

Alabama, March 3, 2019







Enhanced F Scale for Tornado Damage

An update to the the [original F-scale](#) by a team of meteorologists and wind engineers, to be implemented in the U.S. on 1 February 2007.

FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

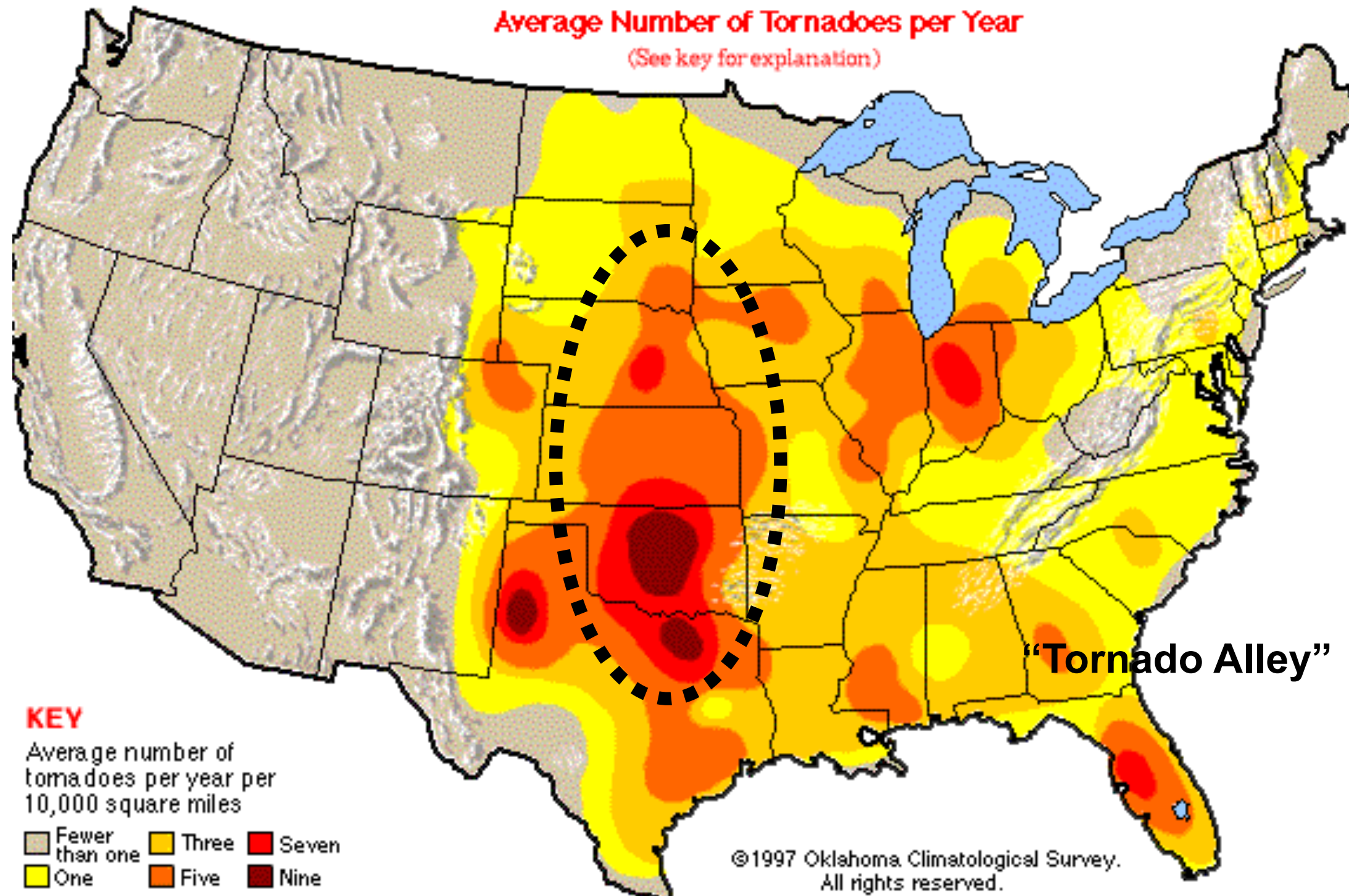
***** IMPORTANT NOTE ABOUT ENHANCED F-SCALE WINDS:** *The Enhanced F-scale still is a set of wind estimates (not measurements) based on damage.* Its uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to the 28 indicators listed below. These estimates vary with height and exposure. **Important:** The 3 second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, "one minute mile" speed.

