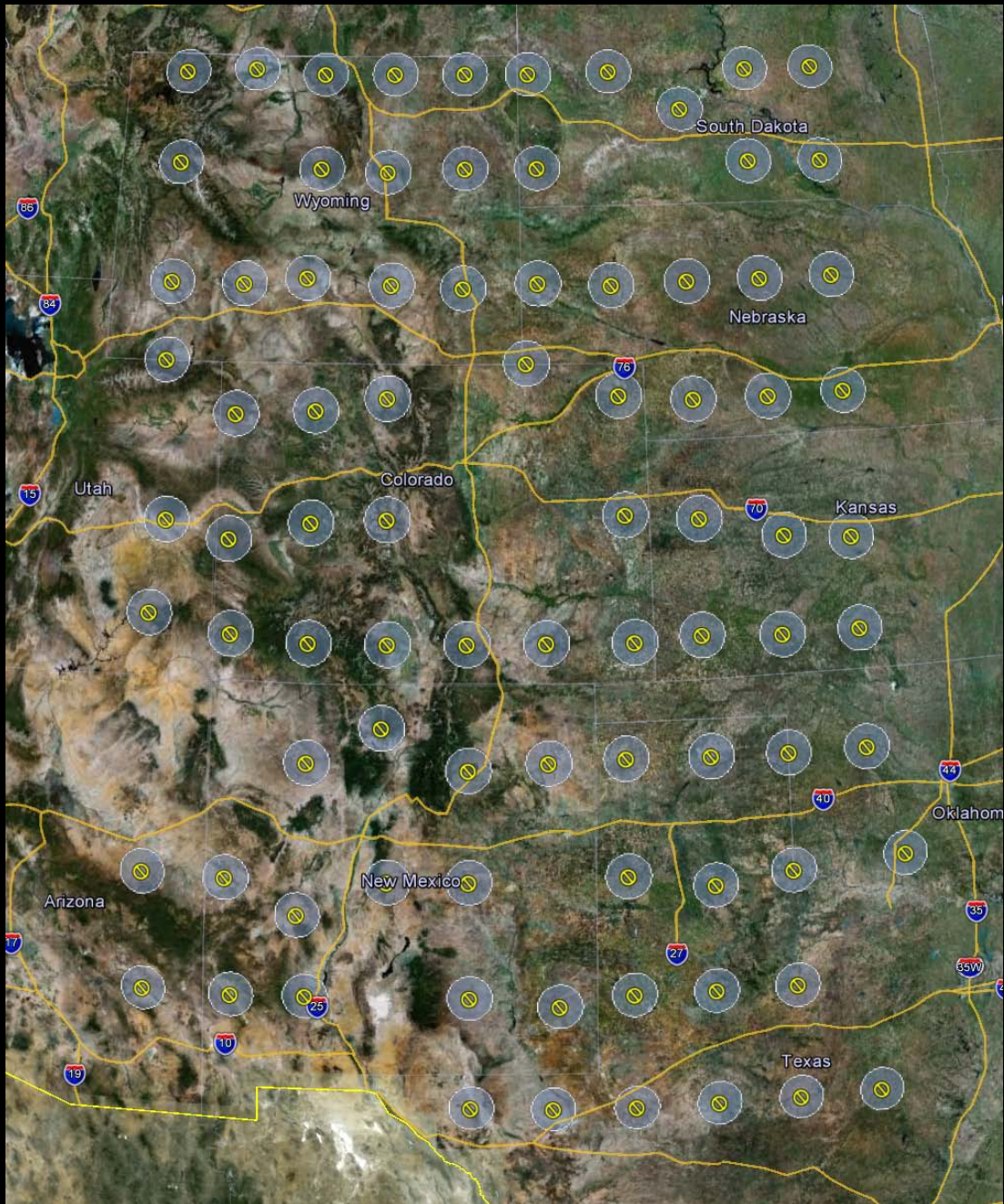
Daily Routine (approximate)

- Flight days
 - 0130: Aircraft rolled out
 - 0200: Hands on, preflight begins
 - 0300: Take-off, drop at complex WPs, then easier WPs
 - 0930: Landing at Jeffco
- Non-flight days
 - Access to GV for maintenance from 0730 to 1700 by non-night duty personnel
 - Flight planning activities, see Mission Timeline

Flight Planning Timeline

As RAF expects now, pending ATC agreement:

- -24 h. – drop region identified (N. Colo, S. Colo etc.)
- -12 h. – drop region confirmed, ATC notified for NOTAM with drop points confirmed (TBD w/ ATC)
- -2 h. – GV rolls out; ATC is communicated over phone
- -1 h. – preflight begins unless earlier preflight required for instruments
- 0 h. – take off
- +6.5 h. – approximately, recover at Jeffco



Constraints

- All estimates here are based on prior experience (PLOWs) and early communications with the FAA. Final FAA requirements may be more or less strict.
- 80 research, 10 scouting and 6 test hours (~15 flights); 400 dropsondes, 340 upsondes; single flight crew
- Prior experience indicates that high altitude drop points can not be changed once chosen at -12 h.
- Waypoints near high traffic areas are best sampled early in the flight
- Lat/Lon WPs not allowed over CONUS; WPs adjusted to intersections or use radials from VOR/DME
- Flight duration will not exceed 7 hours (fuel limit)

RAF Wants to Know

- 15 flights, 400 sondes = 25 drops / flight
 - How are drops organized?
 - 25 WPs, or several drops per WP, or return tracks
 - Will we be able to choose a region (SE CO, NW NM for instance) or will the track cross a very large area?
- Can we select WPs from those planned for a flight and drop them first, based on air traffic concerns?
- How reliably and how early can science team select WPs for dropping? Changing them right before flight will greatly increase risk of non-approval by ATC.