

Method of solar neutron exploring with PAMELA neutron detector

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This work is devoted to methodology of solar neutrons search during solar events by using a neutron detector of the PAMELA the magnetic spectrometer on-board RESURS-DK1 satellite. Analysis of counts rates showed that in the geomagnetic equator region the detector performance is nominal and background conditions are stable. Maps of background fluxes were constructed and then 27 solar events were examined in the period from December 2006 to September 2014. In some events, there are evidence of neutrons count rate increasing during solar events. To make conclusion about the nature of these neutrons statistics and monitoring intervals need to be increased, that requires the analysis of background conditions in the Polar Regions

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