

## CIMI Energy Spectrum at Peak of Equatorial Pressure

The CIMI (Comprehensive Inner Magnetosphere-Ionosphere) model [Fok *et al.*, 2014] calculates ring current and radiation belt particle phase space density distribution as a function of two spatial coordinates and two adiabatic invariants. The CIMI distribution function is then converted to particle flux in energy and equatorial pitch angle. This figure shows CIMI energy spectrum of H<sup>+</sup> from 0-100.0 keV, at the location of peak equatorial pressure marked by black star in the two left plots. (CIMI maximum energy for ring current ions is normally at ~300 keV; the plot is cut off at 100 keV to match the TWINS energy range.)

### Reference:

Fok, M.-C., N. Y. Buzulukova, S.-H. Chen, A. Glocer, T. Nagai, P. Valek, and J. D. Perez (2014), The Comprehensive Inner Magnetosphere-Ionosphere Model, *J. Geophys. Res. Space Physics*, 119, 7522–7540, doi:10.1002/2014JA020239.