



Thunderstorms, Tornadoes, and Storm Spotting/Chasing



**StormGroup
Chasers**

Introduction

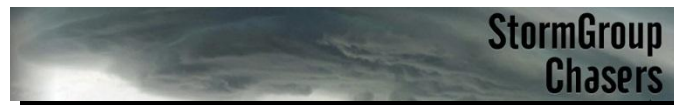
2026 will mark my 22nd year of storm chasing across Tornado Alley, a journey that started with a curiosity based on my lifelong fascination with the weather, which has grown into a deep passion for storm clouds and the raw beauty of nature.

My annual mission chasing supercells and tornadoes across the Plains has become a core part of who I am, and what I hope to share with you today.

If you enjoy epic skies, extreme weather, and natural beauty while on an extended vacation road trip, then this presentation is definitely for you.

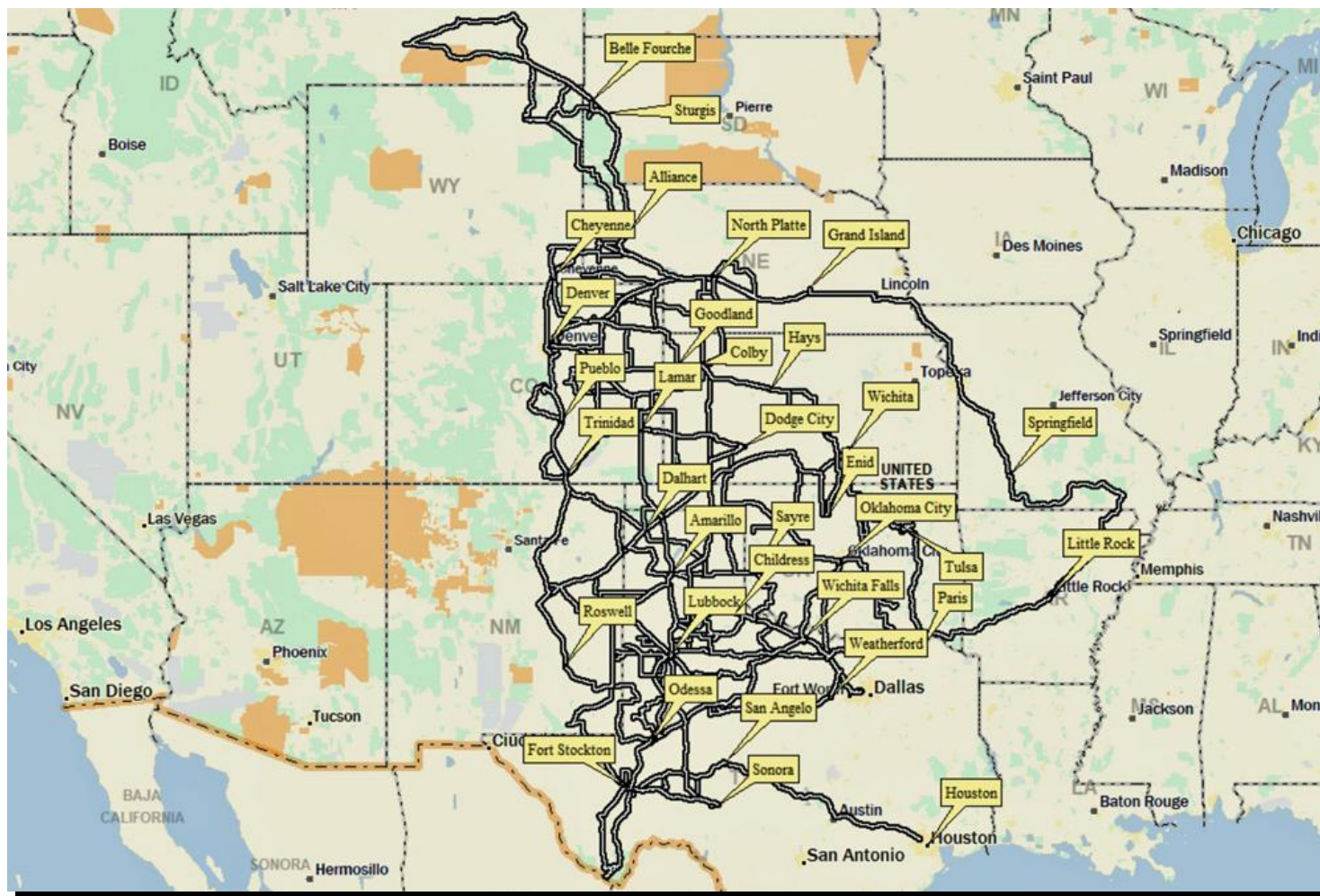
If you're just curious or even frankly sceptical about what may seem like a "crazy pastime", then I hope I'll be able to reassure you that I'm not "crazy". 😊

Rather than the dramatised version of storm chasing you may have seen in the movies or on YouTube, I'd like to offer you a balanced view based on genuine factual content with images of my own, from an authentic chaser perspective based on years of safe chasing.



The Journey in Tornado Alley in 2025

... 23,628 miles
<38,026 kms> over 12
states in 9 weeks ...



... basically, we drive to
wherever we forecast
severe weather is going
to occur ...

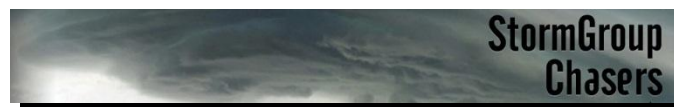
Storm Spotting/Chasing – Why?

"Storm chasing might be a misnomer ... in actuality, storm chasing can more accurately be described as road-trip roulette aided by meteorology"

- The majesty of Nature on the Plains - the storms are awe-inspiring - it's not just about tornadoes,
- Get the opportunity to photograph some unforgettable sights,
- Enjoy a great road trip through some amazing scenery,
- Visit interesting & quirky places in historic & modern middle-America,
- Sample interesting local places to eat – sometimes on the run 😊,
- Share the experience with a group of like-minded adventurous people.

also makes a contribution to public safety via Spotter Network – www.spotternetwork.org

This is not “disaster tourism”

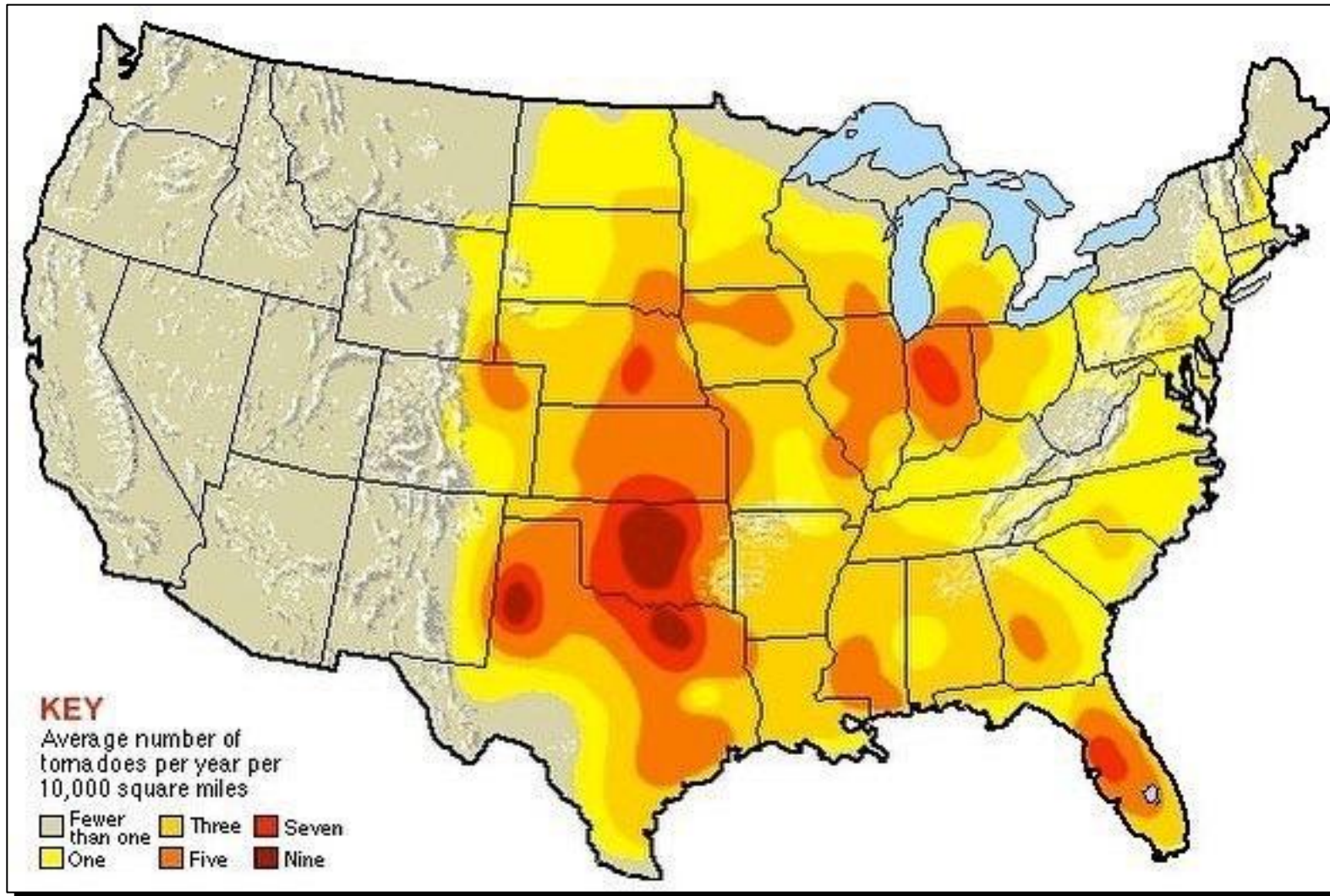


Storm Chasing Territory



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Tornado Frequency per 10,000 sq miles



The Atmosphere & Clouds Above You



250mb
~ 10,500 mtr/34,000 ft

Jet stream

500mb
~ 5,500 mtr/18,000 ft



700mb
~ 3,000 mtr/10,000 ft



850mb
~ 1,500 mtr/5,000 ft



~ 1000 mb
Ground



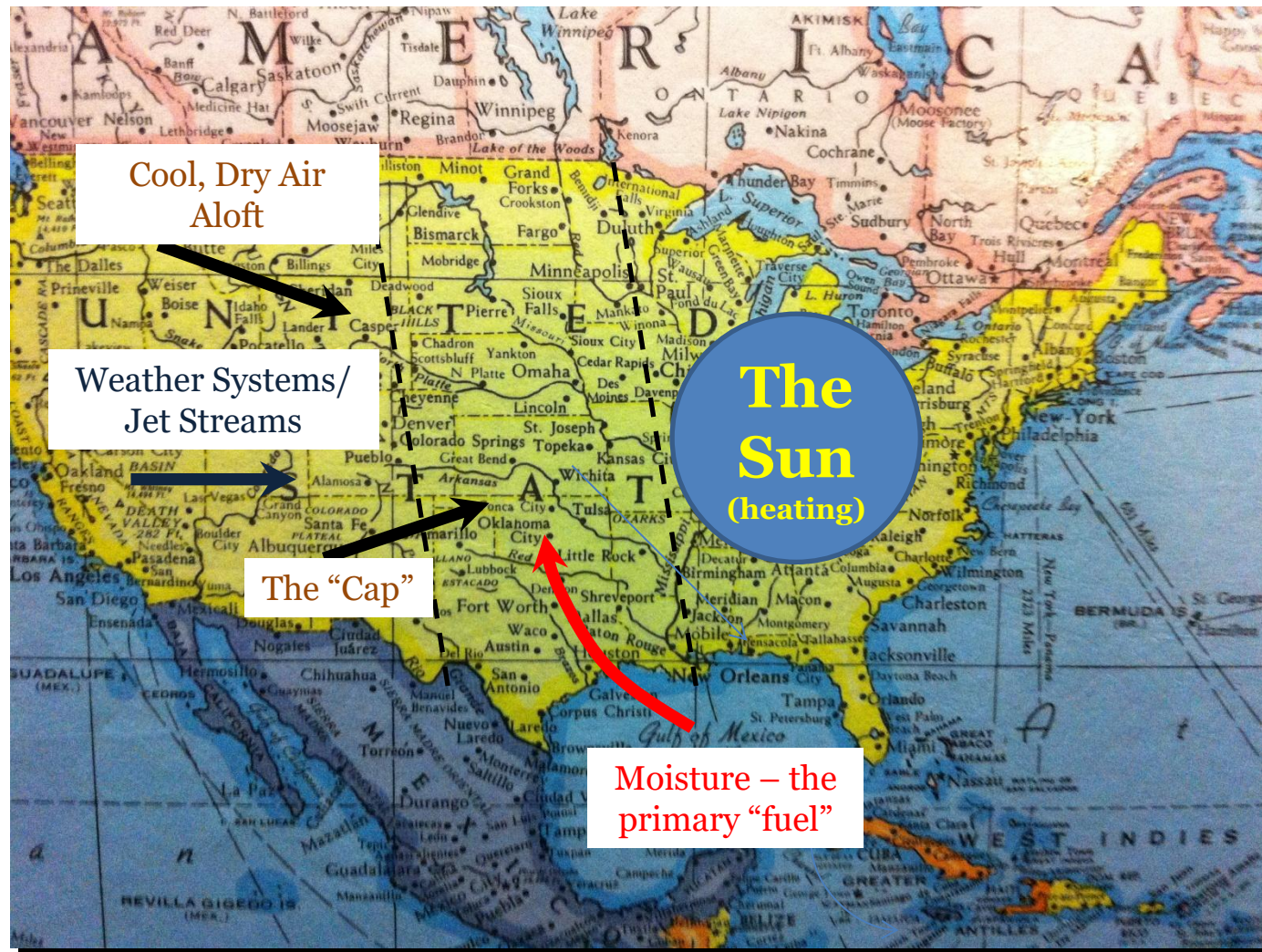
~ ½ way
point on
mass

Boundary
layer

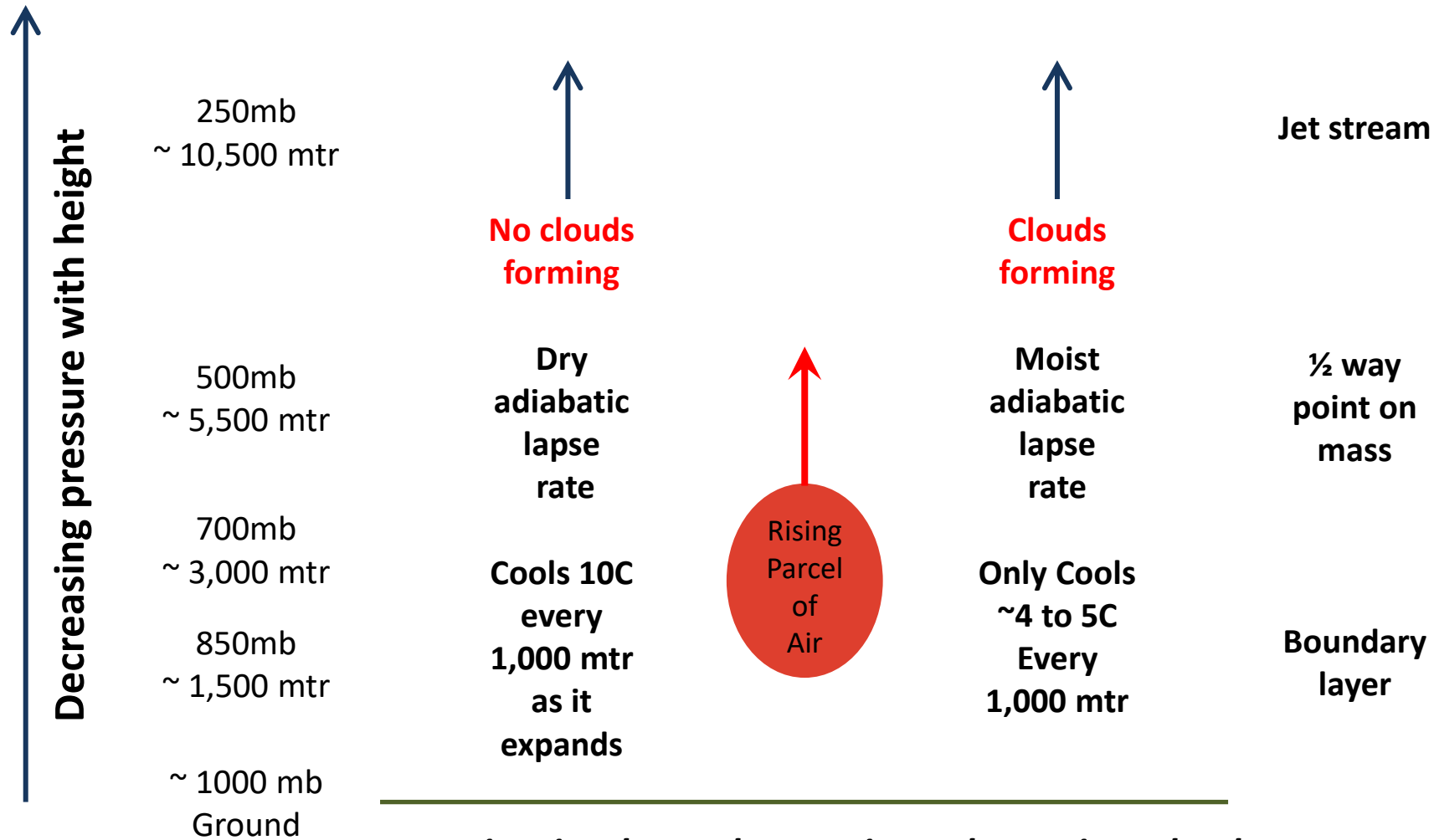


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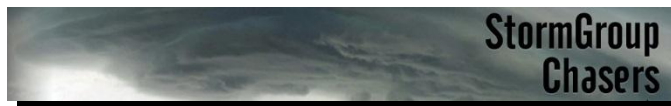
Major Ingredients for Severe Weather



Some Crucial Physics about the Atmosphere



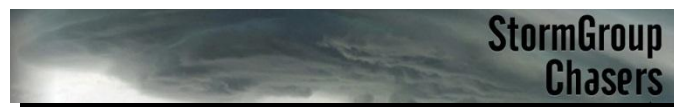
Moist air releases heat as it condenses into clouds



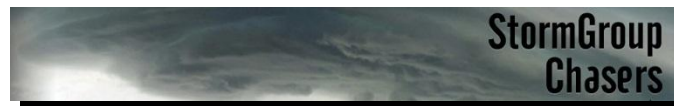
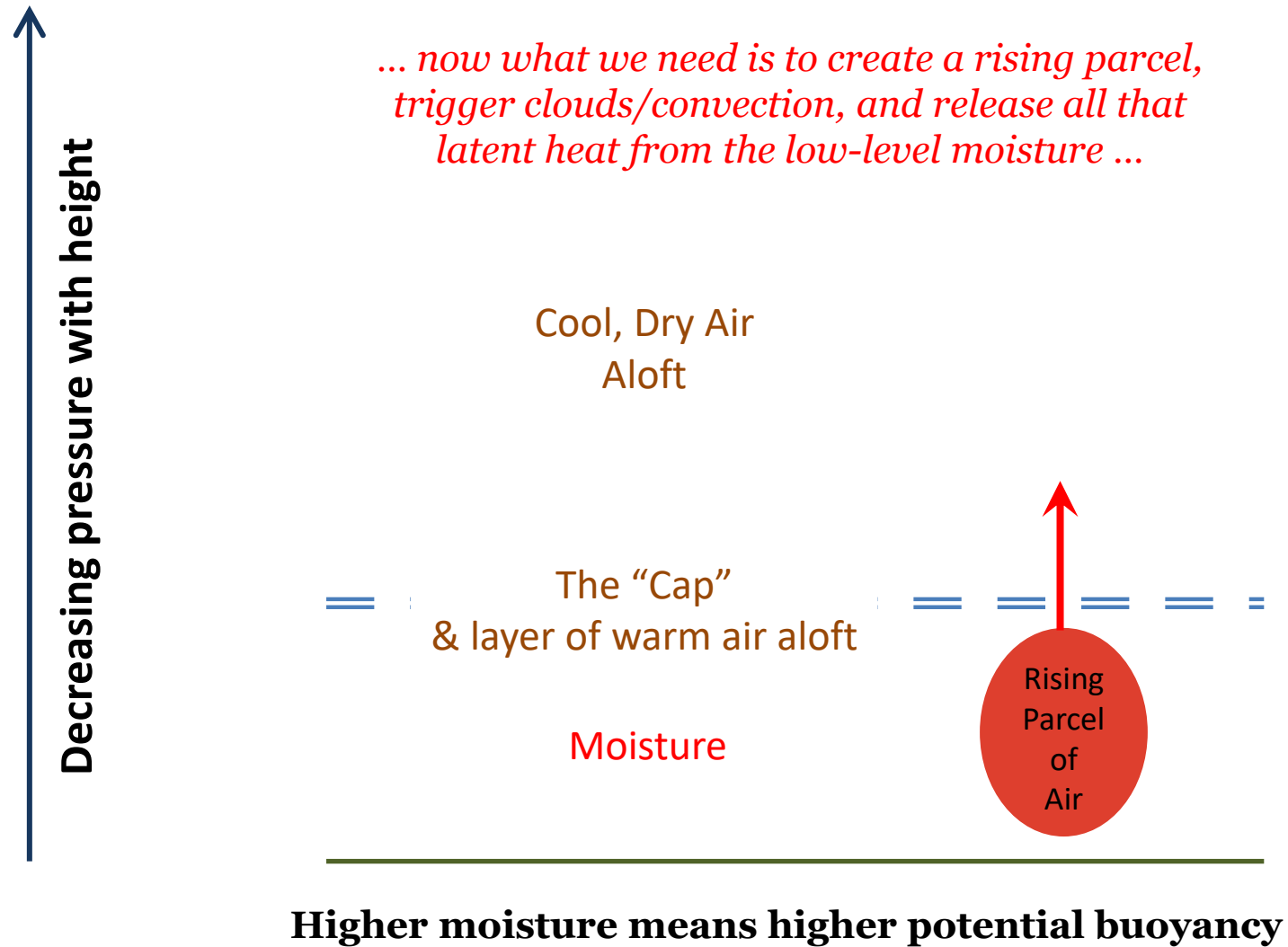
Latent Heat of Condensation & Precipitation

Some interesting metrics:

- severe weather needs a ready source of water vapour – at 1 ½ million sq kms with SSTs in the mid to upper 20 celsius in May/June, the Gulf of Mexico is a great source of water vapour
- it takes about 2,400 k/joules of energy to evaporate one litre of water from the sea surface
 - this is almost an hour's energy use for the average household, or about the energy I burn on a bike ride of 25 kms or so
- when that water vapour condenses into cloud droplets, that latent heat of condensation is released
- an average thunderstorm lifts 500 million litres of water, so releases a VERY large amount of latent heat as it sucks in water vapour, condenses it into cloud droplets which releases that heat powering the updrafts
 - the latent heat released is 500 million x 2,400 k/joules of energy = approx. 45,000 households annual energy use – in just ONE ordinary thunderstorm, let alone a long-lived supercell!!
- to form one raindrop, at 100 times the diameter, takes about a million cloud droplets – warm-phase collision/coalescence or ice-phase deposition/accretion of super-cooled cloud droplets
- 1 cm depth of rainfall over 50 sq kms takes about 500 million litres of rainwater

