

# Severe Weather Awareness Week

## March 27-31, 2017

The Iowa Homeland Security and Emergency Management Division and the National Weather Service (NWS) have declared the week of March 27-31 Severe Weather Awareness Week. The highlight of the week will be a statewide tornado drill on Wednesday, March 29, beginning at 10:00 am. This is an event to remind Iowans that Severe weather is a part of living in our state and that understanding the risks and how to respond to them can save lives.

EH&S will be hosting Storm Spotter Training for ISU faculty, staff, and students on April 4. Register at [Learn@ISU](#).



### Severe Weather Awareness Week Daily Topics

Monday	
The focus will be <b>severe thunderstorms</b> . Hundreds of severe thunderstorms hit Iowa each year. Did you know severe thunderstorms can be as dangerous as tornadoes?	<ul style="list-style-type: none"> <li>• <a href="#">NWS Severe Thunderstorm Fact Sheet (PDF)</a></li> <li>• <a href="#">NWS Thunderstorm Brochure (PDF)</a></li> </ul>
Tuesday	
The emphasis will be on <b>warning reception</b> . Over the years, the ways to get hazardous weather warnings have changed. Do you know how you get a warning?	<ul style="list-style-type: none"> <li>• <a href="#">NWS Receiving Warnings Fact Sheet (PDF)</a></li> <li>• <a href="#">Wireless Emergency Alerts (WEA)</a></li> </ul>
Wednesday	
This is <b>tornado</b> day. In 2011, over 500 people died in the United States from tornadoes! Do you know where the safest place is in your home or car? <b>Statewide Tornado Drill: 10:00 AM</b>	<ul style="list-style-type: none"> <li>• <a href="#">NWS Tornado Safety Fact Sheet (PDF)</a></li> <li>• <a href="#">Get Weather-Ready: Before a Tornado</a></li> <li>• <a href="#">Get Weather-Ready: During a Tornado</a></li> <li>• <a href="#">NWS Tornado Safety Website</a></li> </ul>
Thursday	
This is <b>family preparedness</b> day. Learn about family safety from natural and man-made hazards	<ul style="list-style-type: none"> <li>• <a href="#">NWS Family Preparedness Fact Sheet (PDF)</a></li> <li>• <a href="#">Ready.gov</a></li> <li>• <a href="#">Red Cross Ready</a></li> </ul>
Friday	
<b>Flash flooding</b> is the most deadly weather threat in the United States. Never drive into a flooded area!	<ul style="list-style-type: none"> <li>• <a href="#">NWS Flash Flood Fact Sheet (PDF)</a></li> <li>• <a href="#">NWS Flood Safety Awareness Website</a></li> <li>• <a href="#">NWS Floods the Awesome Power (PDF)</a></li> <li>• <a href="#">American Red Cross Flood Safety</a></li> </ul>

### Safety info, by building

Check buildings you work in or frequent on the [EH&S Building Information website](#). Look for building emergency maps and particularly, where to take shelter from severe weather.

For more information and safety tips, visit our [weather page](#).



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# Severe Weather Terminology

**SEVERE THUNDERSTORM** - A thunderstorm is considered severe when it produces any of the following: Hail 1" (quarter size) or larger in diameter, winds which equal or exceed 58 MPH or a tornado.

**FUNNEL CLOUD** - A funnel shaped cloud, usually extending from a convective cloud, which is associated with a violently rotating column of air that is NOT in contact with the ground.

**TORNADO** - A violently rotating column of air that extends from a convective cloud and is in contact with the ground. The entire column of air associated with a tornado is not always visible. A tornado may only be visible once it has picked up enough dirt and debris.

**HAZARDOUS WEATHER OUTLOOK** - A product which is issued daily, highlighting any potential significant weather in the area for the next 7 days.

**WATCH** - Issued when conditions are favorable for the development of severe weather in and close to the watch area. The size of the watch can vary depending on the weather situation and is usually issued for a duration of 4 to 8 hours. During the watch, people should review severe weather safety rules and be prepared to move to a place of safety if threatening weather approaches.

