

SEVERE THUNDERSTORM REPORTING REFERENCES

CLOUD IDENTIFICATION REFERENCE



Shelf Cloud (A)

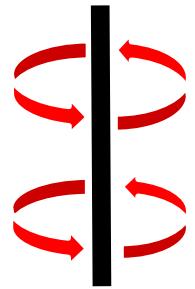
- A horizontal, shelf-like cloud on the leading edge of the thunderstorm
- Signals the approach of the downdraft, which includes heavy rain, gusty winds, and sometimes hail
- **ID Tip:** Slopes away from the rain
- **Beware:** Shelf clouds can appear to touch the ground, and can look different when viewing from the side
- Can rotate about a **HORIZONTAL** axis
- No need to report to the NWS

Wall Cloud (B)

- A **ROTATING** lowering from a T-storm updraft base. Often precedes a funnel cloud and tornado.
- Rotation must be about a **VERTICAL** axis
- **ID Tip:** Slopes down and towards the rain

Funnel Cloud (C)

- A **VIOLENTLY ROTATING** column of air that is **NOT** in contact with the ground
- Rotation must be about a **VERTICAL** axis
- **ID Tip:** Rapidly rotating cloud edges look smooth (versus ragged).



Tornado (D)

- A **VIOLENTLY ROTATING** column of air in contact with the ground
- Rotation must be about a **VERTICAL** axis
- **ID Tip:** Rapidly rotating cloud edges look smooth (versus ragged). To see if it is contact with the ground, look for debris or dust circulating at the surface.

Rotation about
a vertical axis

SCUD (E)

- Harmless, ragged looking clouds that do **NOT** rotate
- Can move up and down, may look turbulent. May look like they are touching the ground
- Responsible for a majority of false funnel cloud and tornado reports
- **ID Tip:** Edges of the cloud look ragged (instead of smooth like rapidly rotating clouds).

WIND SPEED ESTIMATION CHART

Large tree branches moving. Wires whistle.
Whole trees moving. Some difficulty when walking into the wind.
Small branches or twigs break off. Cars veer when driving.
Slight structural damage (shingles blown off). Large branches break off.
Structural damage (parts of roofs blown off). Trees uprooted or snapped off.
Widespread structural damage (whole roof removed, walls blown in, etc.)

HAIL SIZE ESTIMATION CHART



Note: Images not to scale

PLEASE REPORT THE FOLLOWING IMMEDIATELY TO THE NWS

REMEMBER: TIME, EVENT, LOCATION

Wind damage	-Large healthy limbs, structural damage, or trees uprooted -
Hail	-Any size! Report the size of the largest stone!
Flooding	-Water rising rapidly, flowing over roads, flooding buildings
Rotation	-Wall clouds, funnel clouds, and tornadoes

NWS Cleveland CONTACT INFO

Submit via Internet -

https://www.weather.gov/cle/submit_spotter_report

Amateur Radio -WX8CLE mobile.weather.gov



NWS CLE
www.weather.gov/cle

Skywarn™ page
<https://www.weather.gov/cle/SKYWARN>