

Forecasting, modeling, and analysis items discussed at the Dry Run meeting or pulled off of previous lists:

Forecasting product / tool wish list. These are of course on a time-available basis for the forecasting team. We do not expect to achieve all of them.

1. Need to get TeraScan feed from Palmer (NRT satellite imagery). Contact USAP
2. Need satellite cloud images as individual strips with time stamps
3. Learn what customized GEOS-5 products will be available and link into catalog
4. Malvinas airspace on maps [done]
5. LMG forecast
6. Tropopause heights in forecast
7. Fog product?
8. Could fraction from AMPS
9. Matching cloud images from GFS and AMPS (same % cutoff)
10. Cloud ceiling map with < 1000 highlighted in color blind friendly color, also color 0-500 diff from 500-1000.
11. ASMA/ASPA on maps
12. AMPS BL height map
13. Windsat into AMPS?
14. SOCCOM profiles into catalog
15. OOI data into catalog
16. MACC forecasts into catalog
17. Gradient Richardson number calculations from AMPS?
18. cloudsat quicklooks from CSU?

Modeling tool wish list: These are of course on a time-available basis for the modeling team. We do not expect to achieve all of them.

1. Trajectories from nominal flight plans, 2 days back (Jim), 4 days back (Eric/Martin)
2. CAM-SD, 1 deg with MERRA or GEOS-5 winds
3. Turn on chemistry and idealized tracers
4. Run all flight plans for every day of Jan/Feb 2015
5. Turn on prognostic mode for winds
6. Prognostic fluxes?
7. Chl maps advected as a flux
8. Look at 97/98 El Nino - how big of an effect on weather patterns in this region
9. STILT - multiple model winds?

10. Pseudo-obs from CAM, compare derived fluxes to CESM
11. Matt/Eric - what fields would be needed from CAM to drive STILT?
12. Test AMPS output with mass-coupled / time-averaged winds for use with STILT

Analysis to do:

1. Look at HIPPO1 S.O. Flight BL structure compared to AMPS, GFS, and GEOS-5
2. Analysis of impact of land on Argentine Basin
 - a. When skies are clear, are winds off land? (Upper level vs. BL)
 - b. If air is off land, how big are FF and TB signals?
 - c. Possible to correct APO using CO?
 - d. Impact on direct CO₂ estimates or CO₂:O₂ ratios?
3. When it's clear at PALTER, what is wind direction?
4. When it's clear at S. Orkneys, what is wind direction?
5. What are winds like N and S or S. Orkneys? Big shifts?
6. When is MBL O₂ in steady state with BL venting and when is it accumulating? What are terms in BL budget for O₂?
7. Make a movie of the worldview MODIS cloud images for Jan/Feb 2015 to share on field catalog to aid mission planning
8. What causes blobs in CESM concentration movie? Slow winds or high winds?
9. Make paired flux/conc movie from CESM and post to field catalog to aid mission planning (Matt)
10. Concentrations from CESM along a flight track, then flux estimated from STILT, and compared back to CESM fluxes
11. What percentage of summertime S.O. outgassing is from high productivity patches?
12. How variable are curtain averages if you include terrestrial fluxes?
13. What are the E-W differences for the curtain averages if only done for the BL (e.g. > 900 mb)?

Other action items still pending:

1. All instrument teams: send an example quick-look data file to Britt. Britt set up merging code.
2. Get a briefing from Pilots on what their flight planning or safety concerns are and what could lead to a cancellation or deviation. Brief pilots on latest mission concepts and flight plans - how plan/fly RS grid?
3. Make nominal flight plans, including RS grid. Output XY points for CESM
4. Complete draft field staffing calendar

5. Colm and Britt decide whether to request additional XBT or discrete samples on LMG crossings (LMG 16-01 SB currently planned)
6. Elliot and Pavel - decision on GC location, and LN2 needs
7. Britt, Bruce, Colm: Plan/execute a cylinder round-robin
8. Steve Williams: determine if SIO and U. Miami WAS measurements fall under EOL data policy, also do GNI slides?
9. Britt: write letter to Vanda requesting 12-month restriction for data

The old ORCAS Project Planning document has largely been superceded, but some action items remain. Britt will filter these and add here.