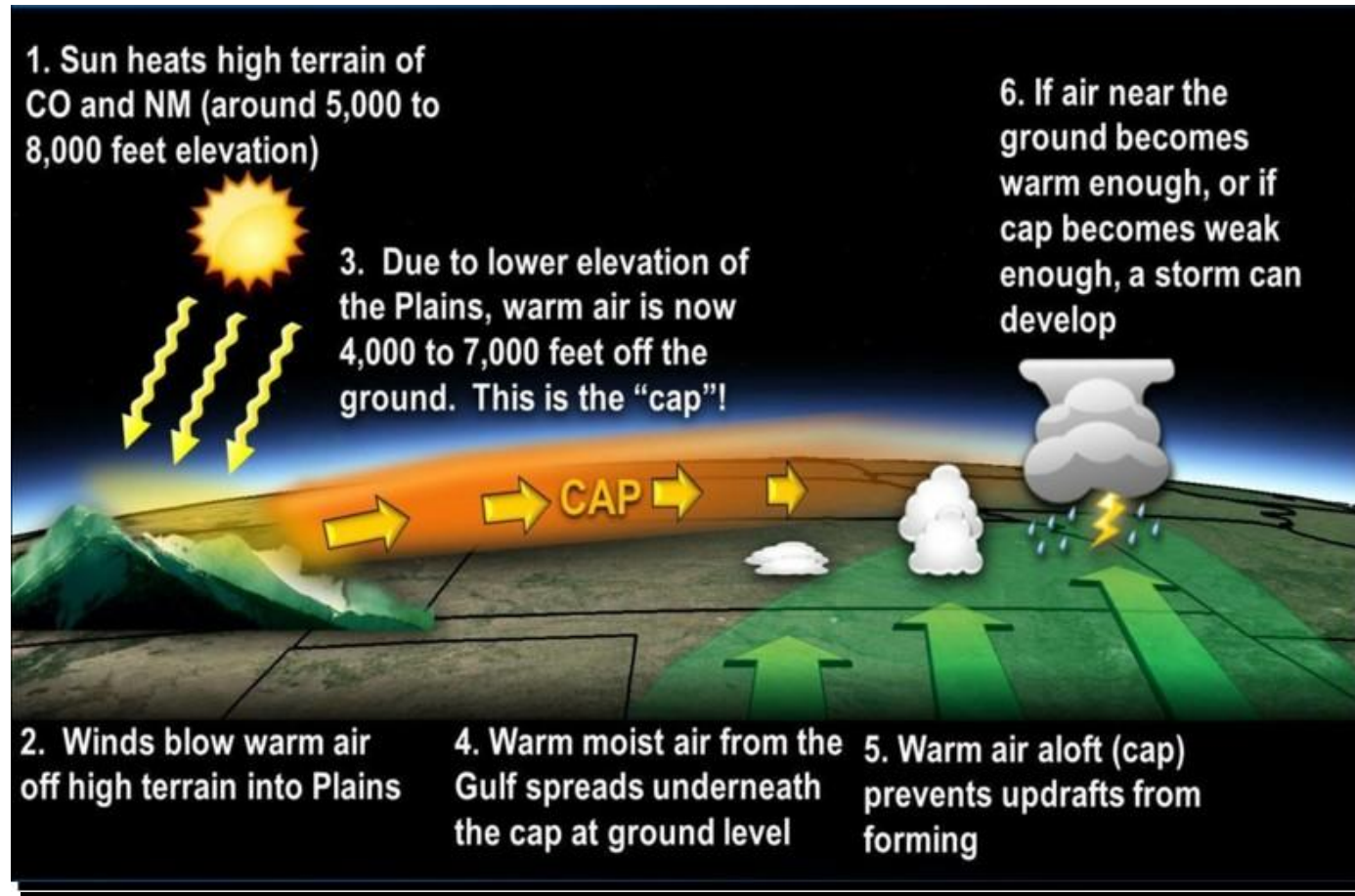


Using Physics to create explosive updrafts



Understanding the “Cap”

A layer of warmer air above the surface which traps heat/moisture/energy – an inversion



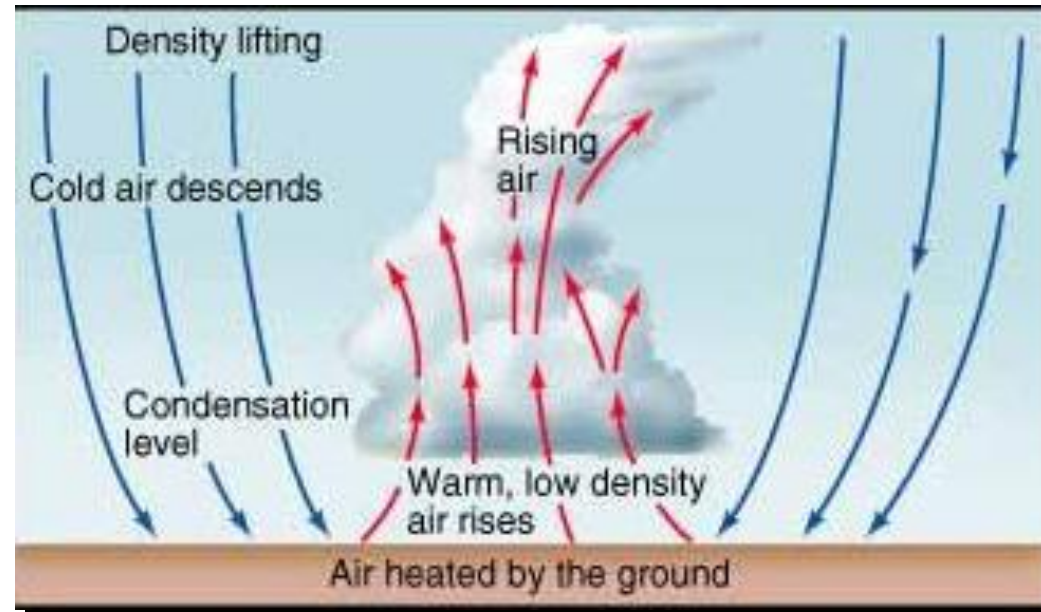
A critical element in this part of the world for the most severe weather

Lift and Convective Initiation

“there’s always a reason for clouds”

To get storms going, we need something to initiate lift/convection - some triggers are:

- Intense local heating

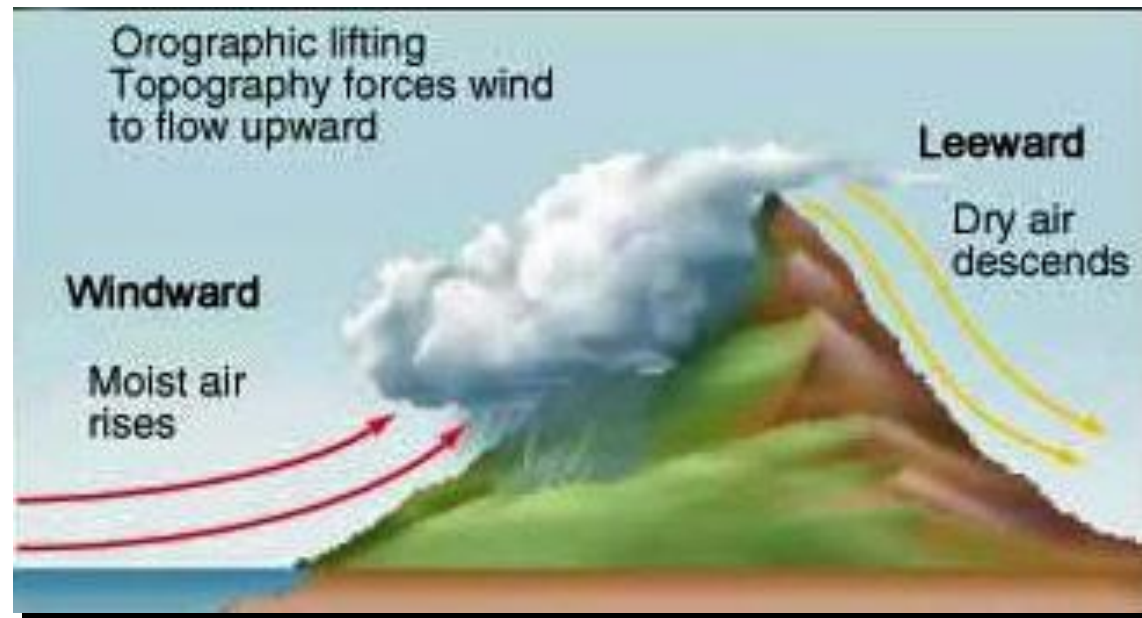


Lift and Convective Initiation

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To get storms going, we need something to initiate lift/convection - some triggers are:

- Intense local heating,
- Orographic lift – air flowing over hills/mountains or simply uphill

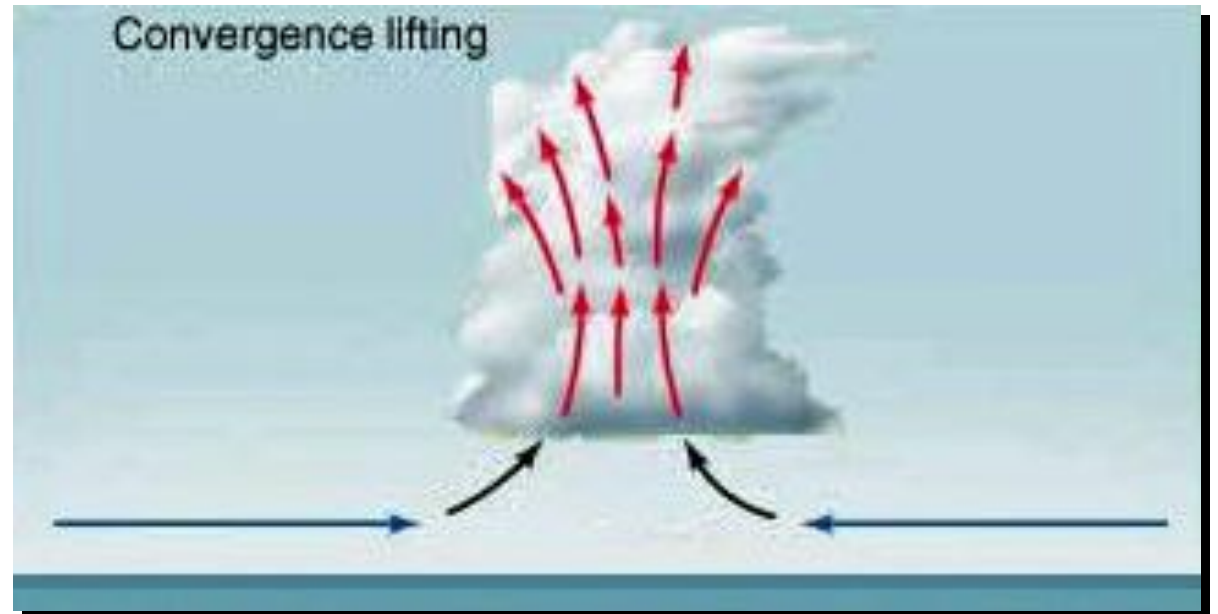


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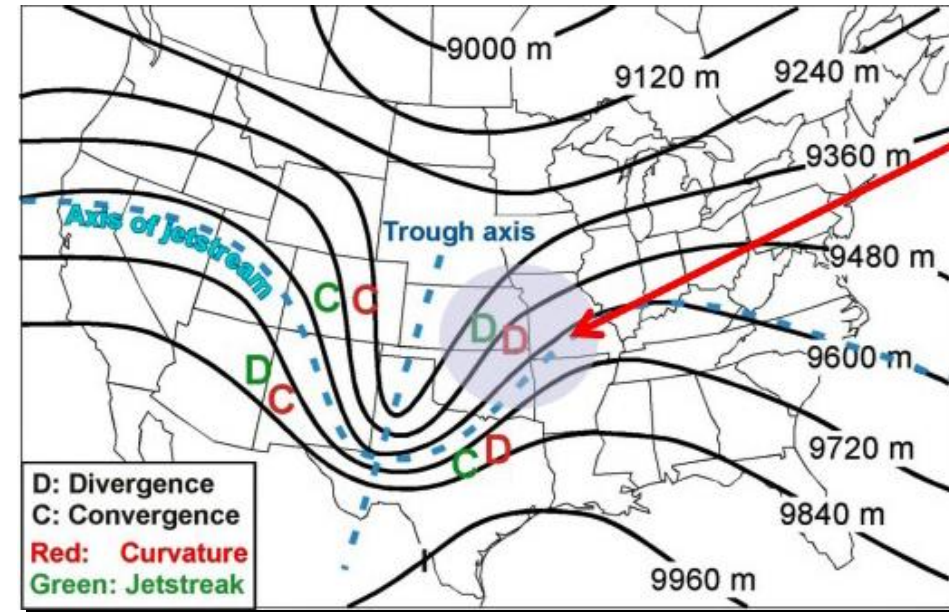


Lift and Convective Initiation

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To get storms going, we need something to initiate lift/convection - some triggers are:

- Intense local heating,
- Orographic lift – air flowing over hills/mountains or simply uphill,
- Convergence – winds from different directions coming together,
- Lift in the atmosphere – jet stream divergence, or trough approaching

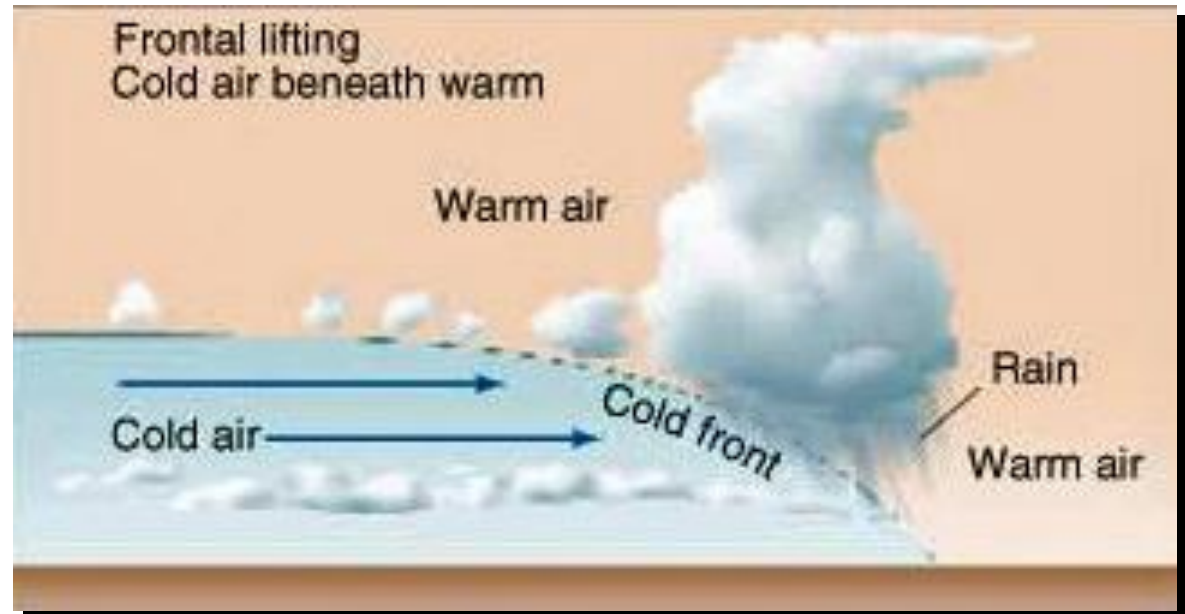


Lift and Convective Initiation

“there’s always a reason for clouds”

To get storms going, we need something to initiate lift/convection - some triggers are:

- Cold front – cold air advancing into warmer air

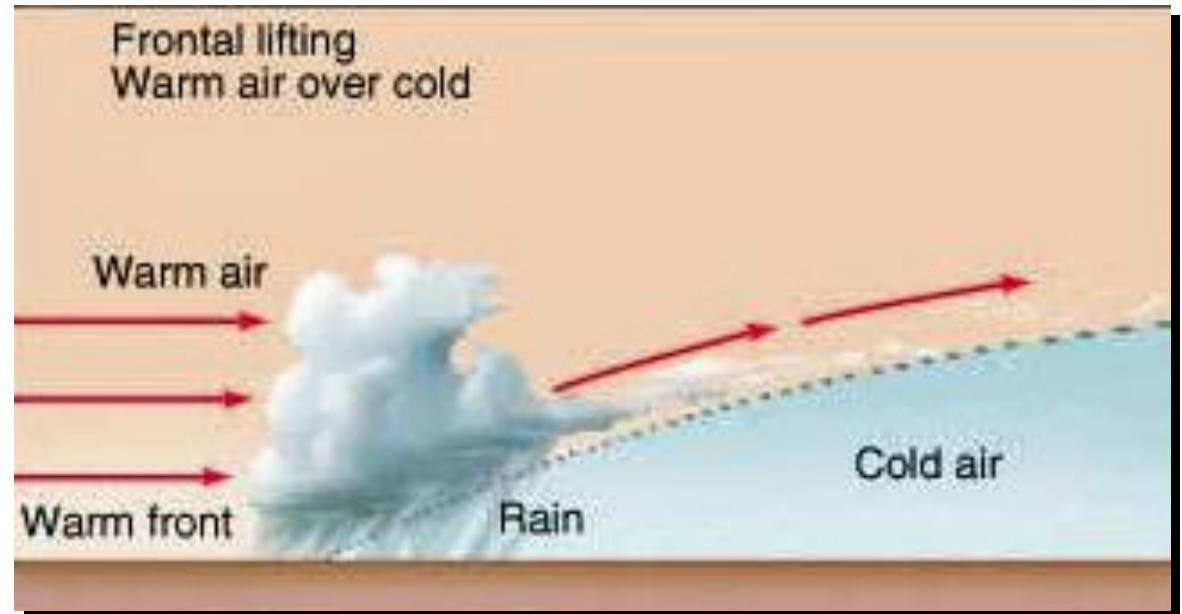


Lift and Convective Initiation

“there’s always a reason for clouds”

To get storms going, we need something to initiate lift/convection - some triggers are:

- Cold front – cold air advancing into warmer air
- Warm front – warm air advancing over cooler air

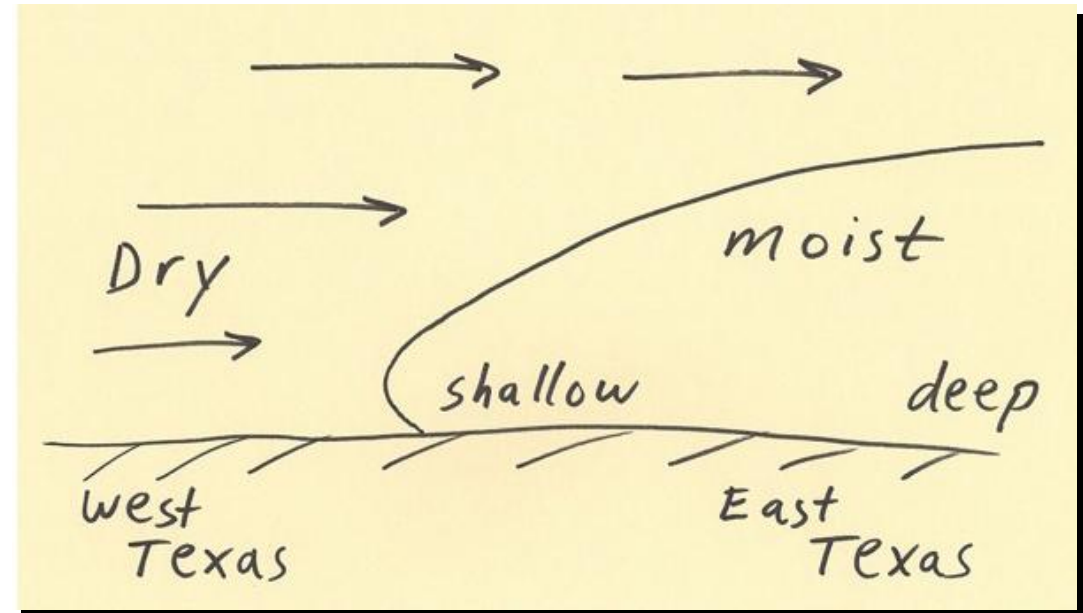


Lift and Convective Initiation

“there’s always a reason for clouds”

To get storms going, we need something to initiate lift/convection - some triggers are:

- Cold front – cold air advancing into warmer air
- Warm front – warm air advancing into cooler air,
- Dry line – boundary between hot, denser dry air and moist Gulf air



Lift and Convective Initiation

“there’s always a reason for clouds”

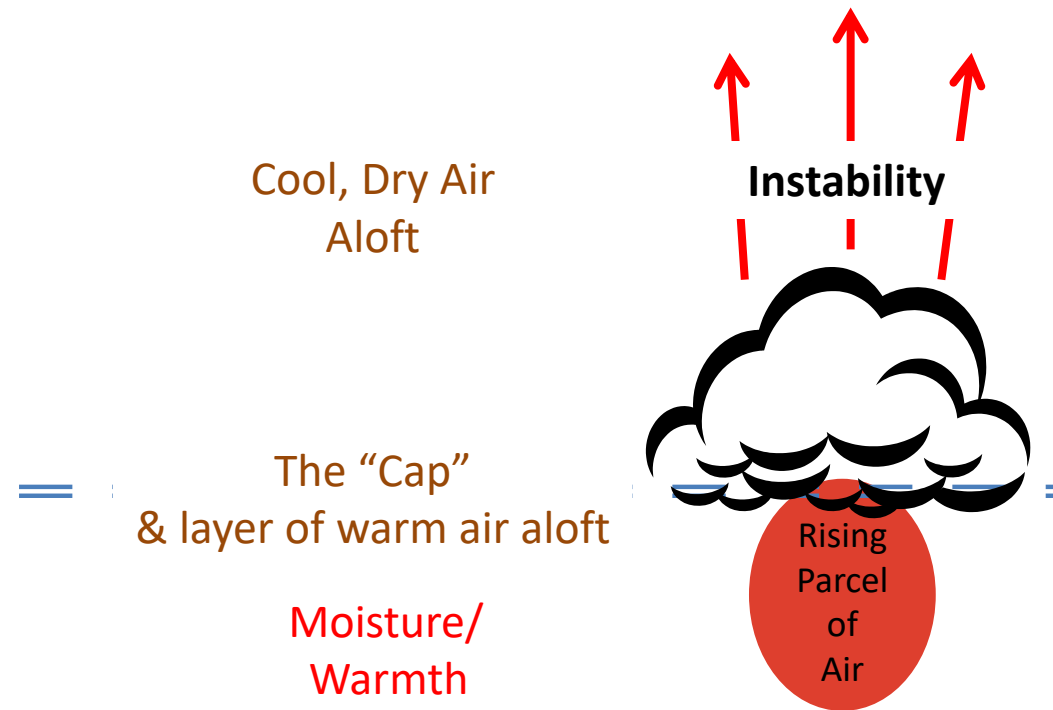
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- Cold front – cold air advancing into warmer air
- Warm front – warm air advancing into cooler air,
- Dry line – boundary between hot, denser dry air and moist Gulf air,
- Outflow boundaries – thunderstorms produce pools of cold air like cold fronts

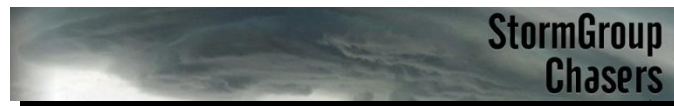


Potentially explosive updrafts

... if the right atmospheric ingredients are in place ...



and convection is triggered that “breaks the Cap”



What if the CAP doesn't break?