**WARNING** - Issued when severe weather is detected by radar or reported by storm spotters. Information in this warning will include the location of the storm, what areas will be affected, and the primary threat associated with the storm. People in the affected area should seek safe shelter immediately. Remember that severe thunderstorms can produce tornadoes with little or no advance warning. Warnings can be issued without a watch already in effect.

**SIGNIFICANT WEATHER ADVISORY or SPECIAL WEATHER STATEMENT** - Issued for "near" severe thunderstorms. Typically issued for storms with 3/4" (penny sized) hail and wind gusts near 50 MPH, but can also be issued for large amounts of small hail covering the ground. It is also used as a "heads up" for ongoing severe storms which may move into the area.

**SEVERE WEATHER STATEMENT** - A product issued which provides follow-up information on any severe weather warnings in effect and conditions which have occurred or are occurring. This information includes updated storm paths and any storm reports, such as hail size or damage, received from spotters.

**FLASH FLOOD** - A rapid rise in water that occurs with little or no advanced warning, usually as the result of intense rainfall over a relatively small area in a short amount of time. Flash Floods can also be caused by dam or levee failures, ice jams, and topography.

**FLASH FLOOD WATCH** - Issued to indicate current or developing hydrologic conditions that are favorable for flash flooding in and close to the watch area. When a watch is issued, be aware of any potential flood hazards. Those in the affected area are urged to be ready to take quick action if a Flash Flood Warning is issued or flooding is observed.

**FLASH FLOOD WARNING** - Issued when flash flooding is in progress, imminent, or highly likely. Those in the affected area should evacuate immediately or move to higher ground if possible. Information in this warning will include the locations in the flood and any areas which may be impacted. Flash Flood Warnings can be issued without a Flash Flood Watch in effect.



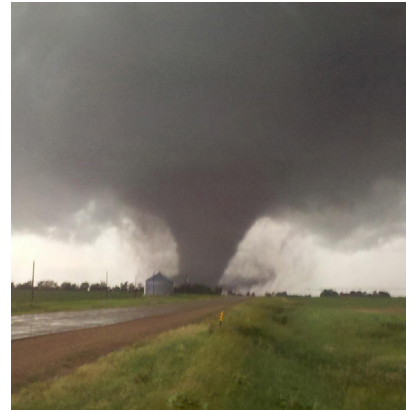
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# Tornado Safety

A tornado is a violently rotating column of air in contact with the ground that is capable of destroying anything in its path and hurling objects through the air like deadly missiles. They can produce winds in excess of 200 MPH, be over 1 mile wide and stay on the ground for over 50 miles! Although tornadoes occur in many parts of the world, they are found most frequently in the United States. In an average year, 1,200 tornadoes cause 70-75 fatalities and 1,500 injuries across

the nation. Warnings save lives, however deaths and injuries still occur. Some people may not hear the warning, others did but did not believe it would happen to them. Are you and your family prepared for a tornado?



## Be Ready Year Round!

- Know the risk for your area. Tornadoes can occur at any time of day, any day of the year.
- Have a NOAA Weather Radio and battery back-up to receive warnings.
- Have a plan of action BEFORE severe weather threatens. You need to respond quickly when a warning is issued or a tornado is spotted.

## Prepare!

- Know how your community sends warnings. Some have outdoor sirens, others depend on media and smart phones to alert residents.
- Pick a tornado safe room in your home such as a basement, cellar or an interior room on the lowest floor with no windows. Make sure all members of your family know to go there. If time allows, get your pets.
- Conduct a tornado drill regularly so everyone knows what to do if a tornado is approaching.
- Have a family plan that includes an emergency meeting place.

## During a Tornado...

- Take shelter immediately! Remember that occasionally tornadoes can develop so quickly that advance warning is not possible. Stay alert when threatening weather is in your area!
- Get to an underground shelter, basement or safe room.
- Mobile homes are not safe! Abandon them immediately and go to the nearest sturdy building or shelter.

If you are outdoors, seek shelter immediately! If you cannot quickly get to shelter:

- Get into a vehicle, buckle your safety belt and try to drive to the closest shelter.
- If flying debris occurs while driving, pull over and park. As a last resort:
  - Stay in your vehicle with the seat belt on. Put your head down below the windows, covering with your hands and blanket if possible.
  - If you can safely get noticeably lower than the level of the road, exit your car and lie in that area, covering your head.
  - ***Your choice should be driven by your specific circumstances!***
  - More information and tips on preparing and staying safe during a tornado can be found

For more information and safety tips, visit our [tornado page](#).



