



Sprites Caused by High-Altitude Nuclear Explosion?

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Short light flashes can be seen in the movie of artificial aurora produced by “Starfish” nuclear test. The observations were performed from Samoa near the area magnetic conjugate to the place of explosion. Flash durations were shorter than the movie frame rate, and some of the flashes strikingly remind sprites. If these transient luminous events are real, they may be very important for the understanding of physics of sprites. However, it is also possible that the observed ‘flashes’ are results of the original film damages. We discuss this possibility using the available digital version of the movie. Whereas a number of film defects as scratches, spots etc. can be found in the movie, no one of the light flashes can be unambiguously identified with film defect. Numerous light flashes are also present in the movie taken from Tongatapu 875 km south from Samoa. They occur at the altitudes >60 km, but their spatial structure is not resolvable because of larger distance.