



## **On the SKR and Saturn auroras relationship**

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We analyze a large SKR data set recorded by the RPWS instrument aboard Cassini in orbit around Saturn, namely all available data between 2006 and mid-2010, when Cassini was at less than 10 radii from Saturn. By using direction finding and polarisation capabilities of the instrument, we confirm that SKR is statistically associated with auroras from the main oval (L-shell $\sim$ 15), in both North and South hemispheres. More surprisingly, we find that the SKR apparent location is constrained by observer's position, both in longitude and latitude with respect to Saturn. This provides a simple explanation for the change of SKR polarisation state (circular to linear), when Cassini leaves equatorial regions during high inclination orbits.