

Convective Outlook

May 25, 2016

11:29 AM CDT

Central KS

...MLCAPE Values over
3500 J/KG.

Vertical shear profiles would
promote supercell storm
structures in the region.

Forecast Discussion
SPC AC 251629

DAY 1 CONVECTIVE OUTLOOK
NWS STORM PREDICTION CENTER NORMAN OK
1129 AM CDT WED MAY 25 2016

VALID 251630Z - 261200Z

...THERE IS A SLGT RISK OF SVR TSTMS OVER PARTS OF CENTRAL KS...

...THERE IS A SLGT RISK OF SVR TSTMS OVER PARTS OF SOUTH-CENTRAL AND SOUTHWEST TX...

...THERE IS A MARG RISK OF SVR TSTMS ACROSS MUCH OF THE PLAINS STATES AND MS VALLEY...

...SUMMARY...
ISOLATED STRONG/SEVERE STORMS WITH HAIL AND DAMAGING WIND GUSTS WILL BE POSSIBLE THIS AFTERNOON AND TONIGHT ACROSS SOUTHWEST TEXAS. A LESS CERTAIN AND/OR MORE MARGINAL SEVERE STORM RISK COVERS A BROAD AREA OF THE PLAINS AND MIDWEST.

...CENTRAL KS...
LATEST SURFACE ANALYSIS SHOWS A LOW OVER CENTRAL KS WITH THE DRYLINE EXTENDING SOUTHWARD INTO WESTERN OK/TX. LOW CLOUDS ARE ERODING IN THIS AREA...WITH SOUTHERLY LOW LEVEL WINDS HELPING TO TRANSPORT MID/UPPER 600 DEWPOINTS INTO THE REGION. BY MID/LATE AFTERNOON...A VERY UNSTABLE AIR MASS IS EXPECTED TO BE PRESENT WITH STEEP MID LEVEL LAPSE RATES YIELDING MLCAPE VALUES OVER 3500 J/KG. A DRYLINE BULGE IS EXPECTED TO FORM ON THE SOUTH SIDE OF THE LOW...HELPING TO INITIATE A FEW THUNDERSTORMS AROUND PEAK HEATING. VERTICAL SHEAR PROFILES WOULD PROMOTE SUPERCELL STORM STRUCTURES IN THE REGION...WITH A RISK OF LARGE HAIL...DAMAGING WINDS...AND PERHAPS A TORNADO.

...WESTERN OK INTO CENTRAL TX...
A GENERALLY UNCAPPED DRYLINE IS FORECAST THIS AFTERNOON ACROSS WESTERN OK AND PARTS OF CENTRAL TX. VARIOUS 12Z MODEL SOLUTIONS SUGGEST WIDELY SCATTERED THUNDERSTORMS WILL FORM ALONG THIS AXIS THIS AFTERNOON...BUT WILL NOT BE MAINTAINED VERY LONG AND WITH LOW CONFIDENCE ON INITIATION LOCATIONS. THEREFORE WILL MAINTAIN ONLY MARGINAL RISK CATEGORY AT THIS TIME.

...SOUTH-CENTRAL/SOUTHWEST TX...
SCATTERED THUNDERSTORMS ARE EXPECTED TO FORM ALONG THE DRYLINE OVER PARTS OF SOUTH-CENTRAL TX...AND OVER THE MOUNTAINS OF NORTHERN MEXICO. THOSE STORMS THAT FORM AND AFFECT THE SLIGHT RISK AREA WILL POSE A RISK OF LARGE HAIL AND DAMAGING WINDS. PERSISTENT MID/HIGH CLOUDS OVER PARTS OF THE AREA ARE LIMITING CONFIDENCE IN A MORE ORGANIZED RISK.

..HART/KERR.. 05/25/2016

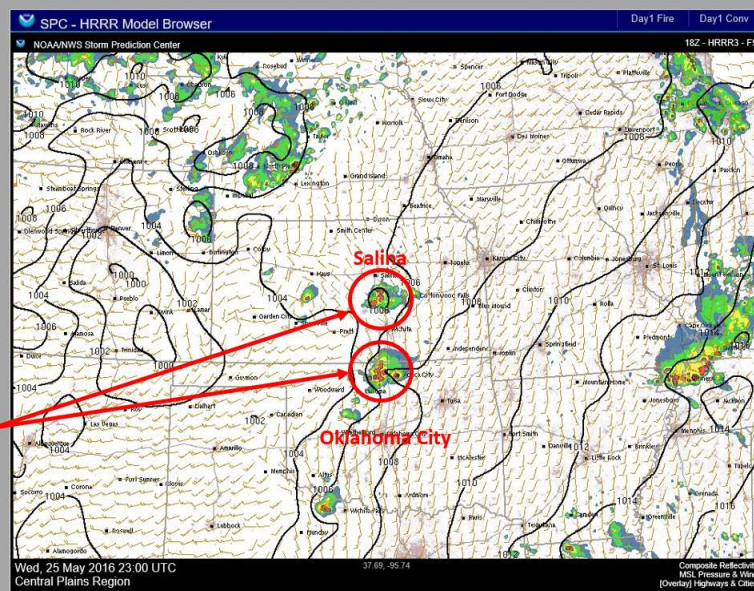
HRRR Model

May 25, 2016

23:00 UTC
6:00 PM CDT

Possible Initiation

South of Salina
and South of
Wichita, Kansas



Mesoscale Discussion

May 25, 2016

2:47 PM

...But a **few tornadoes**
are also possible.

MESOSCALE DISCUSSION 0726
NWS STORM PREDICTION CENTER NORMAN OK
0247 PM CDT WED MAY 25 2016

AREAS AFFECTED...NCNTRL OK THROUGH ECNTRL KS

CONCERNING...SEVERE POTENTIAL...WATCH POSSIBLE

VALID 251947Z - 252145Z

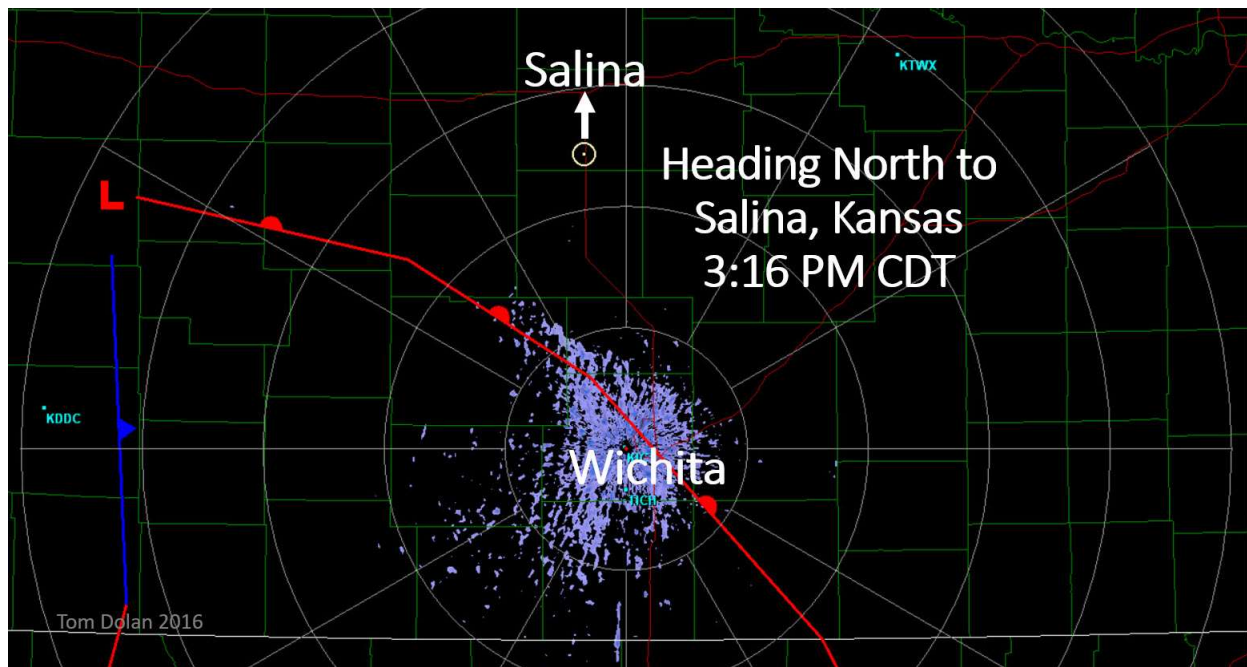
PROBABILITY OF WATCH ISSUANCE...60 PERCENT

SUMMARY...POTENTIAL EXISTS FOR ISOLATED STORMS TO DEVELOP FROM NCNTRL OK TO ECNTRL KS. ISOLATED LARGE HAIL WILL BE THE MAIN THREAT...BUT A FEW TORNADOES ARE ALSO POSSIBLE.

DISCUSSION...THIS AFTERNOON A DRYLINE EXTENDS FROM A SFC LOW IN WCNTRL KS SWWD THROUGH WRN OK AND NWRN TX. EAST OF DRYLINE A TROUGH EXTENDS FROM CNTRL KS SWD INTO NCNTRL OK...AND THIS BOUNDARY INTERSECTS THE NRN PORTION OF AN EXPANSIVE OUTFLOW BOUNDARY THAT EXTENDS FROM SRN AR THROUGH CNTRL AND NCNTRL OK. E-W QUASI-STATIONARY FRONT STRETCHES FROM THE SFC LOW IN WCNTRL KS ENEWD THROUGH NCNTRL KS.

