

HAZARDOUS WEATHER TESTBED

EXPERIMENTAL WARNING PROGRAM BLOG

Northeast Colorado Supercells

Severe Thunderstorm Threat Increasing

Issued: 06/07/22 1930 UTC
2%hatched, Mr.Bean BOU

Potential Hazards

- Large hail up to 2 inches+
- Damaging Wind gusts up to 60-70 mph
- Isolated tornado possible

Actions

Be weather aware and ready to act.
Have multiple ways to receive warnings!

Threat Areas over next Few Hours

Next 1 to 2 hours

Next 1 hour

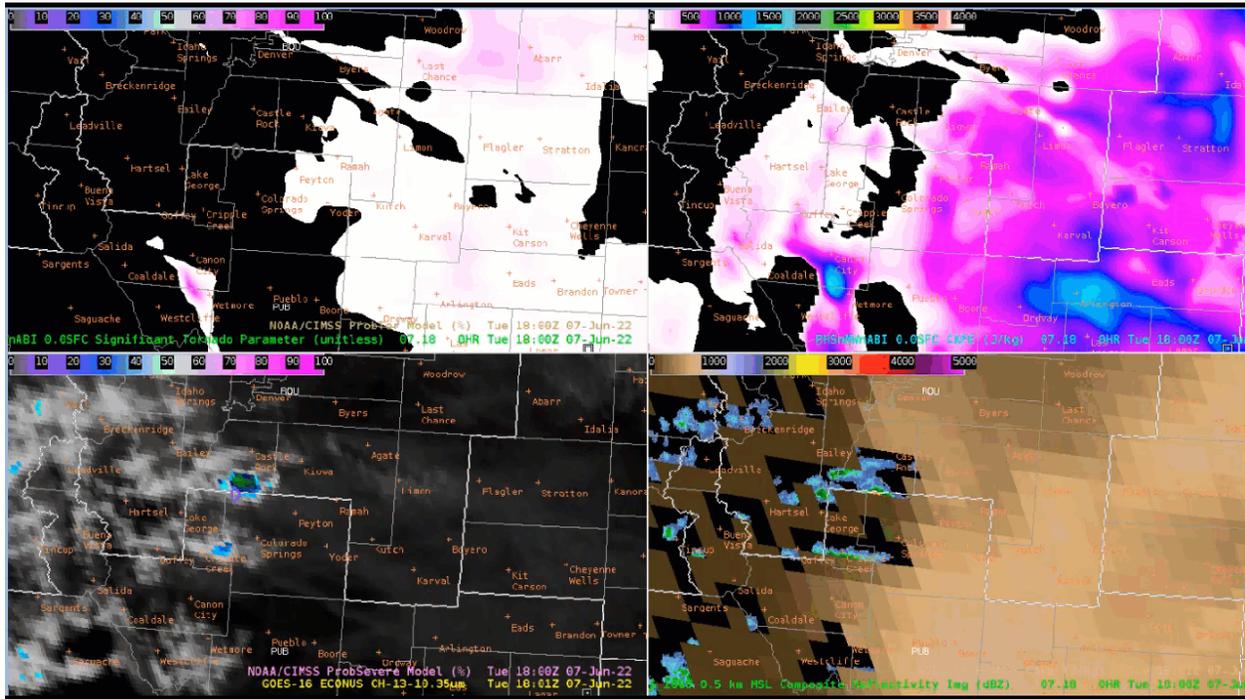
Not a Forecast
Experimental and Non-Operational