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# 2016 Iowa Tornado Facts

Total Number of Tornadoes: 43

Number of Injuries: 12

Number of Deaths: 0

Path Length of All Tornadoes: 96.6 miles

Average Path Length: 2.25 miles

Average Width: 70 Yards

Longest Path Length Individual Tornado: 20.0 miles

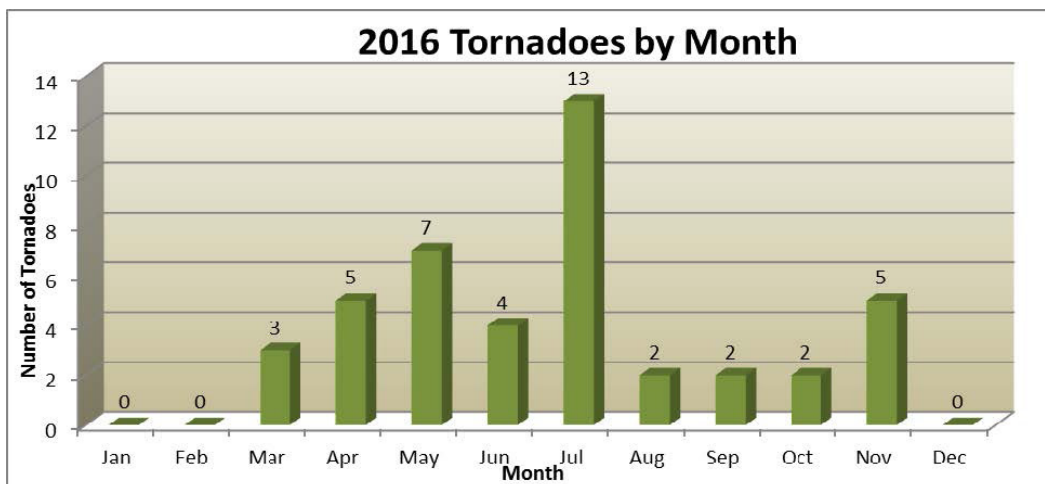
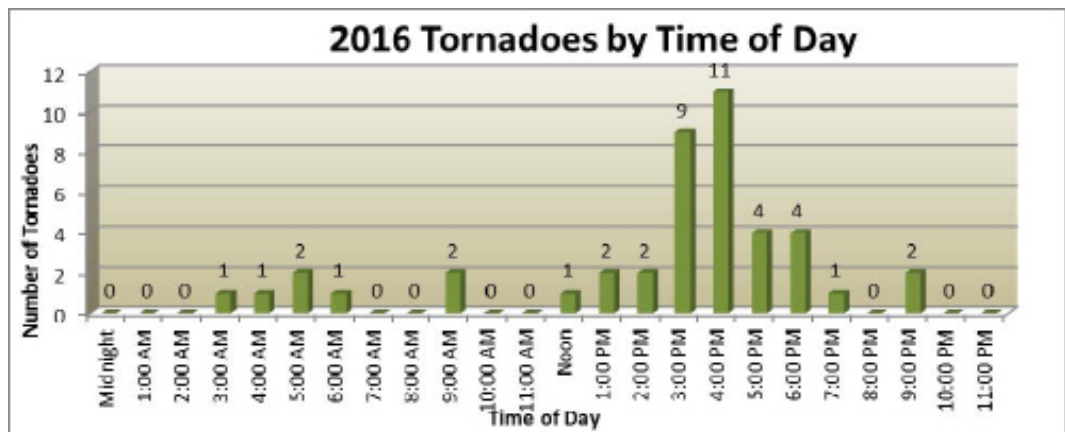
Largest Width Individual Tornado: 800 Yards (0.45 miles wide)

Peak Hour of Tornado Occurrence: 4 – 5 PM CST

Peak Month of Tornado Occurrence: July

Most Tornadoes in a Day: April 27th, July 17th and November 28th, all with 5 tornadoes

Number of Tornado Days: 19



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# Flash Flood Safety

Flash floods are exactly what the name suggest: floods that happen in a flash! Second only to heat related deaths, flooding results in more deaths on average than any other weather hazard. Most occur at night, when it is more difficult to recognize flood dangers, and when people are trapped in vehicles. Do you and your family know what to do in case of a flood?

