

# **North DeLand EF-2 Tornado August 18, 2020**

## **Orange City EF-0 Tornado**

### **Event Summary**

Central Florida was under a deep layer of southwesterly flow with a mid and upper level trough across the eastern Gulf of Mexico and the low level ridge axis draped across south Florida. The observed sounding from Cape Canaveral (XMR) at 15Z showed fairly cold temperatures aloft approaching -9 degrees Celsius along with deep moisture of around 2.0” of precipitable water.

Under this environment, numerous showers and lightning storms developed along the west coast sea breeze early in the afternoon that then quickly pushed across east central Florida from mid to late afternoon. The Deland Municipal Airport (KDED) started reporting thunderstorms with light rain just after 2:00 pm that continued through 3:30 pm, but this was not enough to stabilize the environment. The storms did however leave an outflow boundary with surface observations showing winds from the ENE at KDED and from the SSW at the Orlando-Sanford International Airport (KSFB) just prior to tornado formation. Sufficient convergence and increased wind shear along the boundary locally enhanced the storm-relative helicity, and enough residual instability made the environment supportive for a strong tornadic supercell that produced EF-2 damage in the city of DeLand, along with a very brief tornado that produced EF-0 damage in Orange City. Total damage from the two tornadoes was estimated to be approximately \$8.05 million.

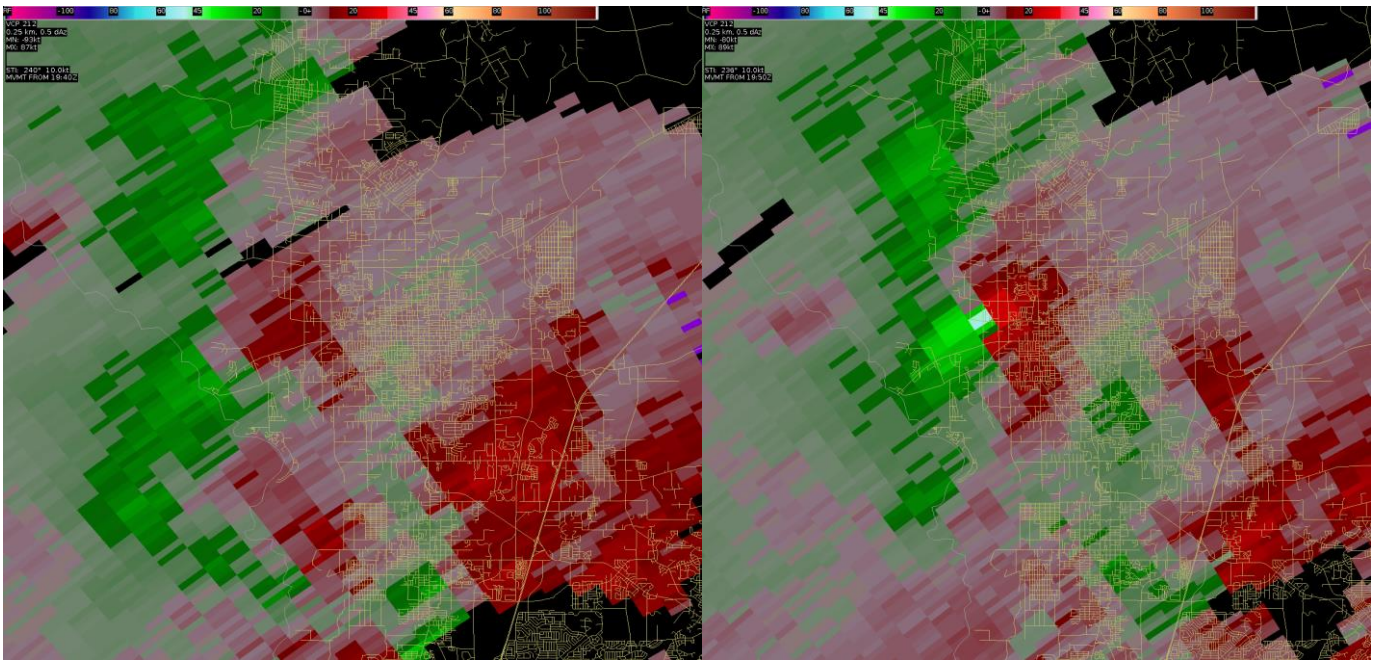
### **Tornado #1 | North DeLand (EF-2)**

- One hundred and sixty three structures were damaged and numerous trees and powerlines were downed along the path.
- Time: 3:48 pm to 4:02 pm EDT
- Path length: 4.59 miles
- Path width: 550 yards
- Injuries: 1 | Fatalities: 0
- Damage estimate total: Approximately \$8.01 million

