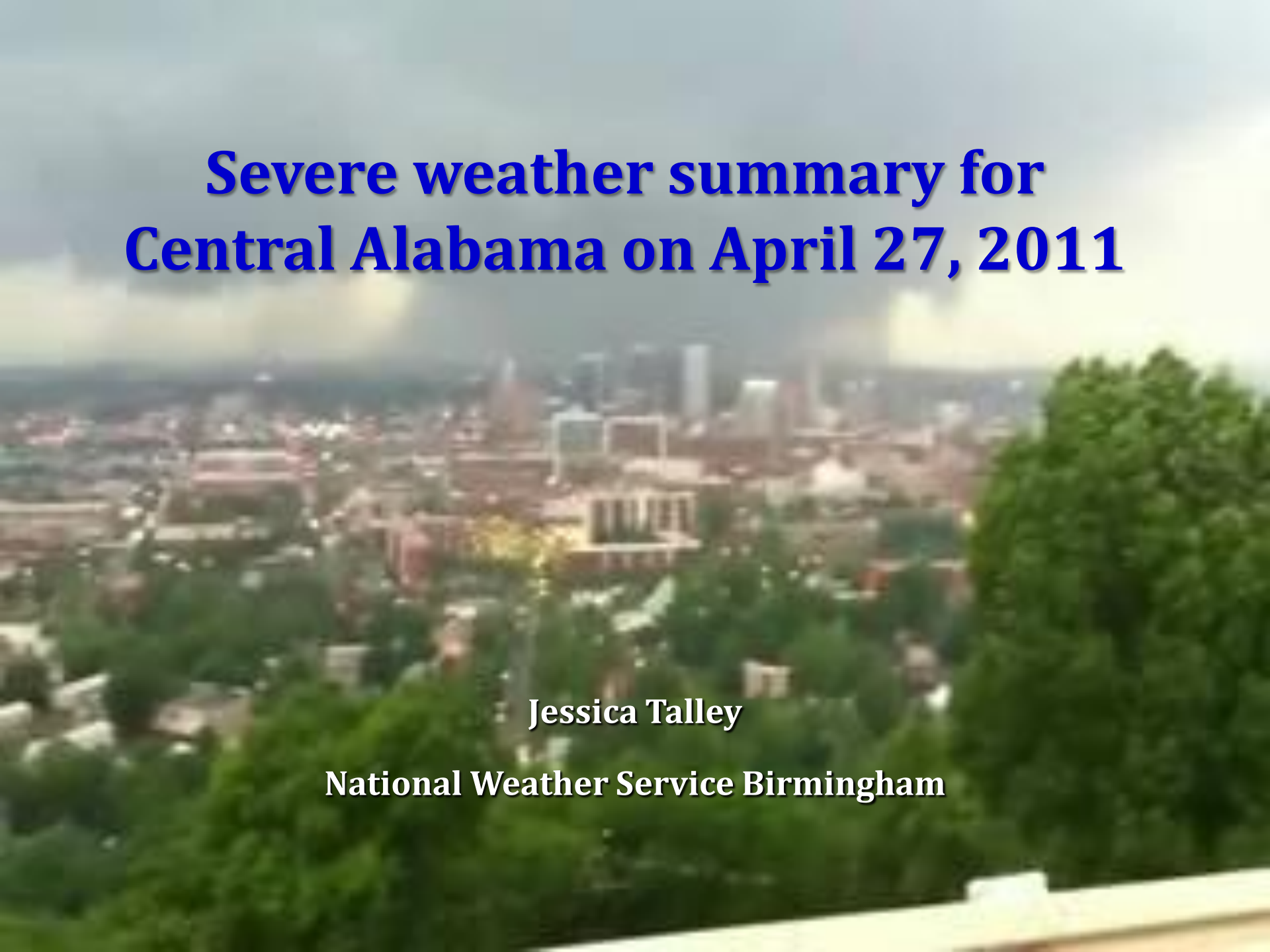
Severe weather summary for Central Alabama on April 27, 2011