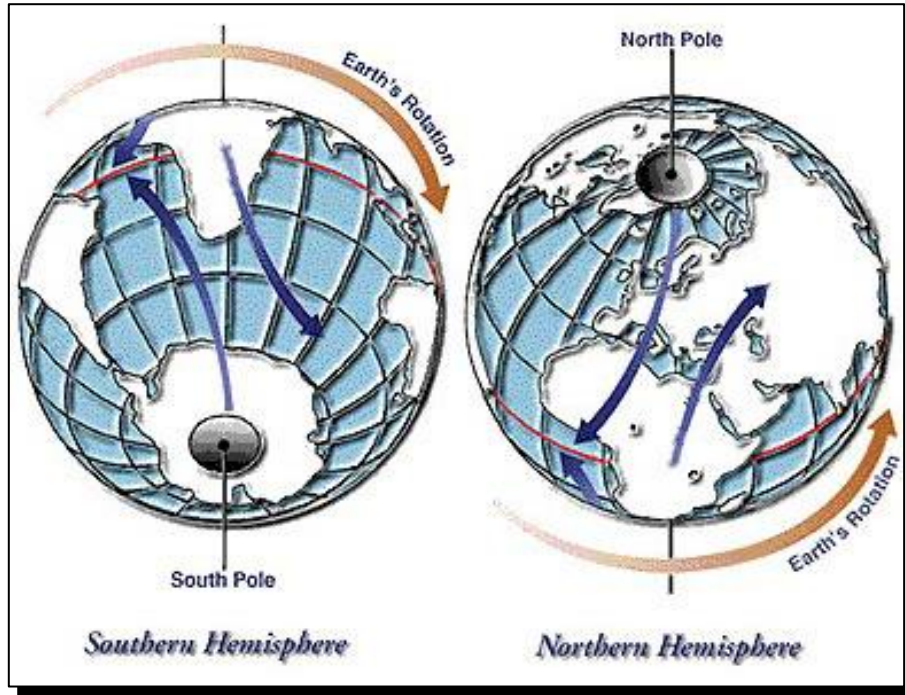
... after hours waiting on a dusty country road watching for convection – a “CAP bust” ...

... but, if the CAP is broken, an explosive updraft ...

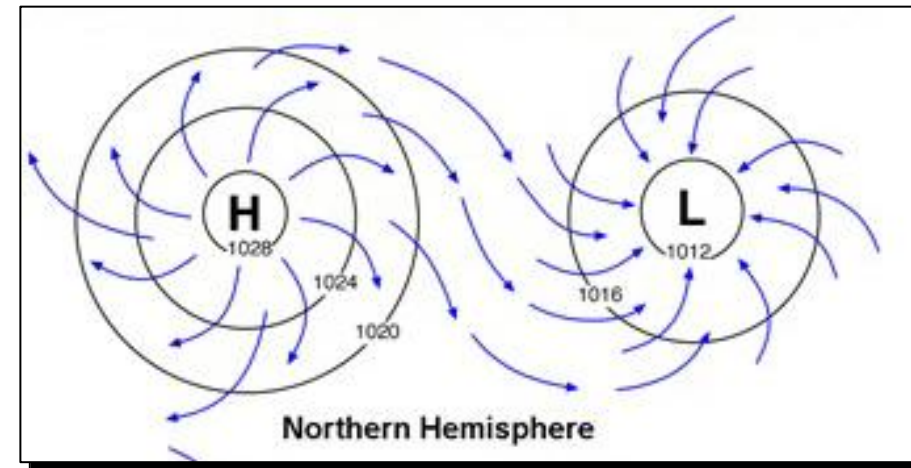
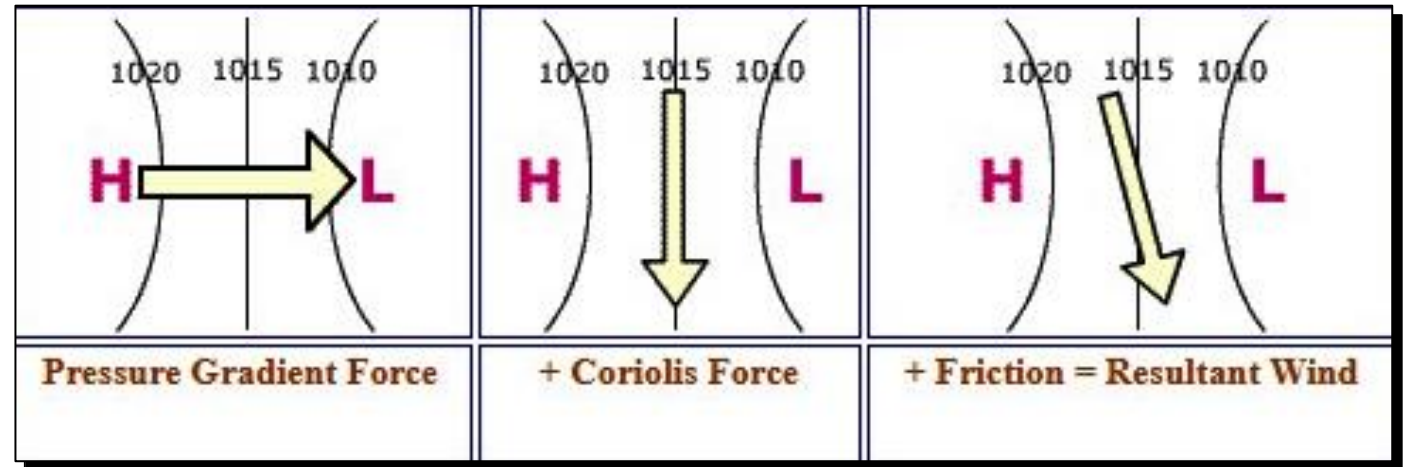


**... already up to
45,000 ft in less
than an hour ...**

The Coriolis Effect ...



Note: the Coriolis effect is a pseudo force, deflecting the apparent path of a moving object/wind to the right over the surface as the Earth rotates

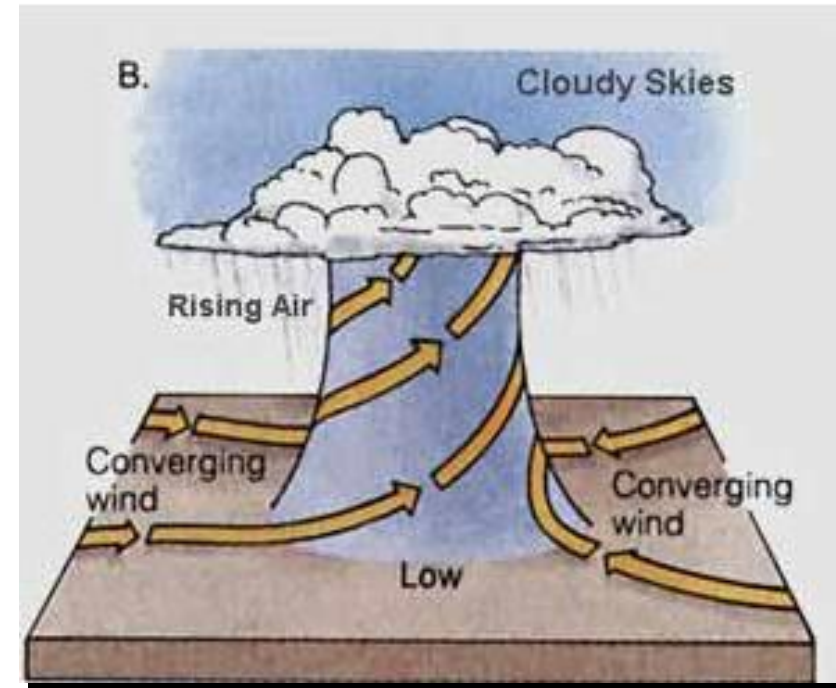
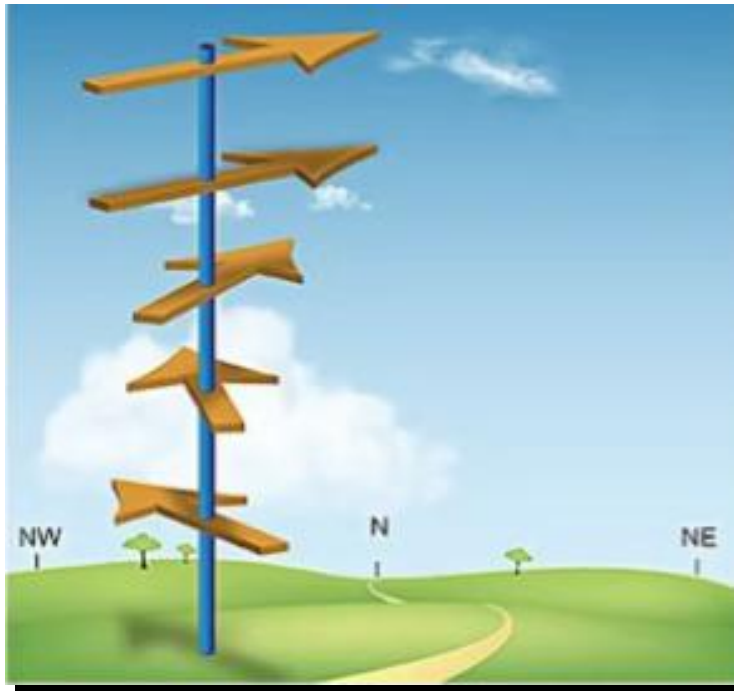


Note: the Coriolis effect is rather weak at the small local scale, but does have an effect on large scale weather systems

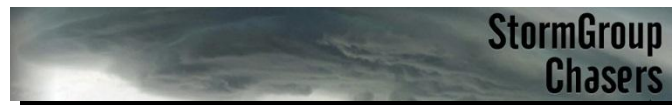
Some additional ingredients for tornadic storms:

In general, to get tornadoes we need long-lived rotating supercells – the first ingredient is:

- **Directional shear** - winds which change direction as you rise up – induces rotation in the parent thunderstorm, intensifying the local low pressure system with inflowing winds & rising air

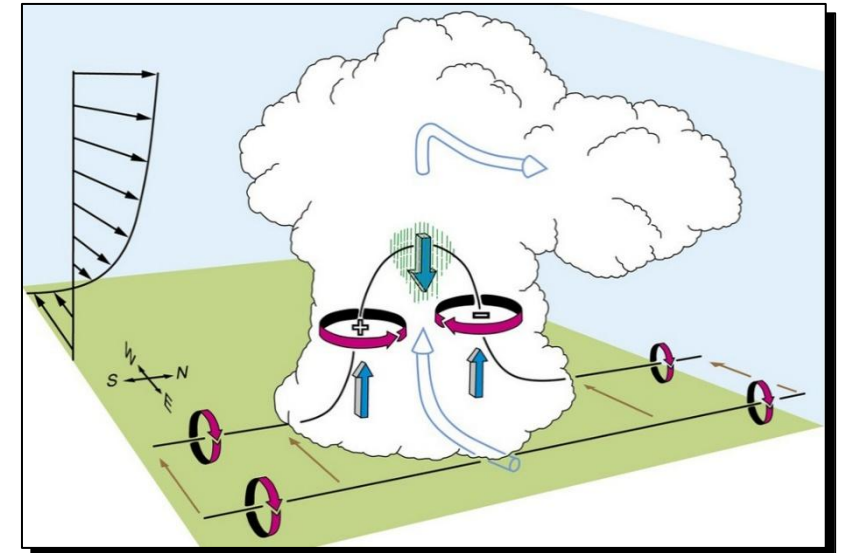
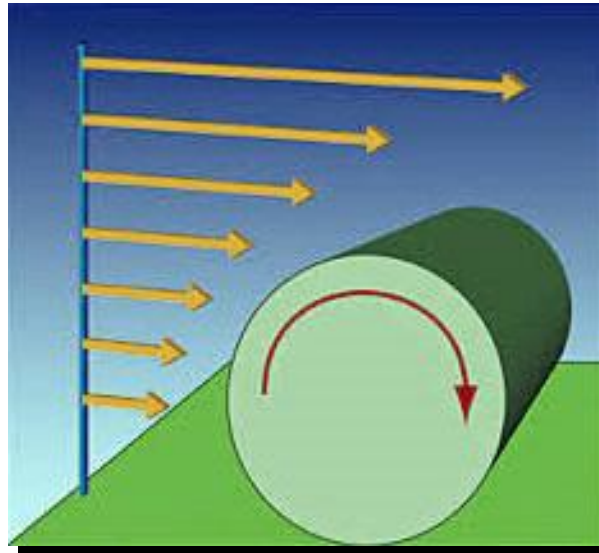
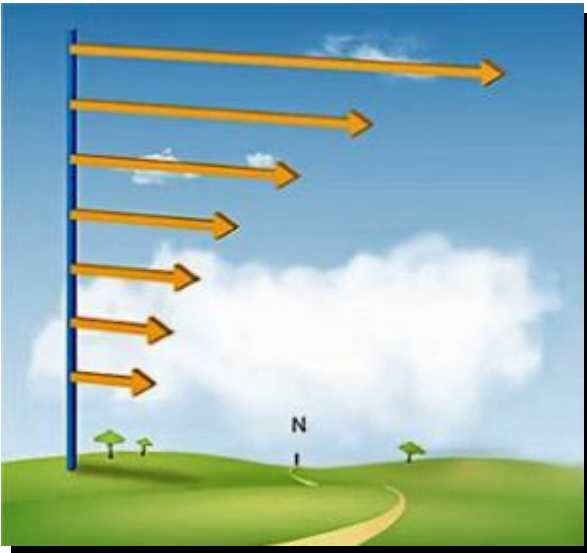


Note: compared to this induced rotation by wind profiles, the Coriolis effect is relatively weak at the small local scale of a thunderstorm



Some additional ingredients for tornadic storms:

- **Directional shear** - winds which change direction as you rise up – induces rotation in the parent thunderstorm as the rising air induces a local low pressure system, with inflowing winds
- **Speed shear** - winds which increase in speed as you rise up – vents a storm by tilting it over, and induces rolls in the atmosphere which can be stretched vertically & tightened by updrafts

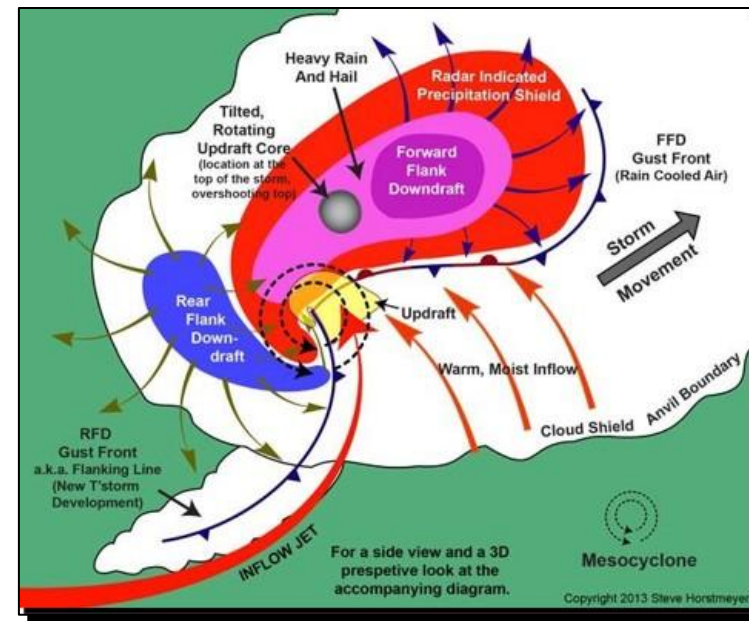


Note: this lifting & stretching of vorticity into the updraft is the primary source of rotation for tornadoes

Some additional ingredients for tornadic storms:

- **Directional shear** - winds which change direction as you rise up – induces rotation
- **Speed shear** - winds which increase in speed as you rise up – vents a storm by tilting it over, and induces rolls in the atmosphere which can be stretched vertically
- **Low level shear** – inflow air in the right direction relative to storm movement - a right-moving thunderstorm can increase streamwise vorticity, which is then lifted by the updraft into the vertical, increasing rotation and pressure falls, & enhancing the updraft

... a top-down view of a supercell thunderstorm – red arrows marking moist, warm inflows into a small-scale low pressure system ...

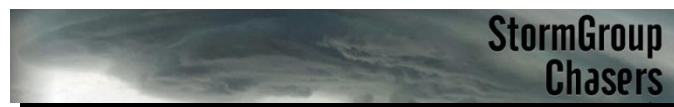


Some additional ingredients for tornadic storms:

- **Directional shear** - winds which change direction as you rise up – induces rotation
- **Speed shear** - winds which increase in speed as you rise up – vents a storm by tilting it over, and induces rolls in the atmosphere which can be stretched vertically
- **Low level shear** – inflow air in the right relative direction to storm movement, enhances vorticity
- **Storms moving in the right direction** at boundaries - sustaining their access to warm, moist air
- **Cloud bases not too high** – 1,500 mtrs or less
- **Minimal competition**/interference from other severe storms

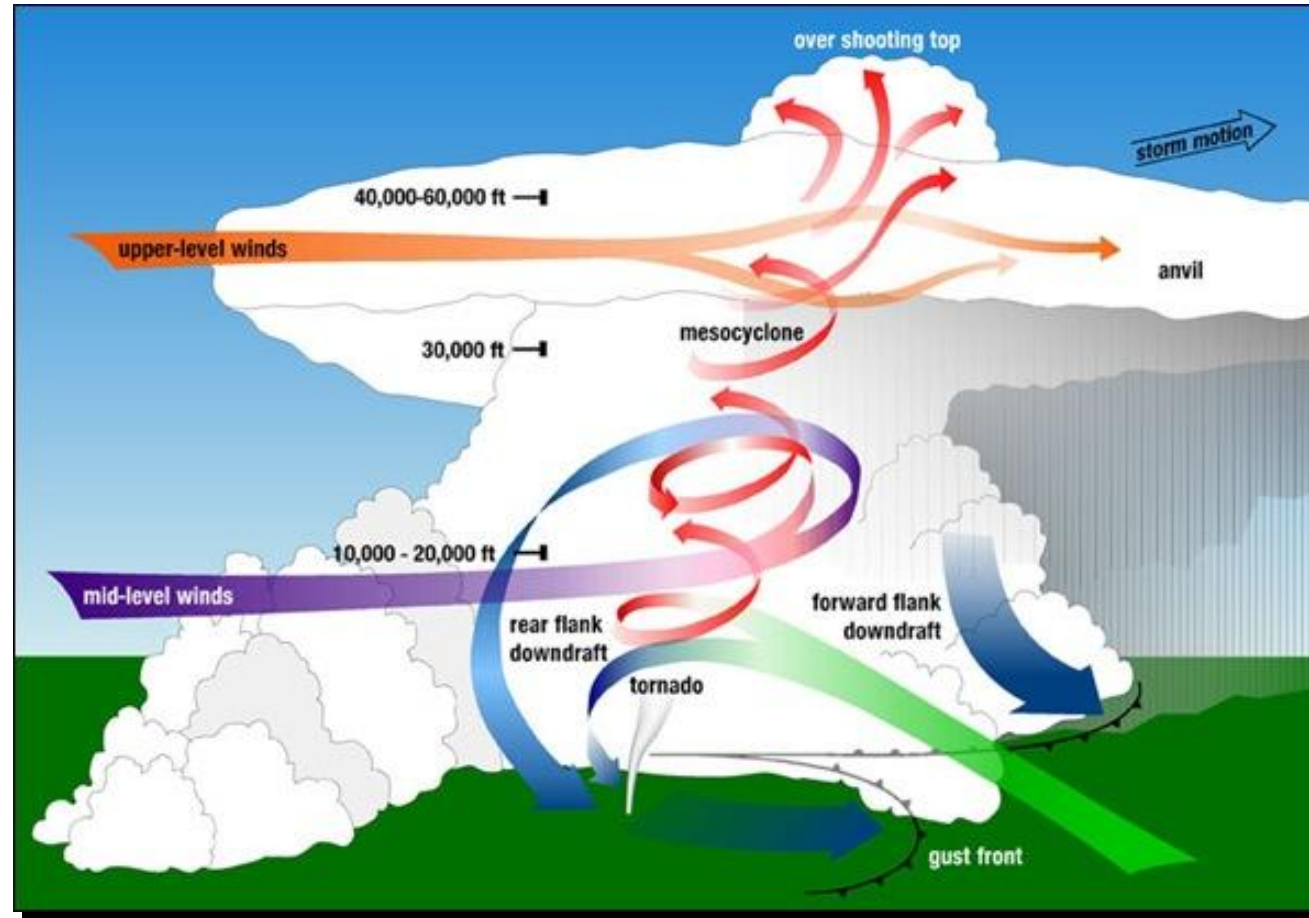
About 2% of all thunderstorms are supercells, and only some supercells produce tornadoes – but, which ones?

A number of factors must come together in precisely the right way, and at the right time, in order to produce a tornado – and the scientific theory is still incomplete ...



... a Supercell Thunderstorm – a lot going on ...

... a long-lived rotating heat engine, moving across the landscape sucking in moisture & releasing energy – a single intense storm, potentially lasting for hours ...



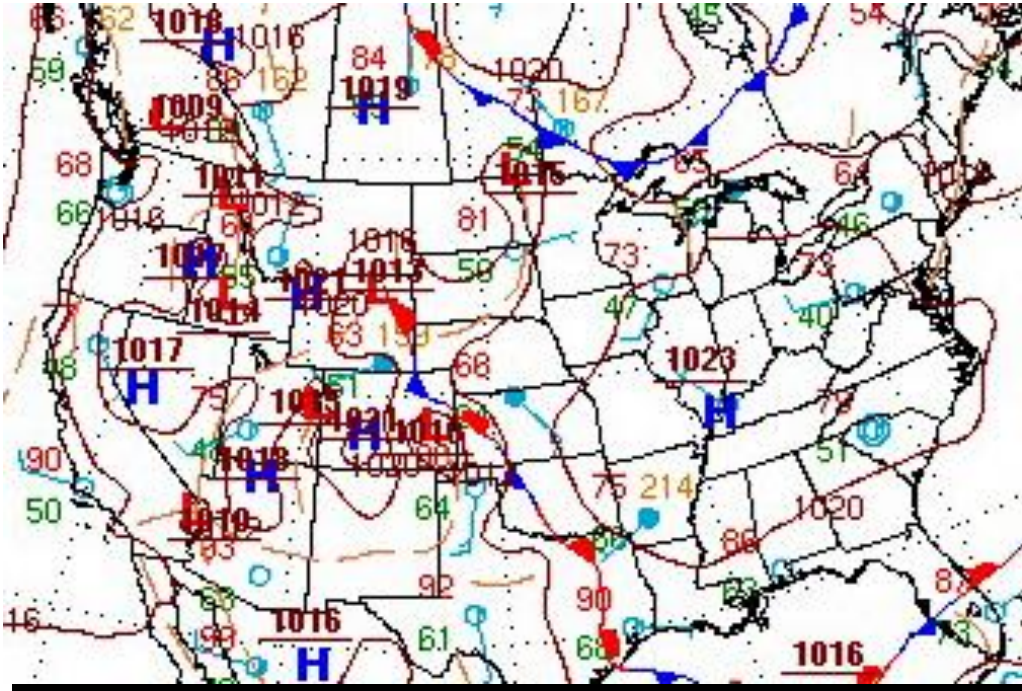
... note the downwards flowing blue arrows – the forward flank downdraft helps generate vorticity along its boundary, and the rear flank downdraft tightens up low-level rotation, and is perhaps the triggering event for tornadogenesis ...

... the tornado is just a tiny appendage under a storm that can extend for hundreds of kilometres ...

