

- the earth's quiet ring current: 1, Data and standard model, *J. Geophys. Res.*, 98, 13,491–13,508, 1993.
- Spjeldvik, W. N., Equilibrium structure of equatorially mirroring radiation belt protons, *J. Geophys. Res.*, 82, 2801–2808, 1977.
- Stening, R. J., A calculation of ionospheric currents due to semidiurnal antisymmetric tides, *J. Geophys. Res.*, 94, 1525–1531, 1989.
- Stern, D. P., A study of the electric field in an open magnetospheric model, *J. Geophys. Res.*, 78, 7292–7305, 1973.
- Strangeway, R. J., and R. G. Johnson, Energetic ion mass composition as observed at near-geosynchronous and low altitudes during the storm period of February 21 and 22, 1979, *J. Geophys. Res.*, 89, 8919–8939, 1984.
- Thayer, J. P., J. F. Vickrey, T. L. Killeen, R. A. Heelis, and J. A. Slavin, Contribution of the thermospheric neutral wind to the magnetospheric Poynting flux, *Eos Trans. AGU*, 71(43), Spring meeting suppl., 1527, 1990.
- Tinsley, B. A., Energetic neutral atom precipitation during magnetic storms: Optical emission, ionization, and energy deposition at low and middle latitudes, *J. Geophys. Res.*, 84, 1855–1864, 1979.
- Vasyliunas, V. M., The interrelationship of magnetospheric processes, in *Earth's Magnetospheric Processes*, edited by McCormac, pp. 29–38, D. Reidel, Hingham, Mass., 1978.
- Volland, H., A semiempirical model of large-scale magnetospheric electric fields, *J. Geophys. Res.*, 78, 171–180, 1973.
- West, H. L., Jr., R. M. Buck, and G. T. Davidson, The dynamics of energetic electrons in the earth's outer radiation belt during a magnetic storm as observed by the Lawrence Livermore National Laboratory spectrometer on OGO 5, *J. Geophys. Res.*, 86, 2111–2118, 1981.
- Whipple, E. C., Jr., (U,B,K) coordinates: A natural system for studying magnetospheric convection, *J. Geophys. Res.*, 83, 4326, 1978.

---

R. B. Sheldon, Physikalisches Institut, Universität Bern, CH-3012 Bern, Switzerland. (email: sheldon@phim.unibe.ch)

(Received January 25, 1993; revised September 21, 1993; accepted September 23, 1993.)