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Comparison of Sprite-Halo Characteristics Imaged Over the USA and South America LANCE PETERSEN, MIKE TAYLOR, DOMINIQUE PAUTET, Utah State University, MATTHEW BAILEY, Trinity College, STEVE CUMMER, Duke University, CENTER FOR ATMOSPHERIC AND SPACE SCIENCE AT UTAH STATE UNIVERSITY TEAM — Sprites and Halos are prominent members of an extraordinary family of Transient Luminous Events (TLEs) that have been discovered over the past 20 years. Halos are short-lived (few millisecond) diffuse optical emissions that appear as horizontal bright disks suspended above distant thunderstorms. They frequently precede the formation of a vertically structured sprite. Reports of halos are relatively few and indicate a limited height range centered at approximately 80 km with optical diameters up to about 100 km. Unlike sprite events, which occur almost exclusively in association with large positive cloud-to-ground lightning discharges, halos have recently been observed from satellites in association with both positive and negative discharges. This presentation compares the optical and electrical properties of a large number of halos and sprite-halos imaged over the U.S. Great Plains and over Northern Argentina in South America. Our goal is to improve current knowledge of their characteristics and variability.

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