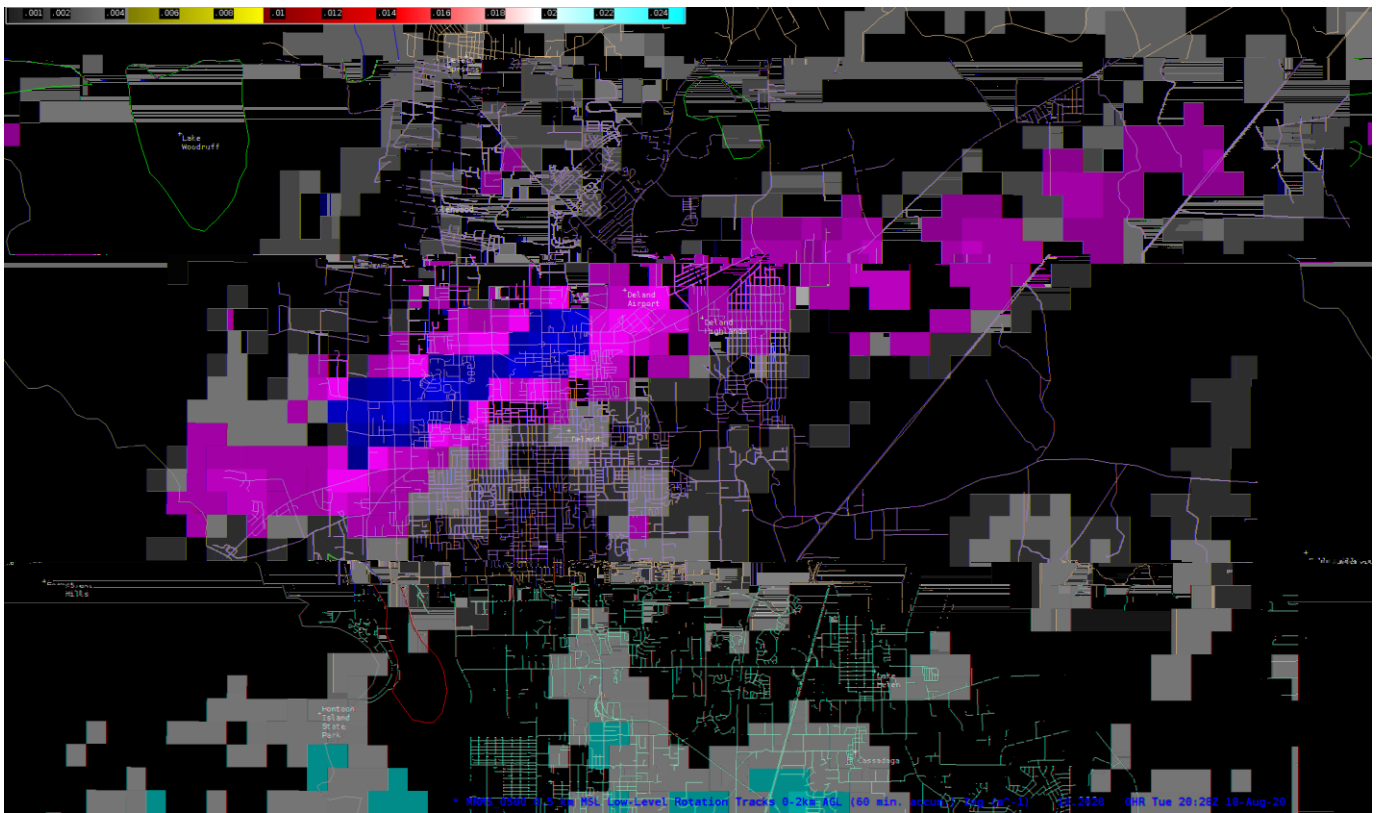
### **Tornado #2 | Orange City (EF-0)**

- One mobile home was destroyed and several large tree branches were downed.
- Time: 3:48 pm to 3:49 pm EDT
- Path length: 0.05 miles
- Path width: 70 yards
- Injuries: 0 | Fatalities: 0
- Damage estimate total: Approximately \$40,000.

