Data shows fewer tornado days in U.S. but more per event over past couple decades

October 17 2014, by Bob Yirka

Image: U.S. National Oceanic and Atmospheric Administration, via Wikimedia

A trio of researches with the U.S.'s National Oceanic and Atmospheric Administration (NOAA) has found that though there are fewer total days per year when tornados occur in the U.S., the number that occur on days when there are tornados has increased over the past couple of decades. In their paper published in the journal *Science*, Harold Brooks, Gregory Carbin and Patrick Marsh describe how they studied weather data over the past half century and what they found when looking for trends.

Tornados happen in many places, but because of its unique geography, the U.S. has more than any other country—mainly due to the lack of a large mountain dividing east and west. There has been speculation recently, that global warming is causing more tornados to occur—though it has also been suggested it only seems that way because of how quickly

information about tornadic events disseminates in the modern era. The trio at NOAA decided to let hard facts tell the story. They collected weather data from the national storm database, which goes back to 1954, to see if they could coax out any patterns (they only included tornados at least as strong as an F1).

As it turns out, the trio did find a pattern, they say the data shows very clearly that the U.S. actually has a trend of having fewer days in which there is a tornado over the past two decades—that's the good news. The bad news is that on days when there is a tornado, there are more than there used to be. The data shows that back in the 1970's there were just .6 days a year that had 30 or more tornados—after the turn of the century, that number had risen to 3 days per year. Curiously, the numbers suggest that the country still experiences on average, the same number of tornadoes each year, approximately 1,200—they're just spread out differently. They also noted that the beginning and end of the tornado "season" in recent years has fluctuated more wildly than the years prior to that.

The researchers cannot say of course why the spread of tornados has changed in the U.S., though some might suggest it's due to global warming or even changes in atmospheric conditions in parts of the country due to pollution or other unknown factors. What is clear, is that something is causing a change, and there is now evidence of it, providing a path for moving forward for better understanding what is really going on.

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