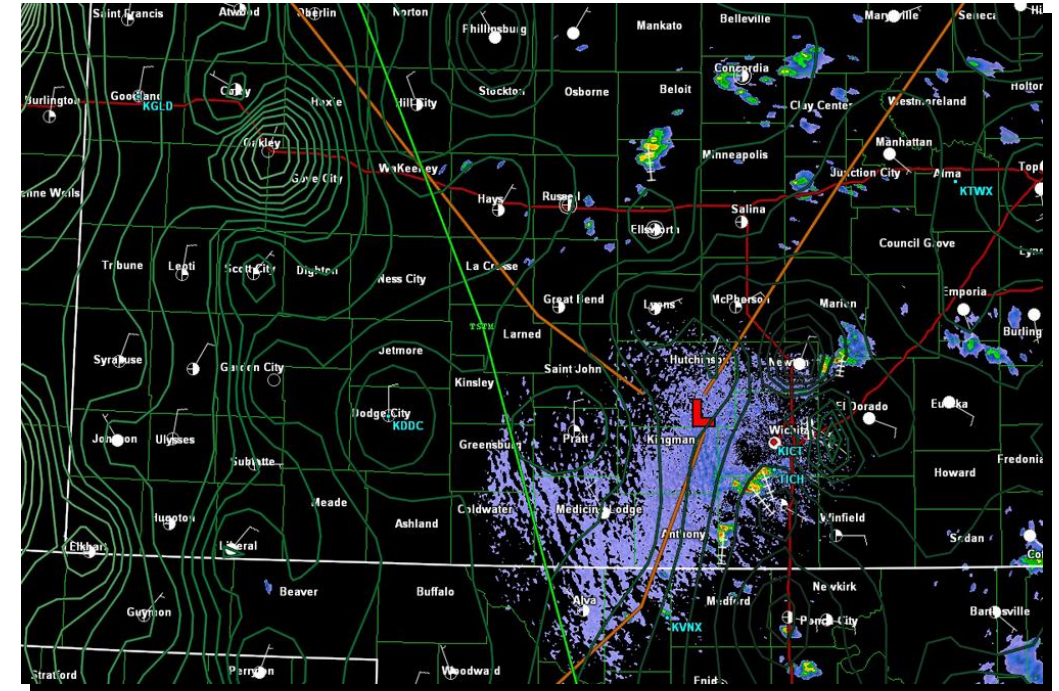
Forecasting & targeting – critical for success

so, how do we forecast, determine targets and close in on a storm?

- Ground & air observations – surface & atmospheric conditions
- Local weather stations/observing sites/twice daily weather sounding balloons



... surface maps ...

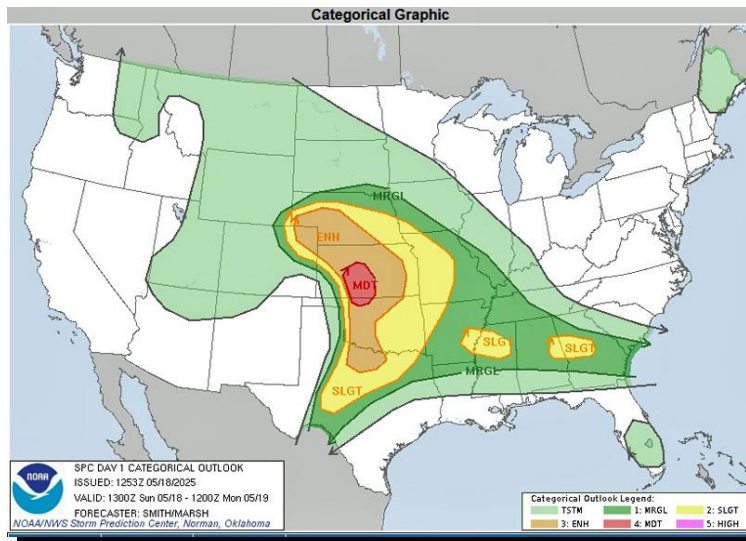


... surface observations ...

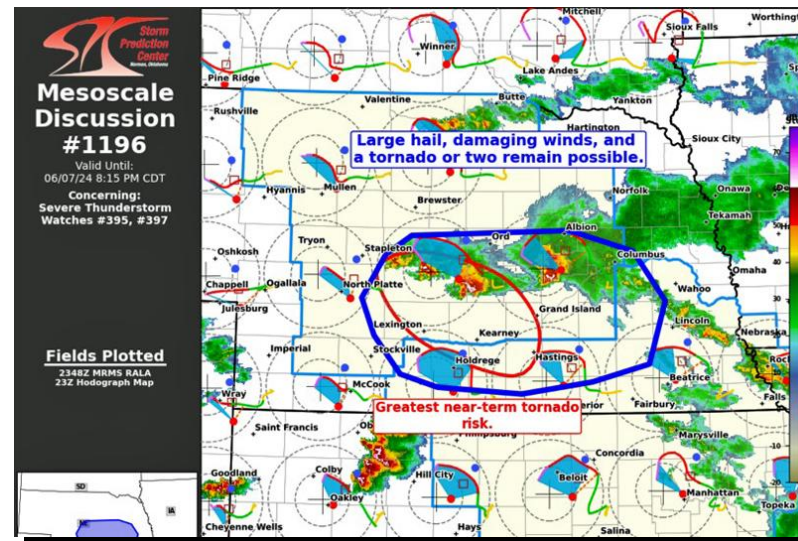
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so, how do we forecast, determine targets and close in on a storm?

- Storm Prediction Centre
 - Day 1, 2 & 3 outlooks
 - Mesoanalysis discussions – issued during the day
 - Severe thunderstorm watches, tornado watches – and then warnings



... SPC Outlooks ...



... Mesoanalysis Discussions ...

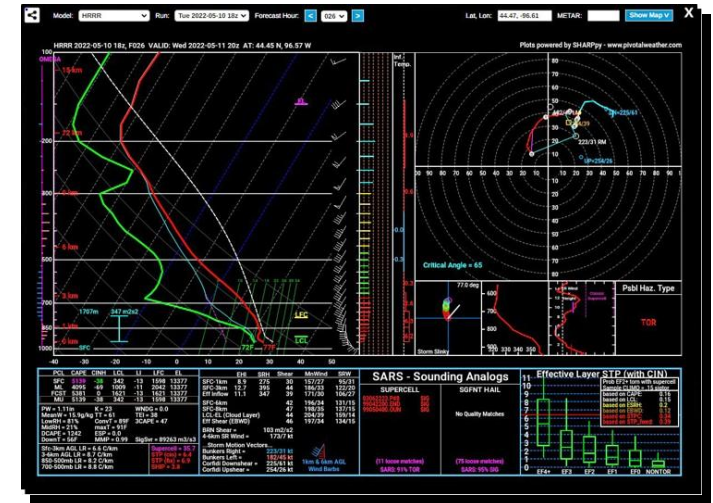


... Severe Thunderstorm or Tornado Watches ...

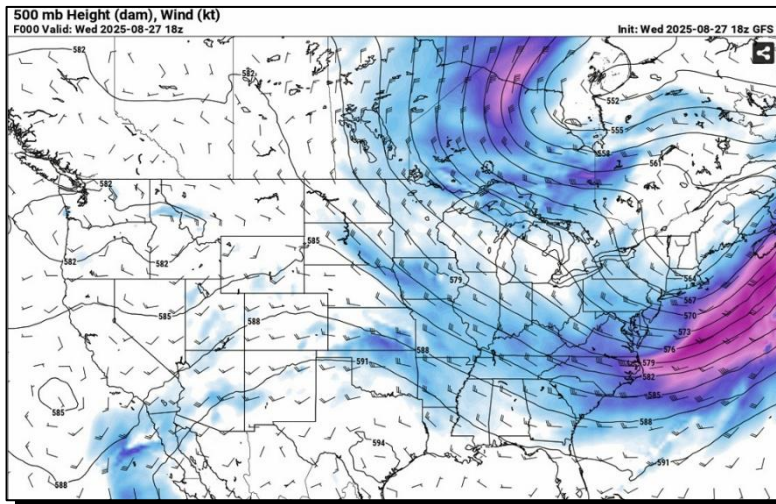
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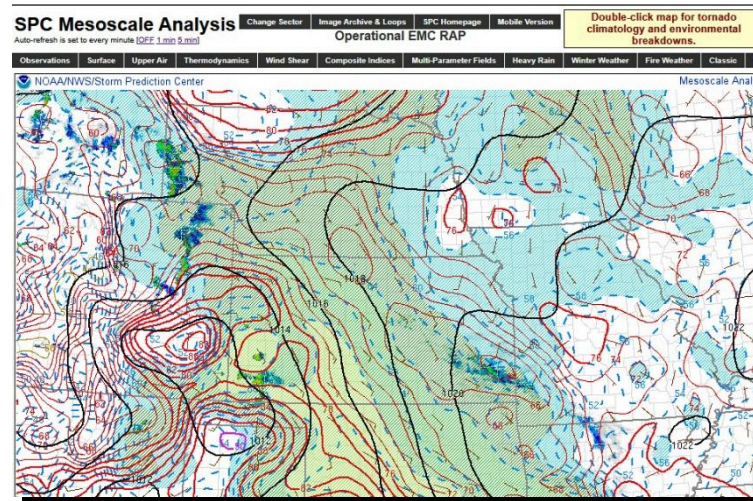
- Weather Models <large supercomputer-driven analysis of forecast patterns>
 - From several weeks to several hours , plus SPC hourly mesoscale analysis site
 - Soundings/hodographs to assess atmospheric potential/tornado probabilities
 - Various Convective Allowing Models <“CAMs”>
 - Supercell initiation & coverage; storm type & movement



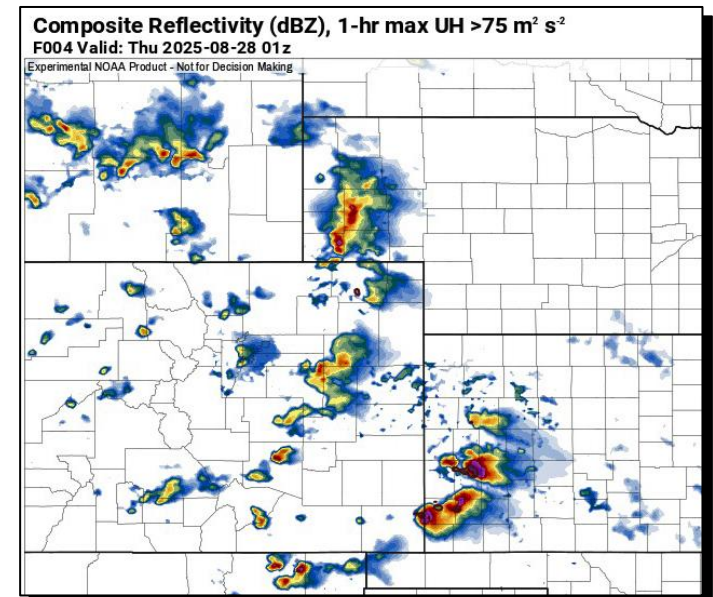
... profile of atmosphere ...



... long-range model forecasts ...



... hourly mesoscale analysis ...



... simulated radar forecast ...

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Forecasting & targeting – critical for success

so, how do we forecast, determine targets and close in on a storm?



National Weather Service local forecasters issue these with updates throughout the day:

- Area Forecast Discussion
- Detailed Analysis Discussion

[Area Forecast Discussion](#)
National Weather Service Dodge City KS
314 PM CDT Wed Aug 27 2025

.KEY MESSAGES...

- There is a marginal risk for severe thunderstorms west of a Garden City to Meade line between 4pm and sunset. Wind gusts of 40 to 60 mph and Large [hail](#) will be the main hazards through sunset.
- Widespread accumulating [rainfall](#) will be [likely](#) after sunset tonight. Locally heavy [rainfall](#) from this event may result in [isolated ponding](#) of water on roadways and poor drainage areas north of a Garden City to Larned line.
- Fall like temperatures (Highs in the mid 70s to lower 80s) expected late week and over the weekend across southwest Kansas.
- Multiple rounds of wet weather will be possible across southwest Kansas the upcoming Labor Day Weekend.

.DISCUSSION...
Issued at 255 PM CDT Wed Aug 27 2025

Water vapor and upper air analysis early today showed an upper level [trough](#) located over northern Kansas. At the 700 [mb](#) level a north northwest to south southeast oriented 700mb temperature [gradient](#) was present from northeast Colorado into south central Kansas with a wedge of high [moisture](#)/PWATS located along and east of the temperature [gradient](#). We are also seeing 850mb warm air [advection](#) improving north and east of the 10C [isotherm](#). At the surface, a boundary was located over eastern Colorado with an area of low pressure developing along this boundary ahead of the approaching [upper level system](#).

The surface boundary mentioned above will be our first area of interest late today for [scattered convection](#), given improving low level [moisture](#) and 0-1km [frontogenesis](#) along this boundary and afternoon [instability](#) developing due to clearing skies. Latest models now show 25 to 30 knots of [shear](#) and MUCAPE >2500 [j/kg](#) by late day in this area. Based on this any thunderstorms that do develop will be capable of producing large [hail](#) and gusty winds. The Storm Prediction Center also appears to be observing the same potential and, as a result, has placed a marginal risk for severe weather west of highway 83 for early tonight (before sunset).

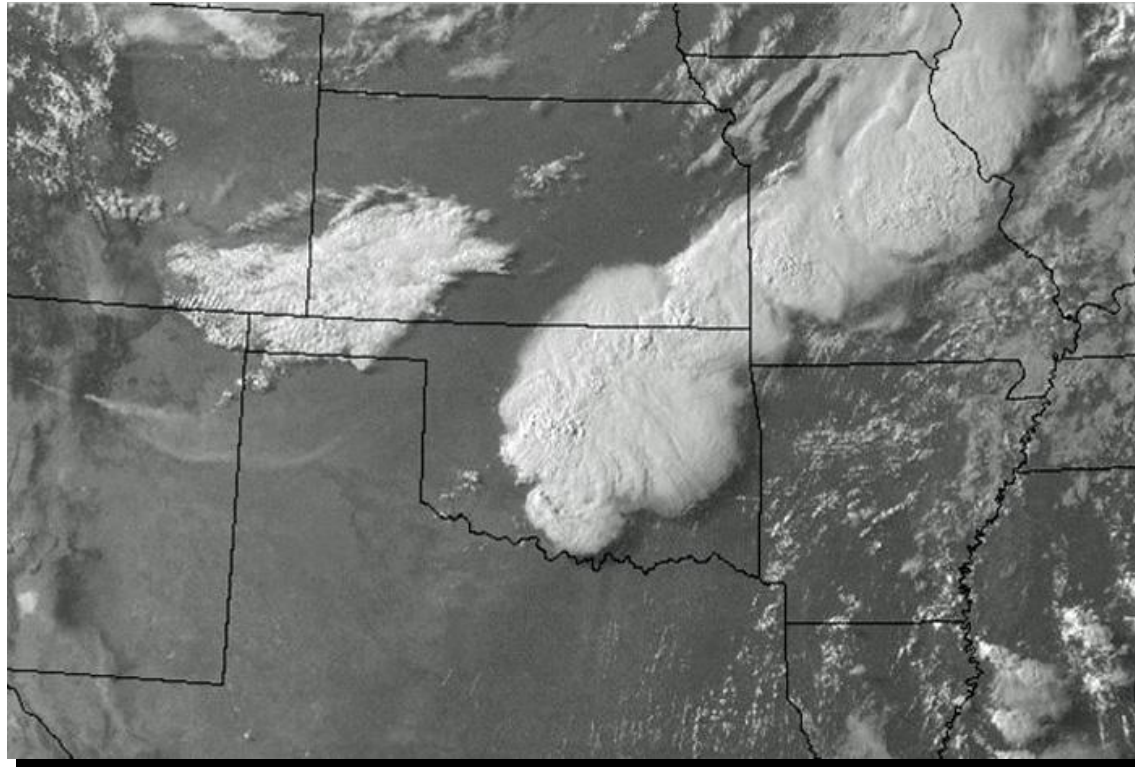
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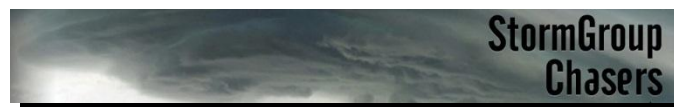
so, how do we forecast, determine targets and close in on a storm?

Satellite images

- Visible, infra-red & water vapour – updated every 15 minutes



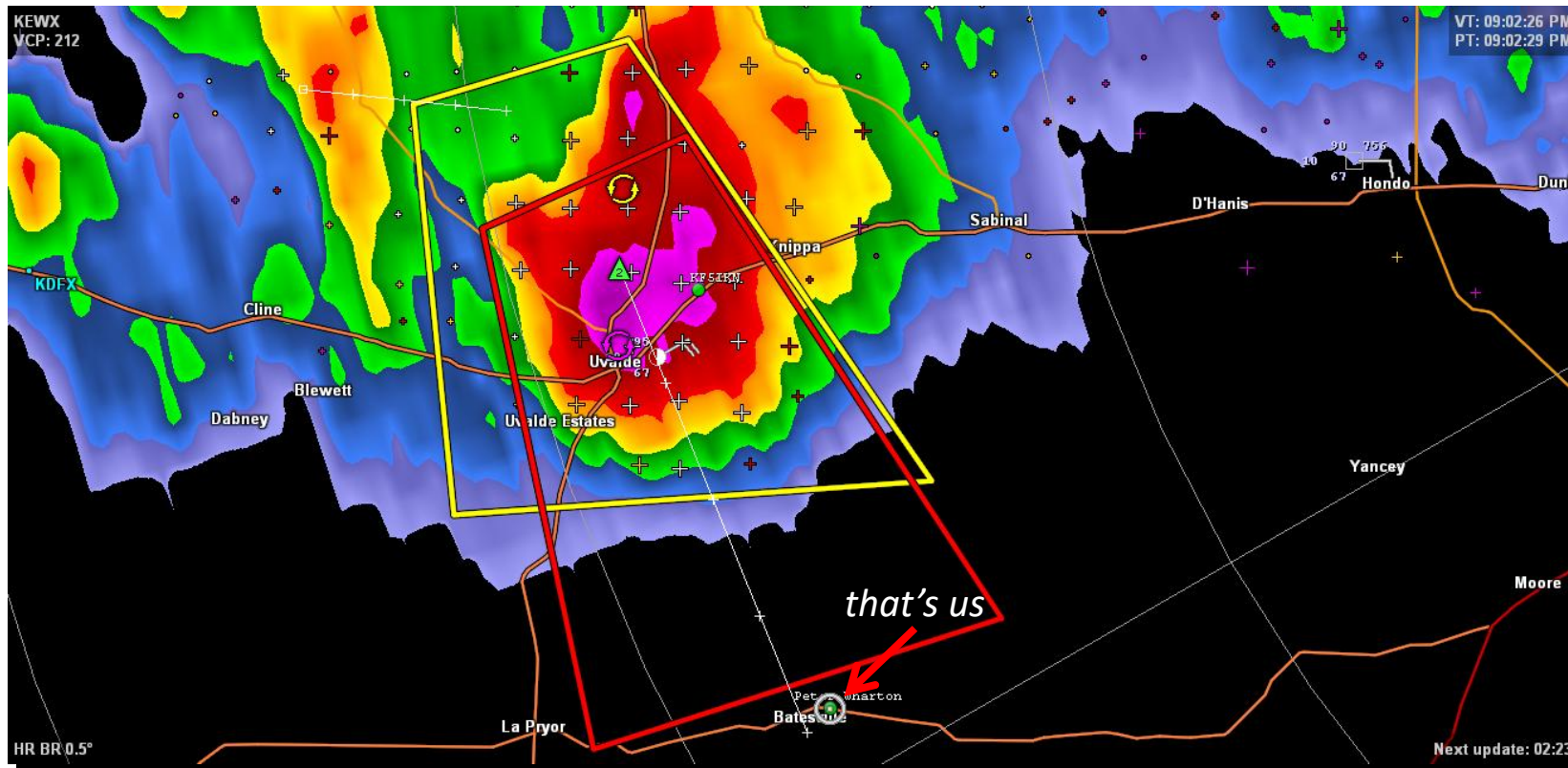
... visually sighting clouds forming, location of boundaries, and the location and intensity of storms ...



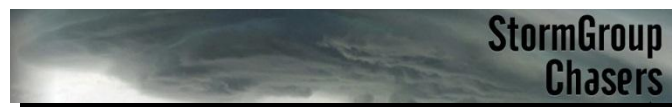
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- Radar analysis <via GRLevel 3 software> - Doppler radar data from across the US – updated every 10 minutes



... a key tool for tracking storms relative to our GPS position – especially after dark ...



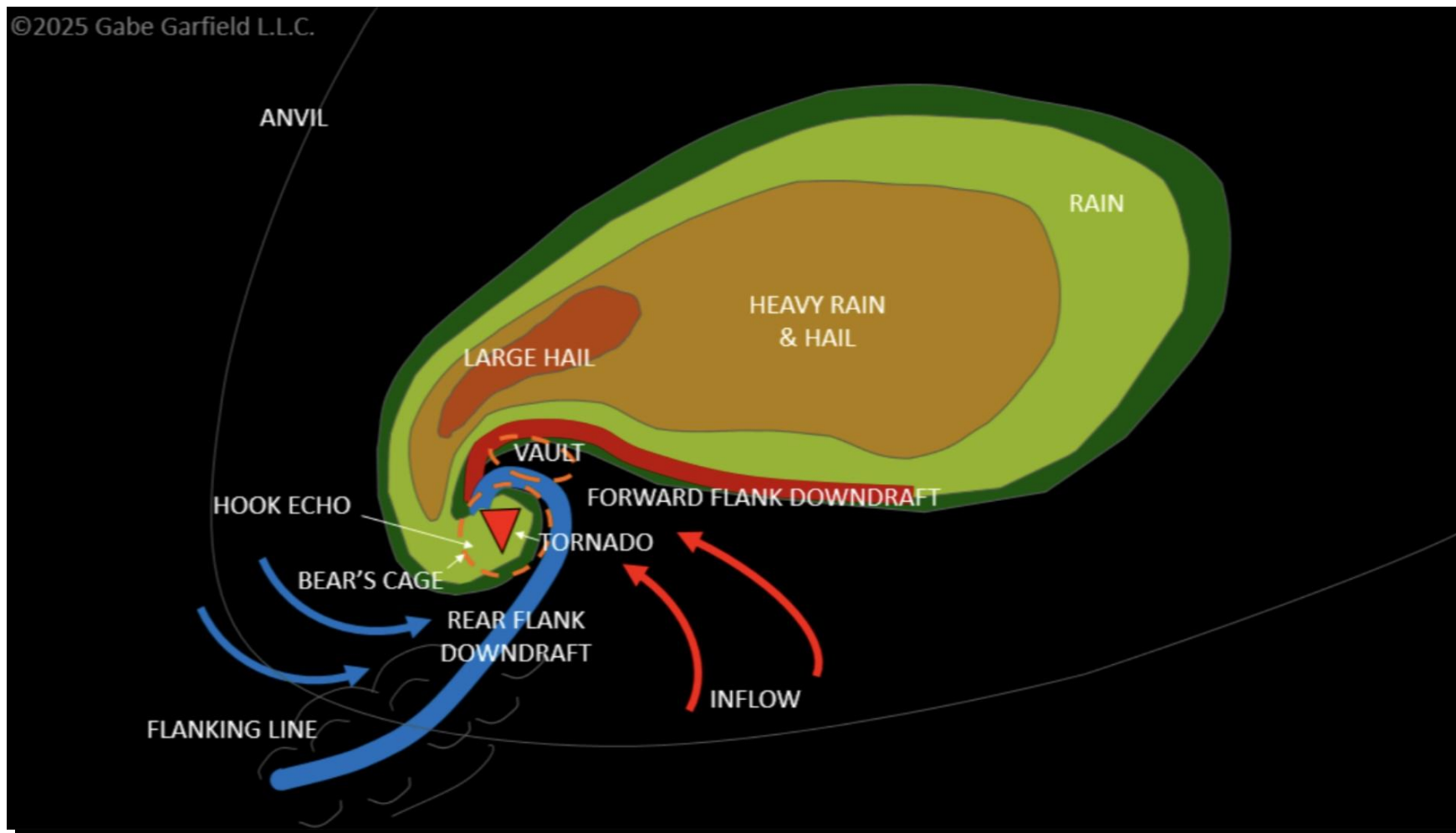
Forecasting & targeting – critical for success

- Visually on the ground, looking out the windows – that's us 😊

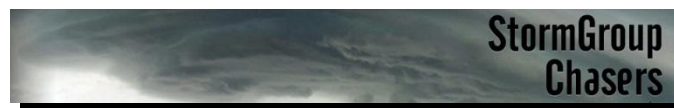


... assessing what storms are doing in “real time” vs inherent delays in digital data ...

