

## Formation of Multiple Minima of Ion Flux Spectgrams in the Near Earth Magnetosphere: MSM Simulations & LANL Observations

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Magnetospheric measurements by various satellites often show flux minima in the energy spectra. The structures are seen in a wide energy range and sometimes appear at the same time. The multiple bands structures have been explained by substorm injections into the inner magnetosphere and subsequent drift echoes. However, our investigations with LANL satellite data discovered other types of multiple band structures during quiet times. To understand the formation mechanisms, we calculate the energy flux of ions at the magnetic equator using the MSM simulations. In the energy spectra, a dip below 10keV appears around the dayside. In one case, there is a sudden change from  $K_p=6$  to  $K_p=2$ , and a flux minimum at about 10keV appears. These flux minima are measured simultaneously around the dayside.