Degrees of Damage For Framed House (in miles/hr)

DOD	Damage Description	EXP	LB	UB
1	Threshold of visible damage	63	53	80
2	Loss of roof covering material (<20%), gutters and/or awning; loss of vinyl or metal siding	79	63	97
3	Broken glass in doors and windows	96	79	114
4	Uplift of roof deck and loss of significant roof covering material (>20%); collapse of chimney; garage doors collapse inward or outward; failure of porch or carport	97	81	116
5	Entire house shifts off foundation	121	103	141
6	Large sections of roof structure removed; most walls remain standing	122	104	142
7	Exterior walls collapsed	132	113	153
8	Most walls collapsed except small interior rooms.	152	127	178
9	All walls collapsed	170	142	198
10	Destruction of engineered and/or well constructed residence; slab swept clean	200	162	220

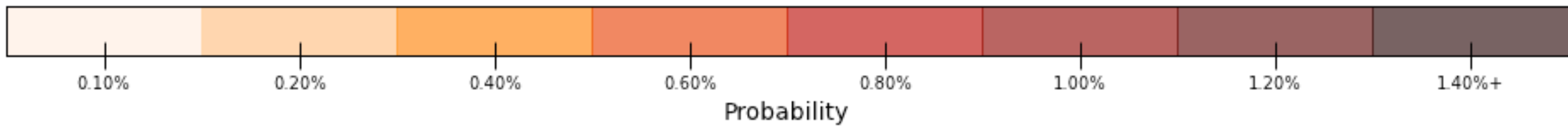
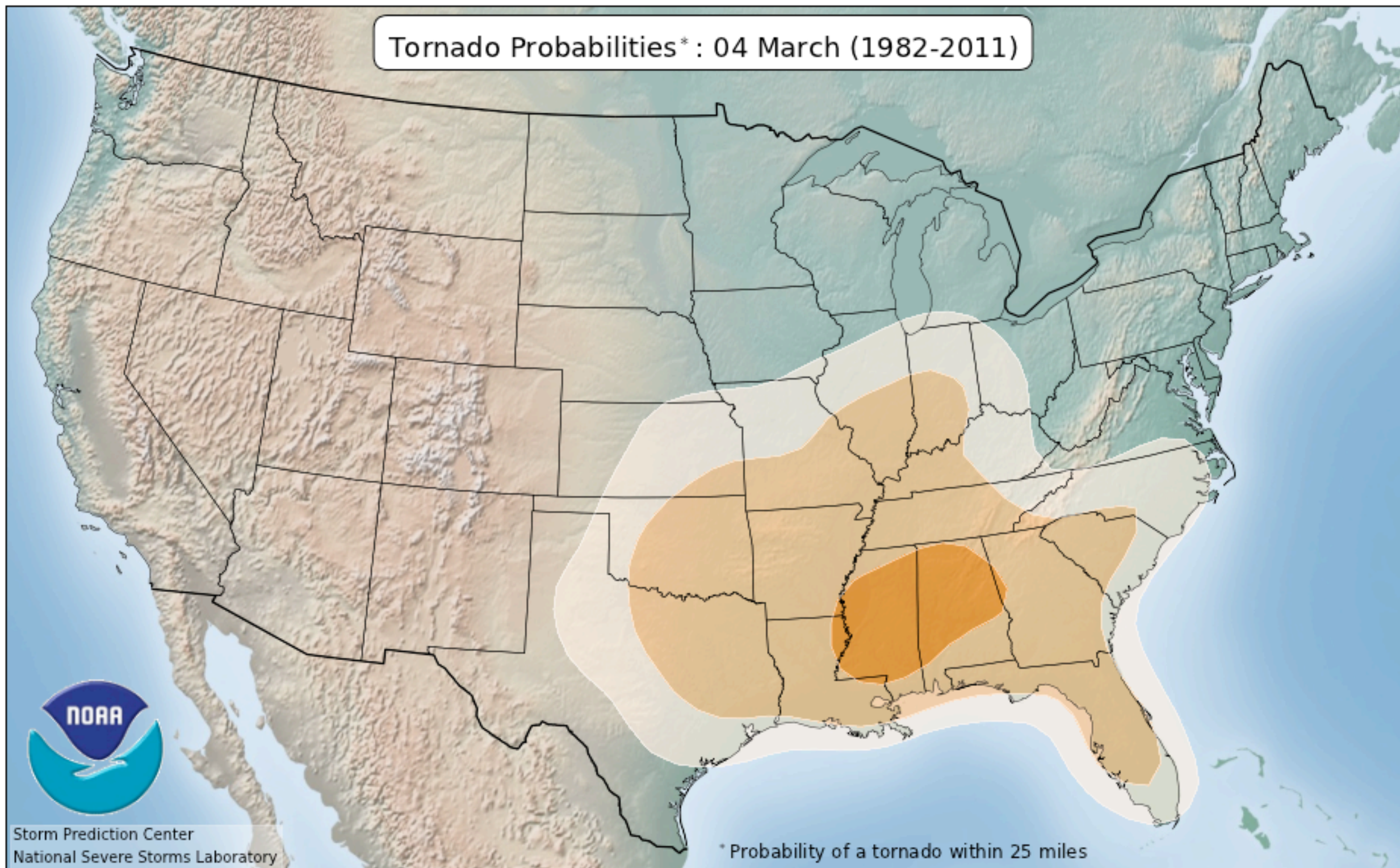
LB = lower bound, UB = upper bound, EXP = expected.

