SKYWARN Reporting via Ham Radio

MSUARC, April 10, 2018

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with assistance from Christine Wielgos, NWS

Topics

- What is SKYWARN?
- How to Select a Good Vantage Point, if Mobile
- What Phenomena Are Important to Report?
- What Shouldn’t Be Reported?
- Spotter Safety Issues
- Spotting At Night
- The Importance of Training
- Optimum Radio Operating Procedures

Skywarn Program

Skywarn: NWS program of trained volunteer severe weather spotters:

-Support local community/government by providing the NWS with timely and accurate severe weather reports.

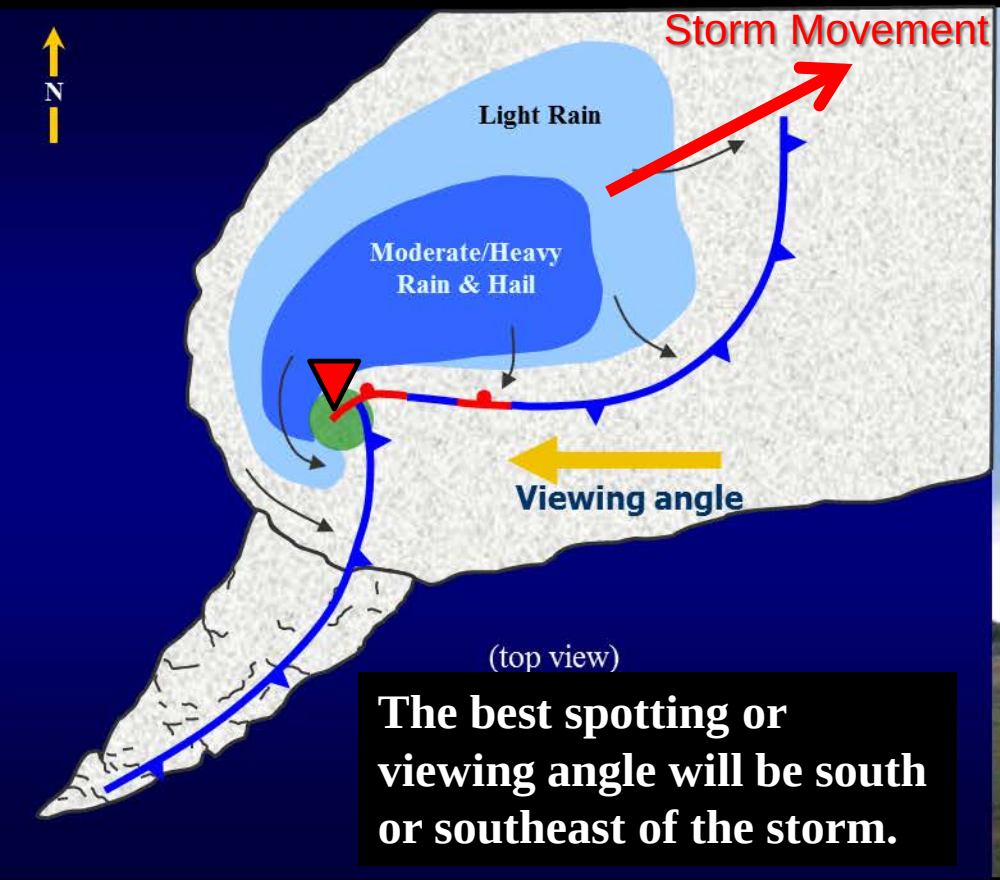
-When integrated with NWS technology, reports will help people make better decisions & decrease number of causalities.

-Real-time reports make our warnings more accurate, credible, and timely.

-We use reports to help verify if severe weather is or did occur during the warning.

Supercell Spotter Positioning

- Know where you are in reference to the updraft and downdraft.
- Know storm movement; correctly position yourself.
- Be positioned so the thunderstorm is moving from left to right.
- Your perspective of the storm makes a difference.

