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Pc3 pulsations during low density events

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<p>We study the generation of Pc3 geomagnetic pulsations (22 – 100 mHz) measured at Tihany, Hungary during intervals of very low solar wind (SW) proton density (low density events - LDE's) when Np 1/cc. We know the main SW based drivers of Pc3's are SW velocity and interplanetary magnetic field (IMF) direction. However, it is observed that under very low SW density pulsation activity measured on the ground is paused, regardless of otherwise favourable conditions. A simple statistical study is performed to show the dependence of pulsation activity on Np, and we estimate a threshold Np, below which pulsations cease. Furthermore we use the growth rate of the ion beam instability, that generates the ULF waves upstream of the bow shock (which drive Pc3's), to explain the observed dependence of Pc3 pulsations on solar wind density.

Level (Hons, MSc,
   PhD, other)?

PhD

Consider for a student
   award (Yes / No)?

Yes

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

No

Primary author: Mr LOTZ, Stefan (SANSA: Rhodes University)

Co-authors: Dr MCKINNELL, Lee-Anne (SANSA: Space Science Directorate; Dept. of Physics and Electronics, Rhodes University); Dr SUTCLIFFE, Peter (SANSA: Space Science Directorate)

Presenter: Mr LOTZ, Stefan (SANSA: Rhodes University)

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