



The number of active global thunderstorms

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It has been estimated, nearly a hundred years ago, that there are approximately 2000 thunderstorms active at any moment. We test the theory and trends in global thunderstorms by a clustering scheme that utilizes lightning strikes detected by the World Wide Lightning Location Network (WWLLN). For our basic cluster parameters (such as minimum size, lightning density, and time) we performed correlations with observations of cloud temperature taken from the Meteosat satellite. Our findings suggest that the global number of storms at any given time is less than 2000 and show significant daily and seasonal variability in the number and characteristics of the storms. The diurnal variability appears to match the "Carnegie Curve" measurements of the daily variations of the fair weather electric field.