## Remember...

- Don't underestimate the power of water!
- Remain aware of the situation. Water levels and the rate water is flowing can quickly change!
- **DO NOT** drive onto a flooded roadway or through flowing water. If you approach a roadway that is flooded, **TURN AROUND - DON'T DROWN.**
- **DO NOT** go into any room if water is covering electrical outlets or cords. If you see sparks or hear buzzing, crackling, snapping or popping noises - Get Out!

## If a Flash Flood Warning is issued for your area...

- **If advised to evacuate, do so *immediately*!** Act quickly to save yourself. Get out of areas that are subject to flooding and move to a safe area before access is cut off by flood waters.
- **DO NOT** camp or park your vehicle along streams and washes during threatening conditions.
- **DO NOT** drive if not necessary. 12-18 inches of water can carry away most vehicles. Do not drive over a flooded road, the depth of the water may not be obvious and the roadway may no longer be intact. Never drive around a barricade, they are there for your protection! If your vehicle stalls, leave it immediately and move to higher ground before water sweeps you and your vehicle away.
- **DO NOT** try to walk, swim, or play in flood water! You may not be able to determine if there are holes or submerged debris or how quickly the water is flowing. You may be swept away! If water is moving swiftly, as little as 6 inches of water can knock you off of your feet! There is also a danger of hazardous materials polluting the water. Also remember that water is an electrical conductor, if there are power lines down, there is a threat of electrocution.
- Always continue to monitor the situation through the National Weather Service website, your NOAA Weather Radio All-Hazards and favorite local television or radio stations.



For more information and safety tips, visit our [flood](#) page.