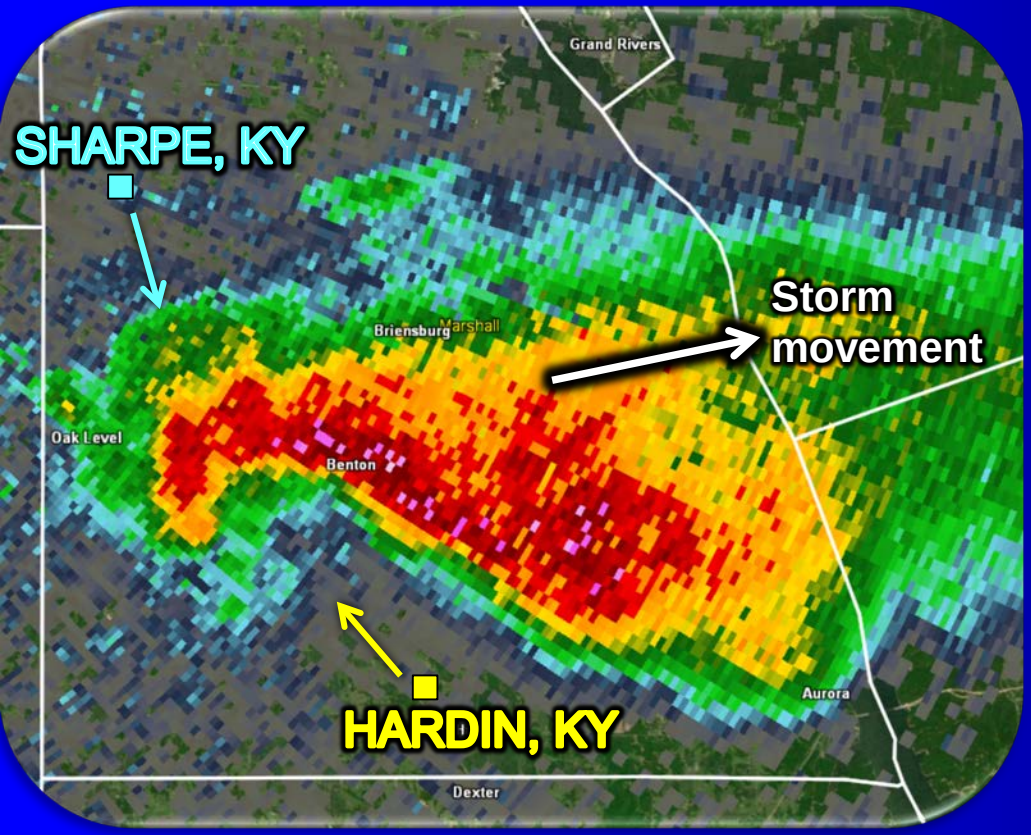


The best spotting or viewing angle will be south or southeast of the storm.

Spotter Perspective: Marshall County Kentucky Supercell

Spotter southeast of Sharpe report:

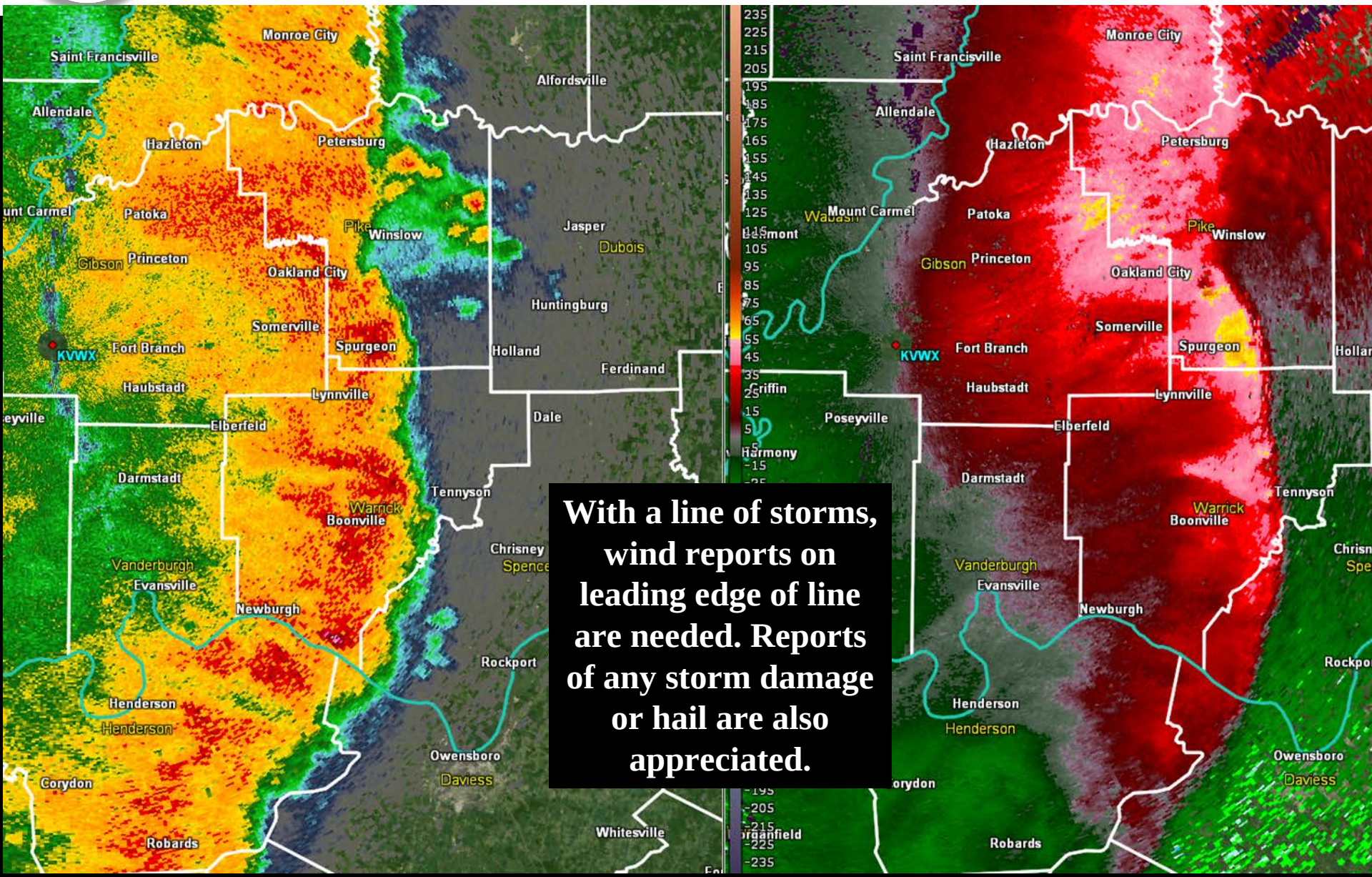
Heavy rain, hard to see; (possible tornado??)



Spotter northwest of Hardin report:

Well developed wall cloud/tornado

Line of Storms: Spotter Positioning



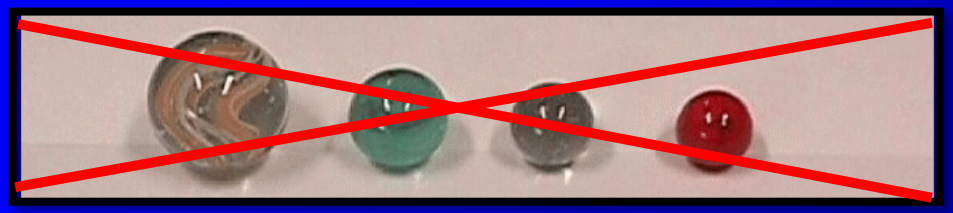
With a line of storms, wind reports on leading edge of line are needed. Reports of any storm damage or hail are also appreciated.

What to Report

- Funnel Clouds
- Tornadoes
- Wall Clouds
- Hail – any size
- Flash Flooding
- Wind Speeds > 40 mph
- Rainfall Amounts
- Fatalities/Injuries
- **Storm Damage** (a few trees down, branches, power lines down, etc)
- **Winter Weather** (precip type, amounts, road conditions, etc)
- Dense Fog

Reporting Hail:

- Measure the diameter of the hailstone or compare to common objects.
- Do NOT report marble sized hail!



- Hail greater than or equal to 1” is considered severe hail.
- If you post pictures on social media, add an object to compare (coins, ruler etc).

