



Temporal and radiometric statistics on lightning flashes observed from space with the ISUAL spectrophotometer.

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The Imager of Sprites and Upper Atmospheric Lightning (ISUAL) on the FORMOSAT-2 satellite was launched in 2004 and record transient energetic event mechanisms that generate Transient Luminous Events (TLEs). ISUAL is an instrument with a imager and a multichannel spectrophotometer which are able to measure the brightness from Far-Ultra Violet to Near-Infrared for TLEs, but also for lightning flashes. This space mission identified, classified and documented several types of TLEs between 2004 and 2014. However, no statistical analyses on lightning have already been realized. The last studies have been made since several decades even if the instruments have been improved as years go by. In this paper, we focus on lightning flashes data that do not create TLEs. Some statistics about brightness or temporal dynamic are presented from fitted waveforms from Far-Ultra Violet to Near-Infrared. Furthermore, the atmospheric effect is corrected for each channel from the spectrophotometer. Our results are also compared with previous experiments performed from visible to Near-Infrared domains.