He Radiation Belt Dynamics inferred from MDS-1 Observations

Takahiro Obara[1]; Masao Nakamura[1]; Hironori Shimazu[1]

[1] NICT

We present new measurements of He (10-100MeV) fluxes at magnetic equator region under solar particle event. Observaions were made by the MDS-1 (Tsubasa) satellite during March 2002 to August 2003. We have found new solar He particles penetrated down to L=4 and their pitch angle was very isotropic, whereas the He flux peak was constantly observed around L=2.5. The pitch angle of He particles in the He radiation belt was rather perpendicular. Newly found thing is that the solar He particles were gradually moved Earthward as time went, forming He trapped radiation belt.