



Resurrection of a Unique Plasmapause Ion Composition Data Base

V. Truhlik (1), J.M. Grebowsky (2), L. Triskova (1), D. Bilitza (3), and R. Benson (4)

(1) Institute of Atmospheric Physics, Department of the Upper Atmosphere, Prague, Czech Republic, (2) NASA/Goddard Space Flight Center, Planetary Magnetospheres Laboratory, Code 695, Solar Systems Exploration Division, Greenbelt, MD 20771, United States, (3) GMU/Goddard Space Flight Center, Heliospheric Physics Laboratory, Code 672, Heliophysics Science Division, Greenbelt, MD 20771, United States, (4) NASA/Goddard Space Flight Center, Geospace Physics Laboratory, Code 673, Heliophysics Science Division, Greenbelt, MD 20771, United States

Orbiting Geophysical Observatory 5 (OGO 5) magnetospheric ion-composition data (H^+ , He^+ and O^+) from an ion spectrometer [Sharp, IEE Trans. in Geosci. Elect. V, GE-7, 93, 1969] have been retrieved from old magnetic tapes archived at the National Space Science Data Center (NSSDC). The highly compressed binary format was converted into a user-friendly ASCII format and these data have now been made available from the NSSDC (<http://nssdcftp.gsfc.nasa.gov>). Using this data we have investigated the similarities and differences between the outer plasmasphere and plasmapause transition as seen in the H^+ , and He^+ density gradients. The He^+ plasmapause transition depicts a topology similar to recent IMAGE EUV observations whereas the H^+ plasmapause characteristics are more in line with ground-based whistler observations. OGO 5 had a 31 degree inclination eccentric orbit of $270 \text{ km} \times 148,000 \text{ km}$ with ion spectrometer measurements available from the period March 2, 1968 to November 11, 1969. We will present the results of a comparison of the locations of the OGO-5 H^+ and He^+ plasmapause crossings. In addition, we will relate the magnetic-field-aligned projections of the plasmapause crossings to mid-latitude topside ionospheric electron-density altitude profiles from the International Satellites for Ionospheric Studies (Alouette 1 & 2 and ISIS 1) topside sounders, when and if such simultaneous data are available from the NSSDC.