... closing in on a storm - “what’s in there?”



... elements of a severe thunderstorm ...



Getting visibility under the base can be a challenge ...



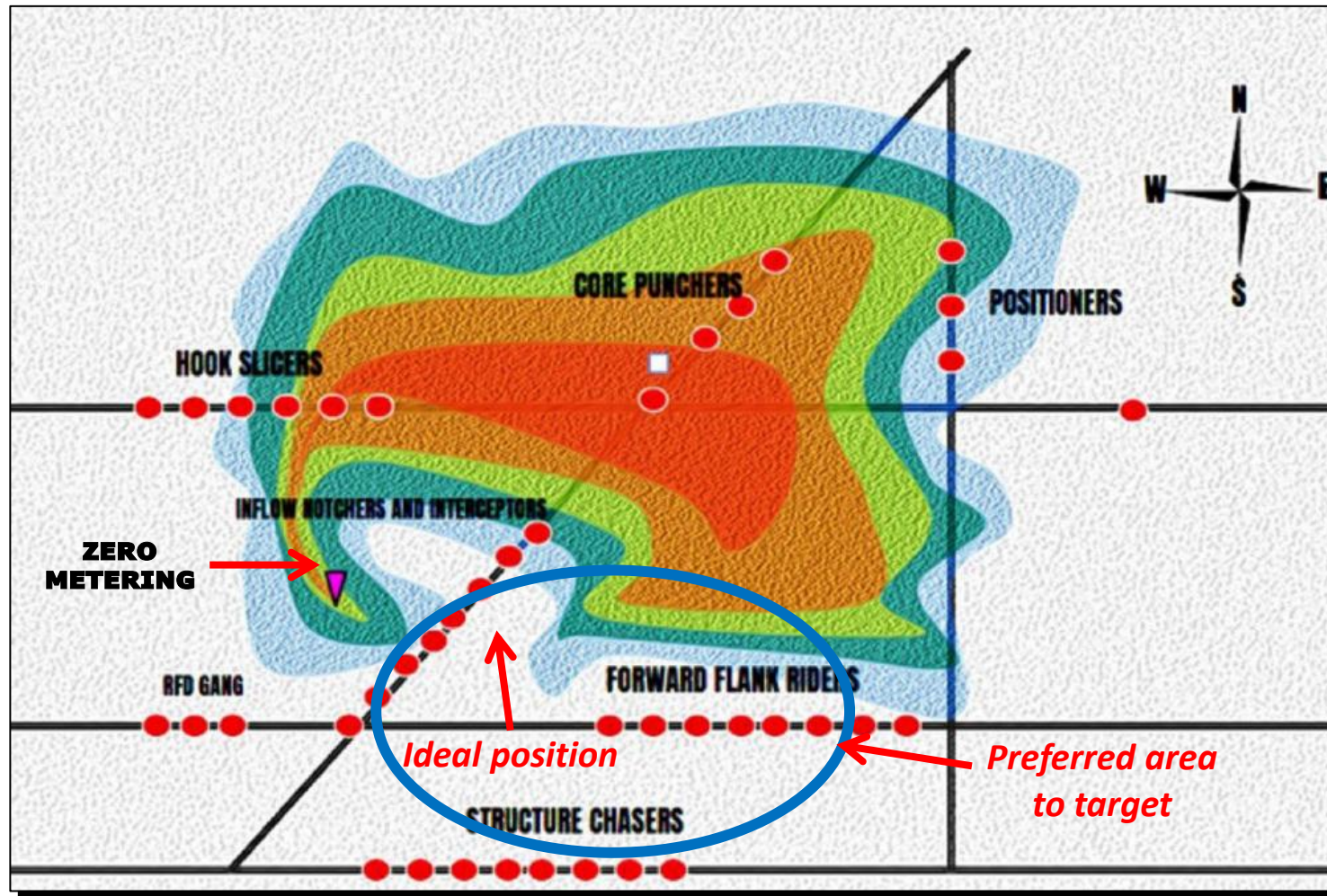
Looking for:

- lowering under the base,
- rising scud clouds,
- formation of a wall cloud,
- signs of rotation,

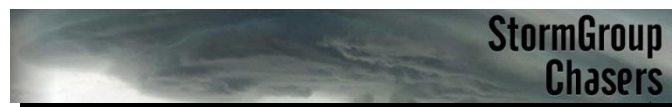
in conjunction with radar data



... safely positioning for visibility under the base ...

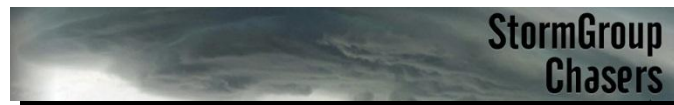


... in general, we don't "hook slice" nor "core punch" - nor ever "zero-meter" ...



A example chase day from May 23rd, 2025

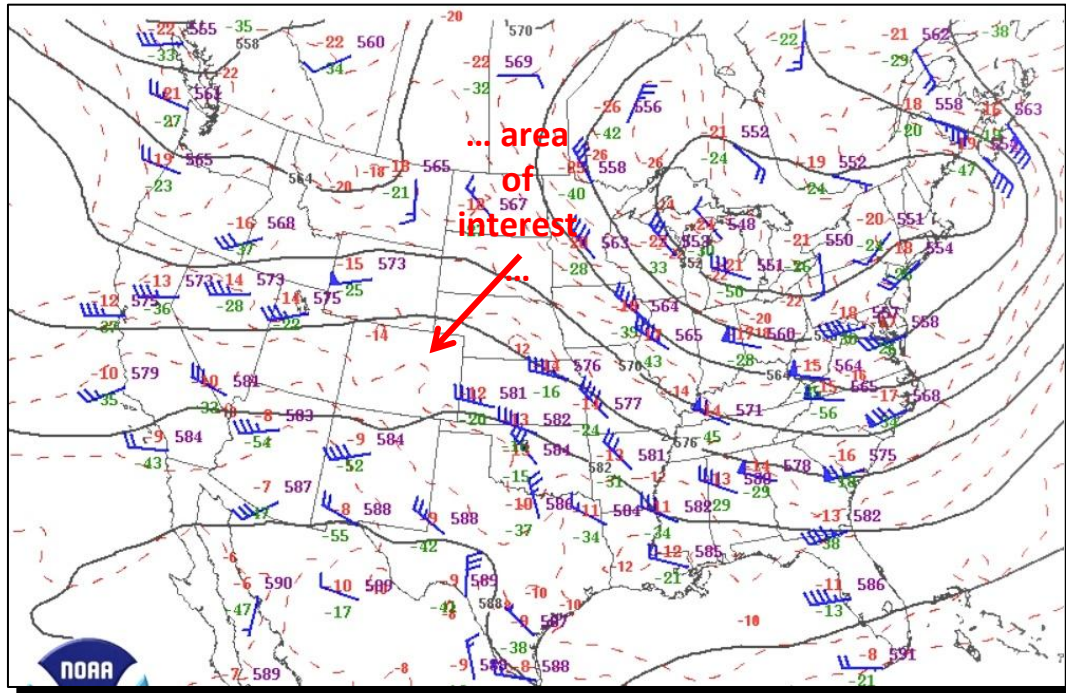
Ok – if you’ve managed to absorb that, would you like to see what a chase day looks like? 🕶️



USA weather maps – 7am CDT

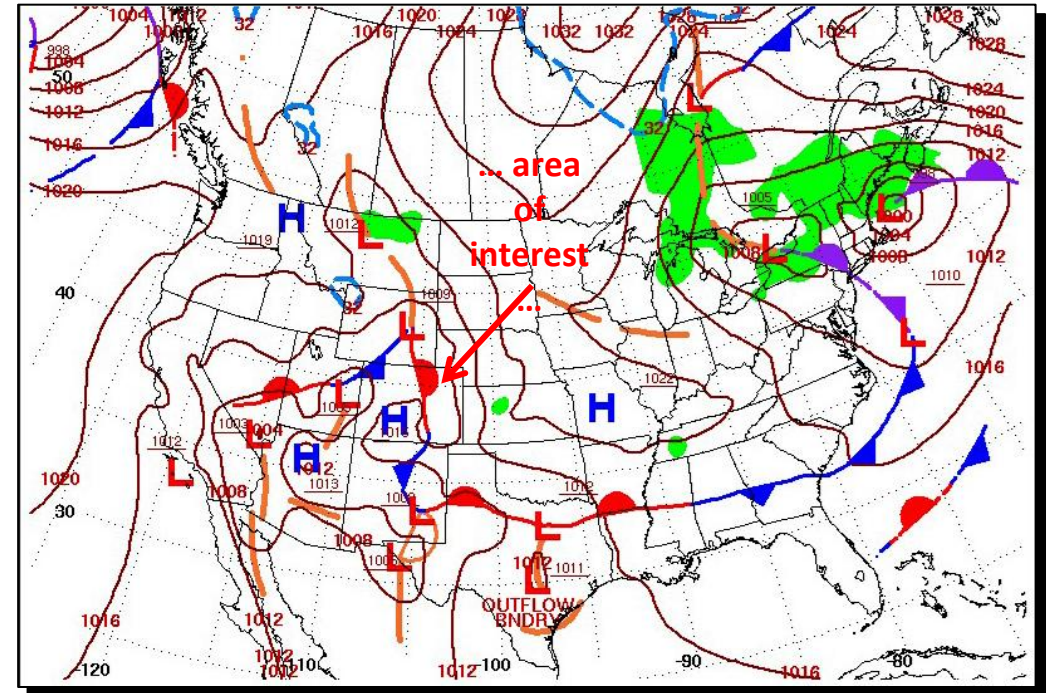
Previous days' analysis of forecast models had suggested that NE Colorado would be a promising target – so we organised to get on the road by 7am CDT to make the long drive north. The morning weather maps reconfirmed this analysis.

500 mb chart



Multiple mid-level shortwave troughs progress from the southern/central Rockies across the adjacent High Plains with up to 35-40 kts of upper level winds from the west.

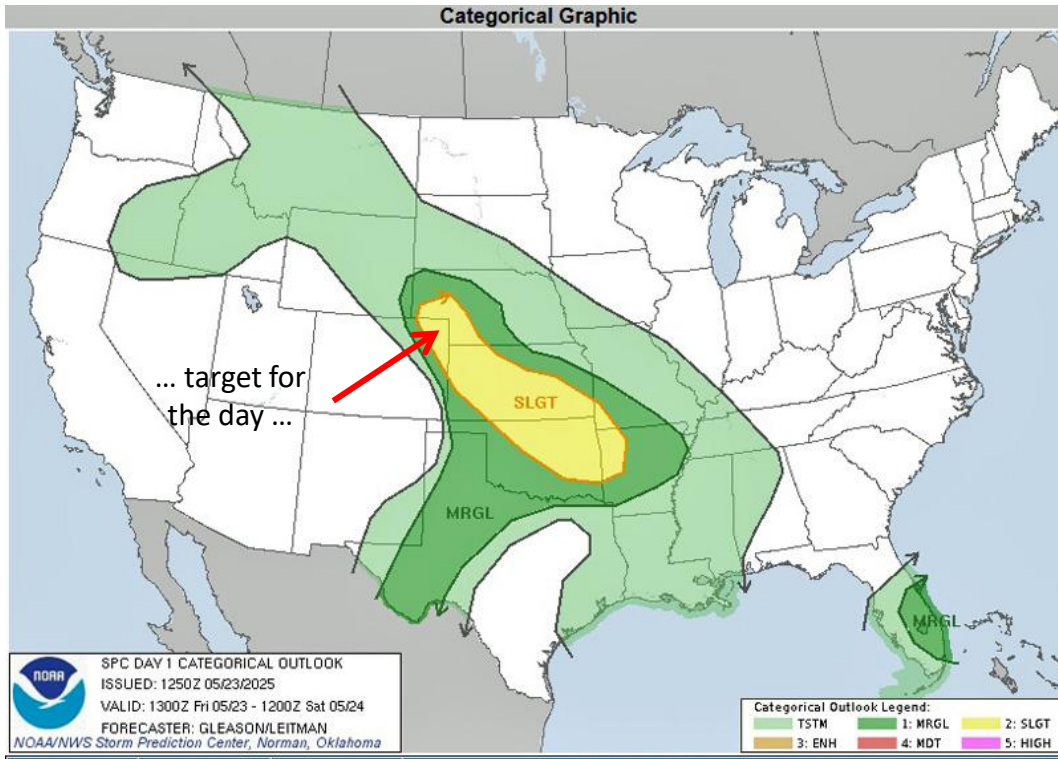
Surface map



A weak low over the central High Plains should encourage modest low-level moisture transport into parts of eastern CO/western KS by peak afternoon heating.

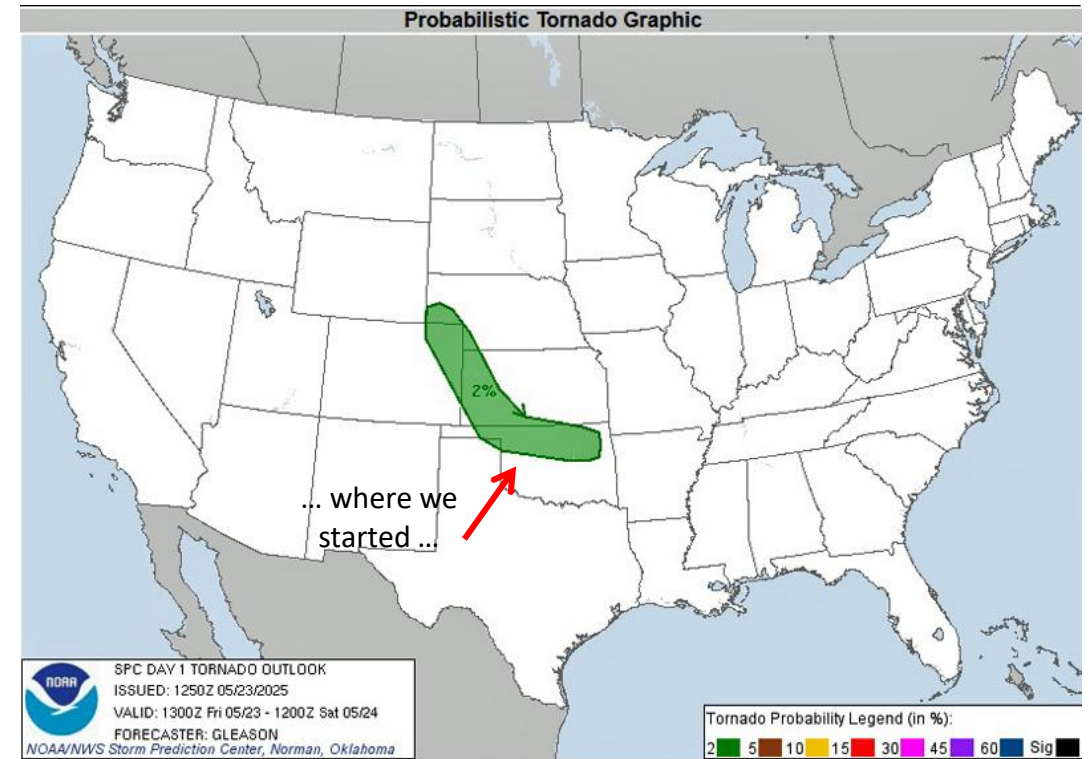
Storm Prediction Center Outlooks at 8am CDT

Convective Outlook



Slight Risk of Severe Weather

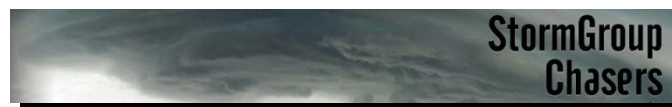
Tornado Outlook



2% Risk of Tornadoes

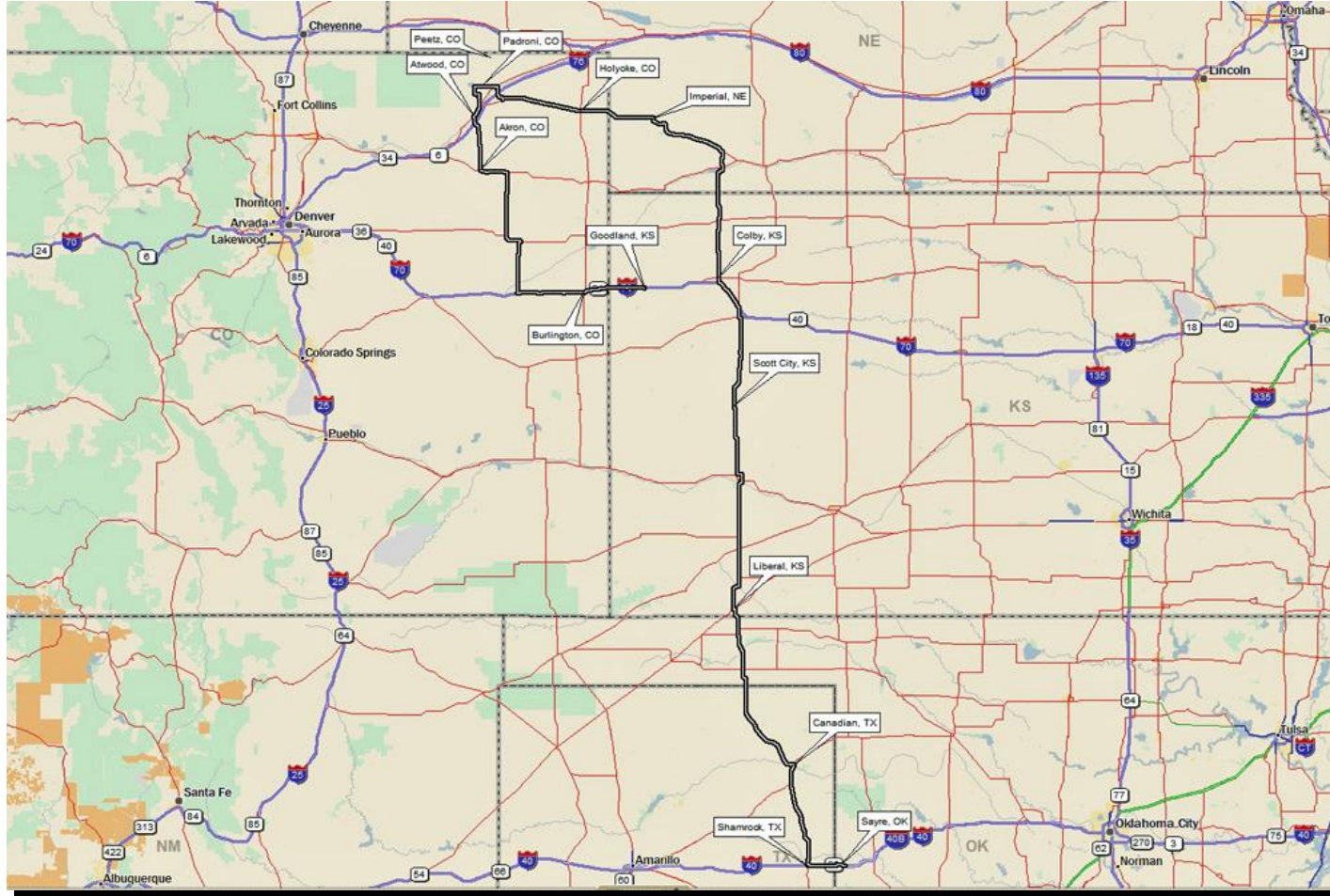
"A narrow corridor of destabilization, with 35-45 kt of deep-layer shear, should support organized supercellular convection."

These SPC Outlooks reconfirmed the target for the day.



The drive ahead of us ...