LATEST OBJECTIVE ANALYSIS INDICATES THE ATMOSPHERE HAS BECOME VERY UNSTABLE IN THE WARM SECTOR WHERE EML PLUME HAS ADVECTED ABOVE A VERY MOIST BOUNDARY LAYER CONTRIBUTING TO 3000-3500 J/KG MLCAPE. HOWEVER...ATMOSPHERE STILL APPEARS CAPPED IN THIS REGION JUDGING BY THE CHARACTER OF THE LOW CLOUDS. CURRENT THINKING IS THAT STORMS MAY DEVELOP OVER NCNTRL OK INTO SCNTRL KS BY 22Z AT THE INTERSECTION OF THERMAL/MOIST AXIS...OUTFLOW BOUNDARY AND WEAKLY CONVERGENT TROUGH/DRYLINE. GIVEN LINGERING CAP ASSOCIATED WITH EML PLUME AND PRESENCE OF LARGE SCALE SUBSIDENCE/DRYING ALOFT...IT APPEARS LIKELY THAT STORMS WILL REMAIN ISOLATED. HOWEVER...35-40 KT EFFECTIVE SHEAR AND STRONG INSTABILITY WILL SUPPORT SUPERCELLS CAPABLE OF VERY LARGE HAIL. A WINDOW WILL ALSO EXIST FOR A FEW TORNADOES...ESPECIALLY AS THE LLJ STRENGTHENS DURING THE EARLY EVENING AND BEFORE THE BOUNDARY LAYER DECOUPLES.

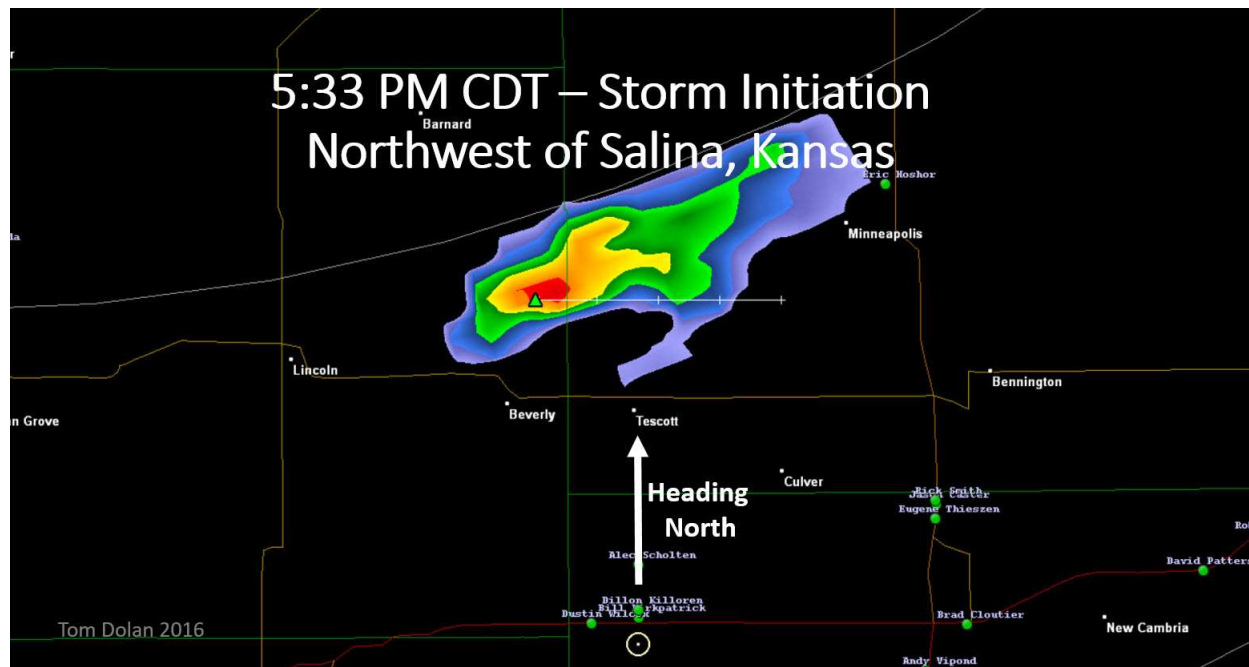
..DIAL/HART.. 05/25/2016

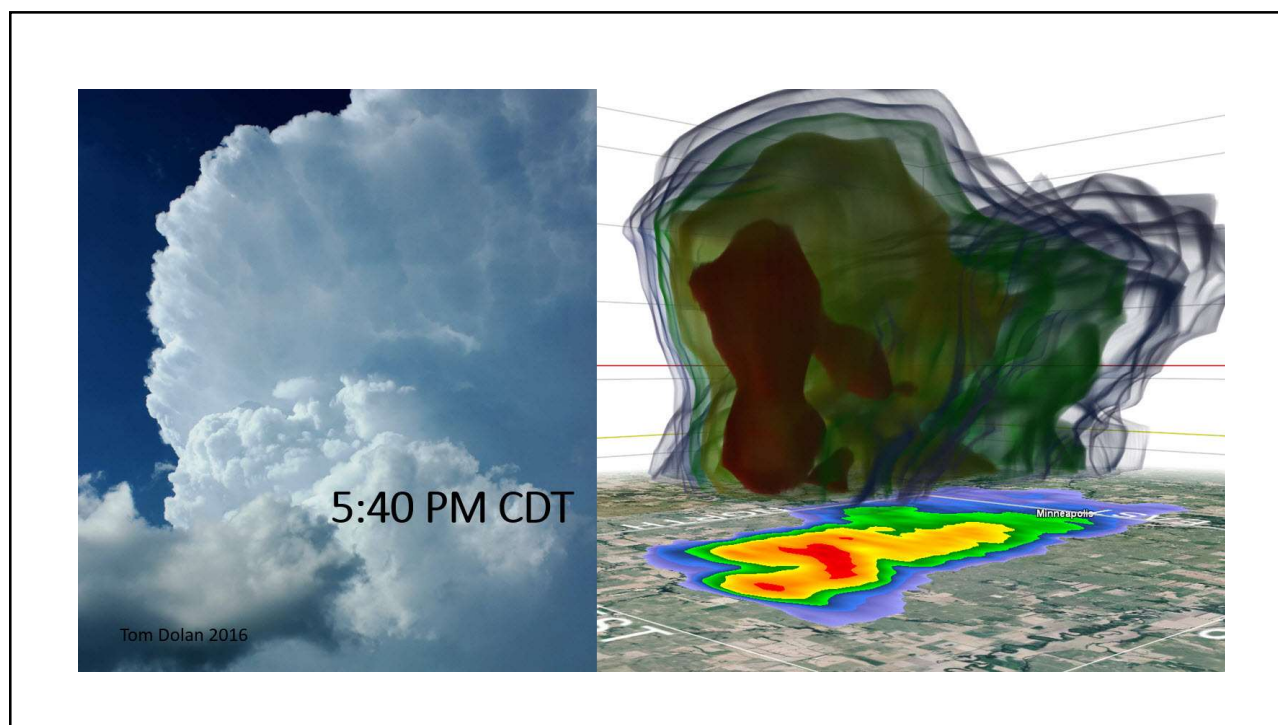
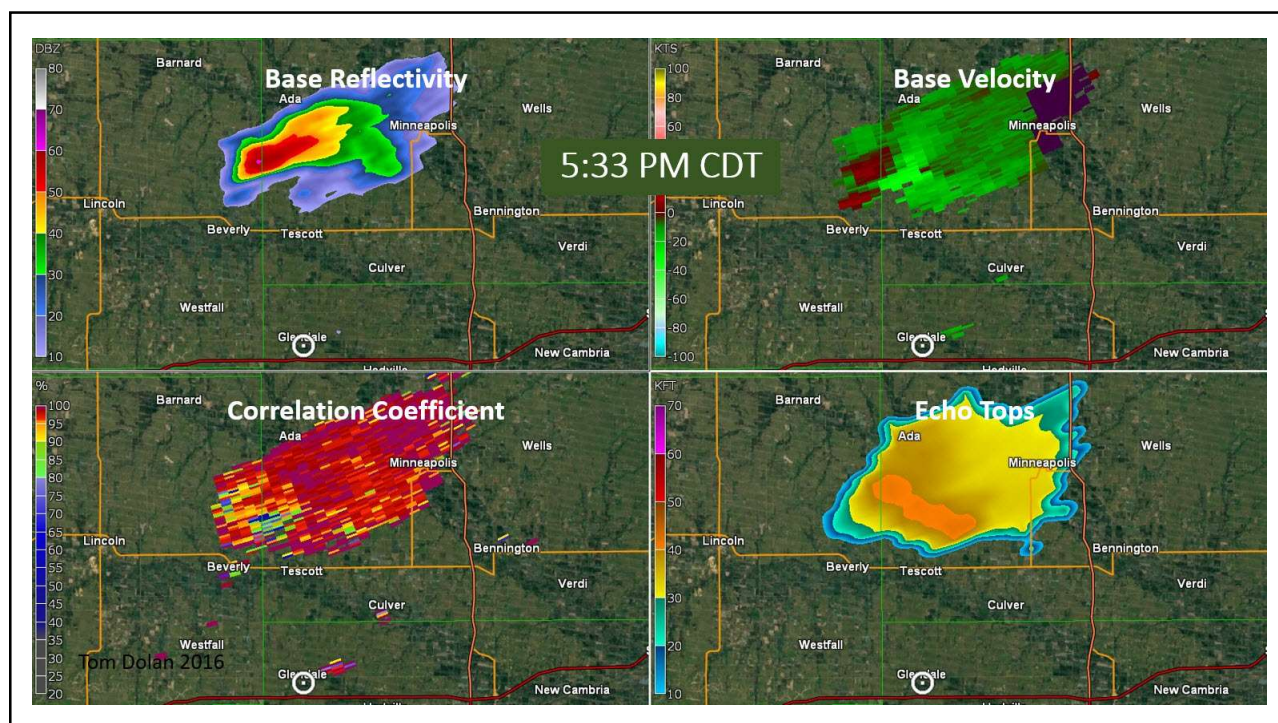