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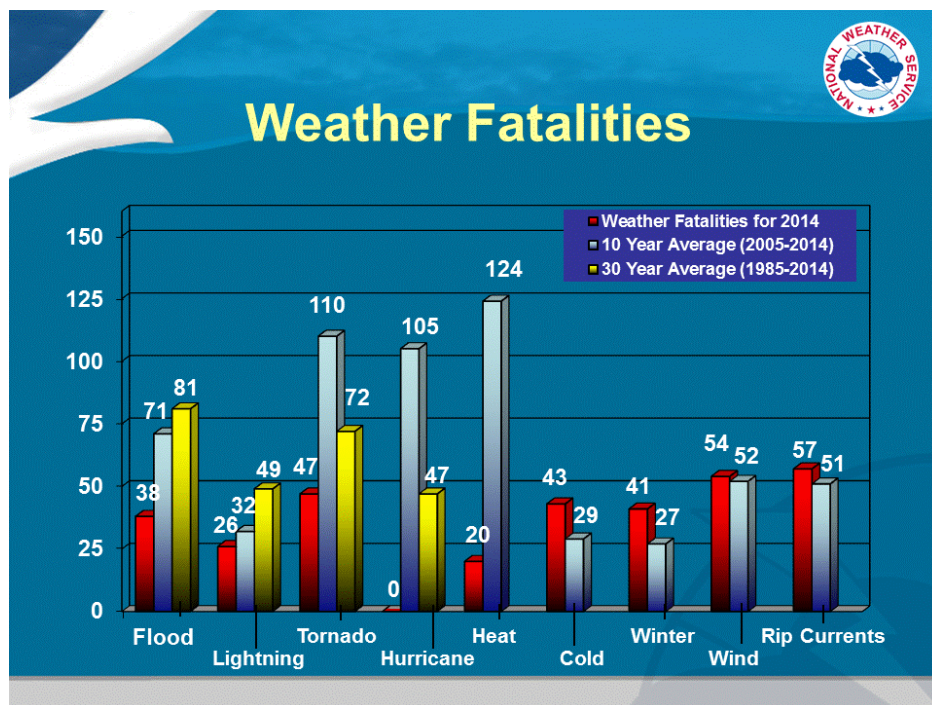
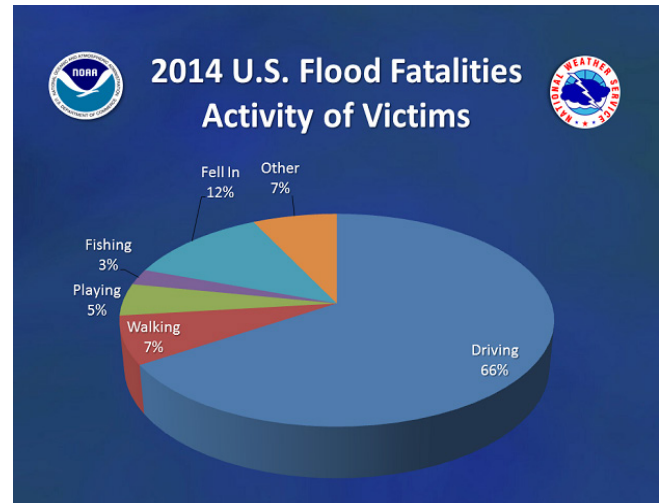
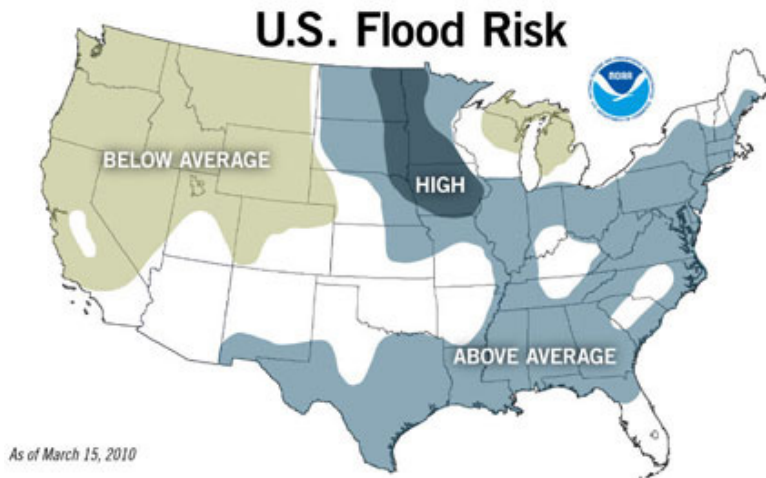
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# Flash Flood Facts

- In 2015, there were no reported deaths related to flash floods in Iowa.
- The last recorded death due to flooding in Iowa occurred in 2014.
- Last major flooding was in June of 2008. The entire Midwest was affected but Iowa was hit the worst. Widespread amount of rainfall ranged from 4-16 inches.
- These rains resulted in over 144 million dollars in damages.
- All 50 states have experience flash flooding or flooding in the past 5 years.



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# Lightning Safety

Lightning Awareness Week June 19-23, 2017

Lightning is fascinating to watch but is also extremely dangerous.

In the U.S., there are about 25 million lightning flashes every year. Each of those 25 million flashes is a potential killer. While lightning fatalities have decreased over the past 30 years, lightning continues to be one of the top weather killers in the U.S. In addition, lightning injures many more people than it kills and leaves some victims with life-long health problems.

Though lightning strikes peak in summer, people are struck year round. In the U.S., an average of 49 people are killed each year by lightning.

## Lightning: What You Need to Know

- **NO PLACE** outside is safe when thunderstorms are in the area!!
- When you hear thunder, immediately move to safe shelter: a substantial building or an enclosed, metal-topped vehicle with windows up.
- Stay in safe shelter at least 30 minutes after you hear the last sound of thunder.

## Indoor Lightning Safety

- Stay off corded phones, computers and other electrical equipment that put you in direct contact with electricity.
- Avoid plumbing, including sinks, baths and faucets.
- Stay away from windows and doors and stay off porches.
- Do not lie on concrete floors and do not lean against concrete walls.

