[포SS-19] The Proton Contamination Problem of RBSPICE's electron data during March 1, 2013 storm event

Hang-Pyo Kim[1], Junga Hwang[1], Eunjin-Choi[2], Jong-Seon Park[3], and Young-Deuk Park[1]
[1]*Korea Astronomy and Space Science Institute, Daejeon, Korea, 305-348*
[2]*Korea Advanced Institute of Science and Technology, Daejeon, Korea, 305-701*
[3]*School of Space Research, Kyung Hee University, Youngin, Korea, 446-701*

The RBSPICE (Radiation Belt Storm Probes Ion Composition Experiment) is one of five instrument suites onboard the twin Van Allan Probes (or Radiation Belt Storm Probes; RBSP), launched August 30, 2012 by NASA. One of science targets of RBSPICE instrument is to determine "how changes in that ring current affect the creation, acceleration, and loss of radiation belt particles?". For that purpose, it measures ions and electrons simultaneously. Ion's energy range is from ~20 keV to ~1 MeV and electron's energy channel is from ~35 keV to 1 MeV in order to provide supplementary information about the radiation belts. In this paper, we investigate a reliability of the electron flux measured from the RBSPICE by comparing with ECT (The Energetic Particle, Composition and Thermal Plasma Suite) data. We found there is a critical proton contamination problem in the electron channels of ~ 1MeV of RBSPICE observations during one moderate storm event of Sym H ~ -76 nT on March 1, 2013.

[포SS-20] Preliminary Analysis of Several Storm Events by using the ECT data onboard Van Allen Probes

Eunjin Choi[1,2], Junga Hwang[2], Hang-Pyo Kim[2], Kyoung-Chan Kim[2], Young-Deuk Park[2], and Kyoung-Wook Min[1]
[1]*KAIST(Korea Advanced Institute of Science and Technology), Daejeon, Republic of Korea,* [2]*KASI(Korea Astronomy and Space Science Institute), Daejeon, Republic of Korea*

The Van Allen Probes were designed to study the Earth's radiation belts on various scales of space and time. The identical two spacecrafts going nearly eccentric orbits lap each other several times over the course of the mission and each probe carries five instrument suites to address the science objectives on the radiation belt. Since Van Allen Probes launched on August 30, 2012, the probes detecte several storm events up to now. To understand the particle acceleration and loss mechanism in the radiation belt, we first focus on the energetic electrons' dynamics detected by ECT (Energetic Particle, Composition, and Thermal Plasma Suite). ECT measures near-Earth space's radiation particles covering the full electron and ion spectra from ~ eV to 10's of MeV with sufficient energy resolution. In this paper, we present the preliminary results of the recent several storm events using electron data from ECT(MagEIS and REPT).