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ON THE ORIGIN OF VLF DISTURBANCES DETECTED AT ANTARCTIC MIDDLE LATITUDES

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Using a Very Low Frequency (VLF) receiver at Comandante Ferraz Brazilian Antarctic Station (62°34´S, 58°23.5´W; L=2.25), we analyzed the amplitude variations of detected signals propagating from station Hawaii (21°25´N, 158°09´W; NPM). The data analysis is performed for 2003 and 2004, and consists in to compare the occurrence rate of the VLF events with the lightning incidence and the geomagnetic activity. The purpose of this work is to define which is the most efficient driver inducing energetic electron precipitation from radiation belts, the lightning-induced whistler waves, or the influence of the geomagnetic storms. The preliminary results show the rate of VLF events is better correlated with the geomagnetic activity, which shows the same seasonality where the highest incidence is in the equinoxes. A more detailed analysis including solar wind parameters will be discussed.