

Qualification Study of Magnetic Index K South American

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The purpose of this study is to qualify a new magnetic activity index, the magnetic South American K (Ksa), concerning to the planetary magnetic index Kp. The Ksa index was developed by the Brazilian Study and Monitoring Program Space Weather (Embrace), in the National Institute for Space Research (INPE). In this analysis are used magnetic data collected by the magnetometers Embrace Network and data from the International Real-time Magnetic Observatory Network (INTERMAGNET). The magnetometers measure the temporal variation of the Earth's magnetic field and they allow the identification of the energy deposition in the terrestrial magnetospheric system. Therefore, in this study we present preliminary results of the methodology used for this qualification of Ksa index. The results are presented in according to seasonal variation, and magnetic conditions. Moreover, the correlation is discussed between magnetic Ksa and Kp ratio in order to validate this new index. Finally, the results show that the Ksa index has a good estimate of geomagnetic activity in the South American sector.