Hazardous Weather Testbed
2022 Satellite Proving Ground

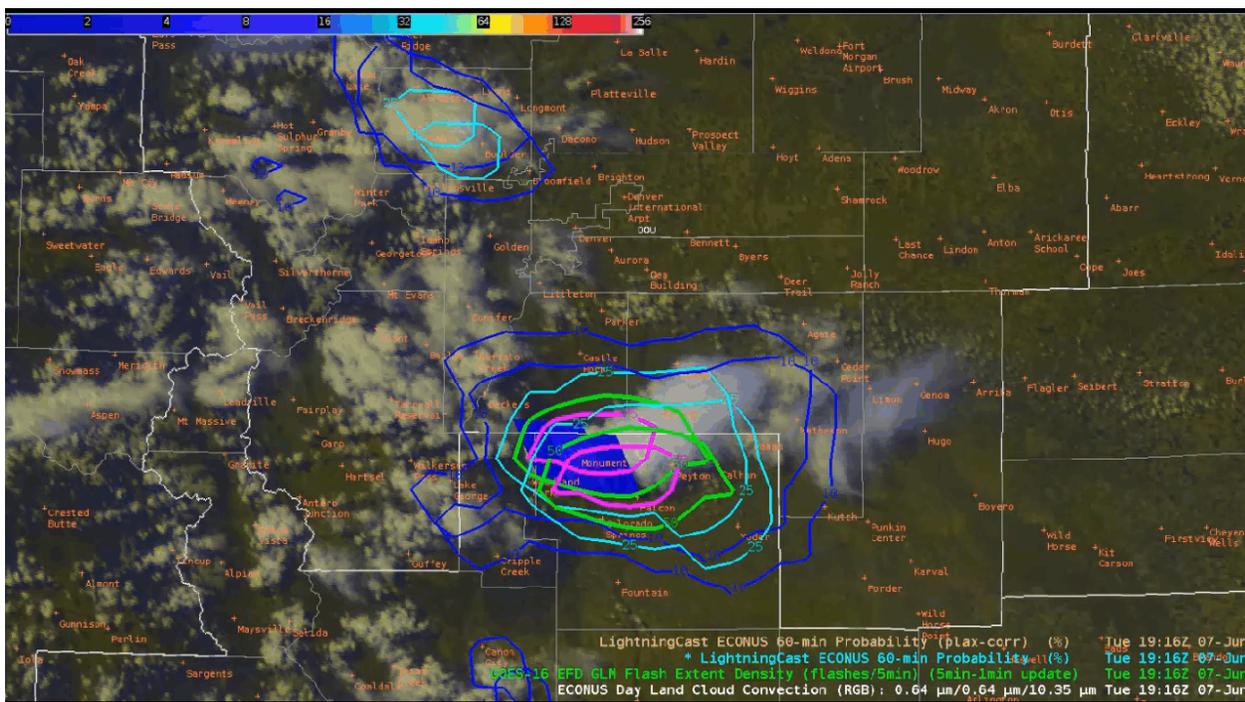
Nowcasting Supercell storm entering CWA: The loop of instability and SigTor highlight the southeast/south central CWA east of Colorado Spring, ahead of an already ongoing storm. North of this storm an environment of favorable instability exists up to about the latitude of Denver, with a significant drop off to the north.

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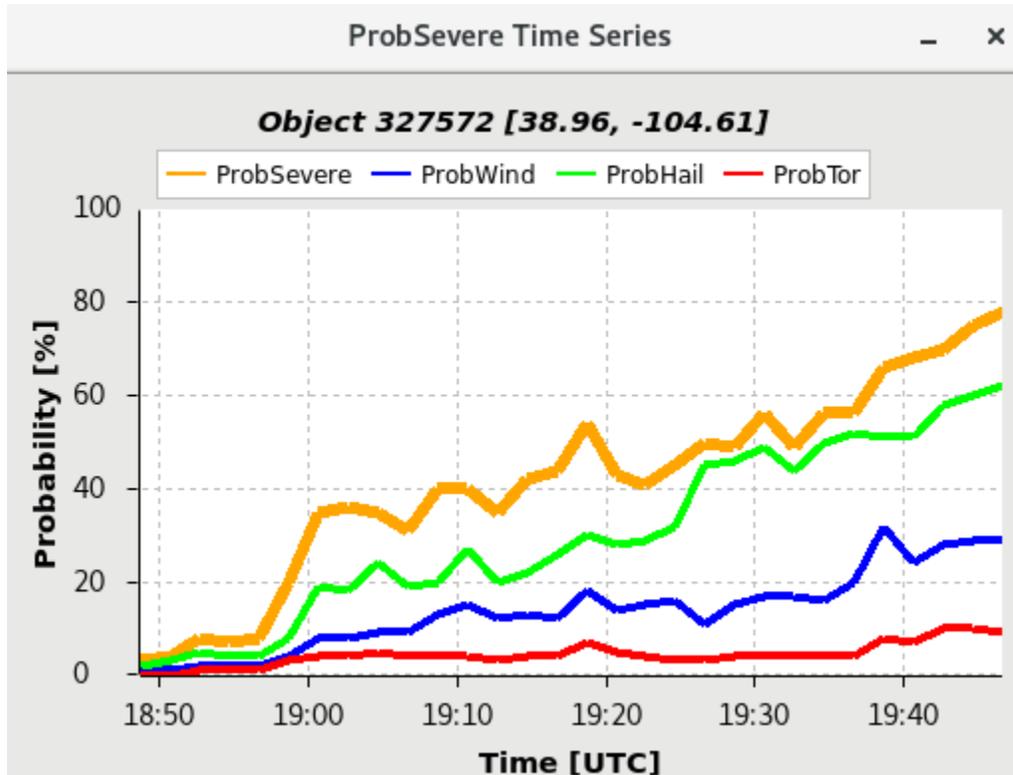