The Do Not Report List

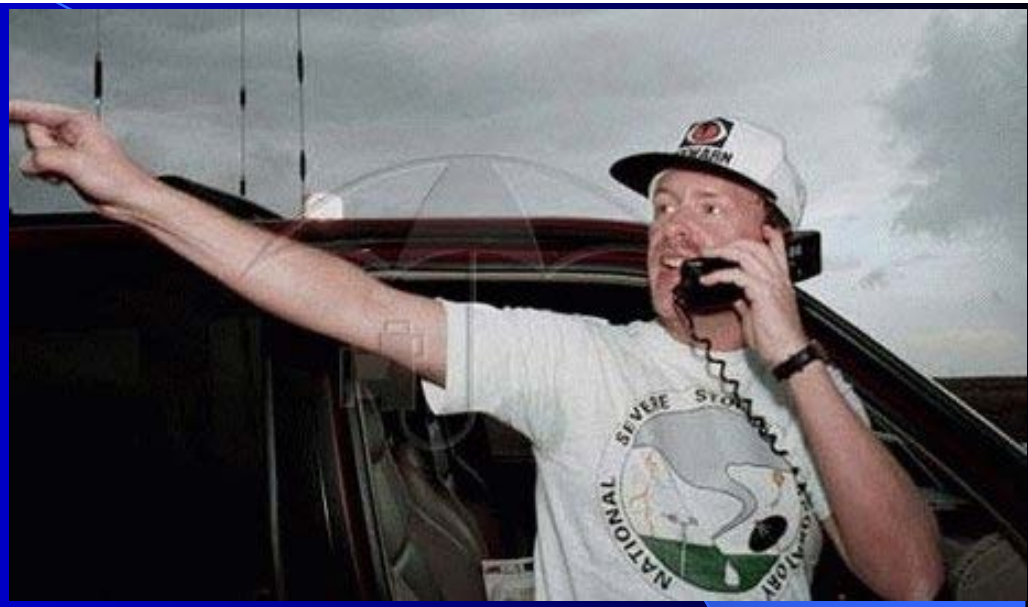
- Non-dangerous SCUD clouds
- Non rotating clouds such as shelf clouds
- Moderate rain and wind (less than 40 mph)
- Lightning – unless it has caused damage

<u>AVOID AMBIGUOUS REPORTS:</u>

- "High" or "Strong" wind
- Flooding (What is flooding?)
- Marble size hail (how big are the marbles?)
- Low hanging clouds

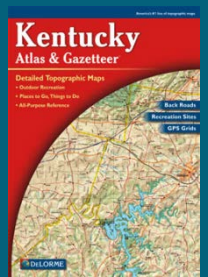
Reporting Guidelines

- Always report what you see as accurately/concisely as possible.
- Be brief.
- Use references to nearby towns in addition to roads.
- Don’t make assumptions about what you see.
- Tell us your uncertainty if you have any.
- Avoid ambiguous reports.