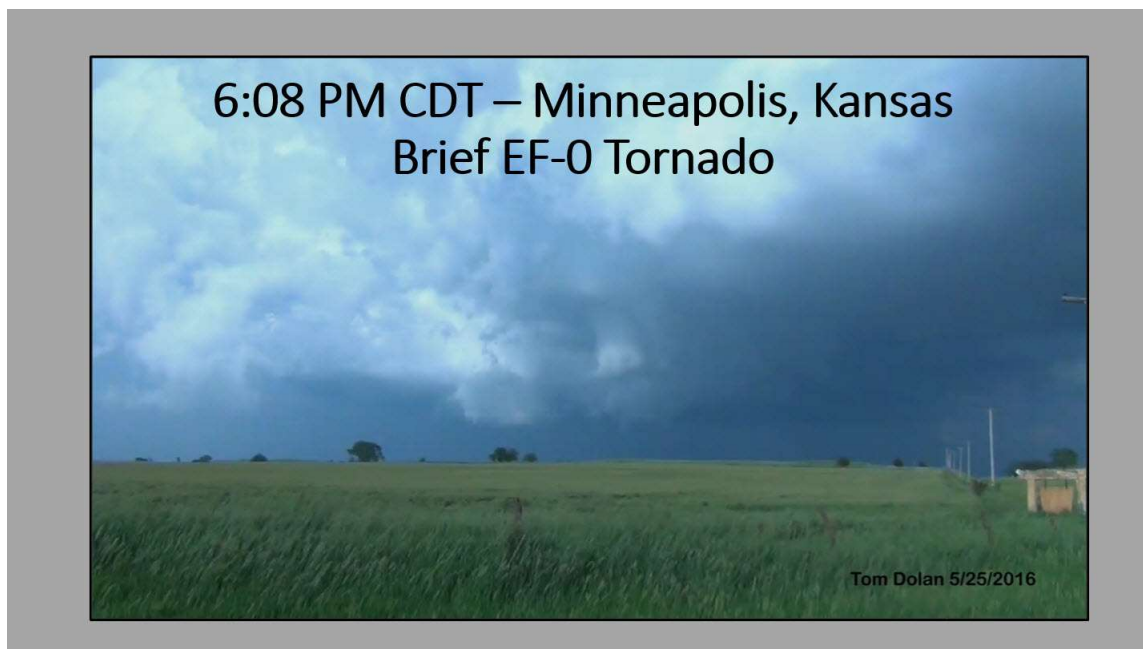
Waiting for storm initiation at Salina, Kansas 4:50 PM CDT

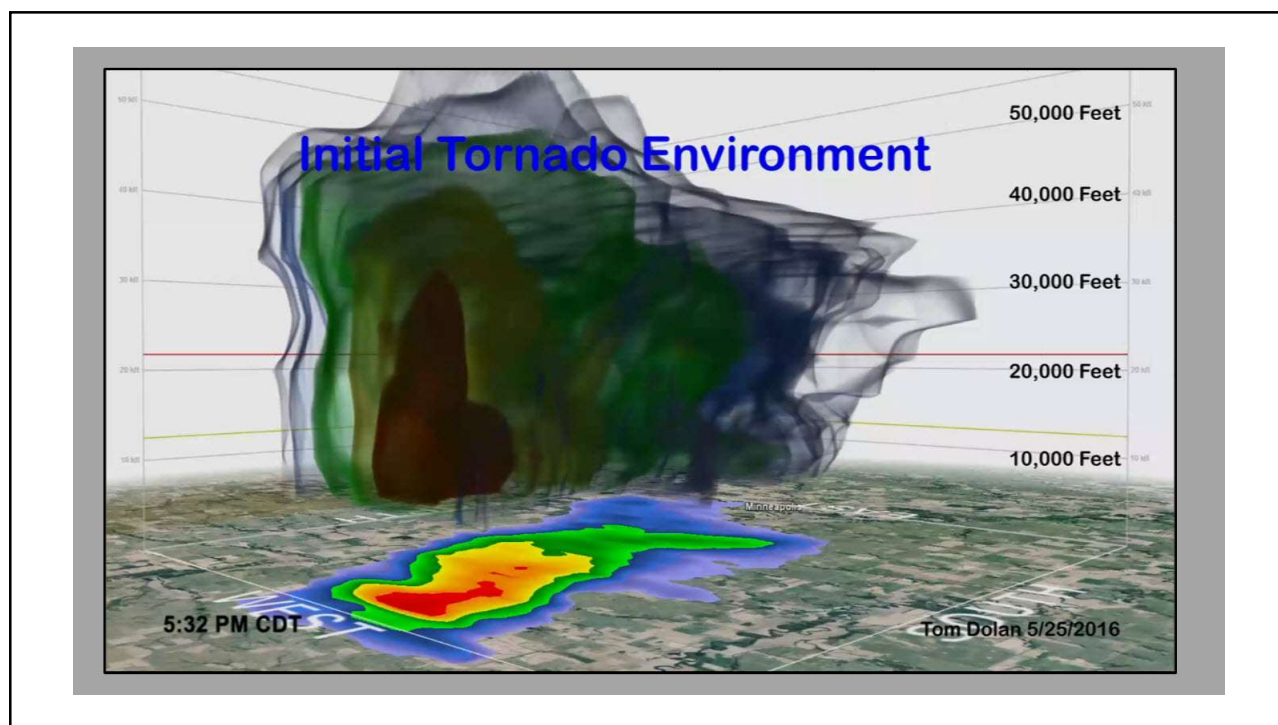
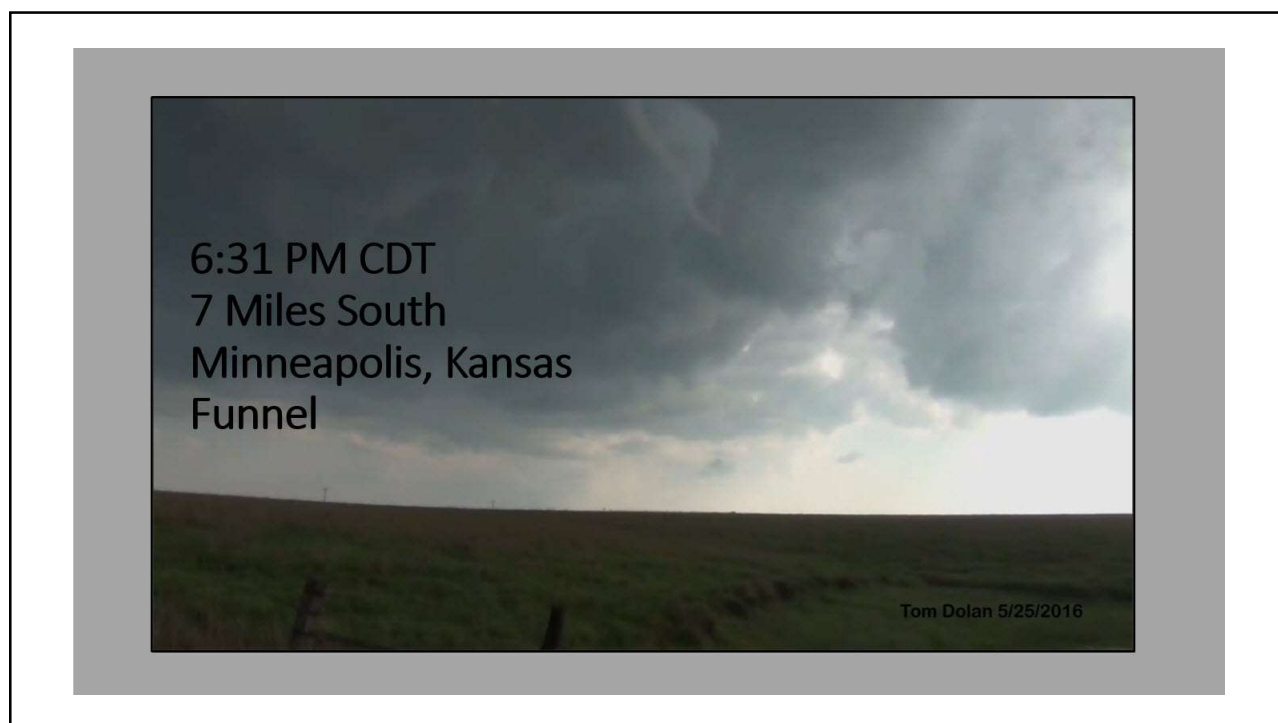


