Physicists explain thunderstorm 'sprites'

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U.S. physicists have determined "sprites" -- bright bursts of light seen in thunderstorms -- travel at 1-10th the speed of light.

But the brief explosions are so fleeting, scientists still don't know much about how they work, National Geographic News reported.

In the study conducted at the University of Alaska-Fairbanks, scientists recorded sprites using ultra high-speed digital cameras at 10,000 frames per second.

"We realized that all these branches and long luminous features that we saw in the sprites, that they didn't really exist," lead author Hans Niel told NGN. "It's sort of like you take a time exposure on a highway, and then all the tail lights of the cars make long streaks in the image."

Study co-author David Sentman told NGN sprites are believed produced when lightning bolts create an electrical field above a storm that accelerates electrons in the middle atmosphere to collide with gas molecules and glow.

Sprites were predicted by Nobel laureate physicist C.T.R. Wilson in 1925. Their existence was confirmed in 1989 by University of Minnesota physicist John Winkler who caught them on videotape.

Sentman called them "sprites" shortly afterward and the name stuck.