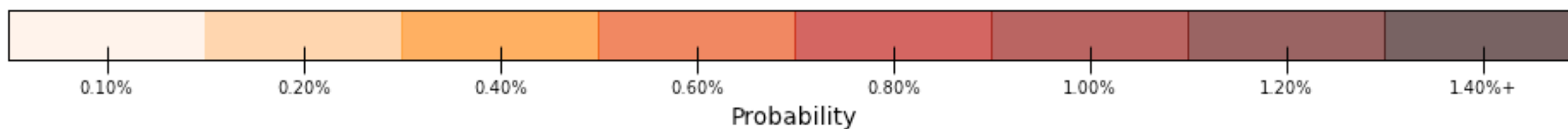
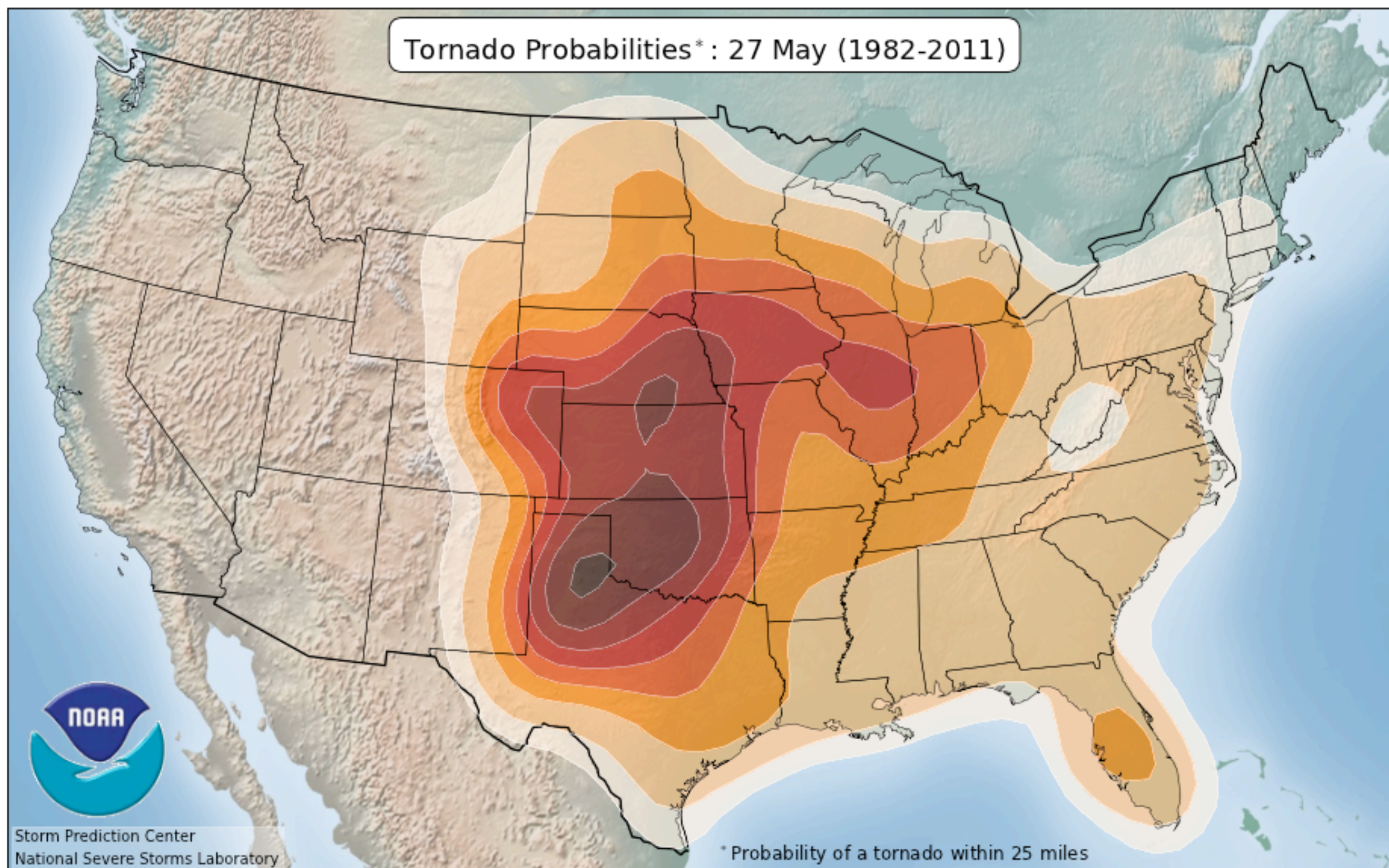
US Tornado Climatology