5:33 PM CDT – Storm Initiation Northwest of Salina, Kansas



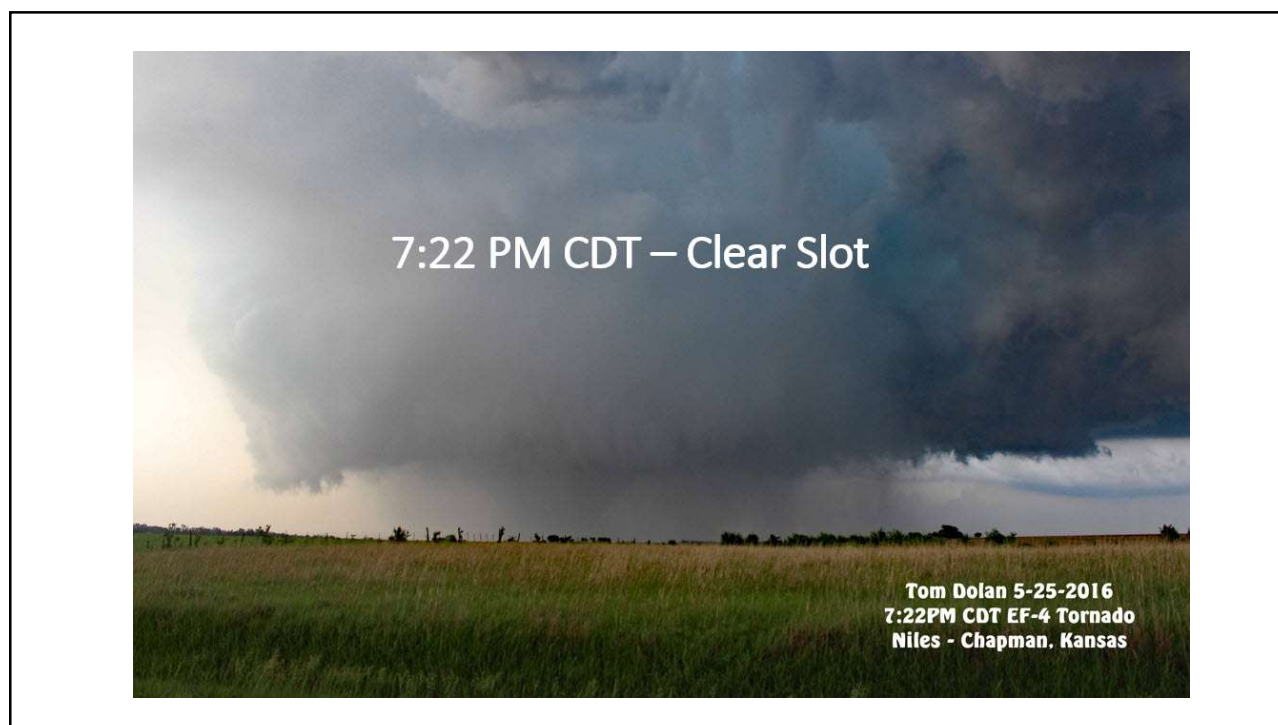


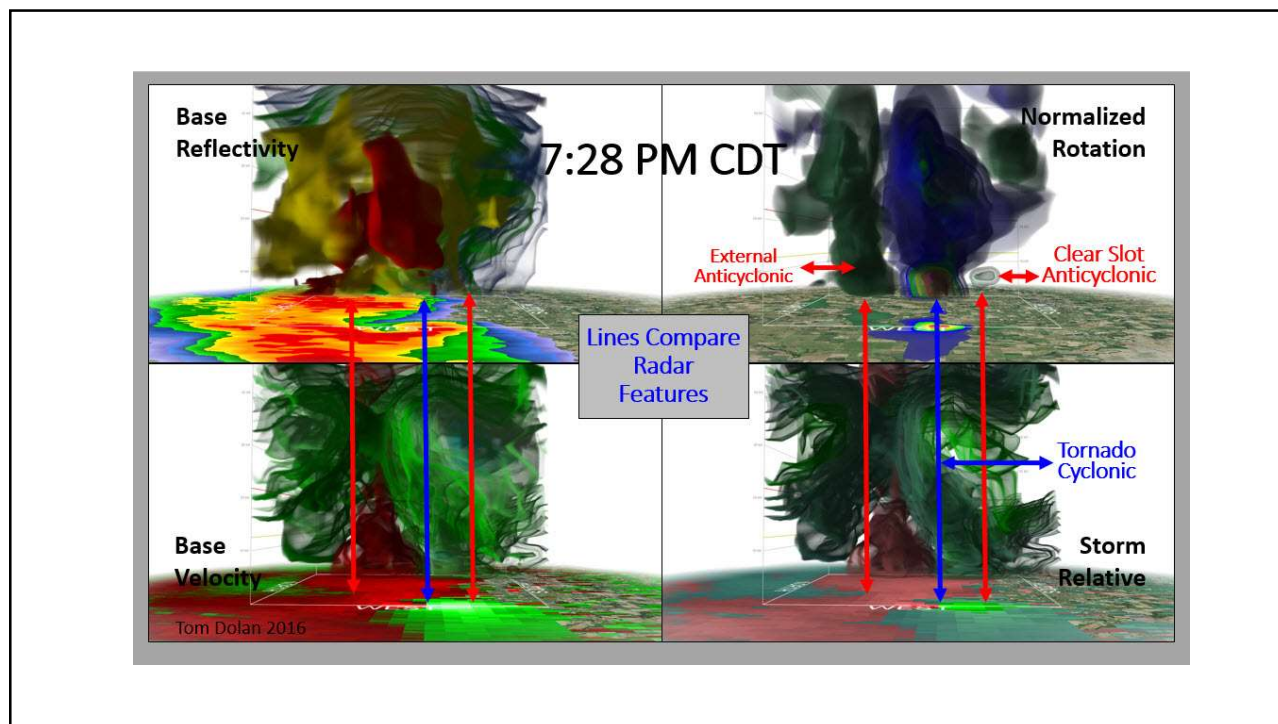








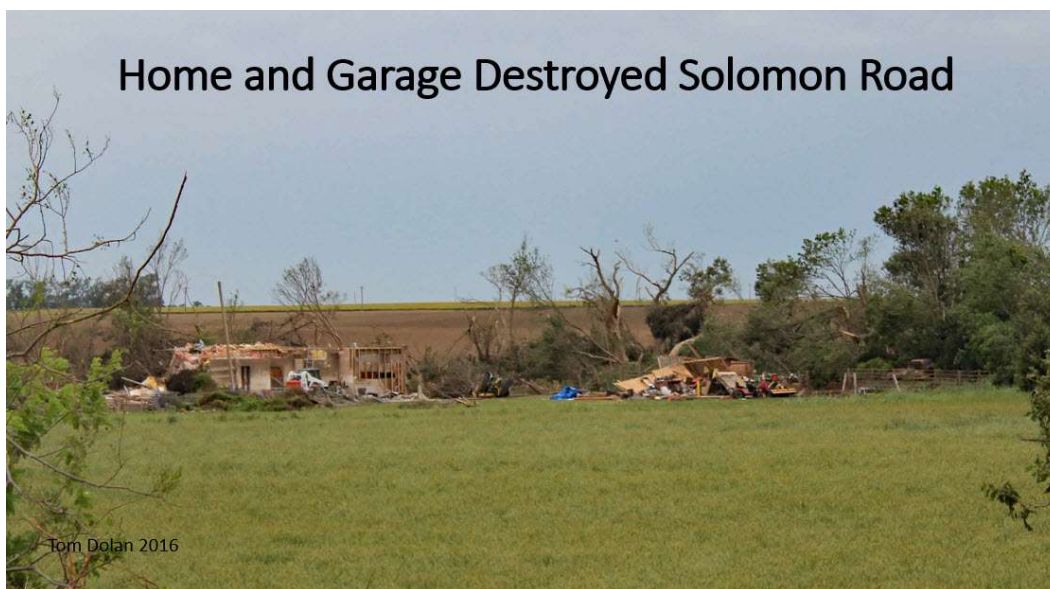


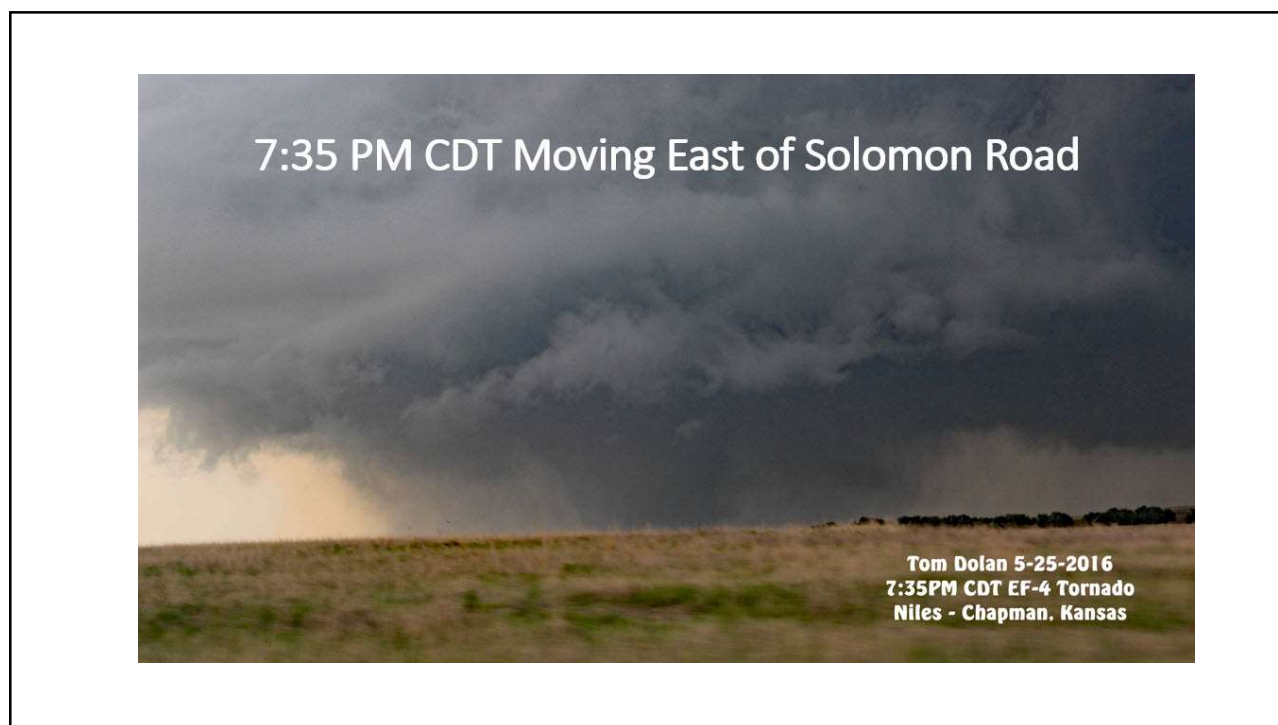