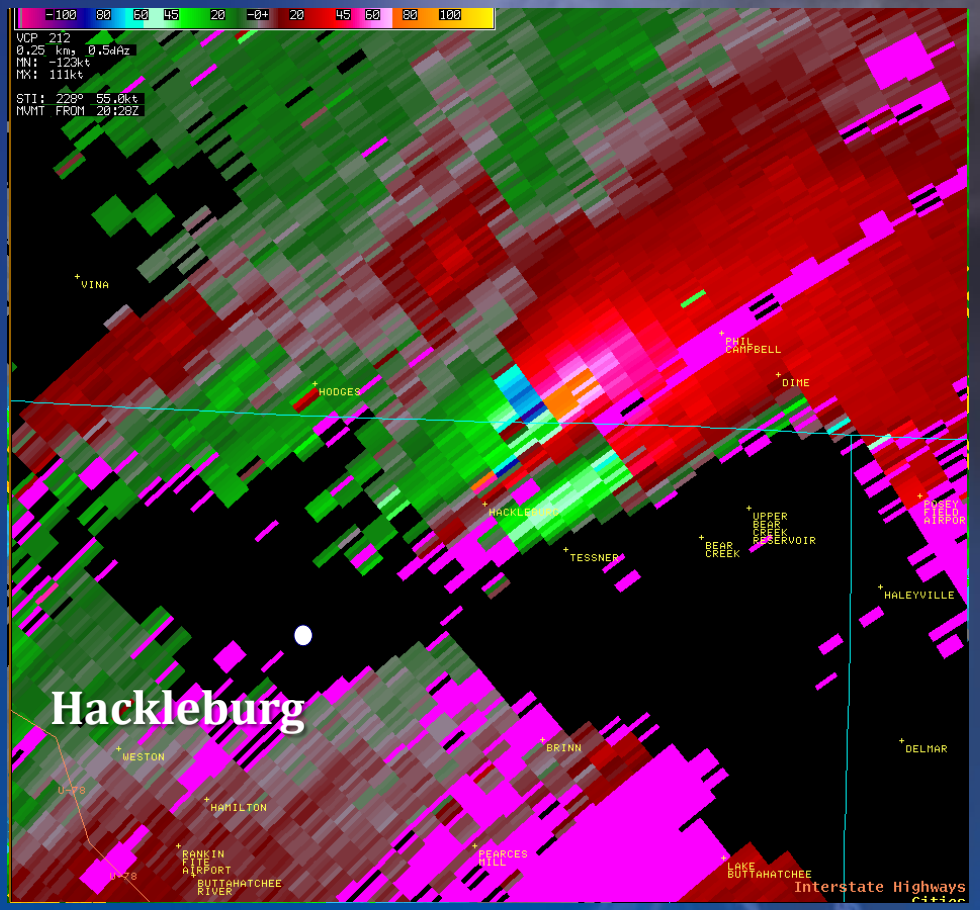


Jessica Talley

National Weather Service Birmingham

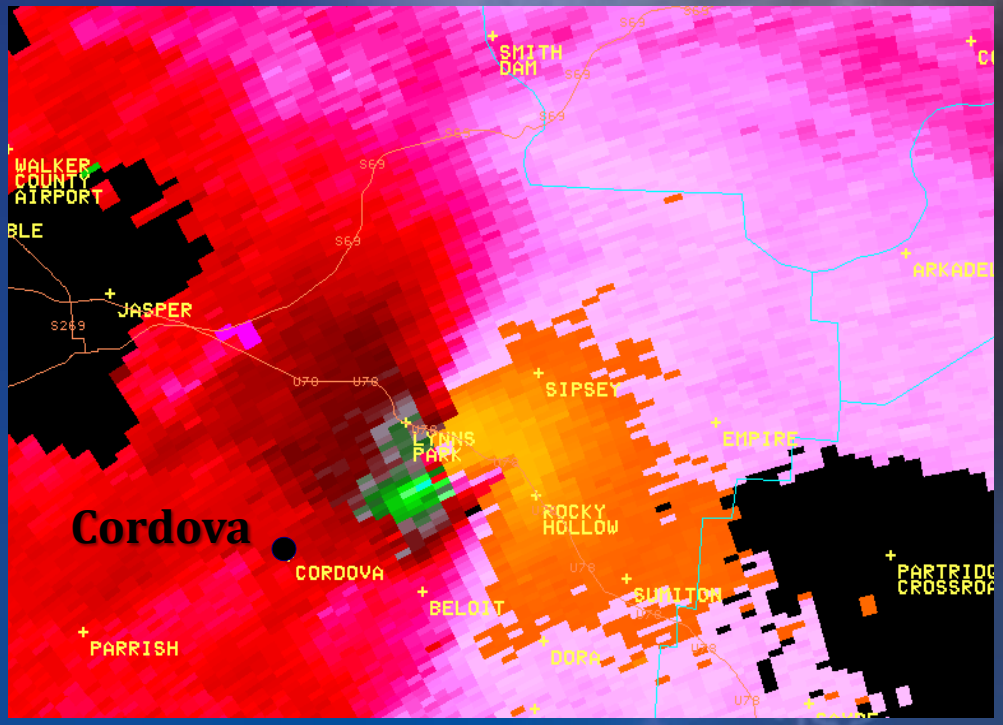
Hackleburg, Al

- Touched down at 3:05 pm just west of Hamilton.
- Moved northeast at 66 mph.
- Increased to an EF-5 as it entered Hackleburg
