

## LATITUDE SURVEY IN DECEMBER 1996-MARCH 1997, 2. APPARENT CUT-OFF RIGIDITIES AND COUPLING FUNCTIONS

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In this paper we calculate the apparent cut-off rigidities along the survey on the basis of results of Danilova et al. (2001) on trajectory calculations for inclined cut-off rigidities at eight azimuths (through 45°) and five zenith angles (through 15°) along the survey. For calculations of apparent cut-off rigidities we use also the information on integral multiplicities of secondary neutrons detected by neutron monitor in dependence of zenith angle of arrived primary cosmic ray particles. This information is based on the theoretical calculations of meson-nuclear cascades of primary protons with different rigidities arrived to the Earth's atmosphere at zenith angles 0, 15, 30, 45, 60 and 75 degrees (Dorman and Pakhomov, 1979). The results of Dorman and Pakhomov (1979) we check and normalize by using of coupling functions obtained in Dorman et al. (2000). Determined apparent cut-off rigidities we compare with results obtained by Clem et al. (1997) and with apparent cut-off rigidities what we used in Dorman et al. (2000), where they were calculated approximately by using vertical cut-off rigidities, trajectory calculated specially for our latitude survey, but for inclined directions we used dipole approximation, normalized by trajectory calculated vertical cut-off rigidities. On the basis of determined apparent cut-off rigidities along the latitude survey Italy-Antarctica-Italy we correct the coupling functions for neutron monitor and bare neutron counters founded in Dorman et al. (2000).

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