Truck and Tree Damage Solomon Road

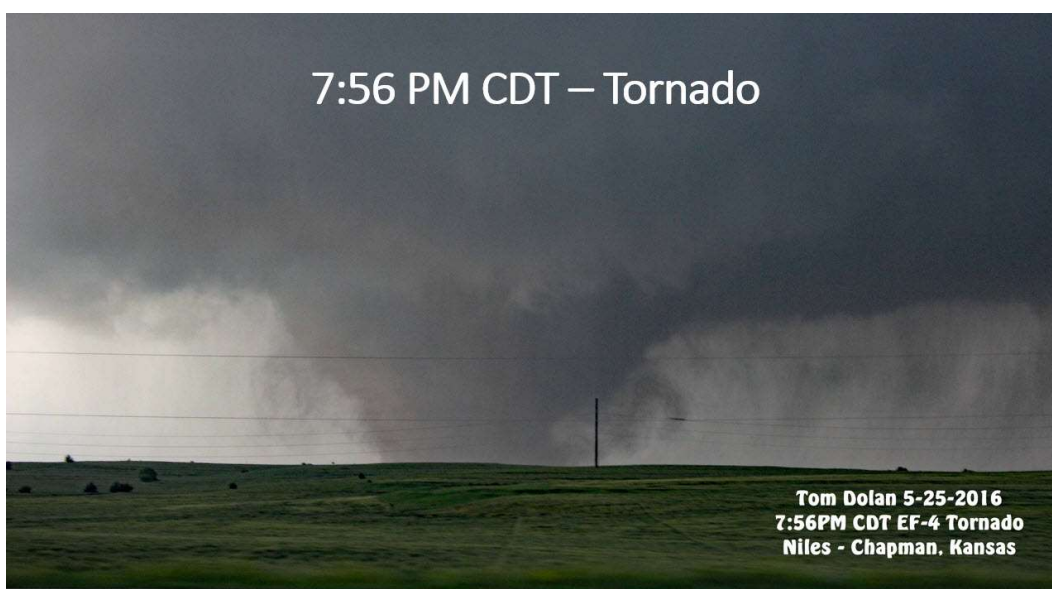
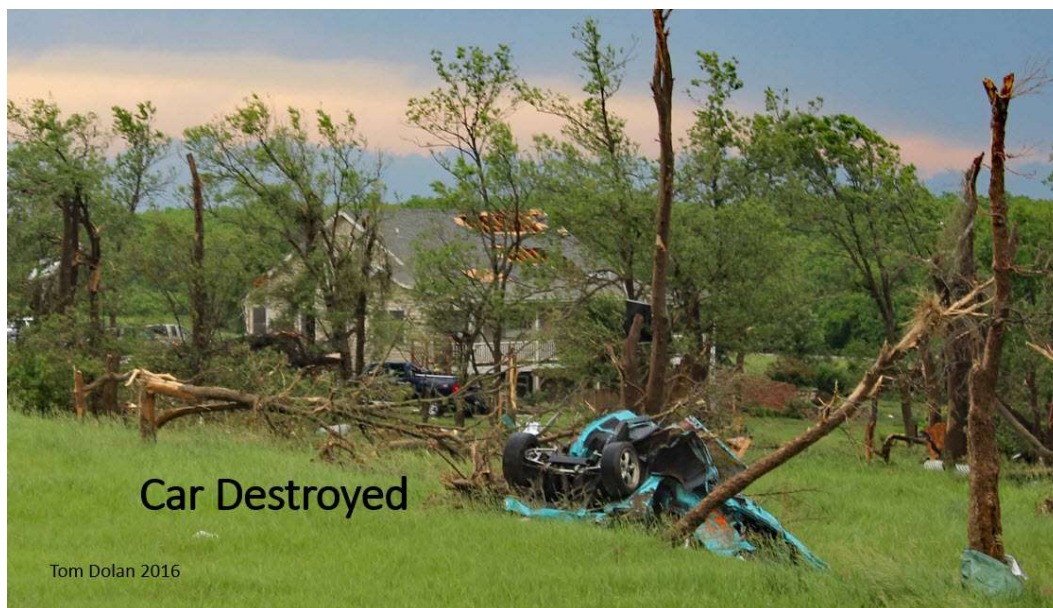


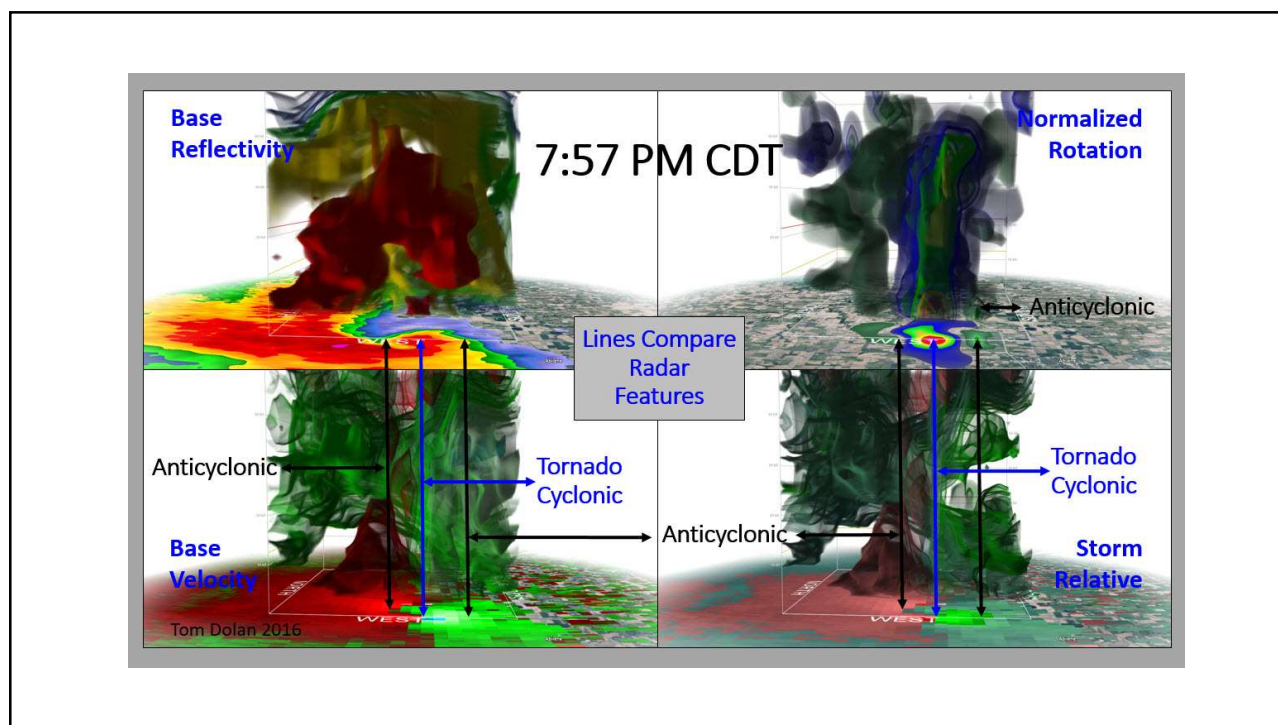
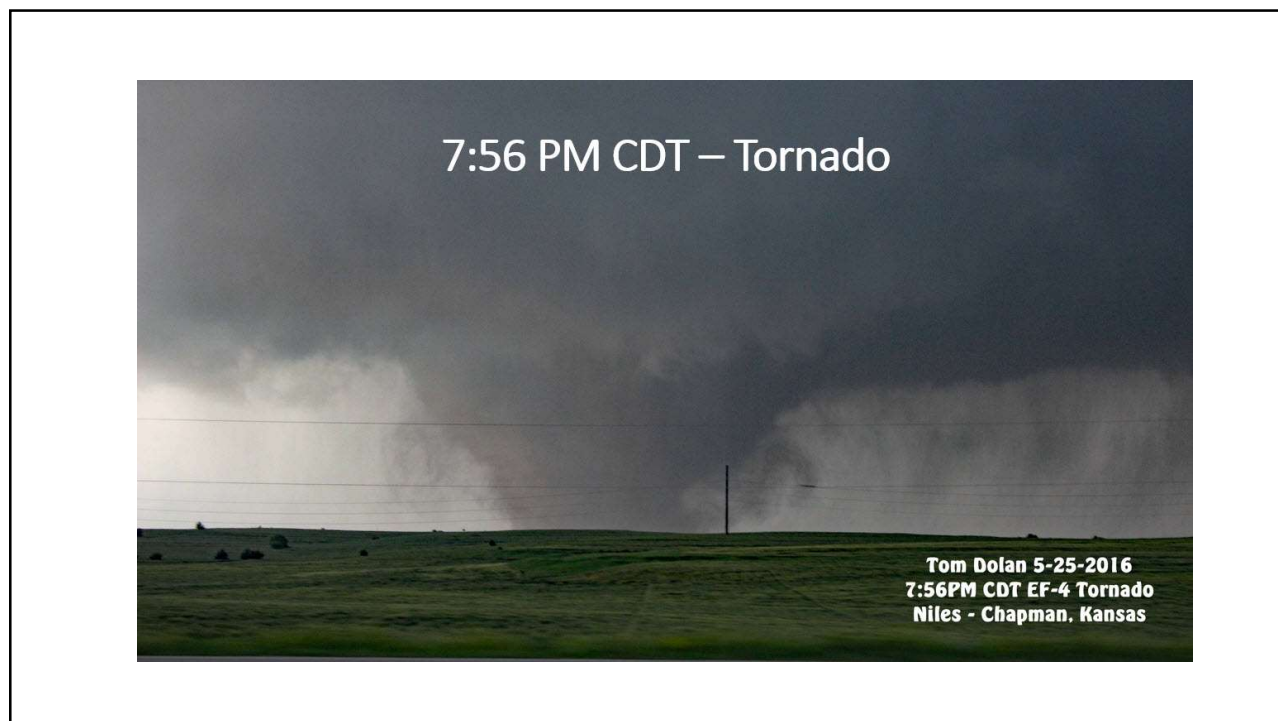
Home and Garage Destroyed Solomon Road

