



Contribution ID: 409

Type: **Poster contribution**

## The event of ground level enhancement of solar cosmic rays on October 28, 2003: the spectrum in a wide energy range.

*Saturday, 1 August 2015 15:30 (1 hour)*

We present the results of spectrum analysis of the event of ground level enhancement of solar cosmic rays on October 28, 2003 (GLE65) in the widest range of energies. The energy spectrum of cosmic rays is studied on the basis of direct measurements of solar particle fluxes aboard the ACE, GOES and WIND spacecraft, as well as by data recorded by the worldwide neutron monitor network. In the relativistic energy range the estimations of spectrum have been obtained using the effective energy method proposed by the authors. It has been established that in this event the energy spectrum of solar cosmic rays extends from  $\sim 40$  keV to  $\sim 5$  GeV and it is described by a power function with an exponential cut-off in the field of relativistic energies. To find out the nature of solar cosmic rays the quasi-linear theory of regular acceleration of charged particles by shock waves in the low solar corona developed at ShICRA of SB RAS is used. It has been concluded that the process of acceleration of solar cosmic rays was over at a distance of 4 solar radii.

### Collaboration

– not specified –

### Registration number following "ICRC2015-I"

0264

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**Session Classification:** Poster 2 SH

**Track Classification:** SH-EX