When it comes to high and northern plains - parallax becomes an issue. In this case lightning was occurring just on the other side of the border with the CWA, so here are the two LightningCasts (with/without parallax correction) for comparison:

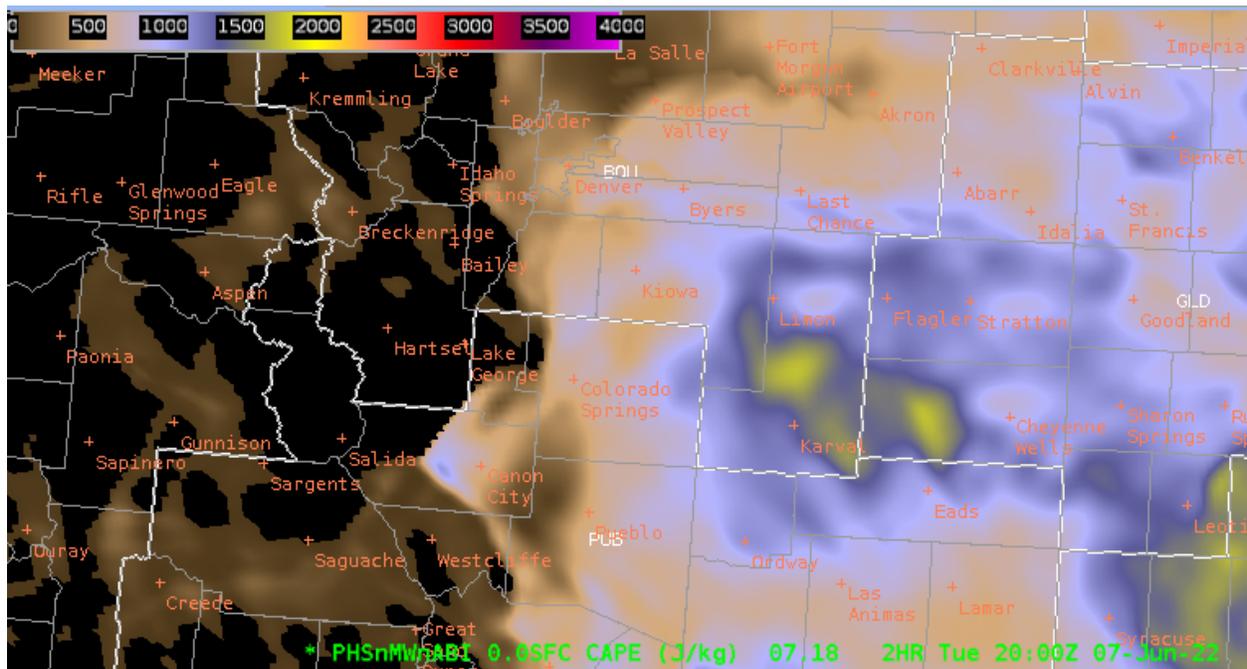


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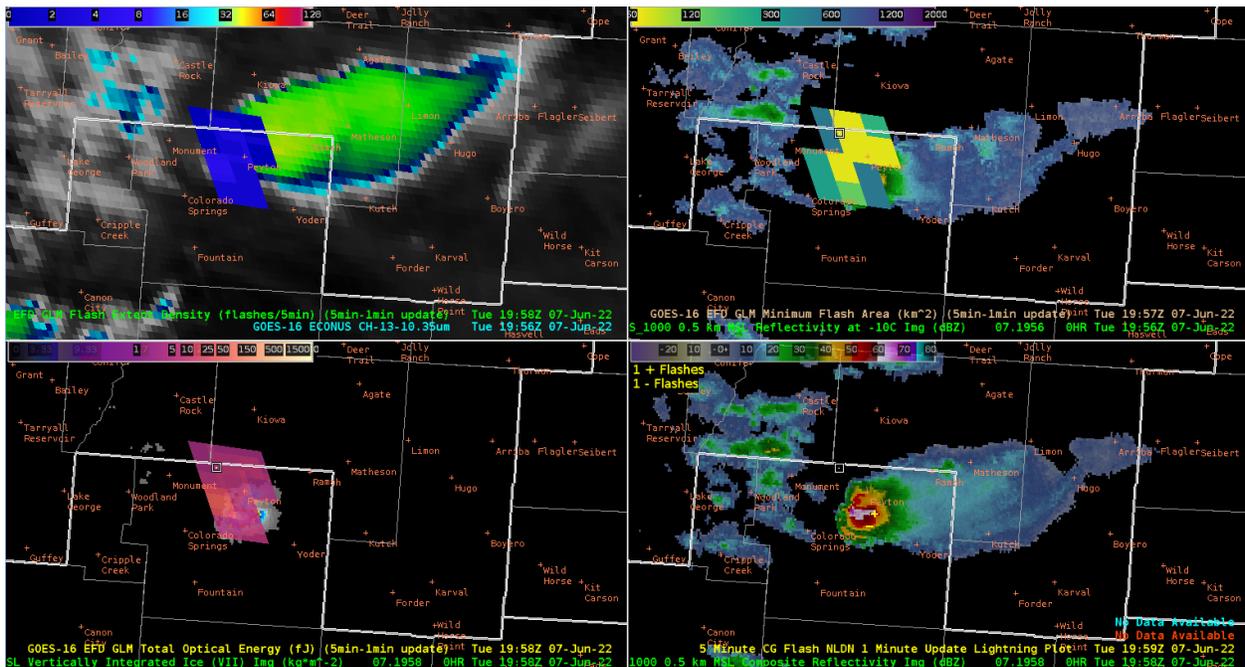
ProbSevere v3 increases correlating to entering a favorable environment