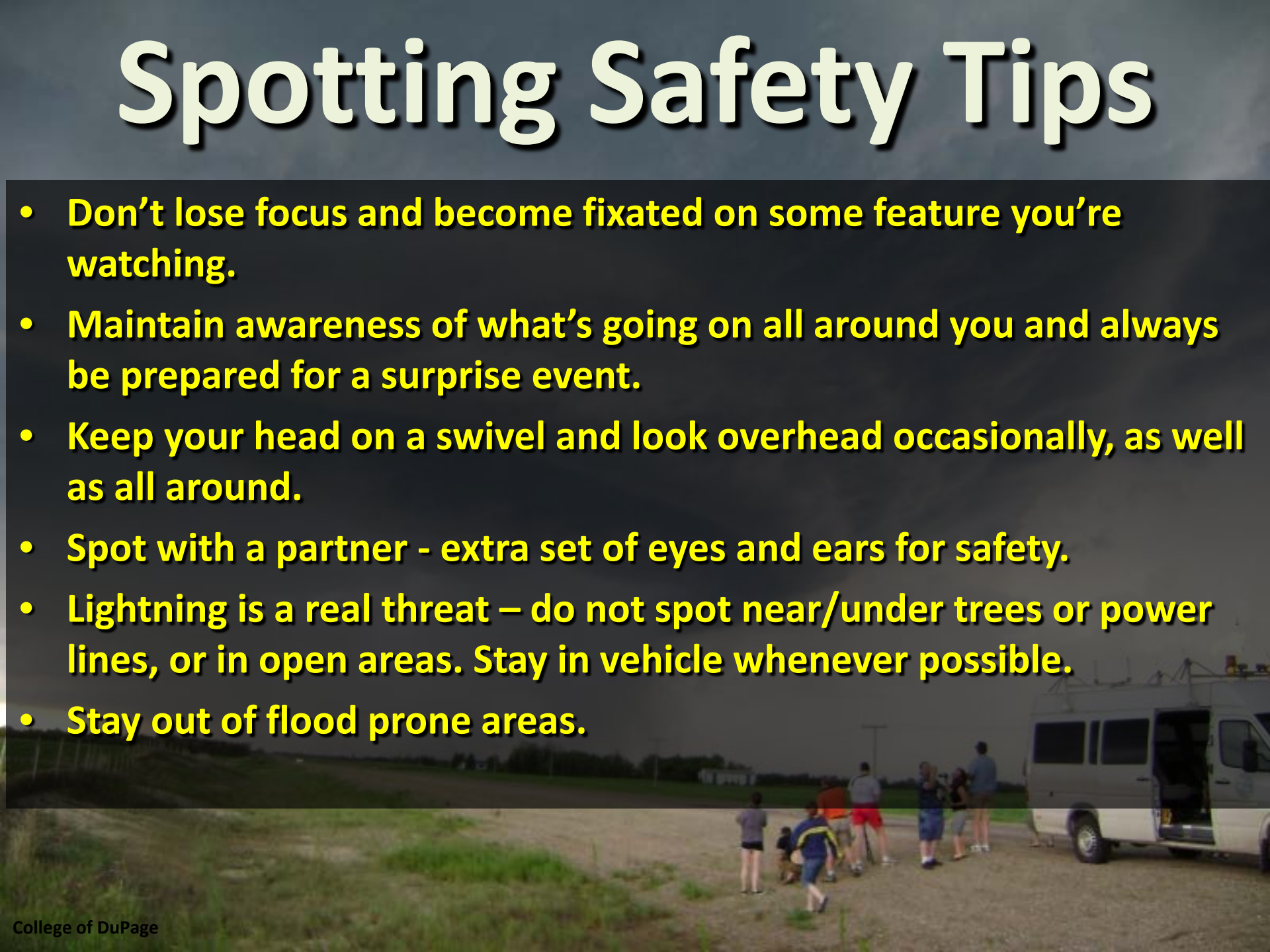
Escape Routes

- Have planned escape routes.
- What if you become trapped?
- Roads and storms can sometimes create situations that you don't expect.
- Maps - not always accurate.
- Events can arise for which you didn't plan.
- Know where all your potential shelters are ahead of time.



Spotting Safety Tips

- Don’t lose focus and become fixated on some feature you’re watching.
- Maintain awareness of what’s going on all around you and always be prepared for a surprise event.
- Keep your head on a swivel and look overhead occasionally, as well as all around.
- Spot with a partner - extra set of eyes and ears for safety.
- Lightning is a real threat – do not spot near/under trees or power lines, or in open areas. Stay in vehicle whenever possible.
- Stay out of flood prone areas.



