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The extent of the chorus observed at Marion Island

Thursday, 14 July 2011 17:00 (2 hours)

On the 4 August 2010, chorus was observed at Marion Island from 03:00 - 07:00 UT (06:00 - 10:00 LT). Marion Island (46.9°S/37.1°E, $L = 2.62$) is within the plasmasphere during periods of low geomagnetic disturbance, making the observation of chorus there a rare occurrence. On the 4 August, a moderate geomagnetic storm occurred, with a maximum K_p of 6+, and a minimum DST of -70nT. These conditions compressed the plasmasphere to such an extent that Marion Island was near to, or outside, the plasmapause at the time of the emission, making the observation of chorus possible. On the same day, there chorus was also observed at SANAE IV ($L = 4.32$). The spectral properties of these chorus are different, meaning that the chorus observed at SANAE IV was generated in a different region to that observed at Marion Island. We present broadband data from both Marion Island and SANAE IV, and extent of the chorus generating region is inferred from DEMETER data.

**Level (Hons, MSc,
 PhD, other)?**

PhD

**Consider for a student
 award (Yes / No)?**

No

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

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