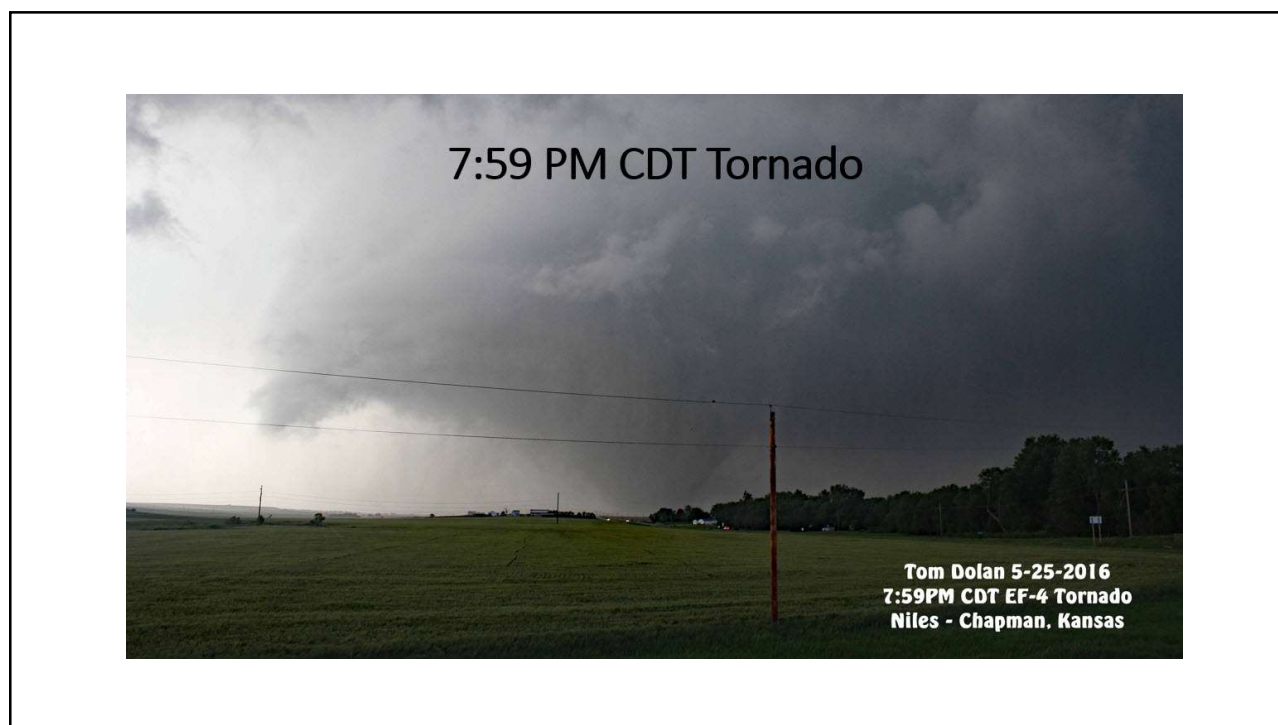
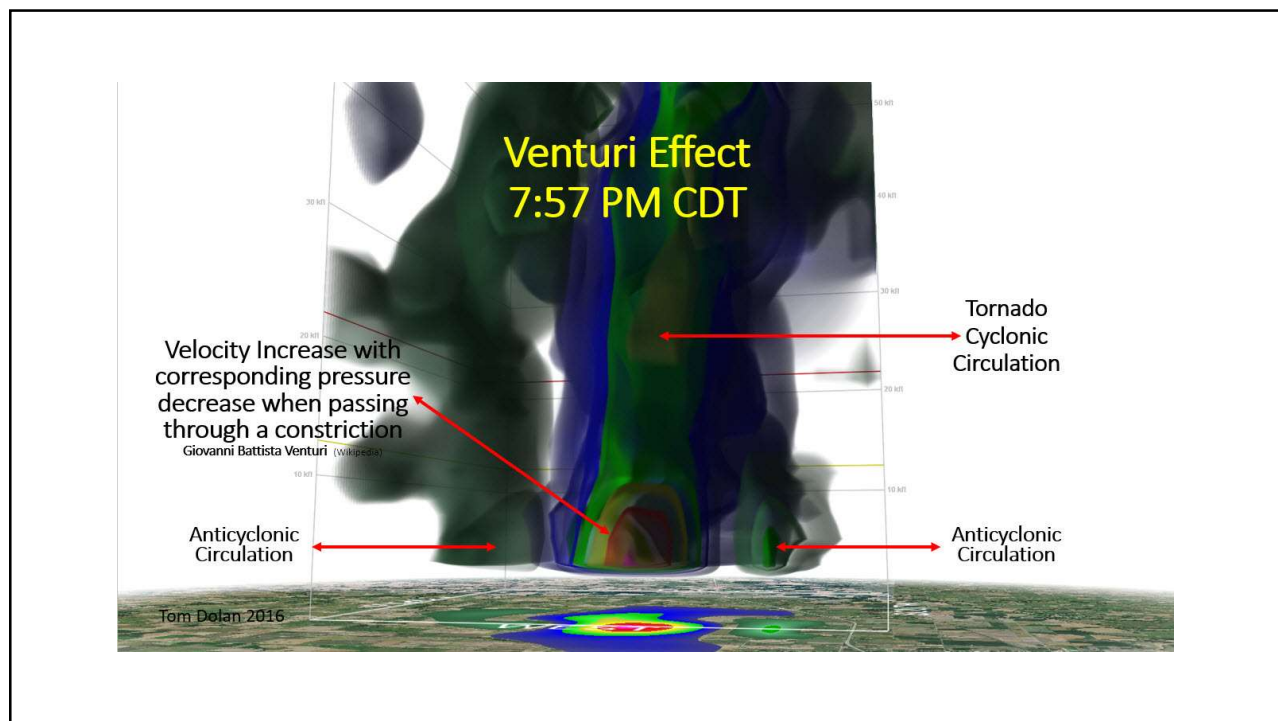