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Nighttime Spotting

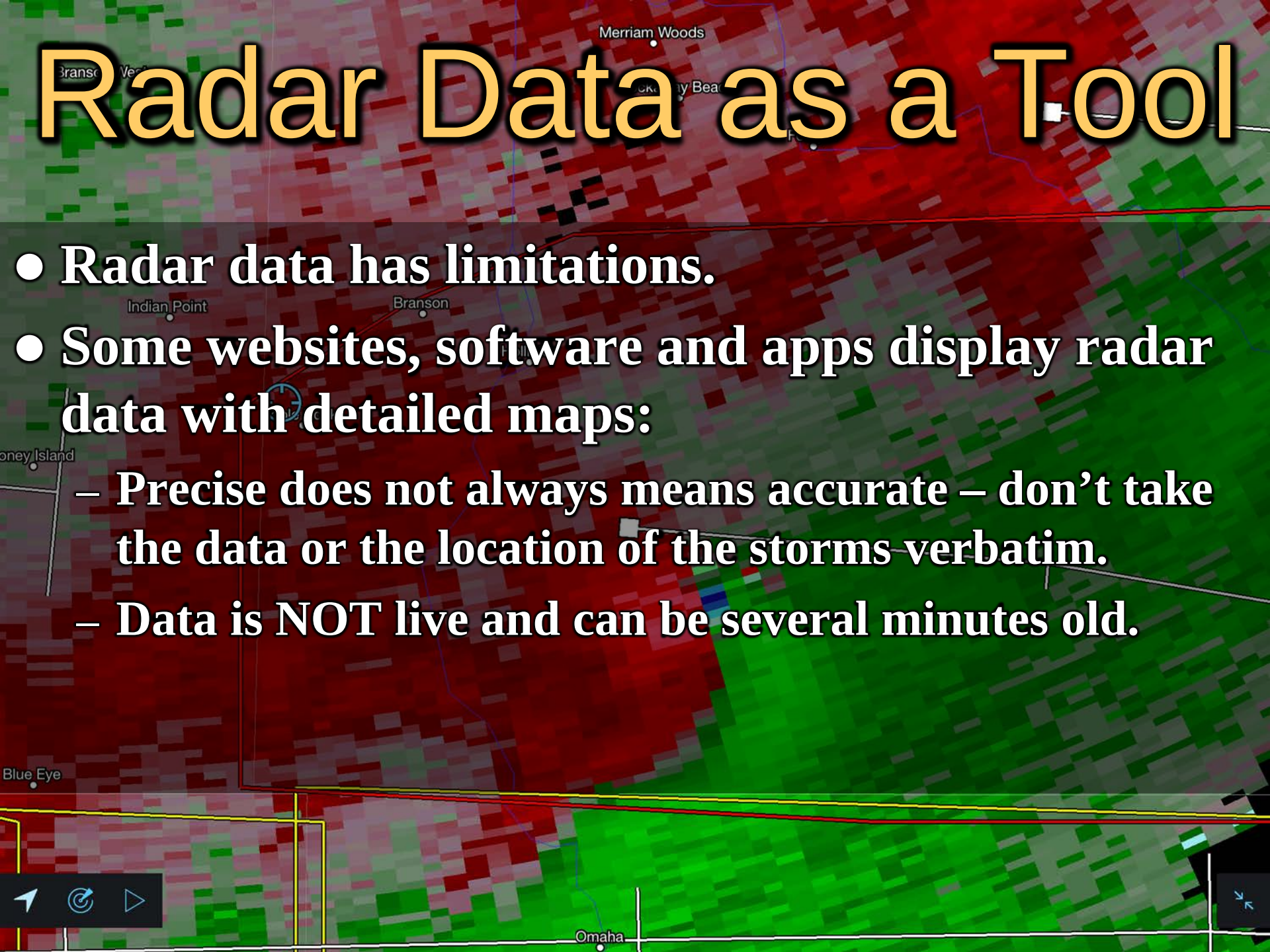
- Mobile spotting at night is especially dangerous.
- Note the wind direction and changes in wind direction.
- Know your directional relationship to the storm.
- Look for signs of rising or rotating clouds.
- Report ground based power flashes.
- Utilize lightning to note storm structure & possible lower cloud base.

Spotting storms at night is dangerous!

Only experienced spotters working in teams and with constant radar support!

Paducah KY 4-2-06 Photos by: Christine Wielgos

Radar Data as a Tool



- Radar data has limitations.
- Some websites, software and apps display radar data with detailed maps:
  - Precise does not always means accurate – don't take the data or the location of the storms verbatim.
  - Data is NOT live and can be several minutes old.

Training Is Essential!

- Take the Basic Spotters Course Regularly
- Consider Taking the Elite Spotters Course (Paducah, Monday April 16; Also Available via Webinar) https://www.weather.gov/pah/spottertraining
- CERT Training Is Helpful, For General Emergency-Procedures Knowledge

Net Procedures “Best Practices”

- Listen Before Transmitting
- “Directed” vs “Free” Net Operation
- Identify As Appropriate, But Not Excessively
- Make Sure NCS Knows Your Location
- Make Transmissions Meaningful, But Brief
- Don’t Repeat Reports Heard On Other Services, Unless They Are Very Relevant
- If A Base Station, Have a Battery Backup and As Low-Profile An Antenna That Will **Work Well**