

Study for the qualification of the magnetic data used form deriving index K South American

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ABSTRACT

In the present work, we summarize the results obtained for the study for the qualification of the magnetic data used form deriving the South American K (K_{sa}) index, based on mathematical and statistical techniques. The K_{sa} index was developed by the Brazilian Studies and Monitoring of Space Weather (Embrace) Program of the National Institute for Space Research (INPE). It uses magnetometer data collected by the Embrace Magnetometer Network (Embrace MagNet), which includes a magnetic station installed at the Vassouras Magnetic Observatory, Brazil (VSS, 22.4° S, 43.6° W). Therefore, we compared the magnetic data collected by the Embrace MagNet station with the same data collected by a magnetometer of the International Real-time Magnetic Observatory Network (Intermagnet) chain, installed at the same site. The results are presented and discussed in terms of an analysis of the quality and precision of the magnetic data of the Embrace MagNet and of used methodology.