- Crossed the CWA line at 3:28 pm.



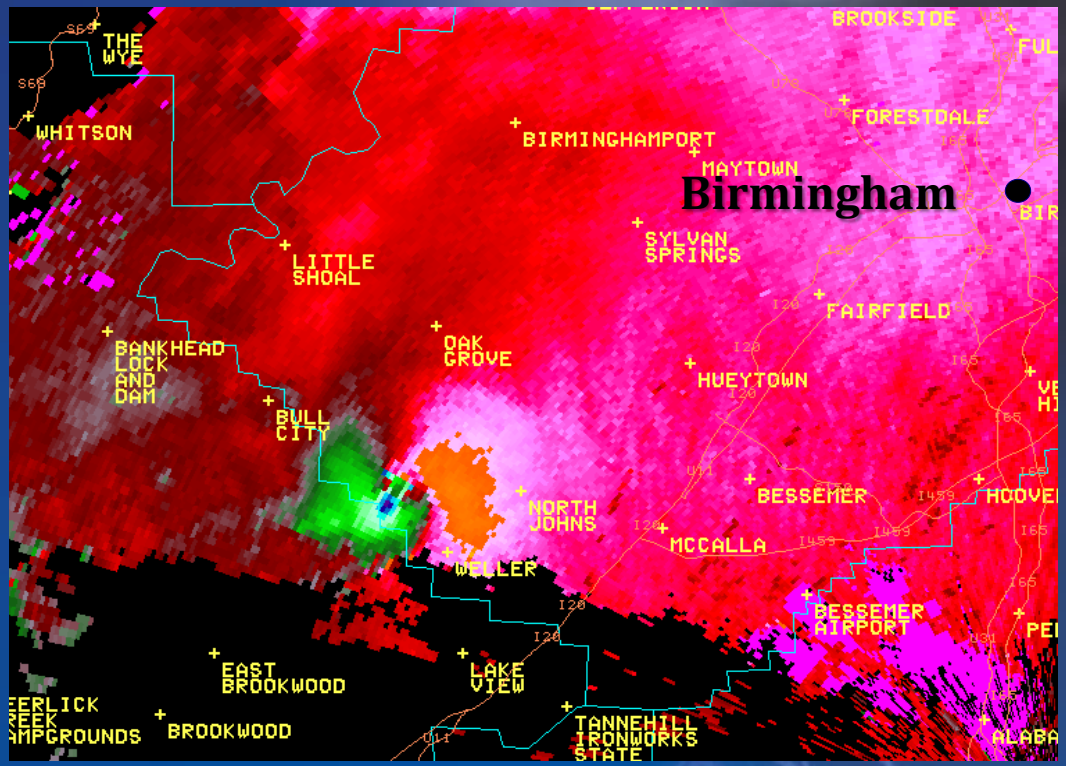
Cordova

- Touched down at 3:40 pm in Pickens County.
- Moved northeast at 54 mph.
- Increased to an EF-4 just northeast of Cordova, Al.
- Crossed the HUN/BMX CWA line several times before leaving BMX CWA at 5:50 pm.



