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Initial Results from the CRRES/MICS Empirical Model of Ion Plasma in the Inner Magnetosphere

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We present initial results from a recently developed empirical model of low energy ion plasma ($\sim$1-300 keV/e) in the inner magnetosphere. This model is constructed from data taken by the Magnetospheric Ion Composition Spectrometer (MICS) on-board the Combined Release and Radiation Effects Satellite (CRRES). The model has been constructed in a similar fashion to the Roeder et al., [2005] CAMMICE/MICS model, which used NASA Polar satellite data. The orbital differences between CRRES (GTO) and Polar (highly-inclined polar orbit) result in each spacecraft sampling different portions of the ion pitch-angle distributions. Such models can be used to estimate the average flux for major ion species (e.g. H+, He+, He++, O+) along any orbit in the inner magnetosphere. To construct this new model, CRRES/MICS ion fluxes were computed and sorted into bins of magnetic coordinates L, MLT, MLAT, equatorial pitch-angle and activity indices. Preliminary comparisons are made between the CAMMICE/MICS and CRRES/MICS models, highlighting the strengths and limitations of both. We also consider the average O+ ion flux deduced from the model in various spatial and activity ranges and qualitatively compare with what is to be expected from O+ ion transport and loss processes.