



Tornado formation as geologically significant phenomena: interaction of geology to atmosphere series-1

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Tornado formation seems to be quite a geologically significant event, although little attention has been paid to geological interference on the meteorological phenomena. Probability and statistic reduction of tornado data is demonstrated by making use of tornado touch-down spots recorded over a few decades, reported by NOAA. Tornado data employed in this study is provided from a relatively flat western part of Kansas state as a Midwest region in the United States so as to eliminate topographic effects to extract geological effects alone. This probability study concludes that tornado occurrence is not randomly distributed over the ground surface and is rather highly extremely significantly location-specific phenomena. Excluding topographic effects, the results strongly suggest that the cause of tornado may be inherited in subterranean geological origin. Tornadoes tend to hit same spots repeatedly during decades of period. This probability and statistic study of tornado touch-down data is analyzed by means of statistic possibility of double or multiple hit occurrences in same ground spots in during a period of decades in a flat Midwest region as a typical nontopographic significant location. The conclusion of this mathematic study in statistically nullifying "random" spot occurrence of tornadoes indicates that the occurrence of these locally induced severe weather phenomena is inherent to subterranean geological formation in conjunction with certain weather conditions such as thunderstorm passage over such regions, in relation to moisture, temperature, seasons, latitude, and other possible storm-forming elements.