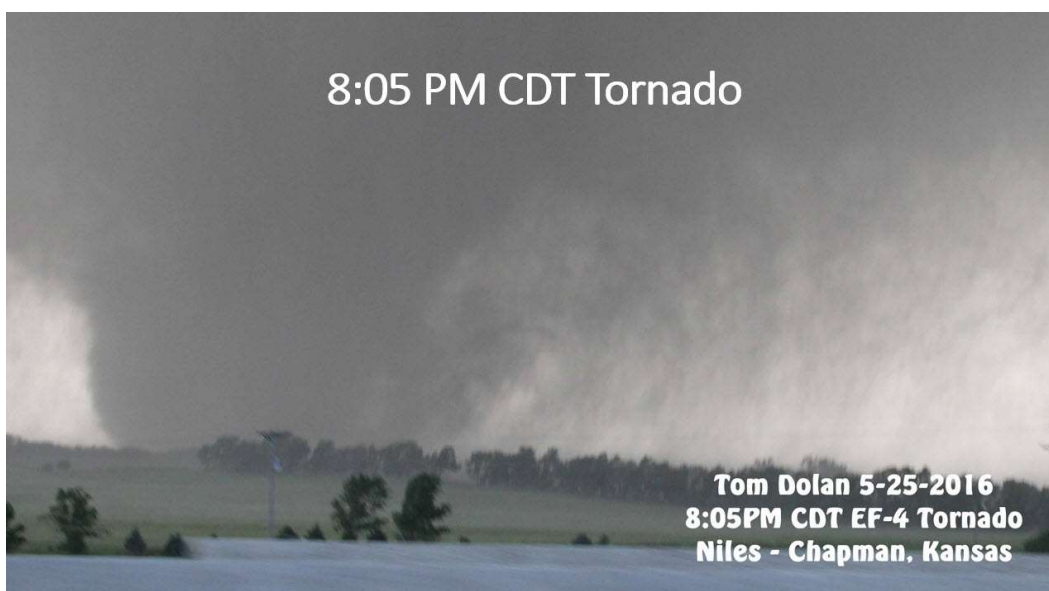


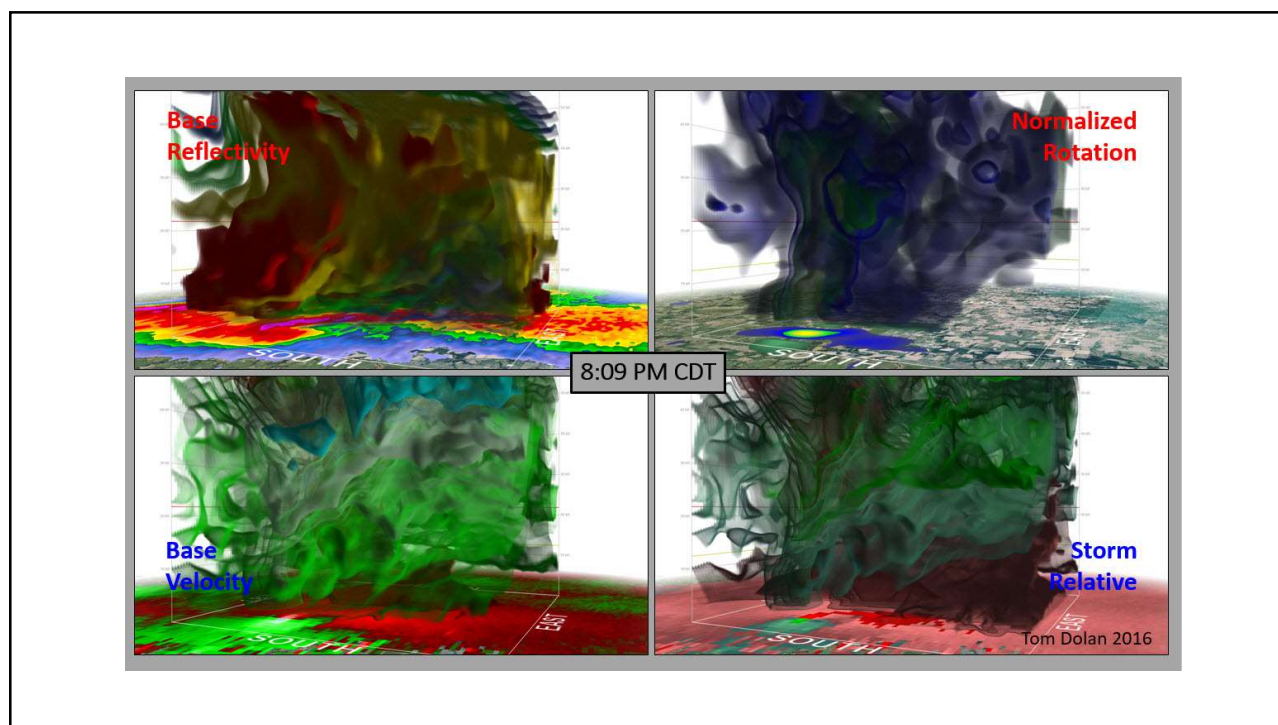
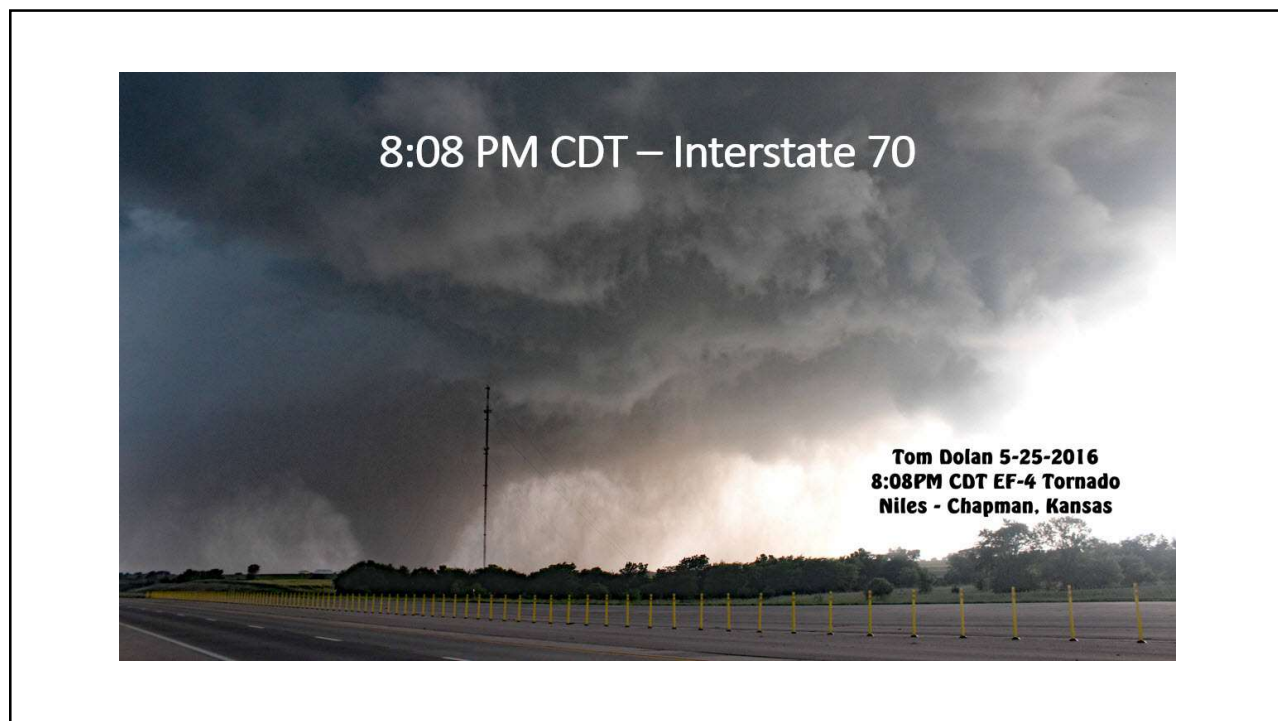