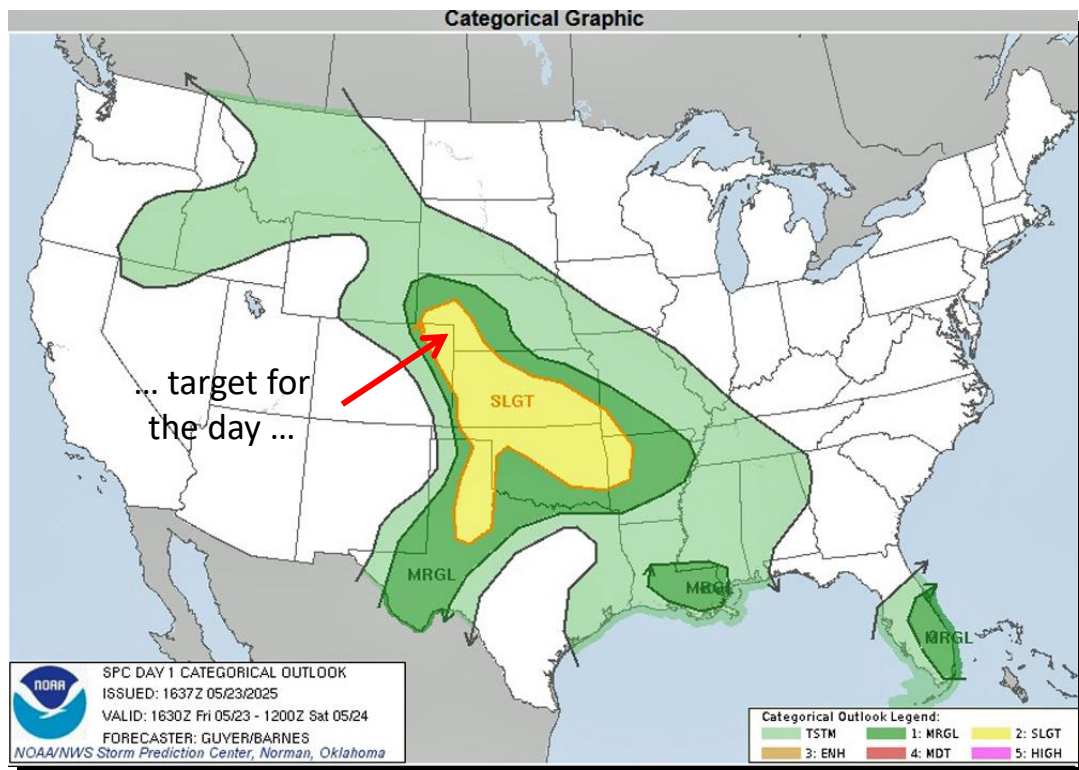
across Oklahoma,
Texas, Kansas,
Nebraska and into
Colorado



745 miles <1,008 kms>
from Sayre, OK to
Goodland, KS via
Padroni, CO

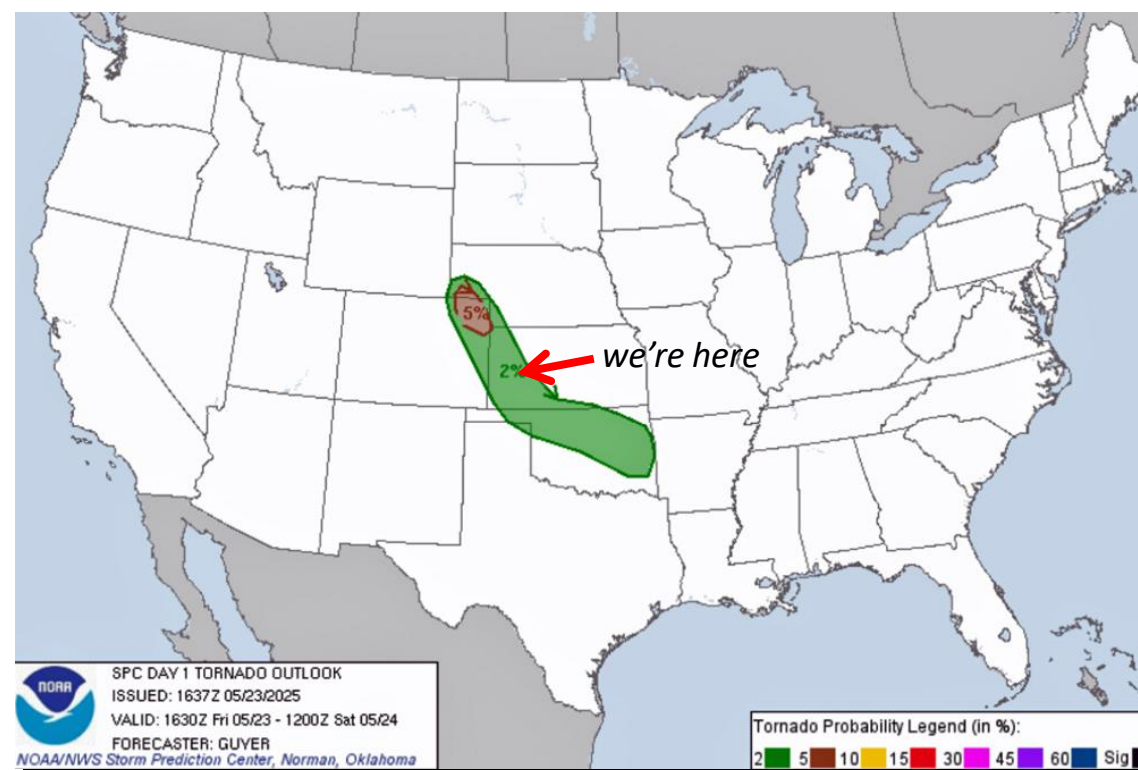
SPC updated Outlooks at 11:37 am CDT

Convective Outlook



Slight Risk of Severe Weather

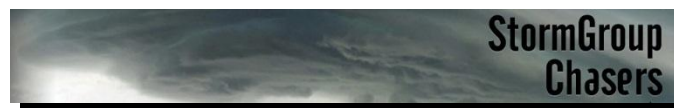
Tornado Outlook



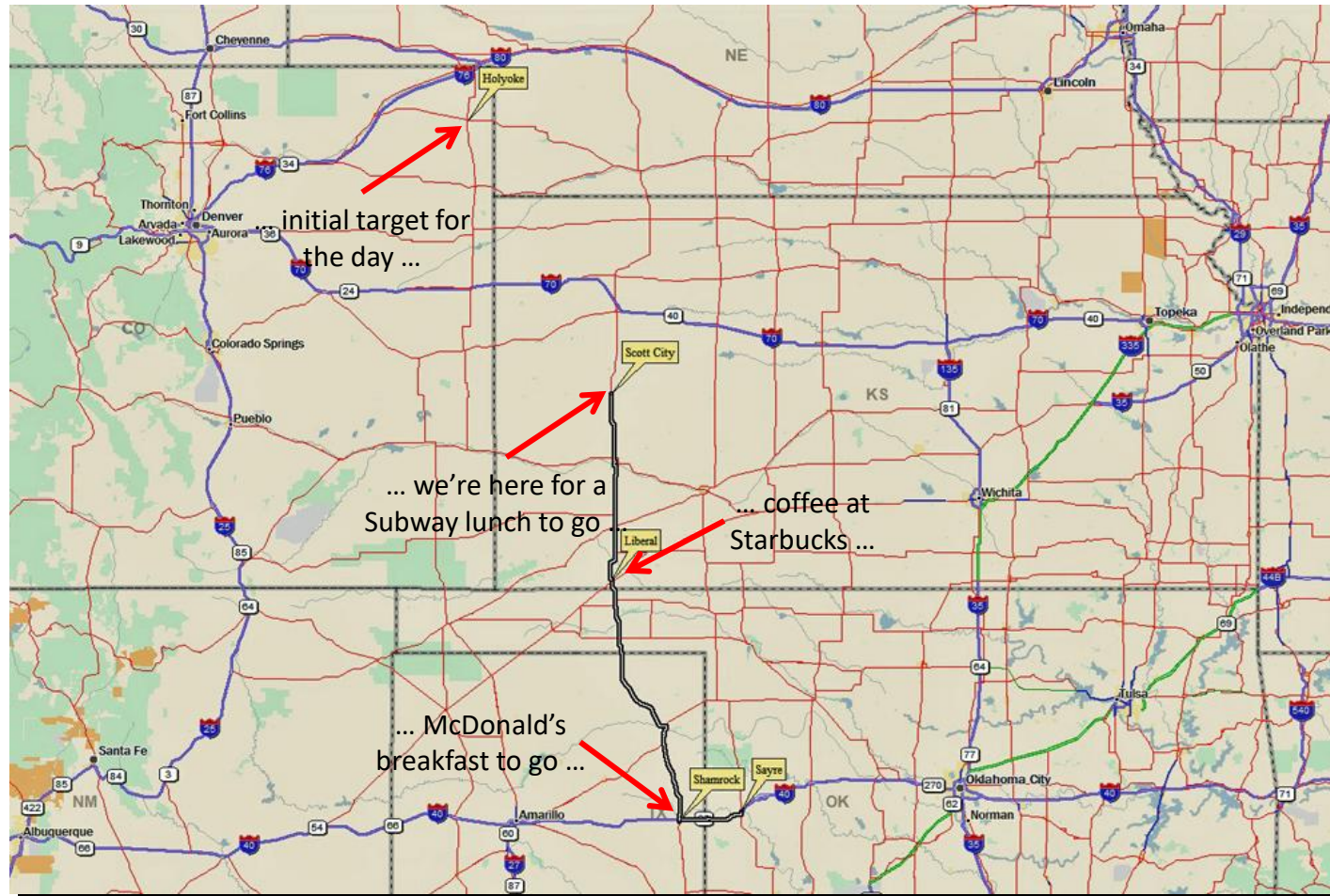
5% Risk of Tornadoes

Favourable upgrade to a 5% tornado risk around our target area.

A 5% risk is a tornado occurring within 25 miles of any given point within the target area.

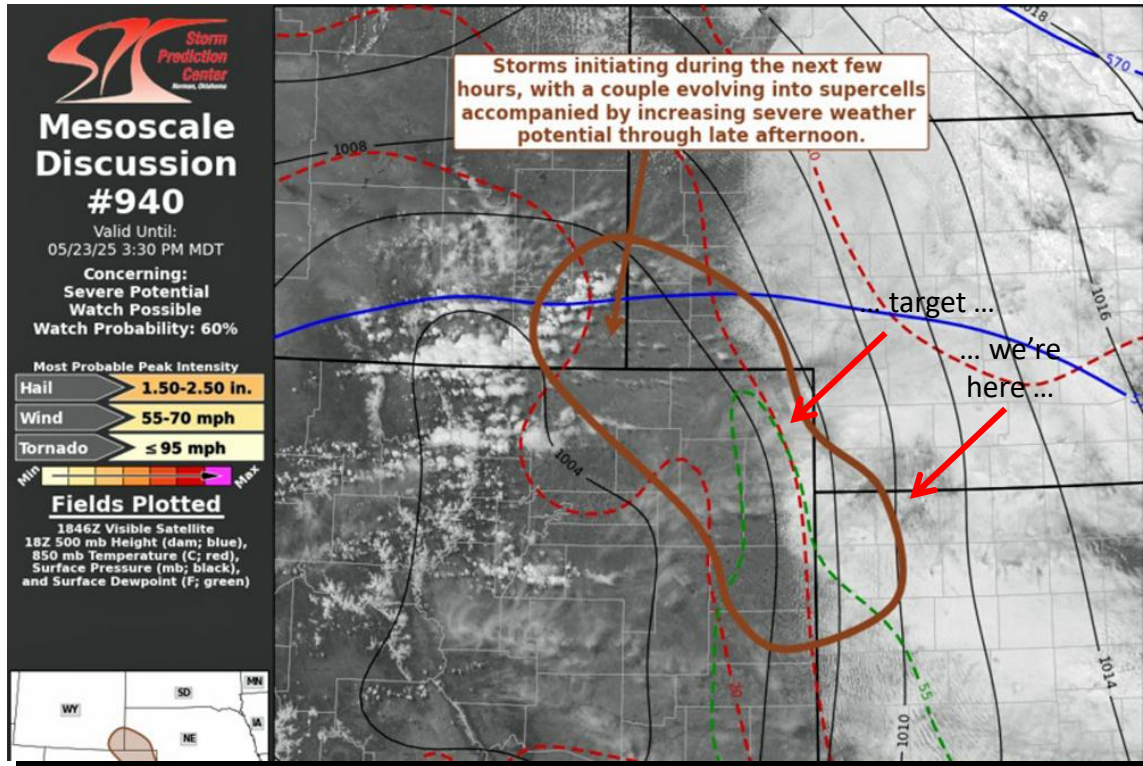


It's 11:55am CDT, and we've driven 286 miles ...

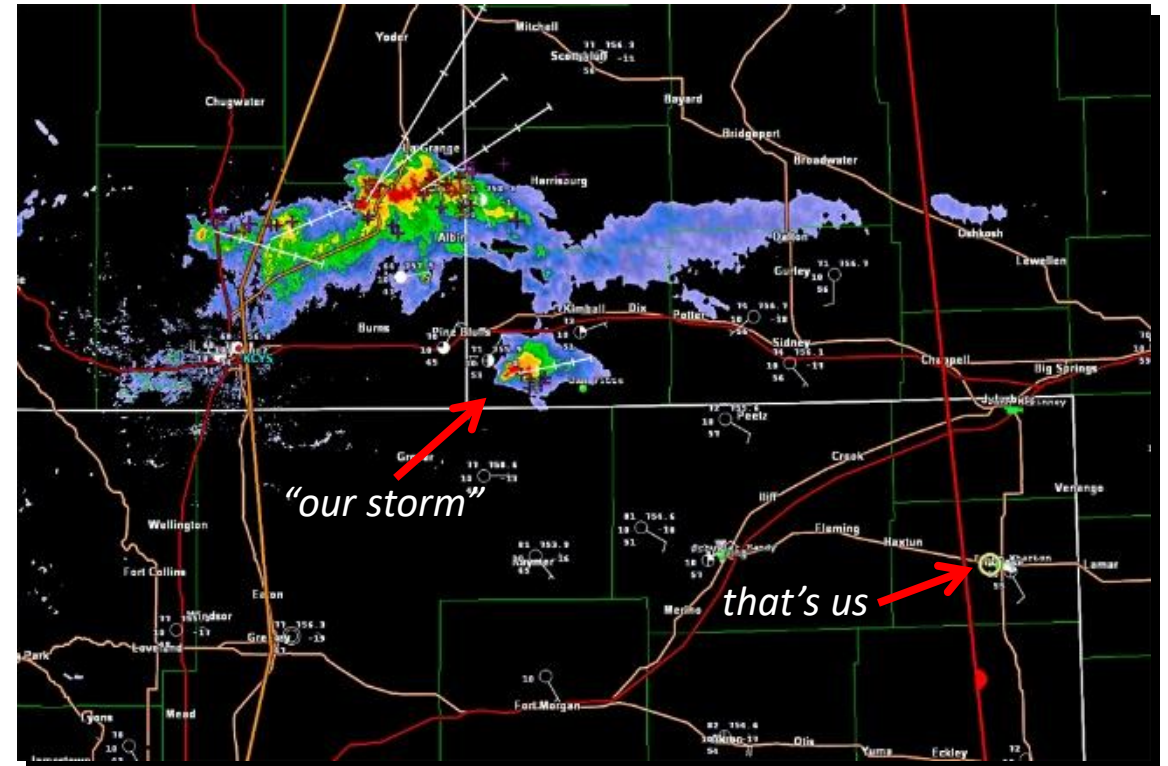


After leaving at 7am CDT, we still have 226 miles <364 kms> to go to our initial target ...

Early to mid-afternoon developments ...

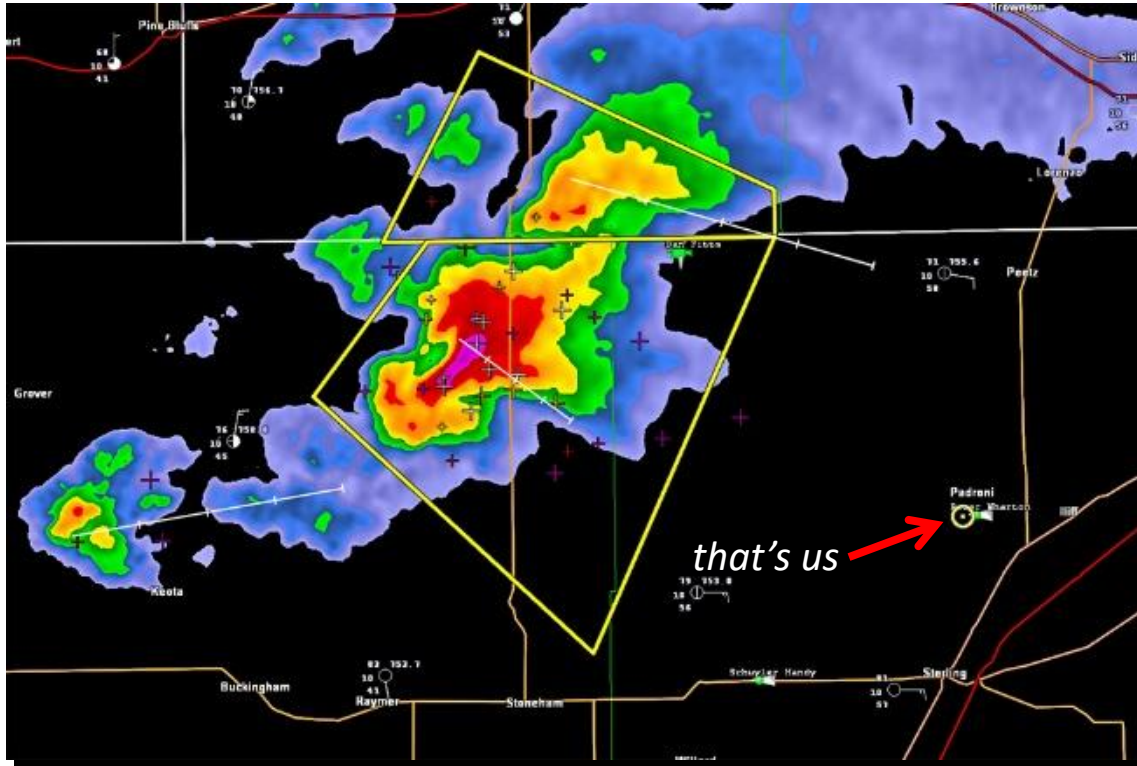


... 1:53pm CDT – mesoscale forecast discussion issued over our target area – we're just about to cross into Nebraska ...



... 3:14pm MDT – having reached our target at 2:55pm MDT, the cell in the SW of the Nebraska Panhandle has caught our eye ...

Targeting our first storm ...



... 4:10pm MDT - heading towards severe-warned storm that's dropping SE into the target area in NE Colorado ...



... 4:17pm MDT - first views of rapidly intensifying severe-warned storm ...

Storm intensifying – getting tornadic? ...

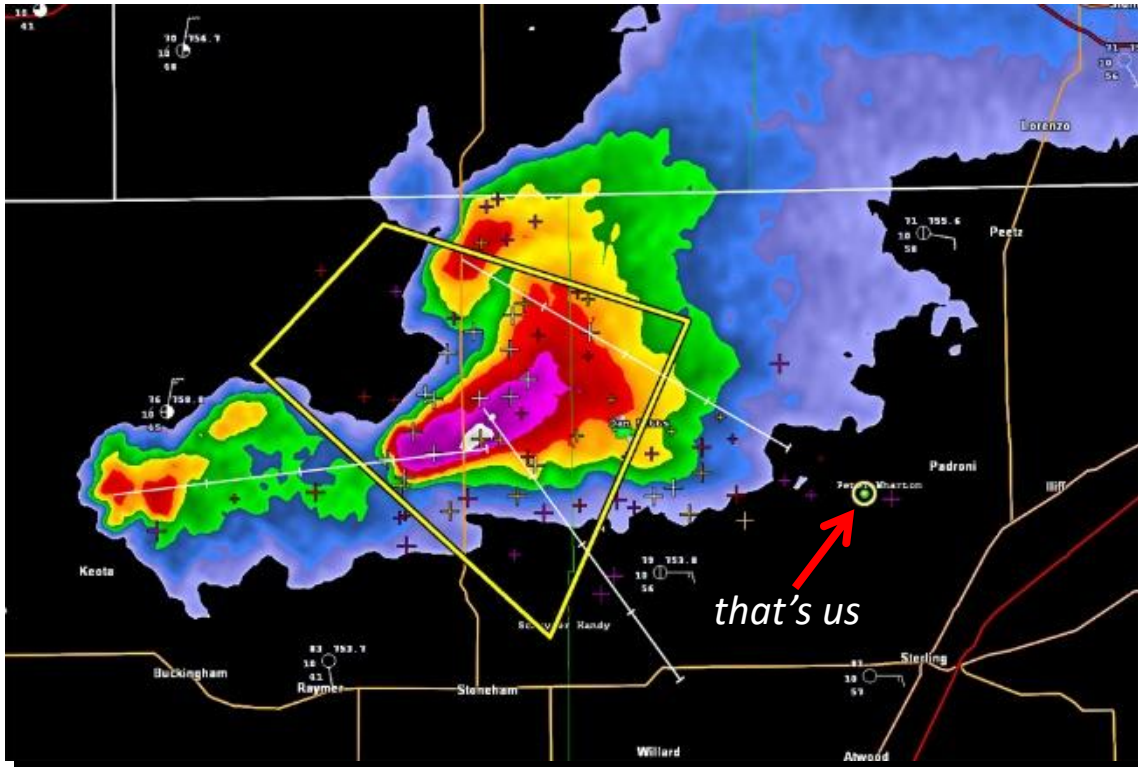


... 4:18pm MDT - already plenty of rising scud under the base, chaser on the west side reporting a funnel/tornado ...

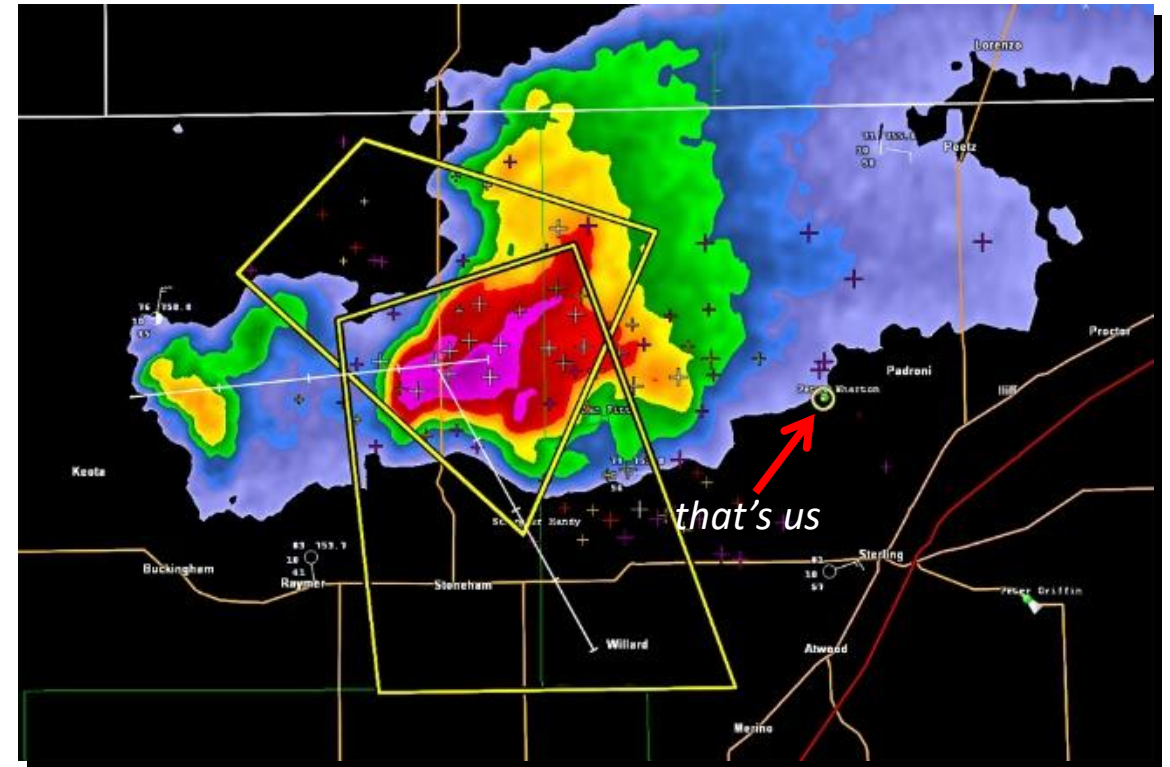


... 4:23pm MDT - anvil edge getting that sharp clear delineation, evidence of a powerful updraft - inflow band forming into the updraft base ...

Tracking storm motion & intensity ...



... 4:26pm MDT - intensifying further, turning right into inflow ...



... 4:33pm MDT ... now dropping SSE, cutting off our visibility under the base - time for us to drop south ...

Getting electrified – a good sign ...



... 4:41pm MDT ...



... 4:51pm MDT ...

Repositioning to stay in front of storm ...



... 4:57pm MDT - heading south to reposition on road south of Atwood, CO ...



... 5:04pm MDT - prominent inflow tail to the updraft base ...

First tornado sighted to our west ...



... 5:07pm MDT - getting quite sculpted layers ...



... 5:10pm MDT - first of the tornadoes - a dusty vortex west of us, south of Atwood, CO ...

Officially “tornado-warned” ...

