LES Cold Pool Progress 3v2 keynote details

Slide 2
The cold pool video for front scores 2+, with zach's adjustment (adjacent points added to cold pool) and the most aggressive connector (26pts).

Slide 3
The cold pool video for front scores 2+ with no added points to cold pools and the less aggressive connector (6pts).

Slide 4
Same as slide 3 except for front scores 3+.

Slide 5
Duration of cold pools (6pt, unadjusted) for the FS 3+ and FS 2+ cases. For the lower front score threshold the pattern is the same, there's just a higher frequency of cold pools.

Slide 6
Cold pool size vs cold pool duration (6pt, unadjusted) for the FS 3+ and FS 2+ cases. The pattern is mostly the same in both cases.

Slide 7
Based on the charts in the e-mail I sent.

The first chart in each section (FS 3+ and FS 2+, tables 1 and 3) lists the variables (DeltaP, DeltaT, divergence or -w) and gives the averages for the 6 different setups. Each point in a cold pool is treated individually (so if there are 1000 points in a cold pool, 1000 values will go into the database of DeltaP, DeltaT, and divergence values). Naturally, with the lower FS threshold the average DeltaP and DeltaT are lower in magnitude. Average divergence, however, remains the same. The charts for DeltaP, DeltaT, and Divergence for the FS 2+ case are shown in slide 8.

The second chart in each section (FS 3+ and FS 2+, tables 2 and 4) shows the correlations between Delta P & Delta T, Delta P & Div., and Delta T & Div. The correlation between DeltaP and DeltaT switches sign for the lower threshold (plots of this shown in slide 9). The correlation between Delta P and Divergence is larger for the FS 2+ case than the FS 3+ case. The correlation between Delta T and Divergence is the same for FS 3+ and FS 2+.

Slide 8
Histograms of DeltaT, DeltaP, and Divergence for the FS2+ (6pt, unadjusted) case. The averages of these histograms make up column 1 in table 3 from slide 7.

Slide 9
Plots of Delta P vs Delta T for FS 3+ and FS 2+. The correlation on the FS 3+ case is around -0.1 while for FS 2+ the correlation is around +0.3. This is not terribly obvious so...

Slide 10
… I used the density plot setup. This slide compares the mesonet distribution to the FS 2+ case. For the model output the primary location is near a delta T of 0 whereas for the mesonet data the primary location is near a delta P of 0. I think this difference is primarily due to the land vs ocean effect. For the

mesonet the average Delta T was over twice that of Delta P while for the model output the average Delta P was over twice that of Delta T.