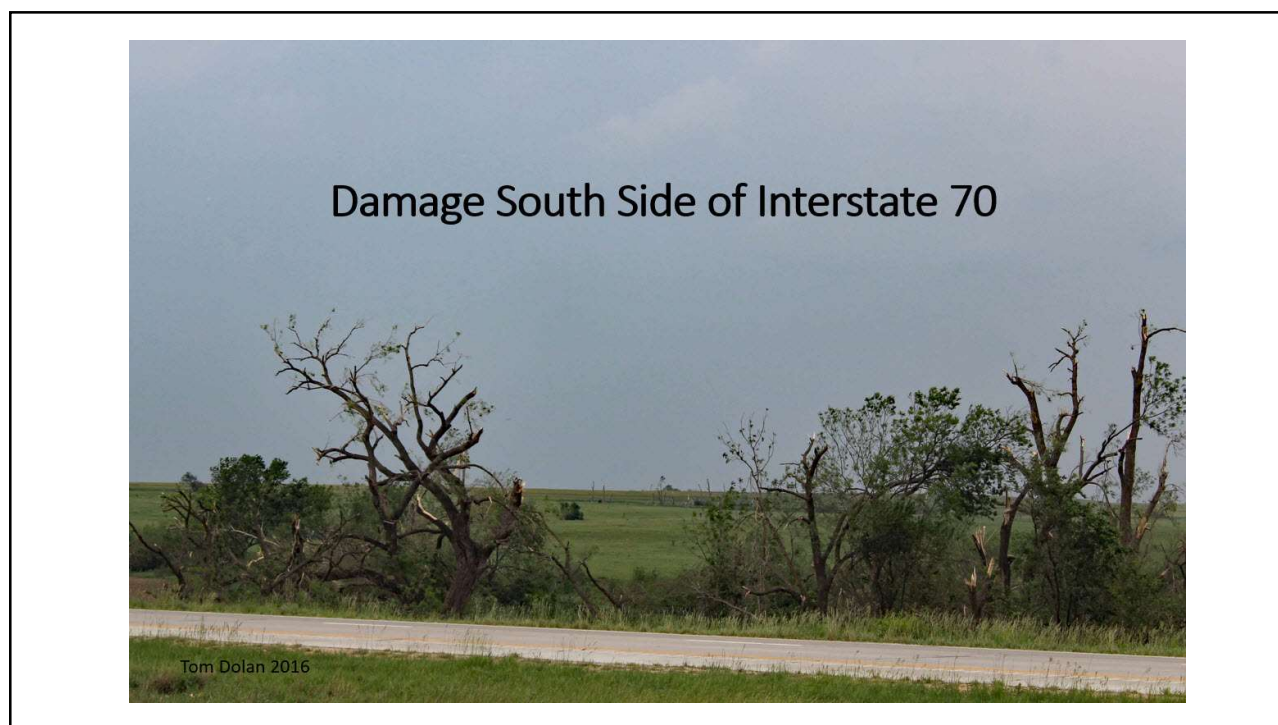
Jeep Rd and 2600th Buildings destroyed

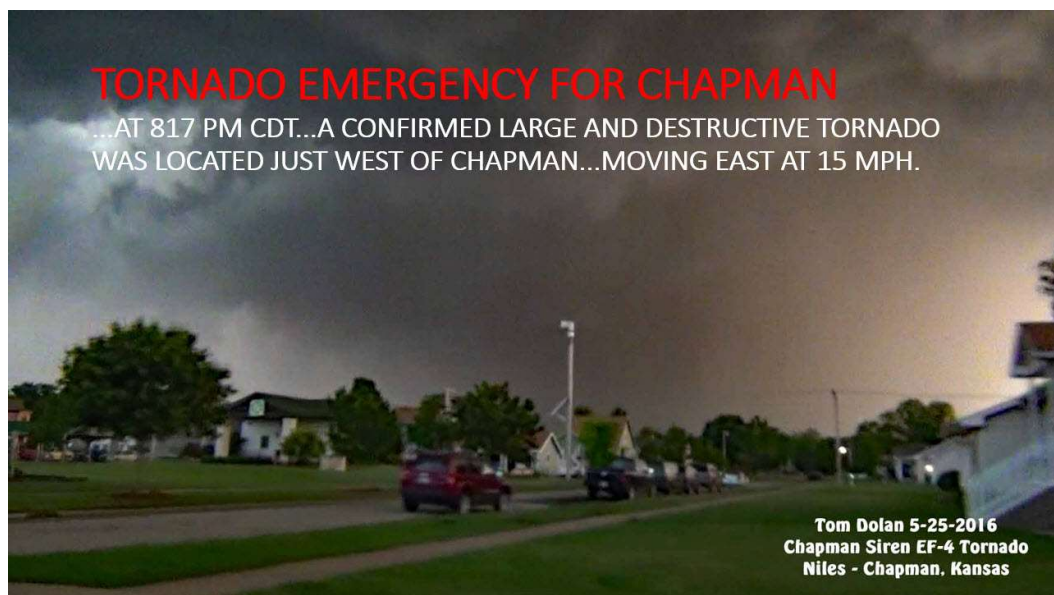


8:05 PM CDT Tornado







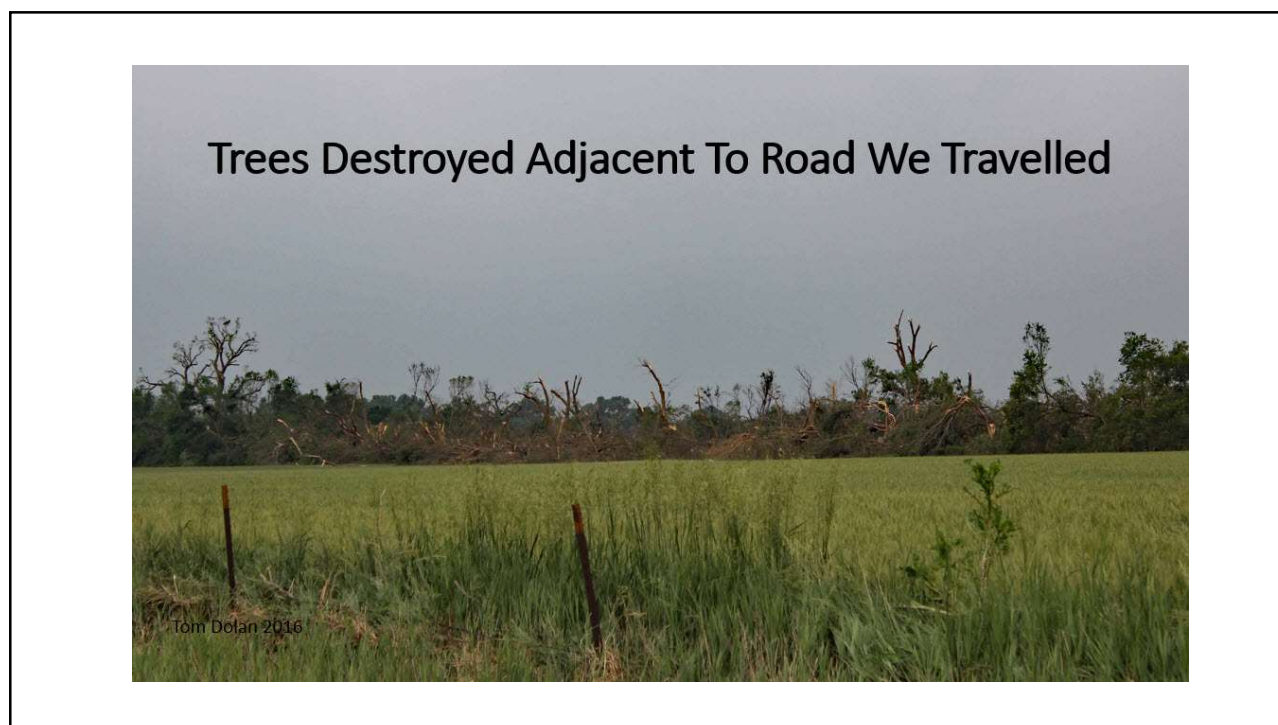


8:23 PM CDT Southwest of Chapman, Kansas

Tom Dolan 5-25-2016
Approaching Chapman
EF-4 Tornado
Niles - Chapman, Kansas

Irrigation Pivot Southwest of Chapman, Kansas

Tom Dolan 2016





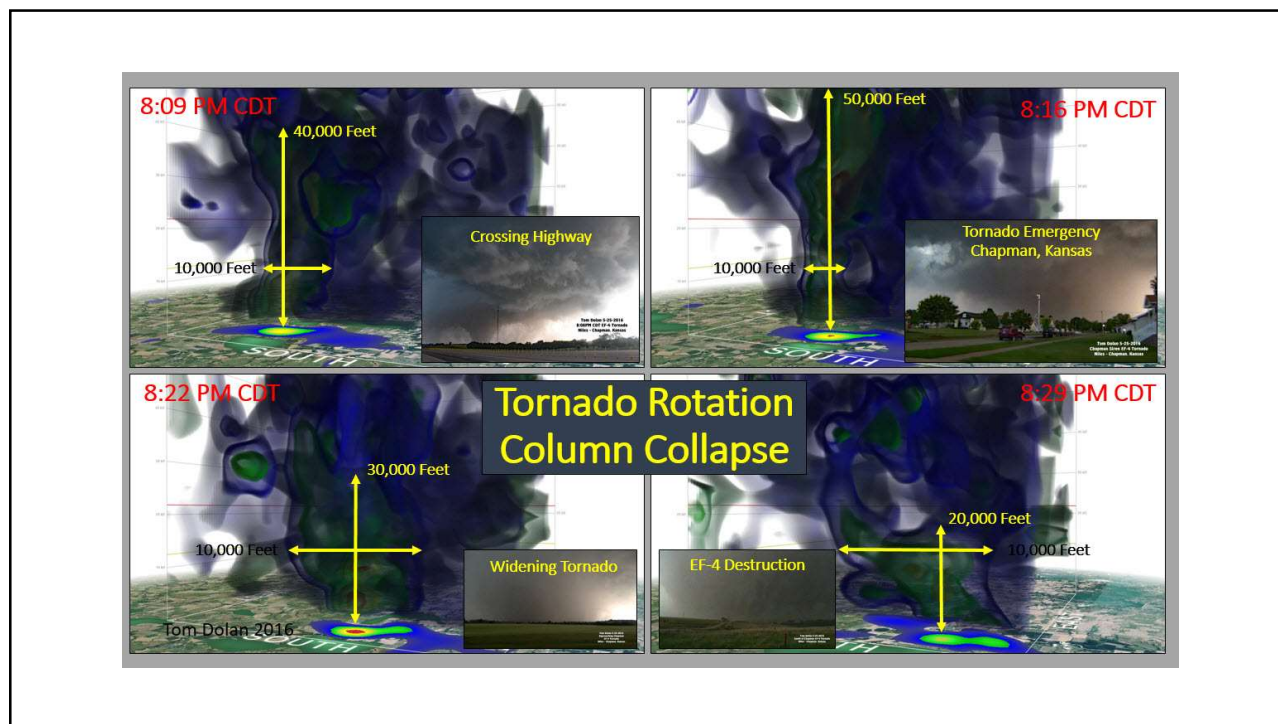
Trees Damaged to Southeast of Road Travelled

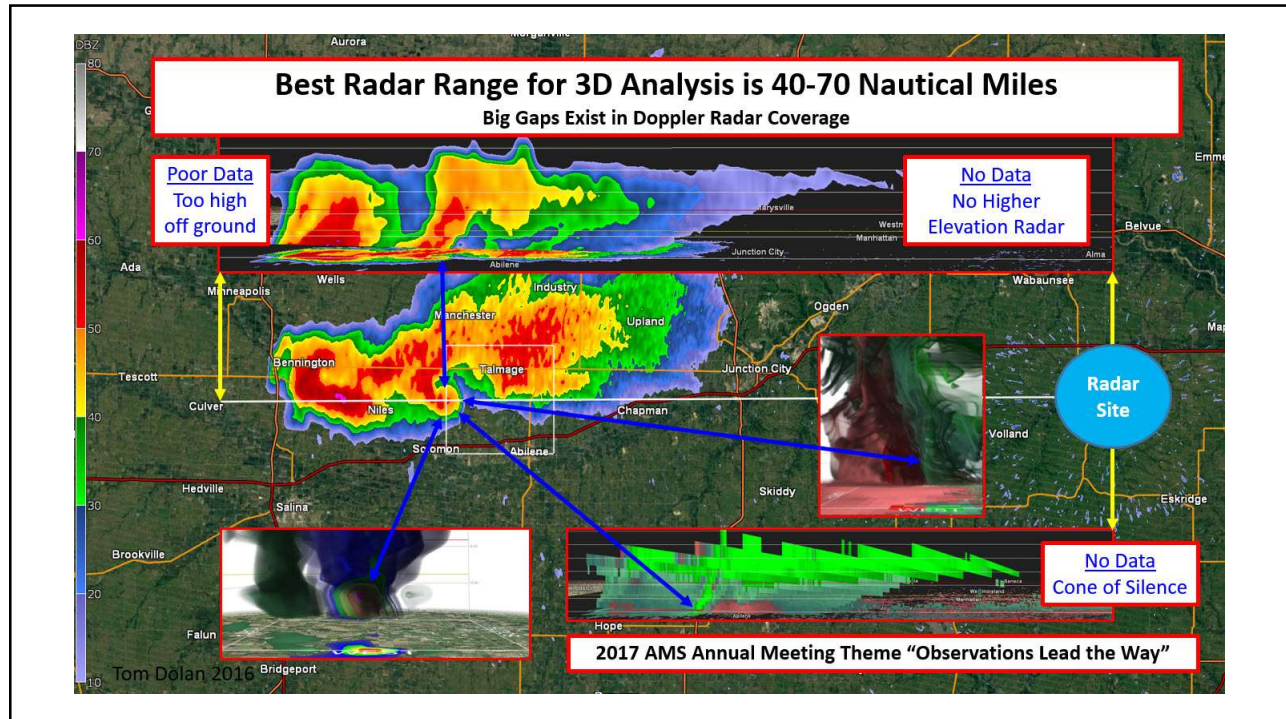
Notice No Damage to Fields



8:29 PM CDT Tornado Damage









Donald Dolan – Research Driver/Safety
Randy Ryan, Kathy Dolan and Matt Dolan - Team

Field Web Data Sources: NWS and SPC
Radar Tools: NWS, Allison House and Gibson Ridge
Photos, Images and Video by Tom Dolan

Website: Outdoorstorms.com
YouTube: Outdoorstorms
Email: tdolan@outdoorstorms.com



Tom Dolan – Tornado Visualization Project
Bill Kirkpatrick – Storm Chaser/Firefighter

Niles to Chapman, Kansas EF-4 Tornado
0 – Deaths and 5 – Minor Injuries
26 Miles and 90 Minute Duration
"Major Weather Impacts of 2016"
97th AMS Annual Meeting