## Last Resort Outdoor Risk Reduction Tips

If you are caught outside with no safe shelter anywhere nearby the following actions may reduce your risk:

- Immediately get off elevated areas such as hills, mountain ridges or peaks.
- Never lie flat on the ground.
- Never shelter under an isolated tree.
- Immediately get out of and away from ponds, lakes and other bodies of water.
- Stay away from objects that conduct electricity (barbed wire fences, power lines, windmills, etc.)

**In 2015, about 10% of lightning deaths in the U.S. occurred in Iowa.**

**Avoid getting caught in a dangerous situation!**

**If you can hear thunder, you are close enough to be struck by lightning**



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**For more information and safety tips, visit our [lightning](#) page.**



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# Lightning Facts

## 2015 Iowa Lightning Facts

Average Strokes: 645,685

Strokes per Square Mile: 11.4

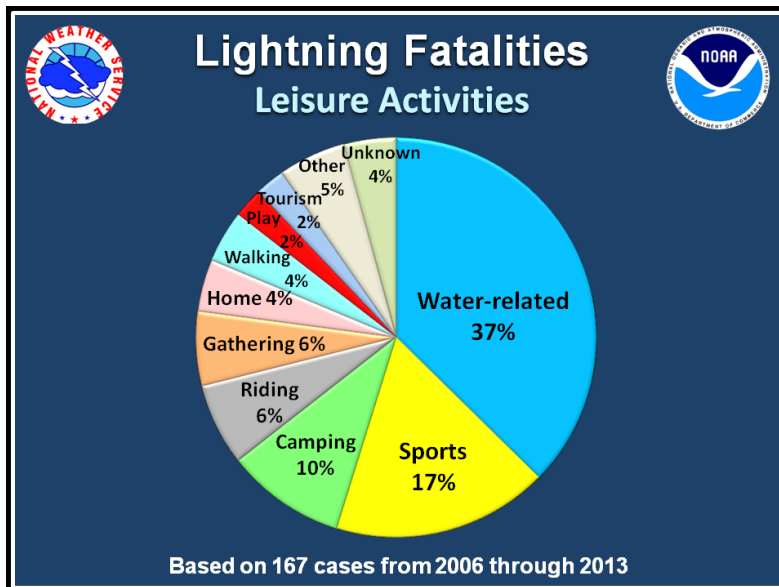
Deaths: 2

Odds of Strike: 1 in 3000

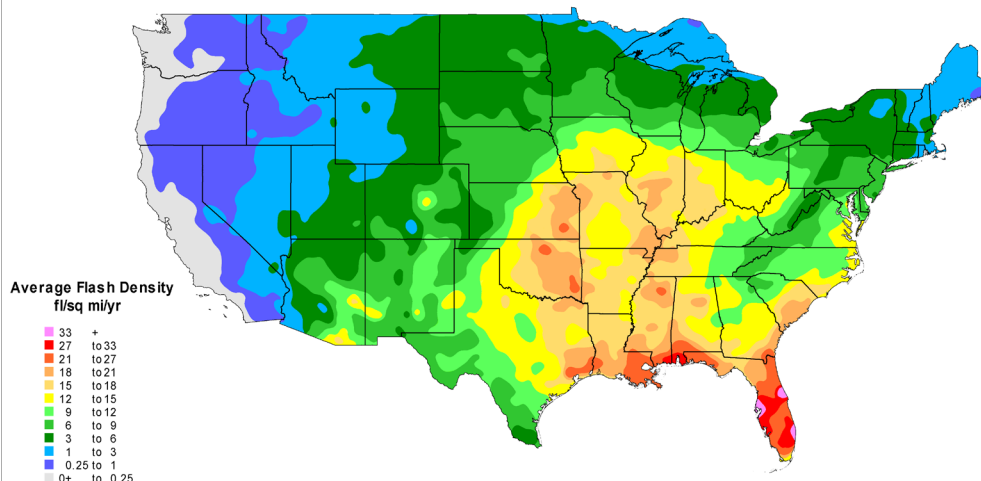
Thunder: Sound travels 1 Mile per 5 seconds

Temperature: 15,000-60,000 degrees Fahrenheit

Size: Width of a pencil and can reach ground from 20 miles up



**Vaisala's National Lightning Detection Network® (NLDN®)**  
Cloud-to-Ground Lightning Incidence in the Continental U.S. (1997 - 2012)



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