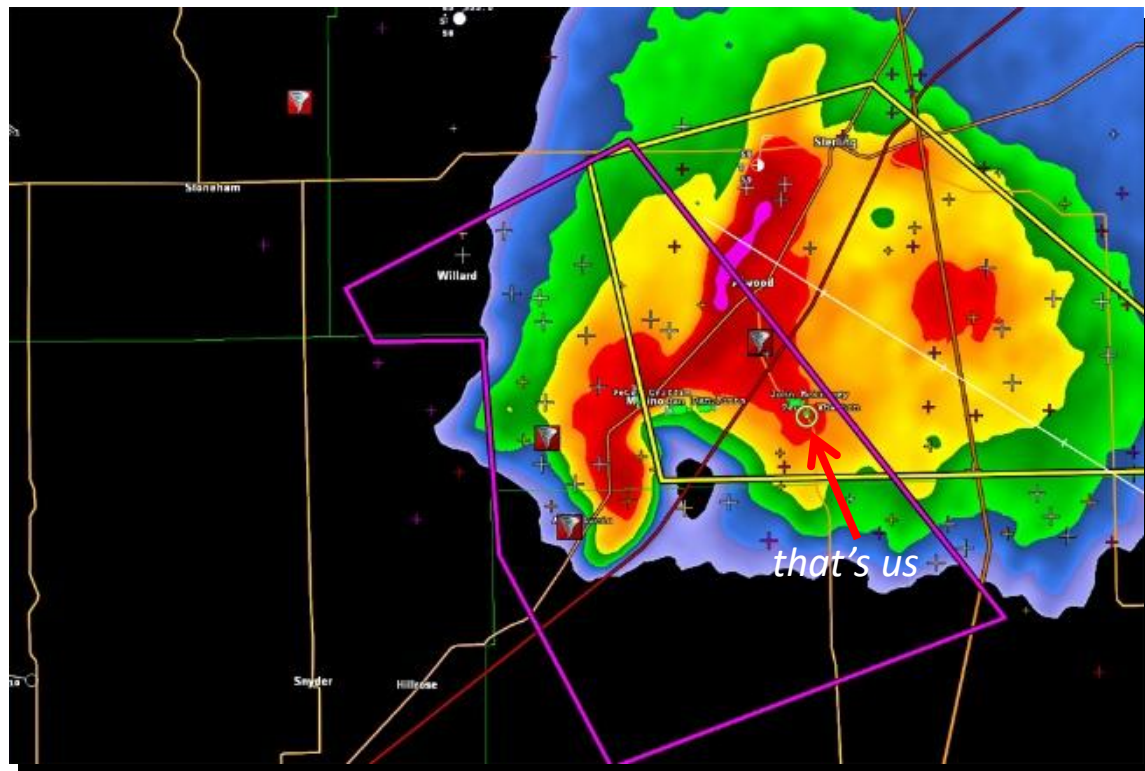


... 5:12pm MDT - dusty vortex dissipating ...

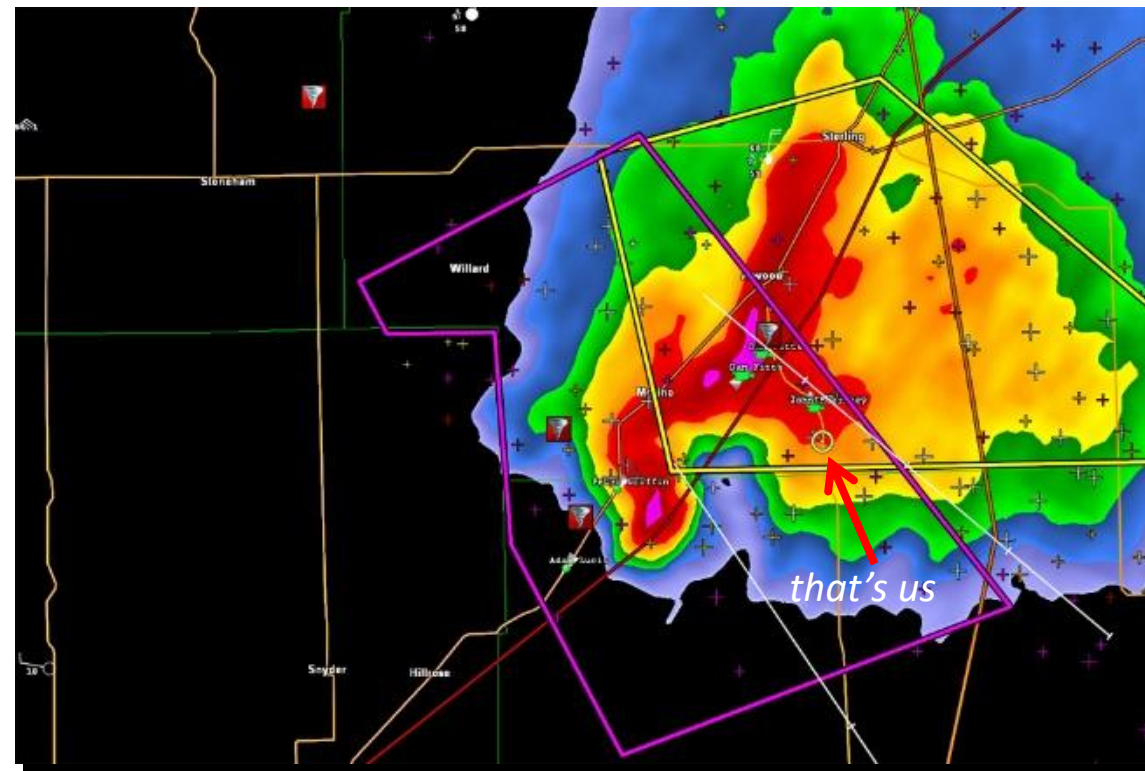


... 5:15pm MDT - “tornado on the ground” warning ...

Tracking the “hook echo” relative to us ...



... 5:26pm MDT - developing a strong hook echo
just to our west ...



... 5:29 MDT - hook echo
continues to intensify ...

The main tornado develops ...

... sequence of 7 photos as main tornado rapidly develops just to our west of our location on road south of Atwood, CO ...



... 5:36pm MDT ...



... 5:36pm MDT ...



... 5:36pm MDT ...



... 5:37pm MDT ...



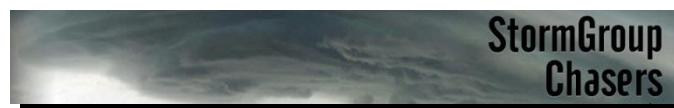
... 5:37pm MDT ...



... 5:38pm MDT ...



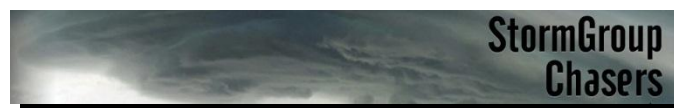
... 5:38pm MDT ...



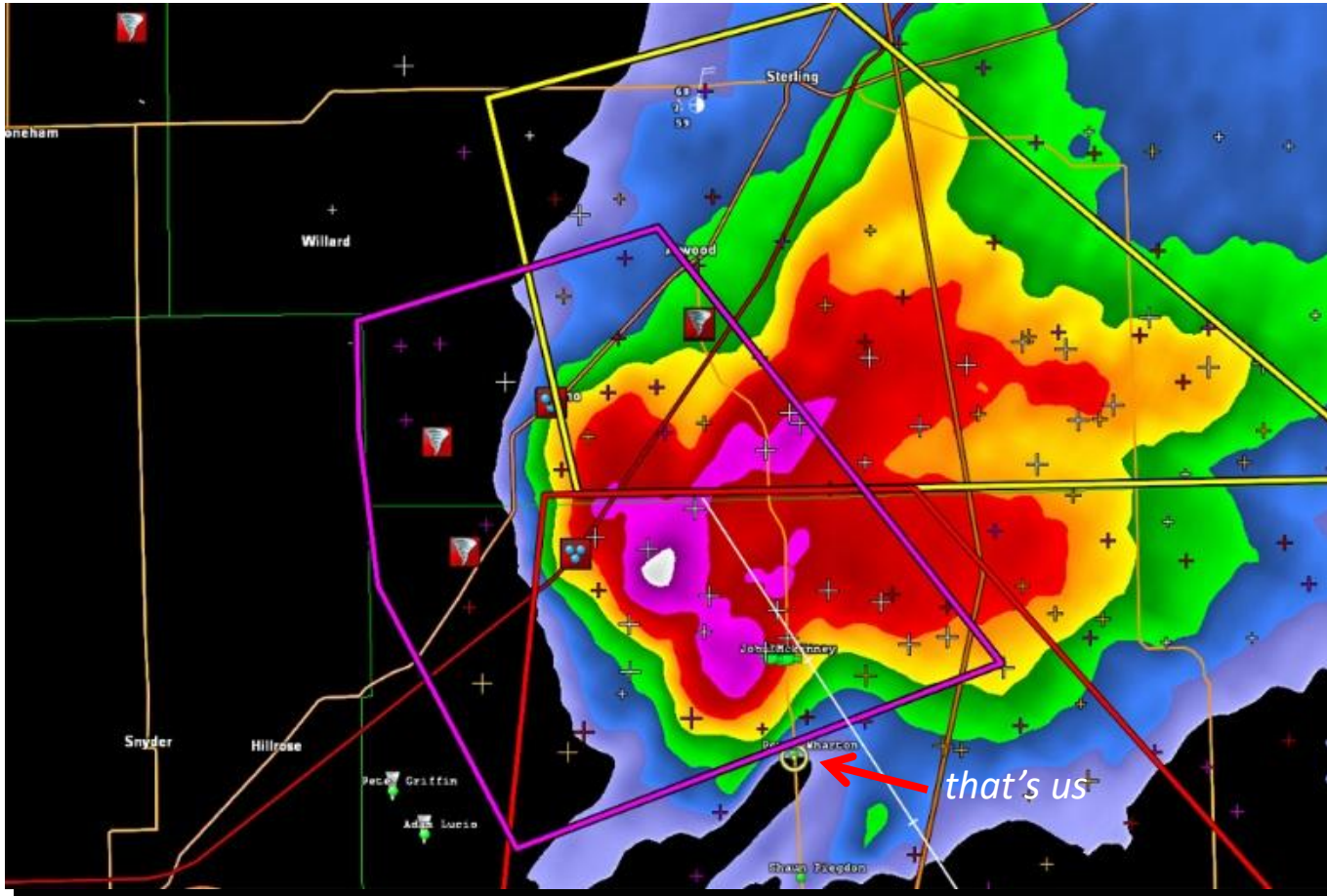
Video of main tornado ...



... 5:40pm MDT ... 30 sec video of tornado moving towards us ...



Staying clear of the tornado ...



... 5:41pm MDT - our position relative to the storm/tornado –
we're repositioning south out of the tornado's wind field ...



... 5:44pm MDT - tornado continues to
develop just behind our right rear quarter ...

Tornado right behind us ...



... 5:44pm MDT just behind us ...



... 5:44pm MDT ...



... 5:45pm MDT - photo courtesy of Dave Evans as we were retreating south a little, after getting into the wind field around the tornado ...

Tornado ropes out ...



... 5:55pm MDT - rope
out stages, amazing
structure ...



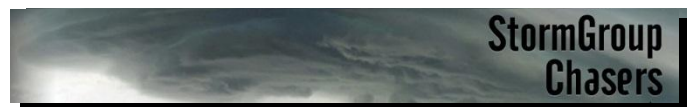
... 5:56pm MDT ...



... 5:57pm MDT - final
rope out stage, no visible
contact with the ground ...

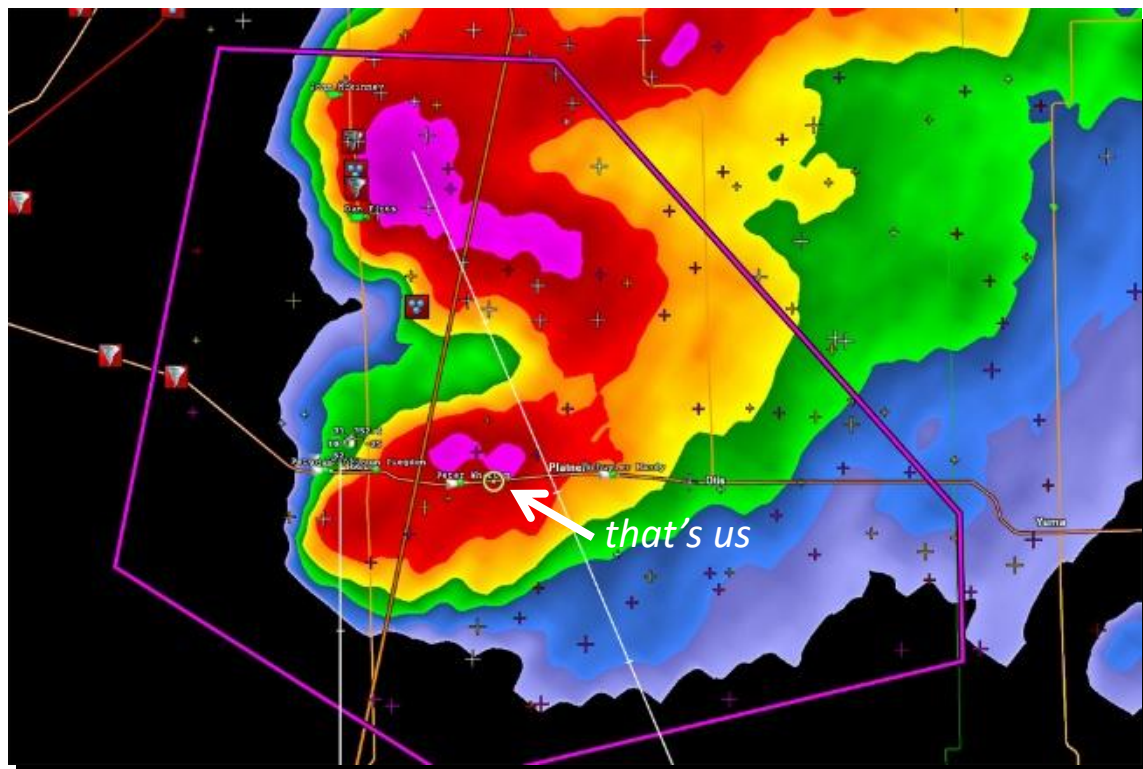
... about 20 minutes from the initial dusty swirl on the ground to the
final rope out – a fairly long-lasting tornado ...

... but, we're about to get impacted by baseball-sized hail 🤨 🤨 🤨 ...

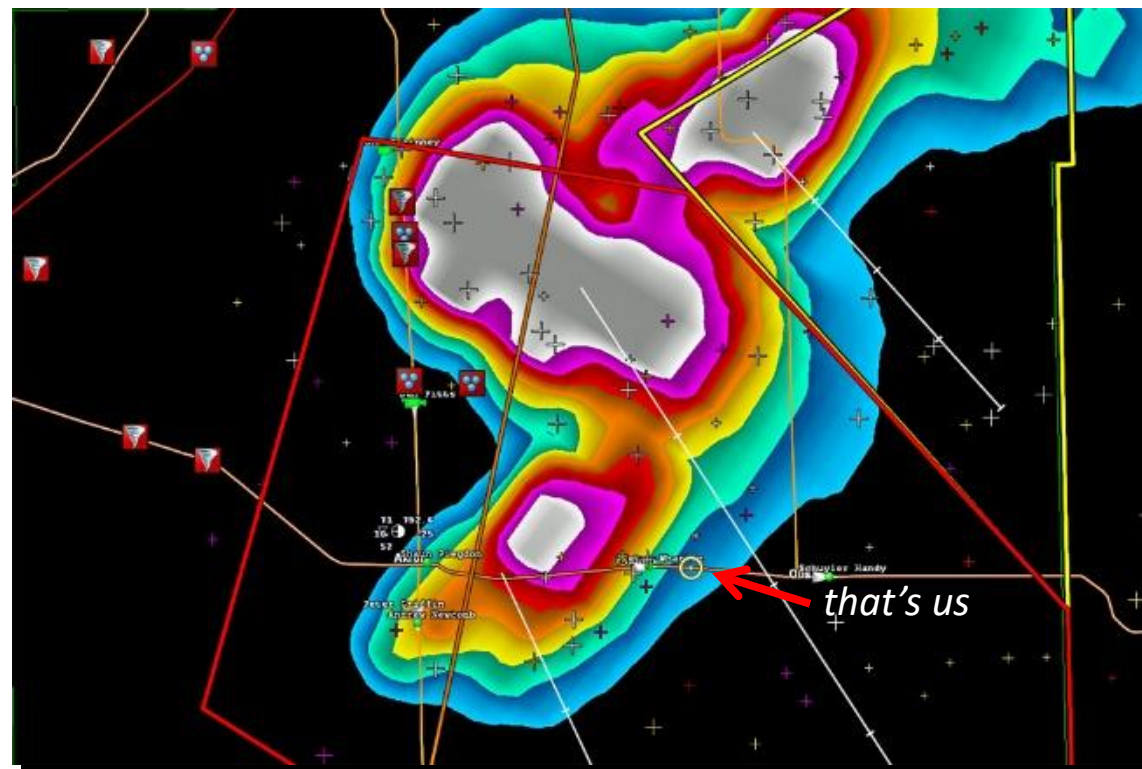


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Fleeing baseball-sized hail ...

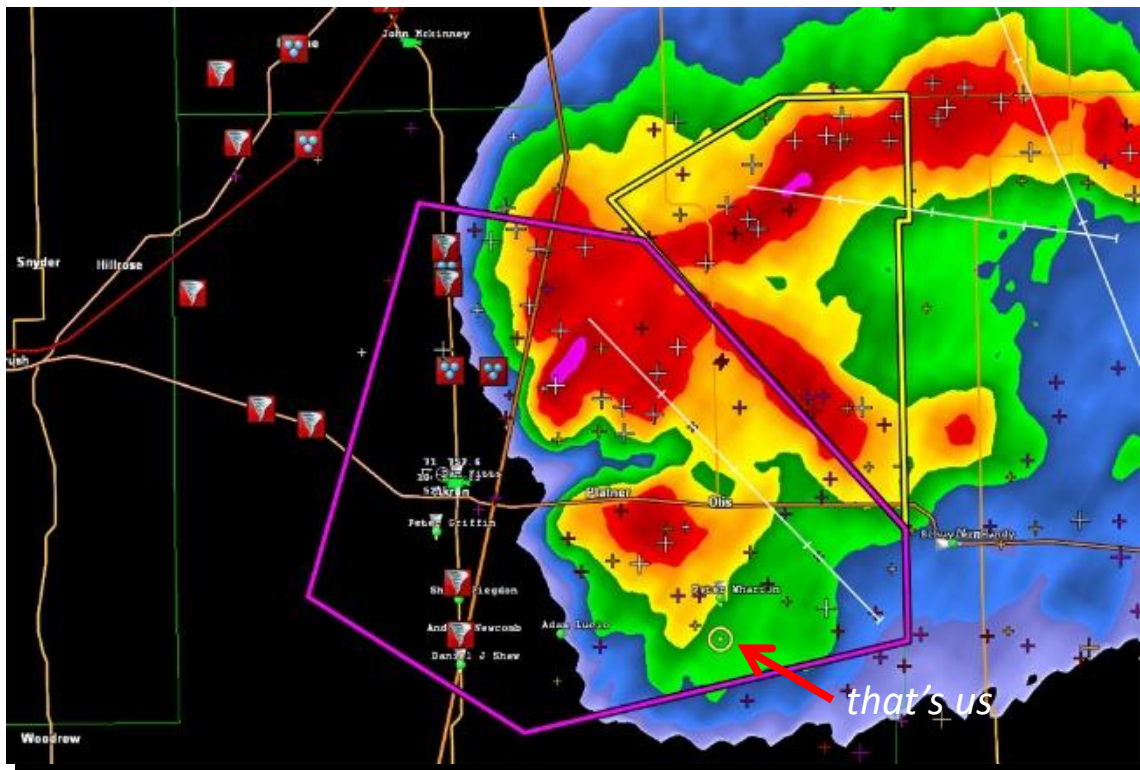


... 6:07pm MDT - fleeing east towards Otis, CO after getting trapped in turning traffic at the intersection in Akron, CO then overrun by storm and getting hammered with large hail 🤖 ...



... 6:11pm MDT - hail core right behind us as we "flee" east ...

Another tornado? ...



... 6:21pm CDT - “tornado on the ground” warning again, as we reposition again south of the storm ...



... 6:24pm MDT - structured wall cloud on secondary updraft south of the main storm ...

Intense inflow & updrafts – still powerful ...

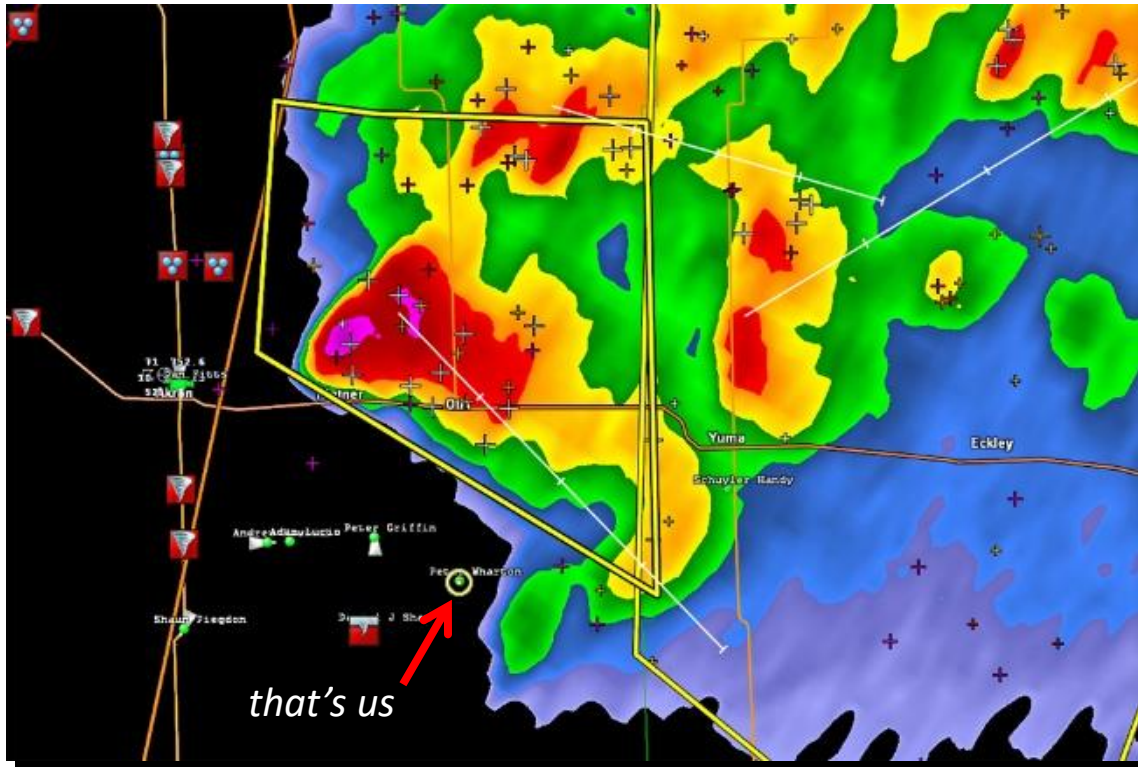


... 6:29pm MDT - pedestal base on the main storm to the north ...



... 6:35pm MDT - watching closely under the base for signs of renewed rotation ...

Continuing to track the storm south ...



... 6:36pm MDT - our position relative to the main updraft base ...



... 6:43pm MDT – still powerful inflow bands to the updraft ...

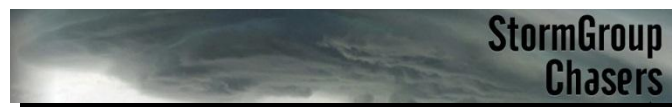
Final spin-up for the day ...



... 6:44pm MDT - bowl-shaped lowering
under the main base to our north ...



... 6:58pm MDT - final spin-up
captured by Kim Watson - reported
by another chaser as a landspout ...

