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On the distribution and seasonal cycle of transient luminous events above Europe

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In the year 2000, the first 40 sprites were observed over European thunderstorms using low-light cameras. Since then, Eurosprite campaigns have been conducted to observe sprites and other transient luminous events (TLEs), expanding into a network covering large parts of Europe and coastal areas. Over 2009 to 2011, the number of optical observations of TLEs exceeded 1000 per year. We present a climatology of over 3500 TLE observations and study for the first time their distribution and seasonal cycle above Europe.