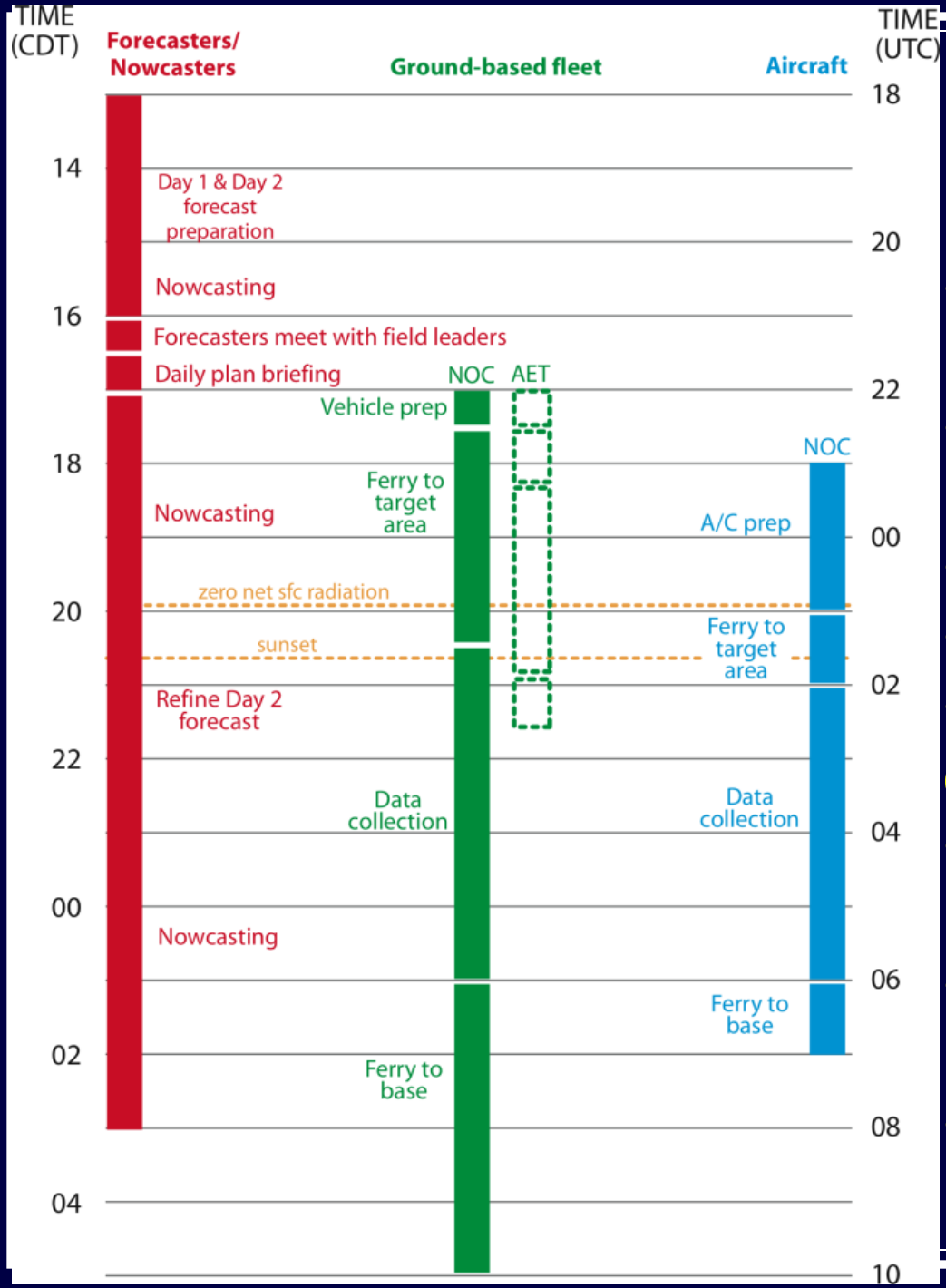
Dry Run Planning

Goals

- Make sure the timing is appropriate to get mobile ground-based and airborne facilities positioned prior to events
- Identify problems with the experimental design
- Check accuracy of forecasts
- Nowcasts will be assessed for accuracy after the fact
- Make sure ground-based crews get home safely
- Take advantage of any deployed systems for the dry run
- Test operations center communications protocols where possible (e.g., tele/video conferencing)

Dry Run Planning

- Monday, 2 June 2014 – Friday, 13 June, weekend excluded
- Virtual activity, ReadyTalk available
- Forecasts for Day 1 and Day 2 will be done on actual PECAN timeline
- Ops decision for the day will be made by Science team
- Mobile crews will be “deployed”
- Flight plans will be “designed” and the timing of flight operations will be assessed
- Crews will be “sent home” after data collection ends
- Next day: Verification will be done to compare ground-based and airborne data collection regions compared to actual weather events