Tuscaloosa-Birmingham

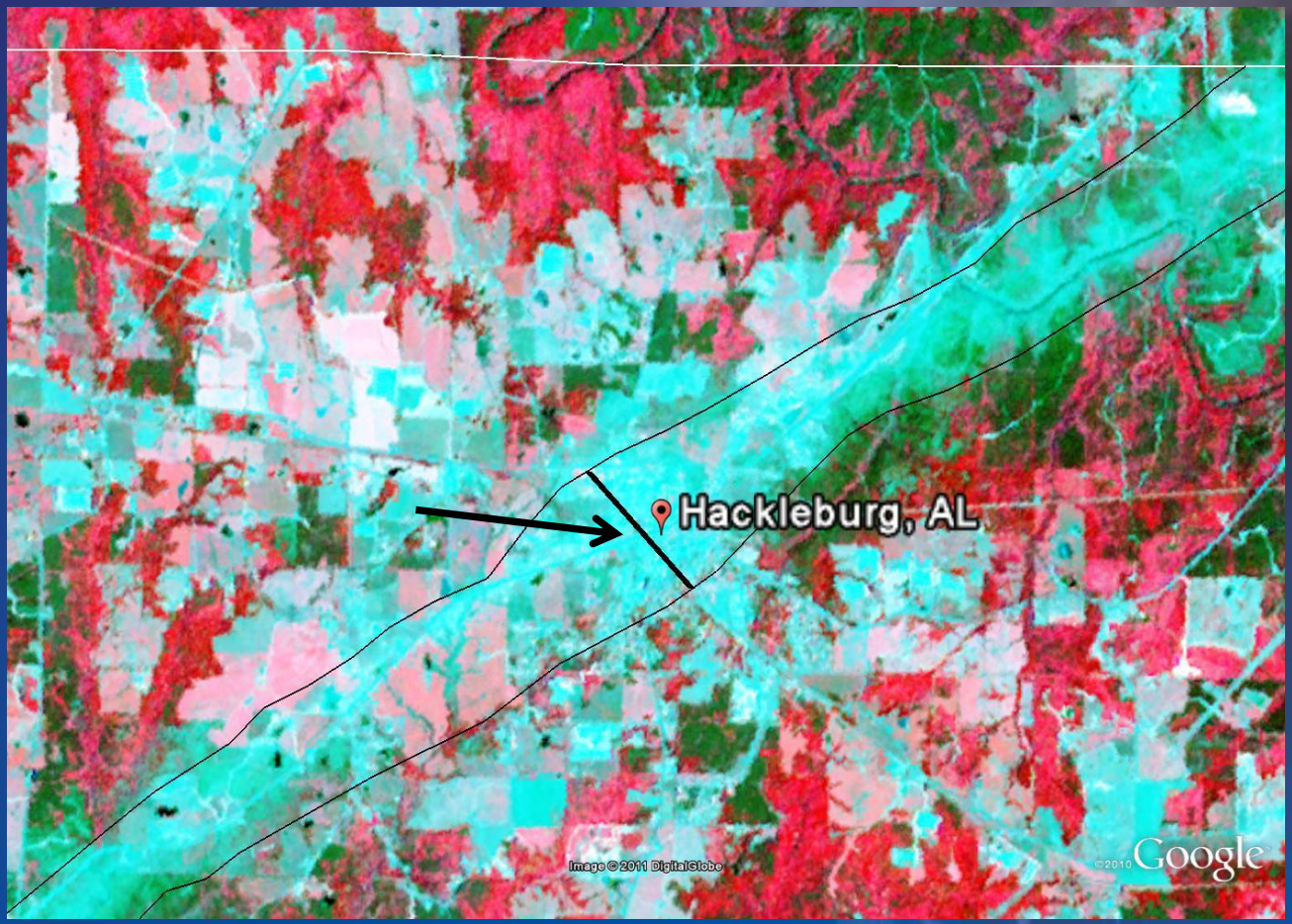
- Touched down at 443 pm in northern Greene County.
- Moved northeast at 61 mph.
- Increased to an EF-4 in Tuscaloosa.
- Lifted at 6:14 pm 4.6 miles north of the Birmingham-Shuttlesworth International Airport