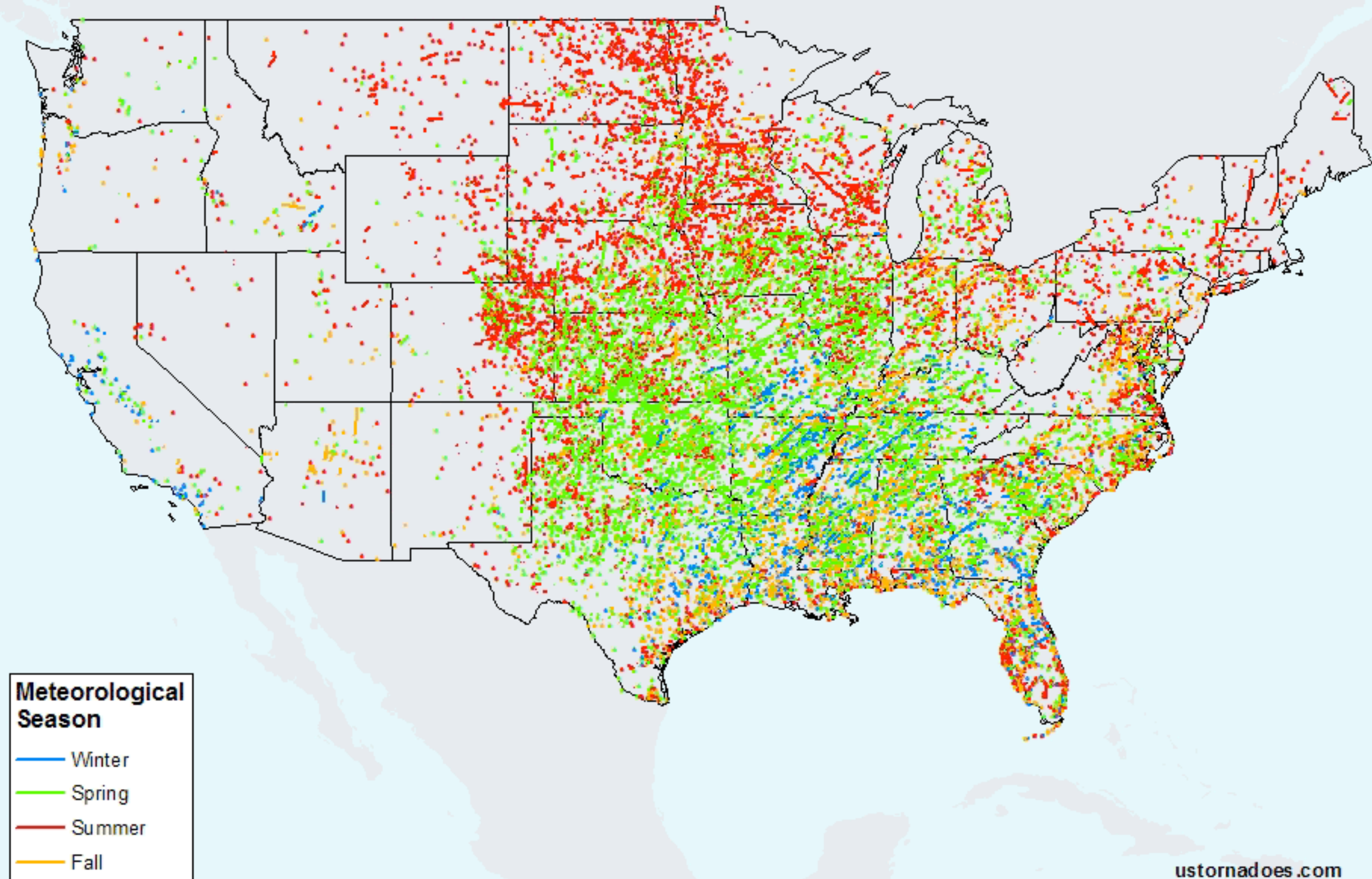
<https://www.spc.noaa.gov/new/SVRclimo/climo.php?parm=allTorn>

