

Day 1: ASR Science Team Meeting Pre-Campaign Forecasting

Submitted by sgiangrande on Wed, 03/30/2011 - 02:09

- [Central Facility](#)

First day of pre-campaign forecasting begins with a challenging set-up for significant precipitation over campaign facilities and Oklahoma extended facilities. Powerpoint attached.

A sequence of upper level waves is forecast to pass over the northern part of the state; The first of these waves - coupled with solid moisture return via the LLJ and isentropic lift (unseasonably cold sfc temperatures in place) - is associated with our current Day 0 conditions of light drizzle over the SGP around 13 UTC and isolated stratiform rain to weak convection that fired over slightly more central parts of the state before 12 UTC. The second of the two waves is forecast to pass more directly over north central Oklahoma late into Wednesday, albeit associated with lessened lower level moisture. This lack of moisture should offset significant widespread precipitation potential despite otherwise solid upper level forcing / associated jet streak. Isolated convective pockets still possible with this wave, but spot cell developments are challenging to pinpoint.

A well-defined longwave ridge sets up into Thursday - implies lessened likelihood of aircraft-type precipitation missions until the weekend. Timing on the duration for this ridge pattern differs somewhat in the models, but relatively consistent with respect to a potential multi-day down sequence.

Day 0 also highlighted an interesting event of drizzle captured by ARM facilities and nearby NEXRAD radar; Given expectations from previous day model outputs, potential campaign forecasts may have encouraged considering campaign aircraft operations having launch times around the time of 12 UTC. Unfortunately, light stratiform precipitation for Day 0 fired earlier and was largely confined to a corridor that approached no closer than approximately 1 to 2 counties to the south of the primary facilities... yet also reasonably north of the Norman fall-back region. Albeit a possibly 'busted' for significant rainfall over most campaign instruments (aka, disdrometers, X-bands, etc.), around this same time a small patch of cloud to drizzle also formed in this environment nearby the SGP CF radar and propagated over the site. The feature appeared to fill-in towards the surface as the event carried on, although measured reflectivity factors never exceeded 20 dBz.

Included below are examples of the NEXRAD and ARM KAZR (Vertically pointing Cloud radar at 35 GHz) around those times, as well as the sounding:

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A potential question might be with respect to the usefulness for this sort of event w/r/t NASA side interests.

Forecasts

Time of Day:
Morning

Attachment

Size

[MC3E WXBrief Tuesday.pptx](#) 6.01 MB