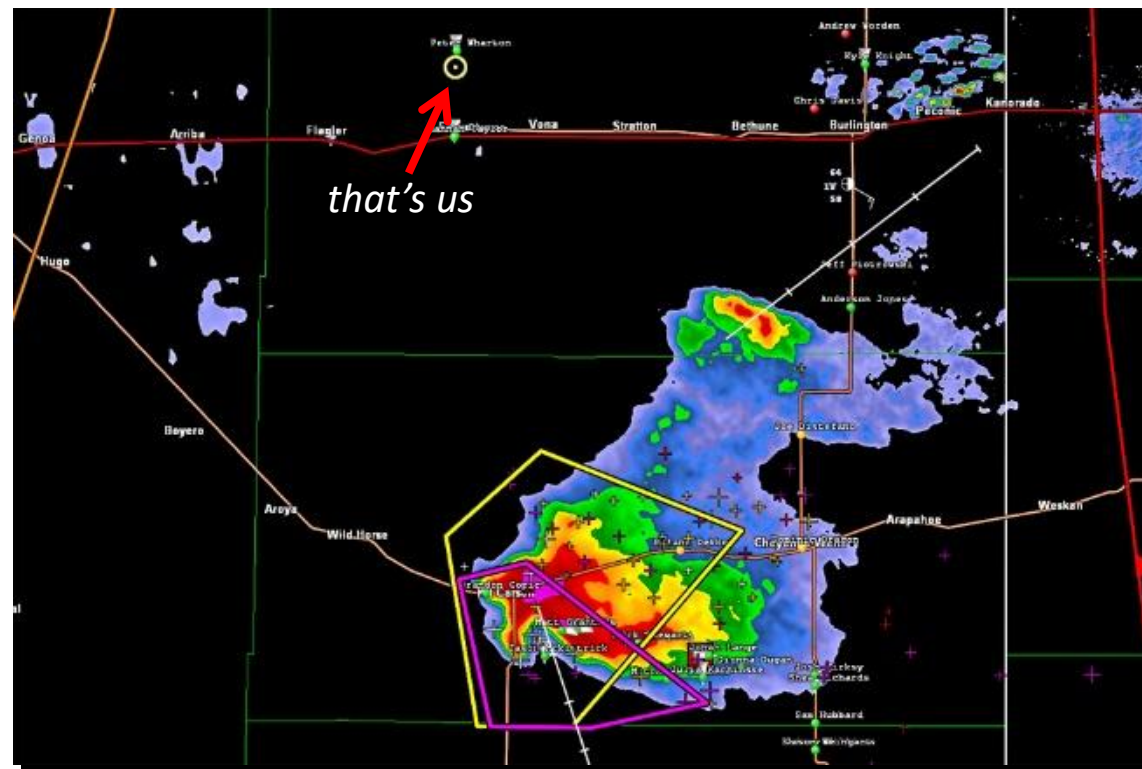


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“Licking our wounds”, last activity to our south ...



... 7:28pm MDT - last tornadic storm of the day, well to our south near Kit Carson, CO - viewed through our windshield 🙄 ...



... 7:33pm MDT - “tornado on the ground” warning on storm 40 miles to our south near Kit Carson, CO ...

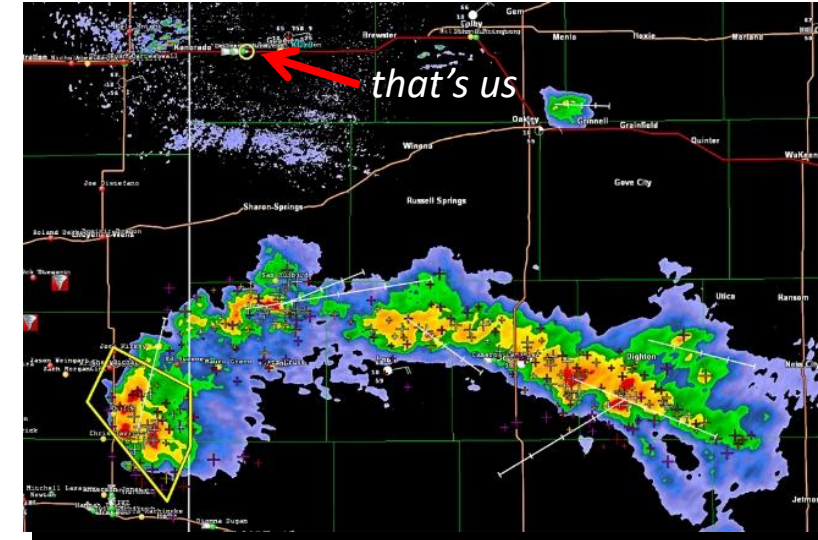
And the day ends ...



... 7:39pm MDT - tornado-warned storm to our south near Kit Carson, CO - viewed from Seibert, CO ...



... 7:40pm MDT – a peaceful end to a dramatic day - looking west from Seibert, CO ...



... 9:38pm MDT - this line of storms now 45 miles to our south, providing a fabulous night-time lightning show as we drive to Goodland, KS 🤘 ⚡ ⚡ ⚡ ...

... after the storms, a delicious celebratory drink & dinner at The Dish Room restaurant in Burlington, Colorado, before the drive to our hotel in Goodland, KS for a total of nearly 16 hours on the road ...

We don't just drive - we also take vacation time ...

4-May Carlsbad Caverns - NM
 5-May Permian Basin Petroleum Museum - Odessa, TX
 6-May Museum of Texas Tech University - Lubbock, TX
 6-May Silent Wings Museum - Lubbock, TX
 7-May Caverns of Sonora - Sonora, TX
 8-May Big Bend National Park - TX
 9-May Conoco Art Deco Gas Station - Shamrock, TX
 12-May Highway of Legends/Cucharas Pass - CO
 12-May Royal Gorge Bridge - Canon City, CO
 12-May Pike's Peak Road - CO
 13-May Cheyenne Historic District - Cheyenne, WY
 13-May Scotts Bluff National Monument - Scottsbluff, NE
 13-May Legacy of the Plains Museum - Scottsbluff, NE
 14-May Union Pacific Bailey Yard - North Platte, NE
 14-May Cody Park Railroad Museum - North Platte, NE
 16-May Original Bass Pro Shop - Springfield, MO
 17-May Historic Bathhouse District - Hot Springs, AR
 19-May Keeper of the Plains Park - Wichita, KS
 19-May Marland Mansion & Estate - Ponca City, OK
 20-May The Gathering Place - Tulsa, OK
 20-May Blue Whale of Catoosa - Catoosa, OK
 20-May Guitar House of Tulsa - Tulsa, OK
 21-May Eiffel Tower - Paris, TX



21-May World's Largest Bowie Knife - Bowie, TX
 22-May Caprock Canyons State Park - TX
 29-May Palo Duro Canyon - TX
 30-May American Windmill Museum - Lubbock, TX
 31-May Dorothy's House/Yellow Brick Road - Liberal, KS
 31-May Big Well Museum - Greensburg, KS
 1-Jun Strataca Underground Salt Museum - Hutchinson, Ks
 1-Jun Cosmosphere Museum - Hutchinson, KS
 2-Jun St Francis Motorcycle Museum - St Francis, KS
 3-Jun Sierra Vista Interpretative Site - Timpas, CO
 4-Jun Capulin Volcano National Monument - NM
 10-Jun International Museum & Research Center - Roswell, NM
 10-Jun Anderson Museum of Contemporary Art - Roswell, NM
 10-Jun Historic Downtown District - Las Vegas, NM
 10-Jun Pueblo River Walk - Pueblo, CO
 12-Jun Big Boy Steam Locomotive - Cheyenne, WY
 13-Jun Powder River Historical Museum - Broadus, MT
 14-Jun Downtown Sturgis - Sturgis, SD
 14-Jun Spearfish Canyon/Roughlock Falls Trail - SD
 14-Jun Devils Tower National Monument - WY
 14-Jun Frontier Auto Museum - Gillette, WY
 15-Jun Rodeo/Breakaway Roping Competition - Broadus, M
 16-Jun Mammoth Site - Hot Springs, SD

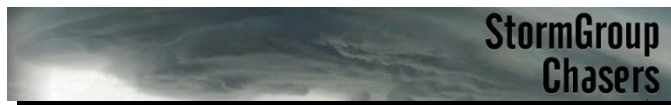


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... and, continuing ...

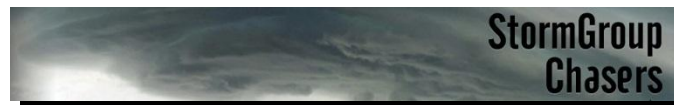
*A few selected images from other
chase days over 15 years ... 🕶️*



... a “spaceship” supercell ...



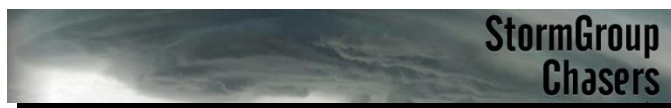
... May 2023 near Stafford, KS ...



... another “spaceship” ...



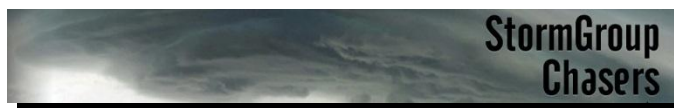
... June 2024 near Gibbon, NE – tornado-warned rotating supercell approaching us ...



... turbulent skies ...



... June 2024 - tornado-warned storm, looking north from near Mason City, NE ...

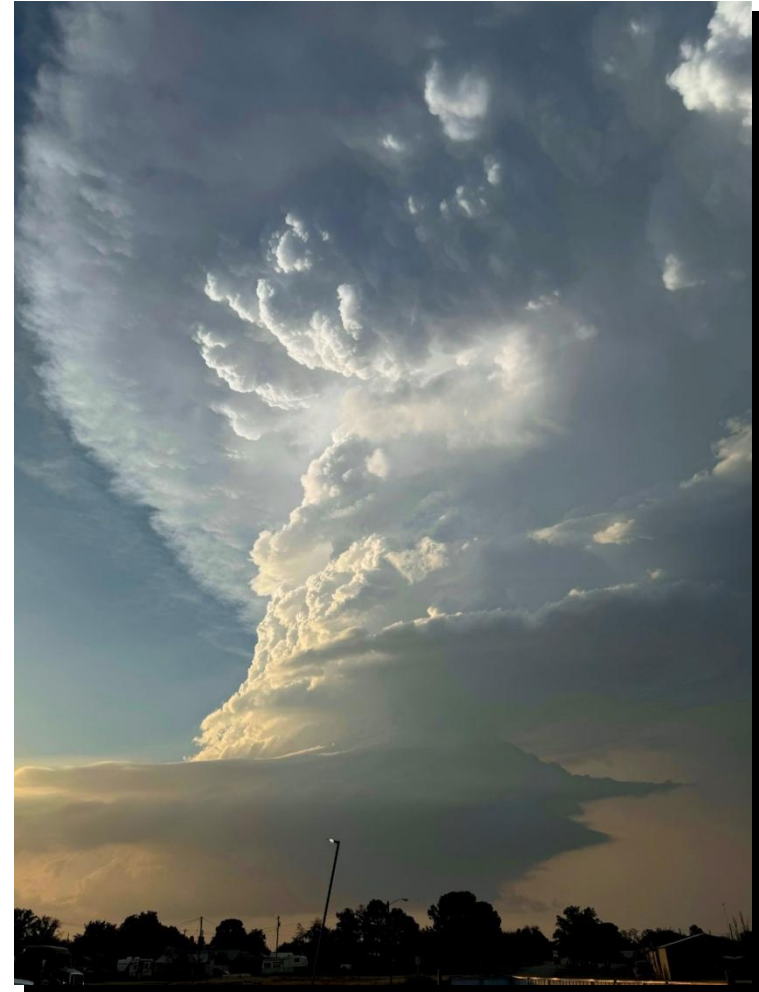


... heading towards us at 15 mph, then after sunset ...



... June 2014 near Roswell, NM ...

... dramatic “barber-pole” supercell structure ...

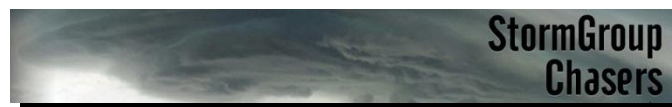


... May 2024 near Rankin, TX ...

... the green monster – beware large hail! ...



... June 2022 near Sturgis, SD ...



... avoiding hail is good ...



... May 2019 near Gonzales, TX ...

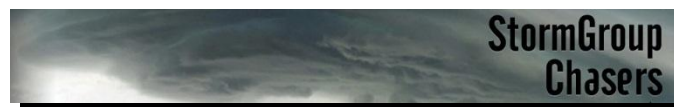


... May 2022 near San Angelo, TX ...

... when there's a tornado in there, chasers "flee" ...



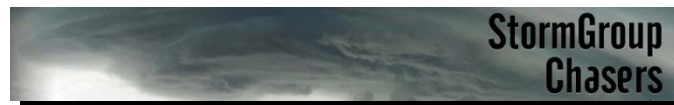
... May 2019 near Vigo Park, TX ...



... almost a tornado - timelapse ...



... timelapse, May 2025 near Matador, TX ...



... tornadoes come in all shapes and sizes ...



... June 2023 near Akron, CO ...



... May 2024 near Fort Stockton, TX ...



... June 2024 near Yoder, WY ...

... tornadoes come in all shapes and sizes ...



... April 2025 near South Plains, TX ...



... May 2025 near Arnett, OK ...



... June 2025 near Boise City, OK ...

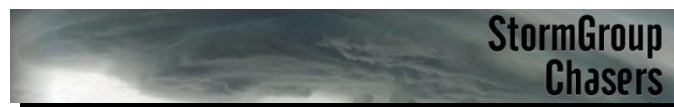


... April 2025 near Bula, TX ...

... at times tornadoes come in clusters - 12 in a day ...



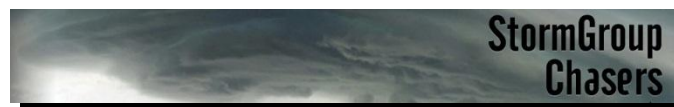
... May 2016 near Dodge City, KS ...



... a long-lasting one with several cycles ...



... May 2022 near Morton, TX ...



... a picturesque sequence ...

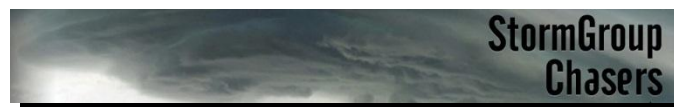


... June 2023 near Perryton, TX ...

... tornadoes at night can be scary! ...



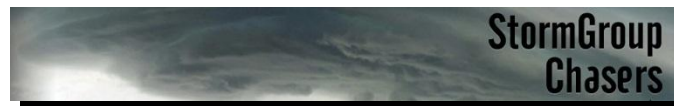
... May 2012 near La Crosse, KS – video grab back lit by lightning flashes ...



... lightning – always my favourite ...



... June 2014 near Loraine, TX ...



... lightning – always my favourite ...



... June 2016 near Benjamin, TX ...

... June 2007 near Selby, SD ...



... lightning – always my favourite ...



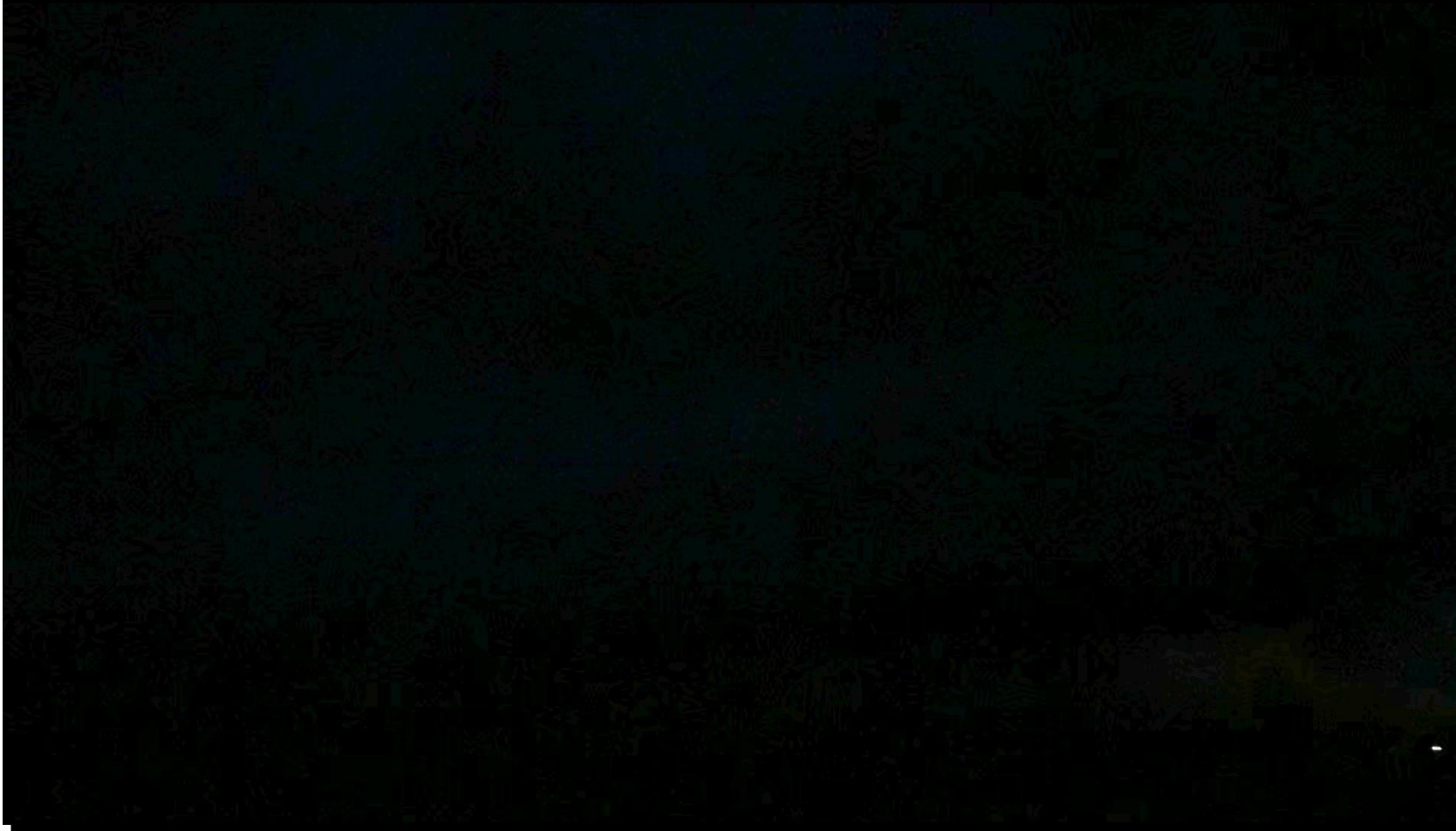
... May 2025 near Lamesa, TX ...



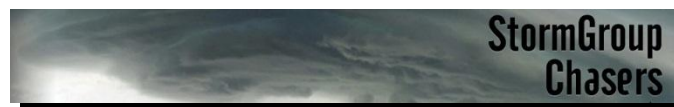
... June 2025 near North Platte, NE ...



... lightning – always my favourite ...



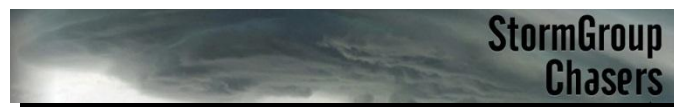
... June 2025 near Hammond, MT ...
<line of severe-warned storms racing towards us at nearly 70mph>



... lightning – always my favourite ...



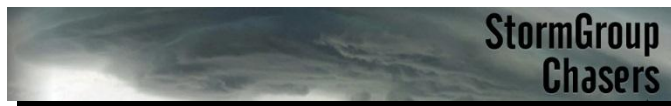
... June 2025 - video as we were driving east from Wallace, NE - spectacular lightning show ⚡ ⚡ ⚡ 😎 ...



... lightning – always my favourite ...



... June 2025 near North Platte, NE ...
<“strobe-lightning” on storms heading east away from us>



... sometimes the dust chases you ...



... June 2019 near Tahoka, TX ...

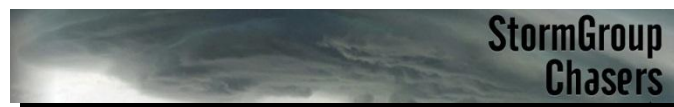


... May 2023 near Crosbyton, TX ...

... the colours can be amazing ...



... June 2019 near Amarillo, TX ...



... mammatus ...



... June 2023 near San Angelo, TX ...



... June 2023 near Langtry, TX ...

... rainbows ...



... June 2023 near Sanderson, TX ...



... June 2025 near Hugo, CO ...

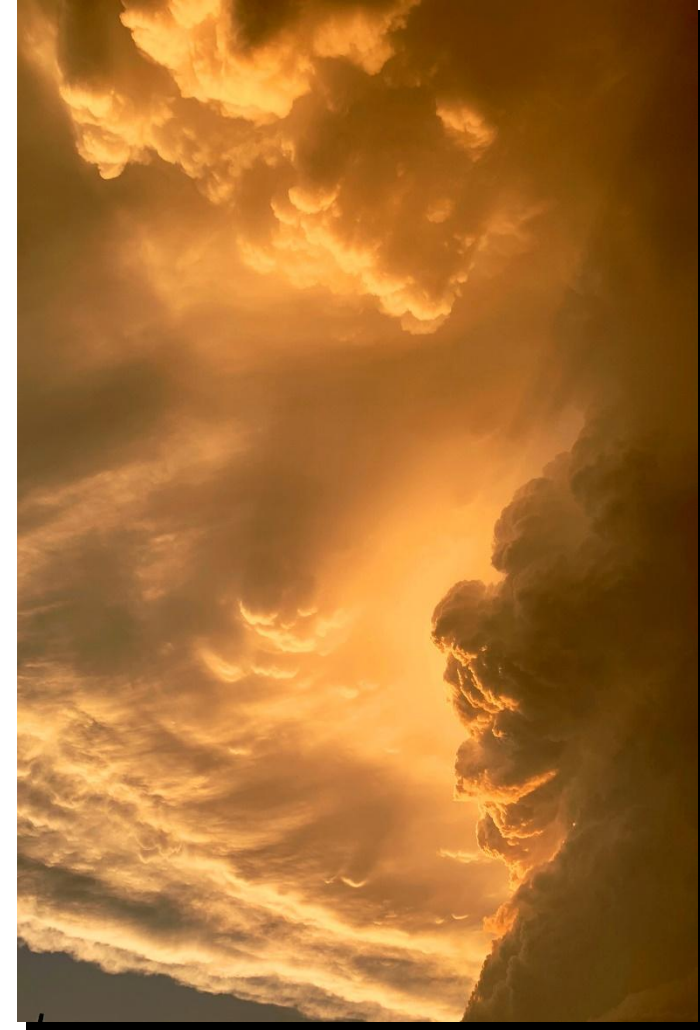
... dramatic skies ...



... July 2022 near Biddle, MT ...



... June 2015 near Elmo, KS ...



... June 2023 near Mason, TX ...

... the ultimate tornado ... Campo, CO - May 2010 ...



... looking west, tornado in shadow ...



... looking northeast, sunlight on the tornado ...

... how close were we ?!?

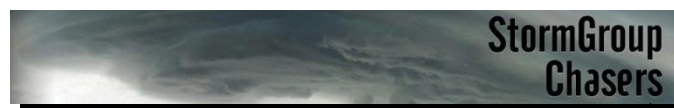


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... finishing with a peaceful sunset shot ...



... May 2013 near McLean, OK ...



... lastly, a gentle promotion ...



Great Price. Great Adventures. Great People.

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from \$2,050 for 7 days, or 2,900 for 10 days
including all your hotel rooms

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... for more photos, visit my photoblog at pwharton.aminus3.com/portfolio/ ...*