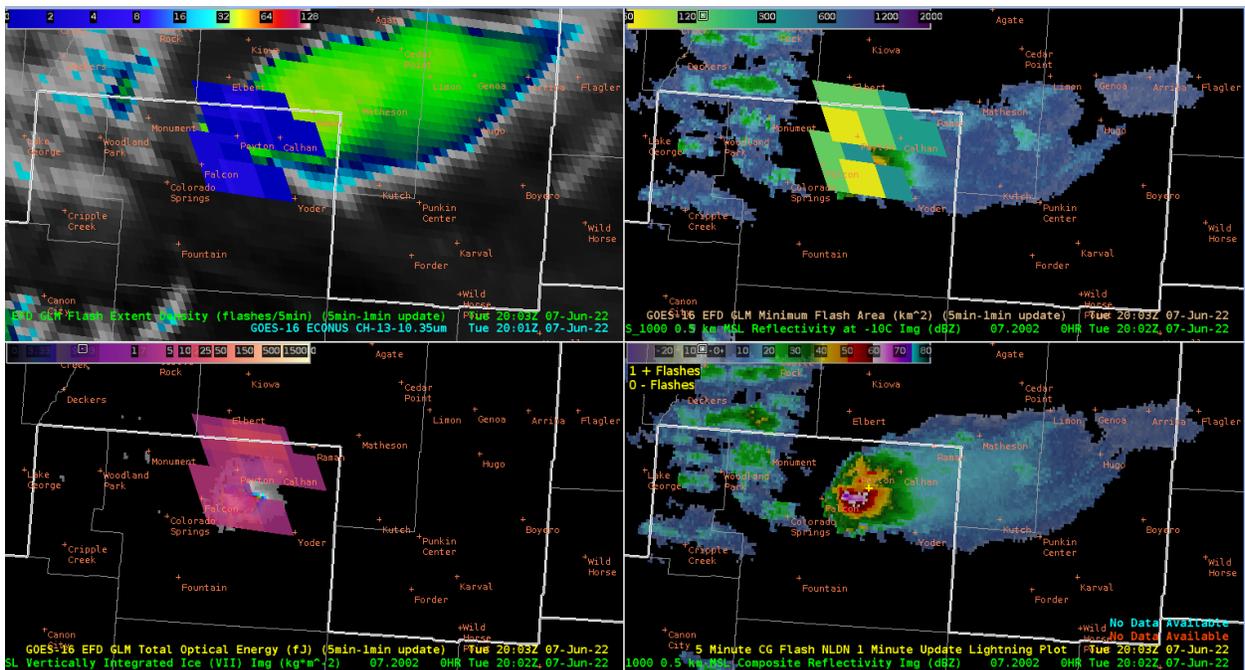
PHI localized CAPE corridor

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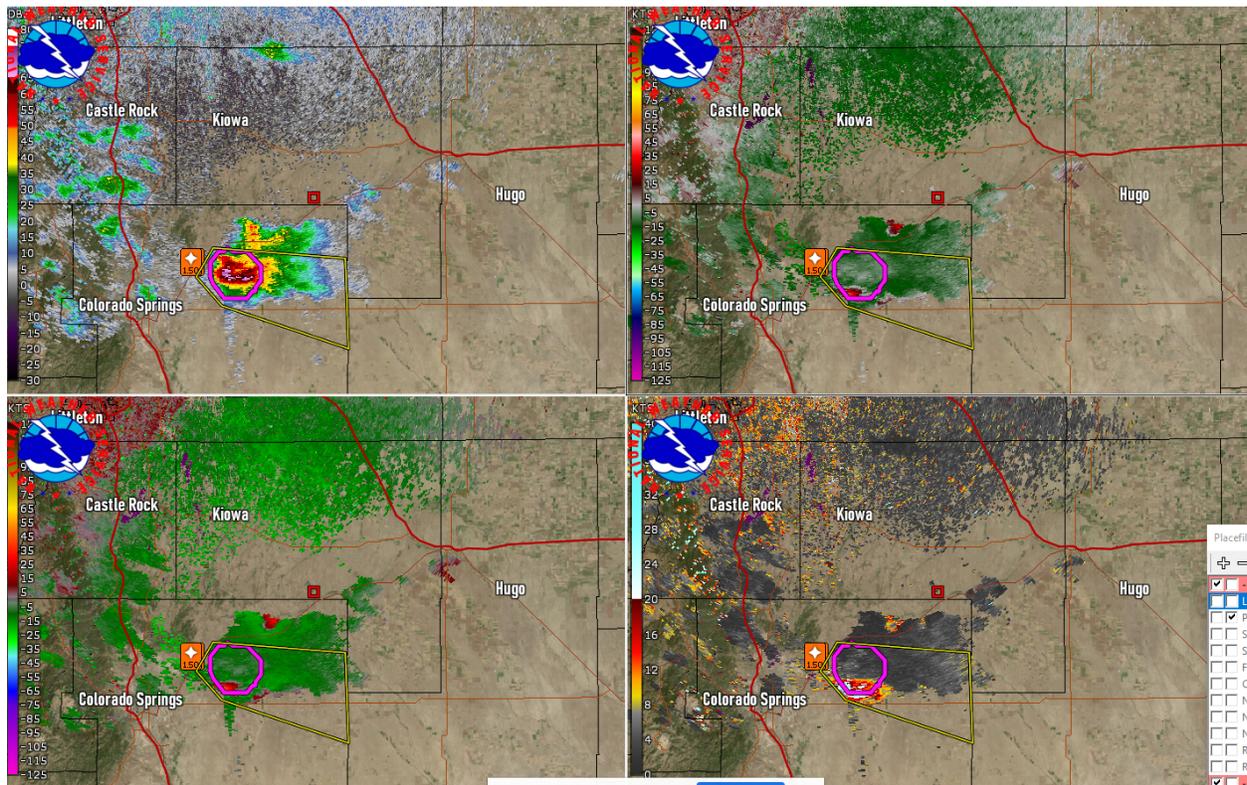
New area of MFA suggesting spitting storm with new updraft core of the established cell. (1950 UTC)



Storm cell split denoted by MFA with two distinct areas of MFA in upper right panel. (2000 UTC)