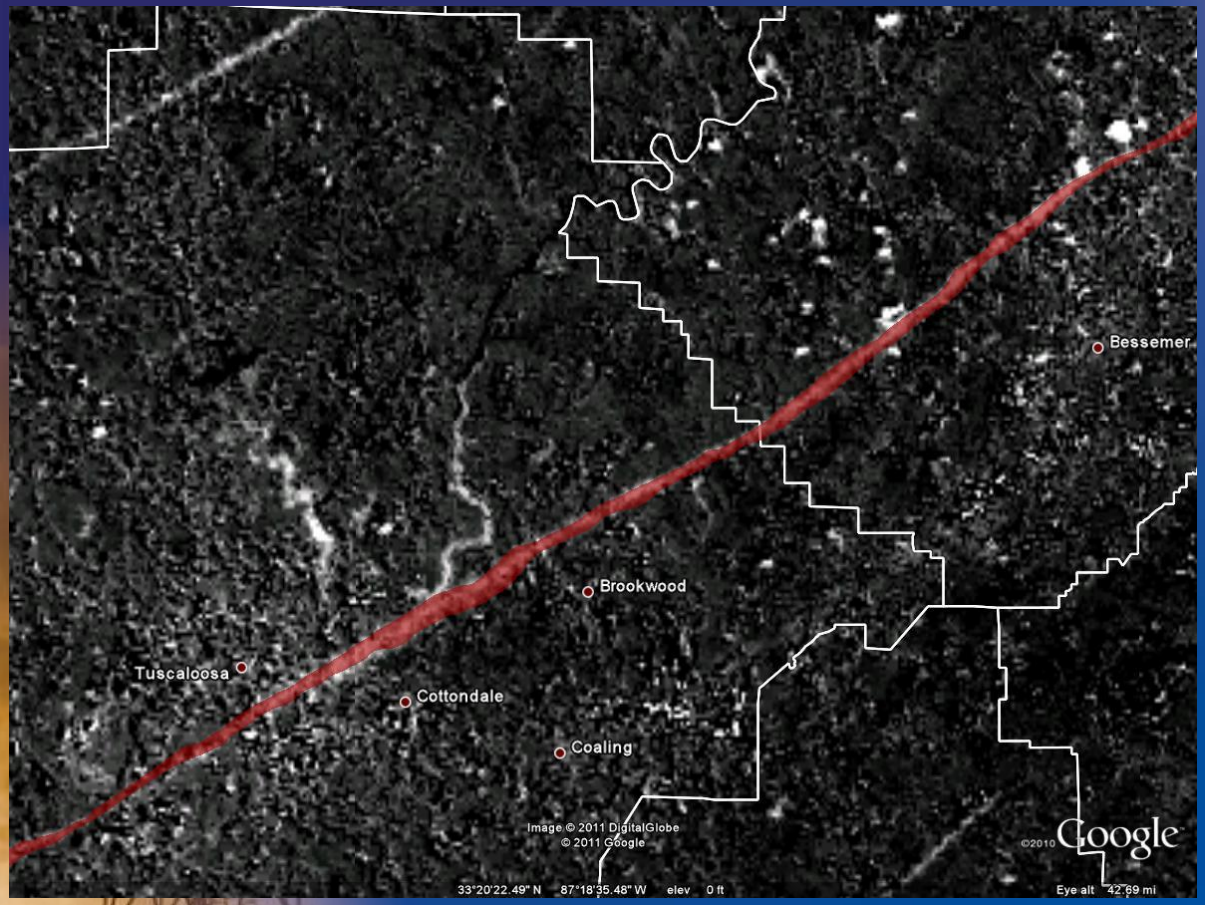

Dugan Ave

Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER)

- 15 m resolution data.
- Used to identify urbanization areas and vegetation areas.
- Tornado path can be easily seen.
- Path width could be determined based on satellite images



Moderate-resolution Imaging Spectroradiometer (MODIS)



- 250 m resolution
- Channel 1 difference
- Path characteristics are clearly seen
- Damage swaths can be more accurate and detailed.

Advantages

- Allow for more efficient use of time on storm surveys, if the data are more readily available.
- Quickly determine path beginning and ending point.
- Determine the curvature and width of the path more quickly.
- Allows surveyors to view areas of the path that are otherwise inaccessible.
- Intersecting damage paths can be separated.

Disadvantages

- Satellite images may not be available due to the temporal resolution.
- Clear skies are required to be able to see the ground.
- Availability of the raw data for the widest possible audience, i.e. GIS analysts and the remote sensing community.
- Not all tornado paths can be seen from satellite.

Why is this important?

- In the current economic climate, our resources are becoming limited.
- When big events occur, we cannot physically survey every mile of every track.
- Satellites have no boundaries, therefore we will be able to see every part of the track.
- Helps in coordinating track paths between WFOs.


Questions?