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Influence of the Neutral Sheet on the Swinson's Type North-South Anisotropy of Cosmic Rays

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Abstract

We examine the relations between the north-south anisotropy of cosmic rays and/or nucleonic intensity variation and the latitudinal angular distance (λ) of the earth from the neutral sheet, using the data in the period from Apr. 1976 to Aug. 1977 at the solar minimum.

It is found that the nucleonic intensity variation of the cosmic rays has no correlation with $\sin\lambda$ in this period as shown in Figure 1; but the amplitude of the north-south anisotropy is fairly correlated with $\sin\lambda$ as shown in Figure 2.

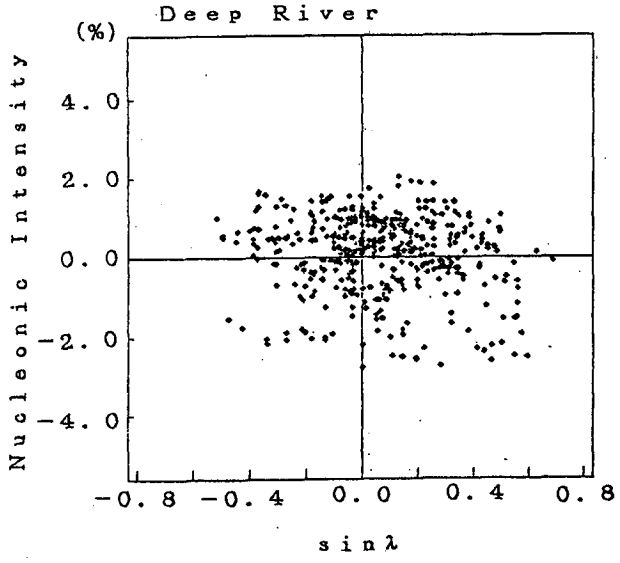

Figure 1. The correlation diagram between nucleonic intensity variation and $\sin\lambda$.

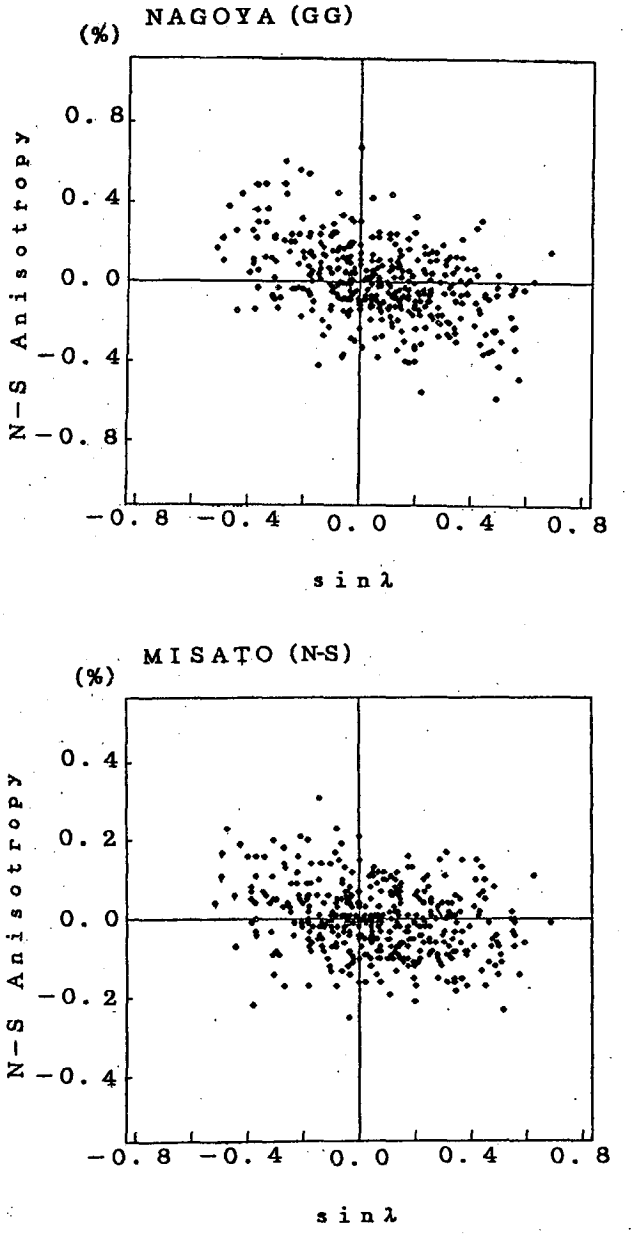

Figure 2. The correlation diagrams between north-south anisotropy and $\sin\lambda$. The figures at the top and the bottom correspond to the data observed at Nagoya (85 GV) and at Misato (150 GV). The resultant correlation coefficients are -0.42 and -0.26 respectively.