Abstract:

In this talk I will survey some of the basic facts about the size, intensity and duration of tornadoes. In the last decade or so, major advances in gathering information on the structure of tornadoes (i.e. how the wind in the tornado varies with radius and height above the ground) has come from mobile Doppler radar which can be positioned at close range (within a few kilometers) to the tornado. Although there are important limitations to the mobile-Doppler radar, the database using this technology has increased to the point where certain generalizations about tornado structure are now possible. Perhaps the most important generalization is that the strongest winds in a tornado are found at the lowest observable level which is approximately 10 meters off the ground. I will show that this finding (among others) is consistent with theoretical models and laboratory data.