

Trimpi events solar minimum incidence: the beginning of a model to re-evaluate the radiation belts equilibrium

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We present the first results of an incipient attempt to re-modeling the Van Allen electron radiation belts equilibrium mechanisms. During the 23rd cycle solar minimum period (1995-1997) the Trimpi occurrence at the Antarctica Peninsula region was collected and studied. With statistical techniques we have reproduced the pattern of the events incidence on that period. The 1998 year was also analyzed and two well defined geomagnetic storms (01-07 May and 26-31 Aug) were studied in association with the Trimpi events data. We have confirmed the narrow relationship between events occurrence rate and geomagnetic activity. The next step, in order to carry on the model, will be the modeling of the solar maximum Trimpi occurrence and to compute these results in the present radiation belts population models.