## Radar Reflectivity & Other Images

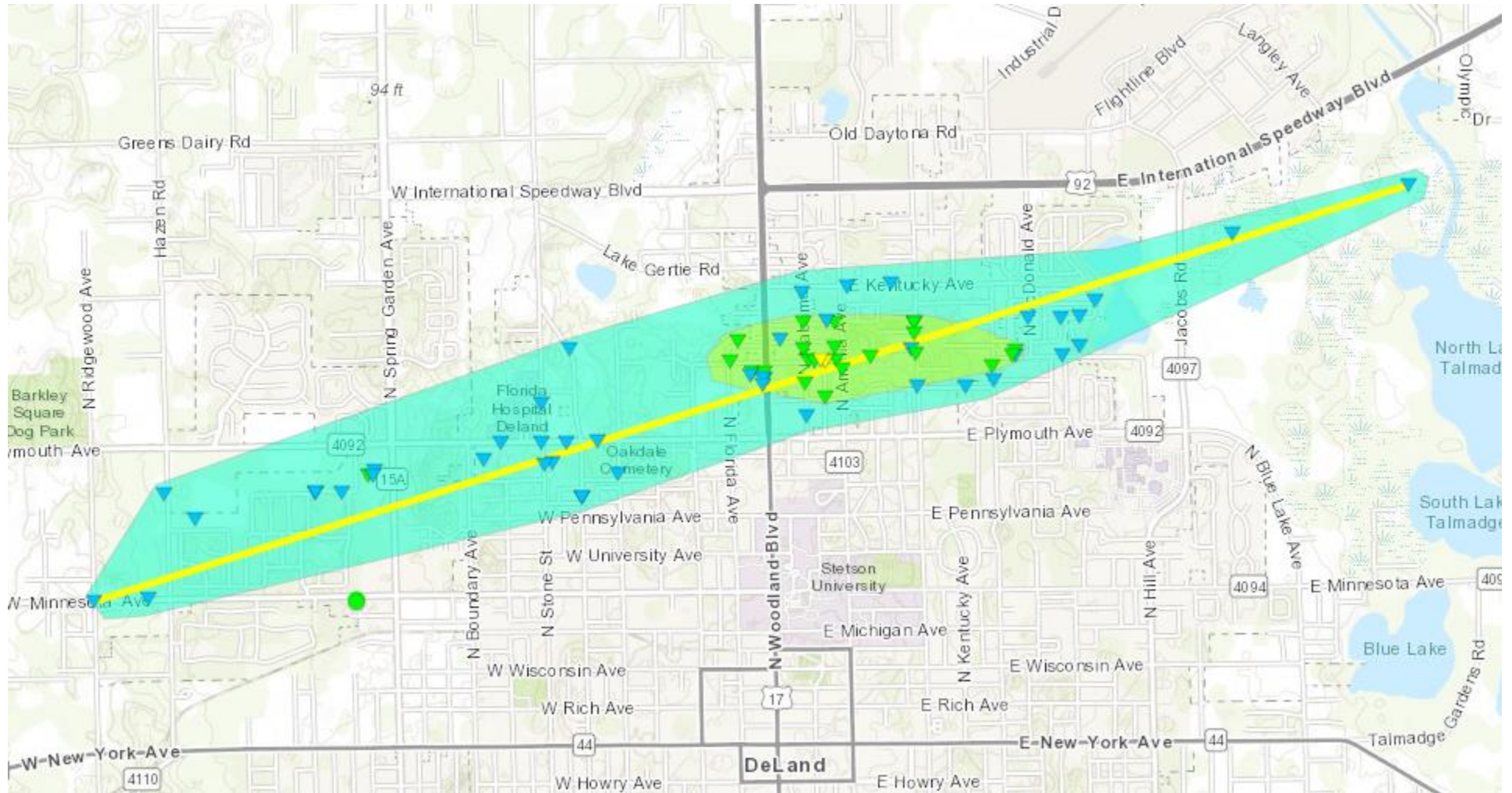


Above are several Storm-Relative Motion (SRM) velocity images from the KMLB Doppler Radar that show the rapidly intensifying mesocyclone over North DeLand. The two images are from August 18, 2020, the image on the left is the SRM at 3:40 pm EDT, and the image on the right is the SRM at 3:46 pm EDT.



The image above is a composite of the Multi-Radar Multi-Sensor (MRMS) low-level shear tracks through DeLand. The bright colors signify stronger rotation being seen on the radar, and in this case the track shows the path of the mesocyclone associated with the supercell over DeLand.

## EF-2 North DeLand Tornado Track



**Legend For Track Image** (polygons indicate tornado damage swath, while individual triangles represent damage survey locations)

- EF2
- EF1
- EF0

**Damage Photos from North DeLand EF-2 Tornado**  
Photos taken by NWS Storm Survey Team (unless otherwise stated)



*Aerial image of tree damage along North Boundary Ave.  
(source: Volusia County Emergency Management)*



*EF-1 damage occurred at a storage facility near W Plymouth Ave & Spring Gardner Ave*



*Aerial image of tree and home damage near W Washington Ave.  
(source: Volusia County Emergency Management)*



*Damage to a building along North Woodland Blvd.*



*Tree damage along E Washington Ave. and N Amelia Ave.*



*EF-2 tornado damage to homes along E Washington Ave.*



*Aerial images of EF-2 damage along E Washington Ave.  
(source: Volusia County Emergency Management)*



**Damage Photos from Orange City EF-0 Tornado**  
Photos taken by NWS Storm Survey Team



*Damage to trees and one mobile home along County Road 4101 and E Graves Ave.*