



## **ENA Signatures of Precipitating Ring Current Ions Observed by the TWINS Stereo Imaging Observatory**

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Energetic neutral atom (ENA) stereo images are routinely obtained by the dual-spacecraft Two Wide-angle Imaging Neutral-atom Spectrometers (TWINS) mission. During the quiet to moderately disturbed geomagnetic conditions that have prevailed during 2008-2009, the ENA images have contained strong emissions from low altitudes, i.e. close to the limb of the Earth. A statistical analysis of over one hundred TWINS observation intervals is used to determine the dependences of the occurrence and intensity of these emissions versus viewing geometry, magnetic local time, and geomagnetic activity. In ten case studies, stereo imaging (observation from two widely-separated vantage points) is used to analyze the spatial dependence of these low-altitude ENA emissions. Results are also shown highlighting the work being done to recover precipitating ion fluxes from the ENA signals.