

Forecast of solar radiation storms by on-line NM one-minute data. 2. Automatically determination of FEP spectrum

L. I. Dorman^{1,2}, M. Murat³, L. A. Pustil'nik¹, A. Sternlieb¹, and I. G. Zukerman¹

¹Israel Cosmic Ray Center and Emilio Segre Observatory, affiliated to Tel Aviv University, Technion and Israel Space Agency, Israel

²IZMIRAN, Russian Academy of Science, Troitsk

³SOREQ, Israel

Abstract. In paper Dorman et al. (2001) was described how works automatically the program "FEP-Search", determined on the basis of on-line one-minute NM data the beginning of great FEP event. The next one-minute data the program "FEP-Search" uses for checking that the observed increase reflects the beginning of real great FEP or not. If yes, automatically starts to work on line the program "FEP-Research/Spectrum". We consider two variants: 1) quiet period (no change in cut-off rigidity), 2) disturbed period (characterized with possible changing of cut-off rigidity). We describe the method of determining of the spectrum of FEP in the 1-st variant (for this we need data for at least two components with different coupling functions). For the 2-nd variant we need data for at least three components with different cou-

pling functions. We show that for these purposes can be used data of total intensity and some different multiplicities, but better to use data from two or three NM with different cut-off rigidities. We describe in details the algorithms of the program "FEP-Research/ Spectrum". We show how worked this program on examples of some historical great FEP events.

REFERENCES

Dorman L.I. et al., Forecast of solar radiation storms by on-line nm one-minute data, 1. Automatically search of great FEP event beginning , Proc. 27 ICRC, Paper SH&., 2001

Correspondence to: L. I. Dorman
(lid@physics.technion.ac.il)