Proposed PECAN Daily Schedule

- 10 am: Discuss previous nights' ops
- 1 pm CDT: Early deployment update
- 4 pm: Daily Planning Mtg
- 445 pm: Mission decision
- 5 pm: Ground facility deployment notice
- 6 pm: Aircraft operations notice for Day 1 and Day 2
- 830 pm: Begin ground-based mobile facility ops
- Midnight: discuss & end ops

Dry Run Roles

	2-6 June	9-13 June
• Mission Scientist	Geerts	Rauber
• Ops Director	Salazar	Salazar
• Forecaster	Gallus	Gallus
• Nowcaster/verifier	Haghi	Haghi
• Bore rep	Parsons et al.	Parsons
• MCS rep	Ziegler	Ziegler
• ECI rep	Weckwerth	Weckwerth
• Mobile radar coordinator	Wurman	Wurman
• Aircraft coordinator	McFarquhar	Jorgensen
• PISA coordinator	Turner	Turner
• Sounding coordinator	Parker/Schu/Con	Parker/Schu/C
• MM coordinator	Parker/Schu/Con	Parker/Schu/C
• Field catalog	Loehrer	Loehrer

Field Catalog Products (1/5)

1. Satellite Products (Nominal Scan frequency: 15 min) :
    - GOES-East (1km and 4km Imagery)
    - Channels: IR, Vis, WV
    - GOES-West

2. Upper-Air Products:
    - Constant Pressure Charts (Coverage: CONUS, Frequency: 12-hourly)
        - 850 mb
        - 700 mb
        - 500 mb
        - 300 mb
        - 250 mb
        - 200 mb
    - SkewT Plots (90 W to West Coast, 25 deg N to 49 deg N or ~ Mexico border to Canada border Frequency: 12-hourly)
        - Individual NWS stations
        - COSMIC radio occultation soundings
    - NPN Profilers (as available). Since NPN profilers are largely unavailable, suggest adding WSR-88D VAD time-height diagrams from the sites listed below.
        - Wind time-height diagrams
        - ACARS observations

Field Catalog Products (2/5)

3. Surface Products
    - GTS Station plot map (hourly)
    - USPLN/NLDN Lightning strike location map (5-min)
    - Mesowest surface plots which cover entire domain
    - SPC mesoanalysis fields -- use all VORTEX2 ones (if you can) plus add
        - 3h 100 mb mixing ratio change, theta-E advection, deep moisture convergence, 850-700 mb frontogenesis, 850 temp advection, MCS maintenance parameter

4. Special NWS Products
    - SPC Outlooks
    - Mesoscale Discussions

5. NEXRAD Radar Products

Regional Reflectivity Composite

NSSL-Q2 Reflectivity Composite

- Individual Radars - Base Scan Reflectivity (N0Q) and Radial Velocity (CYS, FTG, PUX, FDX, UDX, LNX, GLD, DDC, AMA, LBB, ABR, FSD, OAX, UEX, TWX, ICT, VNX, INX, TLX, SRX, FDR, FWS, DYX, DMX, EAX, SGF, SHV, LZK)

Field Catalog Products (3/5)

6. Model Products

NCEP GFS and NCEP NAM (Fcst period 0 - 48 hours, 3 hour increments, 00, 06, 12 & 18Z)

- 300 mb (Geopot Ht and Wind)
- 500 mb (Geopot Ht and Vorticity)
- 700 mb (Geopot Ht, RH and wind)
- 850 mb (Geopot Ht, Temp and wind
- 3 Hour Total Precip
- MSLP
- Add lapse rates sfc-700 mb, 700-500 mb, MLCAPE, SBCAPE, K index

NCEP RAP (Fcst period 0 - 18 hours, 1 hour increments, hourly runs)

- 300 mb (Geopot Ht and Wind)
- 500 mb (Geopot Ht and Vorticity)
- 700 mb (Geopot Ht, RH and winds)
- 850 mb (Geopot Ht, Temp and winds)
- 1 Hour Total Precip
- MSLP
- CAPE/CIN
- Helicity
- Add same as GFS

Field Catalog Products (4/5)

6. Model Products

ESRL HRRR (Fcst period 0 - 9 hours, 1 hour increments, hourly runs)

- 0-1 km shear
- 0-6 km shear
- 1 hour accumulated precip
- 2m temp
- Max updraft helicity
- Most unstable CAPE
- Reflectivity
- Sfc CAPE
- Sfc CIN
- MLCAPE

NSSL WRF (use same parameters as ESRL HRRR if possible)

NSSL ensemble (www.nssl.noaa.gov/wrf)

CAPS HWT products (http://hwt.nssl.noaa.gov/Spring_2014/)

Field Catalog Products (5/5)

7. Research Products
   - Proposed Flight Plans
   - Ground mobile deployment locations (per event)

8. Reports
   - Ops Plan of the Day
   - Weather Discussion
   - Chief Scientist Summary

9. Catalog Maps (GIS Display) will include the following layers:
   - aircraft
   - flight plans (if provided ahead of time)
   - mobile facility deployment locations
   - GOES satellite imagery
   - NEXRAD regional reflectivity composite
   - USPLN lightning activity (last 15 minutes)