ICRC2015

ICRC
The Astroparticle Physics Conference
34th International Cosmic Ray Conference
July 30 - August 6, 2015
The Hague, The Netherlands

Contribution ID: **864** Type: **Poster contribution**

Barometric effect of the neutron component of cosmic rays with consideration for wind effect at the Antarctic station Mirny and station Mt. Hermon in Israel.

Saturday, August 1, 2015 3:30 PM (1 hour)

Estimation of barometric coefficient for neutron component of cosmic rays was performed for Antarctic station Mirny and Mt. Hermon in Israel taking into account effect of dynamic pressure caused by wind in the atmosphere. Hourly data of continue monitoring of neutron component and data of the local meteo station have been used for the period 2007-2014. Wind velocity at the observatory Mirny reaches 20-40 m/s in winter that corresponds to dynamic pressure of 5-6 mb and leads to the error of 5% in variations of neutron component because of dynamic effect in the atmosphere. The results are interesting for high latitude and high mountain detectors, where effect Bernulli may be significant.

Collaboration

– not specified –

Registration number following "ICRC2015-I/"

0144

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Session Classification: Poster 2 CR

Track Classification: CR-EX