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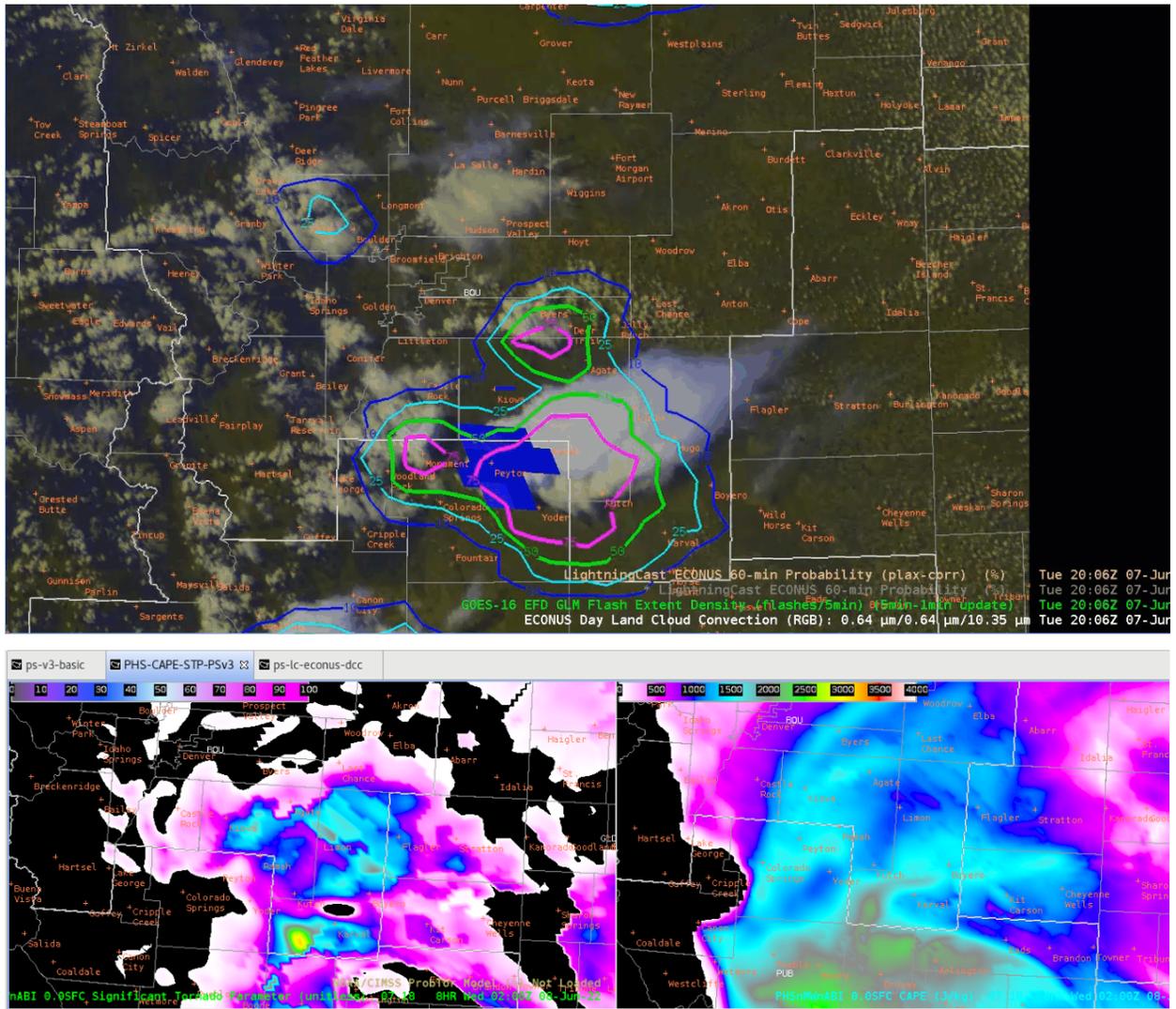
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Focused on the cell east of Denver - this cell and subsequent others that developed are in the favorable area of instability. Just to the north of Boulder we spotted a few cells that attempted to develop, however in the lower instability environment movement off the higher terrain resulted in these cells falling apart. Through the rest of the afternoon this area remained convection free.