Tornado Probabilities* : 04 March (1982-2011)





Tornadoes by Season during the 1991-2010 NOAA Averaging Period





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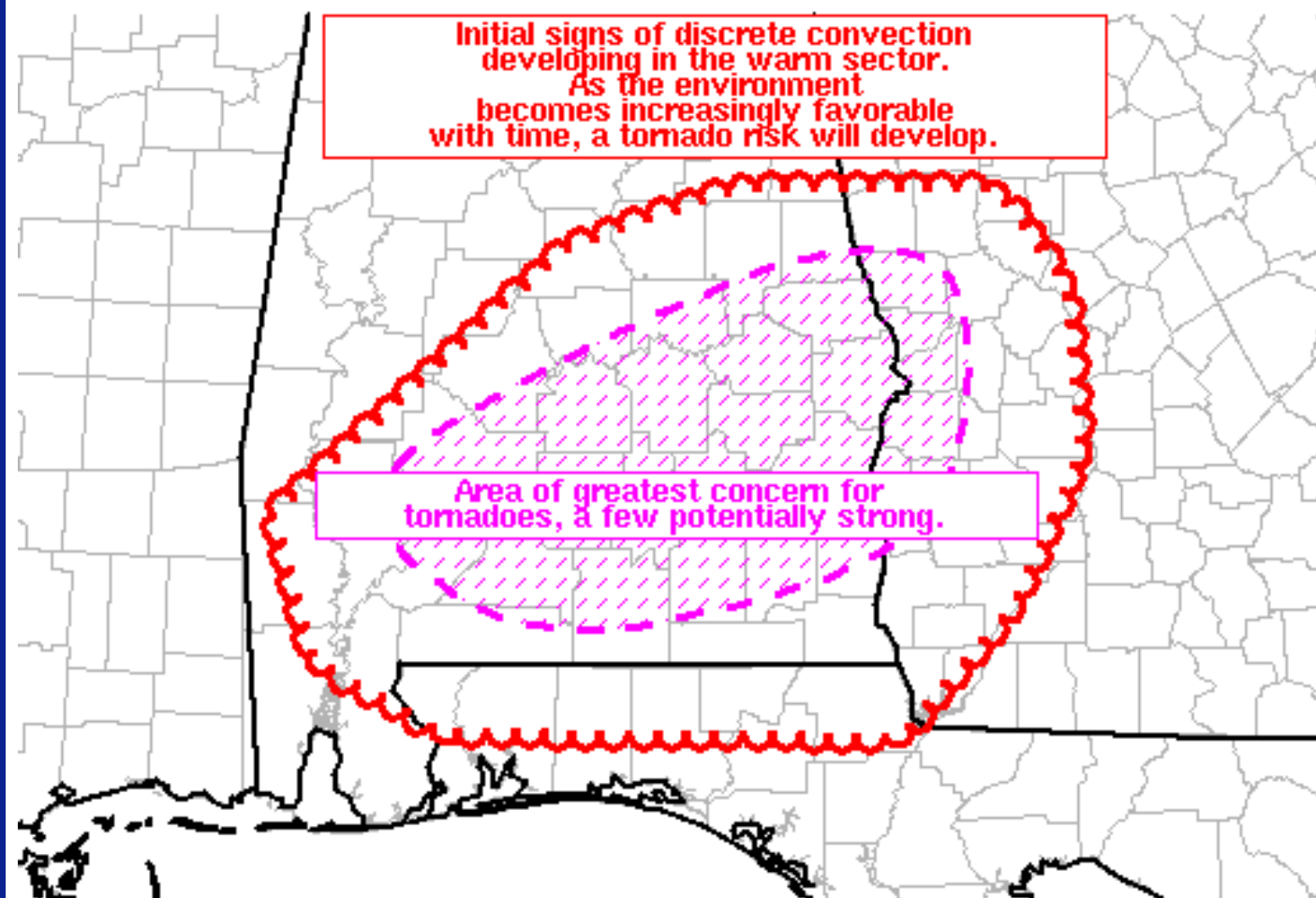
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NWS Storm Prediction Center Norman OK
0959 AM CST Sun Mar 03 2019

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Areas affected...southern and central AL...western FL
Panhandle...southwest and west-central GA

Concerning...Severe potential...Tornado Watch likely

Valid 031559Z - 031800Z

Probability of Watch Issuance...95 percent

SUMMARY...The initial signs of discrete convective development are occurring late this morning in the warm sector. Rapid environmental changes are forecast to occur between 10am CST/11am EST and the mid afternoon.

DISCUSSION...Visible satellite imagery shows widespread cloud cover across the destabilizing warm sector to the south of the primary frontal zone where the surface low is forecast to develop eastward across central AL into north-central GA later today. Surface dewpoints over the FL Panhandle and far southern AL have risen around 3 degrees F in the past hour and are indicative of strong poleward moisture advection occurring as the surface cyclone develops. The warming/moistening are contributing to MLCAPE increasing from near 0 J/kg to upwards of 1000-1500 J/kg by early-mid afternoon.

Late morning VAD data show around 35-45 kt southwesterly 700mb flow from KMOB/KBMX/KMXX/KEOX in central and southern AL but stronger flow (50-55 kt) is now being observed farther west in Jackson, MS (KDGX) and Slidell, LA (KLIX). Models show the flow intensifying further over AL and GA this afternoon (55-60 kt 700mb). The end result is a hodograph exhibiting little weakness (no veer-back-veer tendency or a weak layer of winds). In summary, as moderate buoyancy and strong/veering flow through the profile combine with moist low levels, the threat for strong low-level mesocyclones associated with the discrete storms will increase, along with a corresponding risk for tornadoes of which a few may be strong.

..Smith/Hart.. 03/03/2019

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...FFC...TAE...BMX...MOB...

LAT...LON 31638830 32898673 33168582 33148441 32698405 31948400
31268437 30678499 30698736 30988805 31638830