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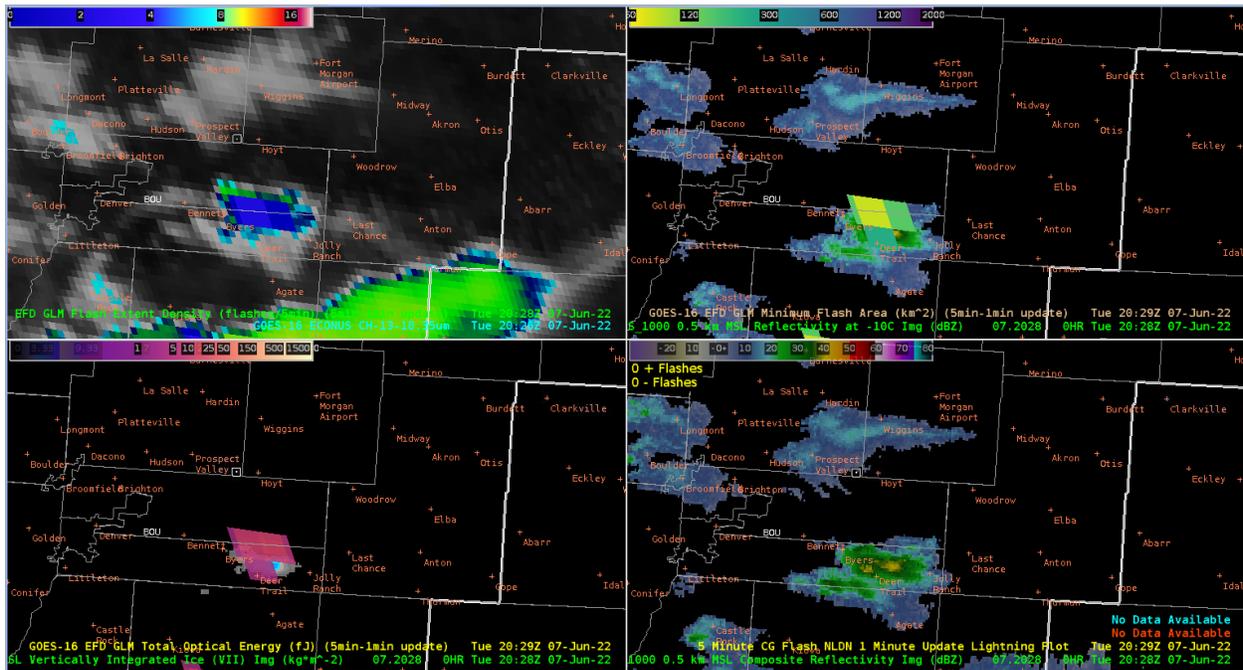
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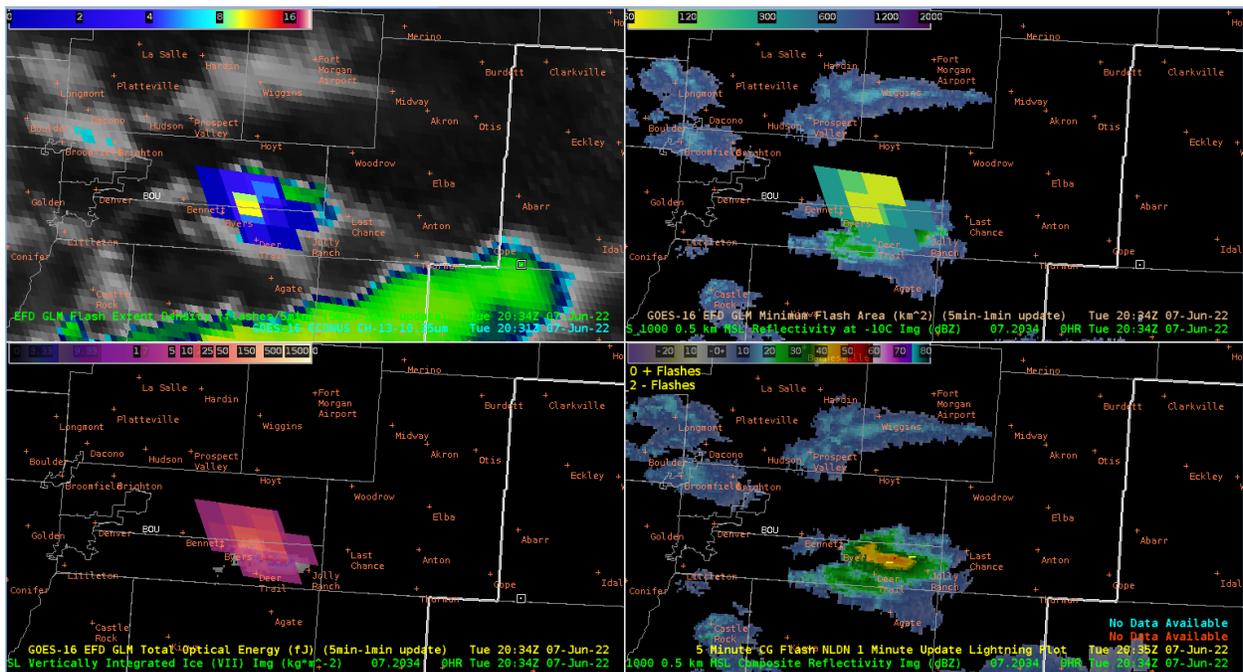
Sig Tor blip. A SRVE like feature was observed but at this time convergence associated with this feature wasn't favorably located under the updraft.

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Cell developing east of Denver, noted by the MFA in the upper right panel. (2020 UTC)

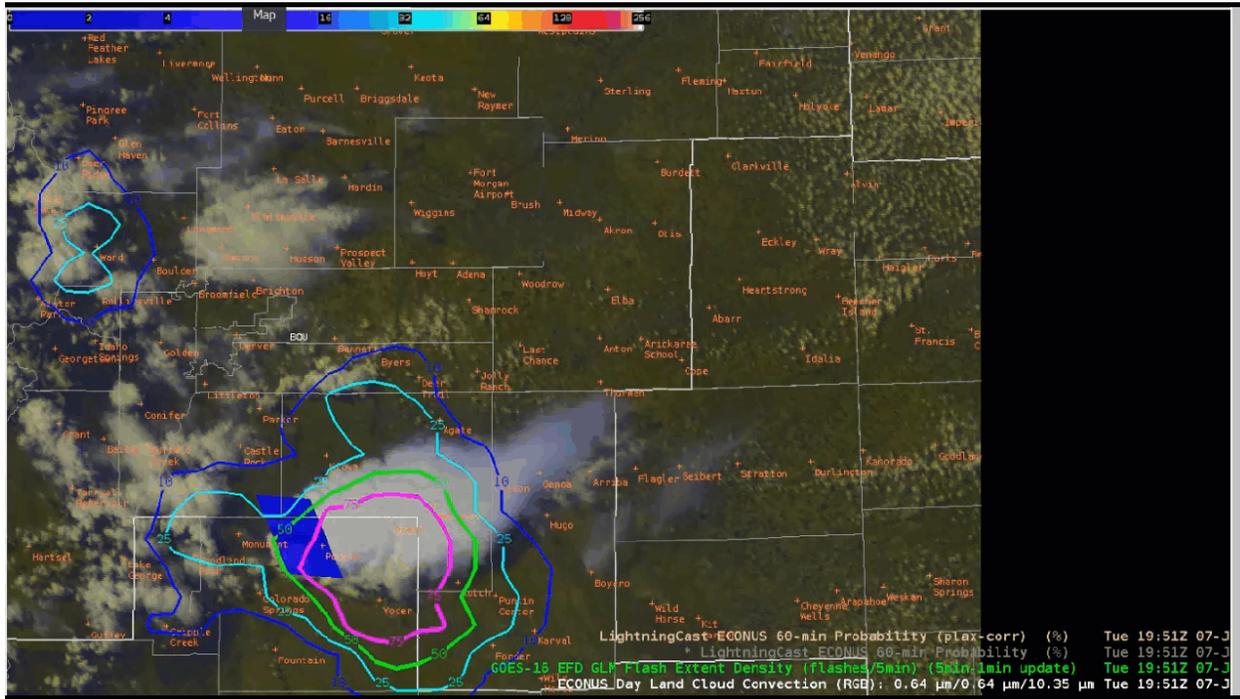


Cell rapidly develops in an area of localized higher instability denoted by the PHS values discussed earlier on. (2034 UTC)

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The LightningCast has identified the left turning nature of the storm(s) east of Denver



An interesting note was comparing the differences between GOES East (left panel) and GOES West (right panel). These subtle differences can be effective in analyzing the strengthening of a thunderstorm.

In the middle of METWATCH - NUCAPS became available (about 1 hour latency). The sounding below is a modified NUCAPS profile, depicting the environment in which our storms developed. Storm mode was supercellular with frequent spitting of cells.

