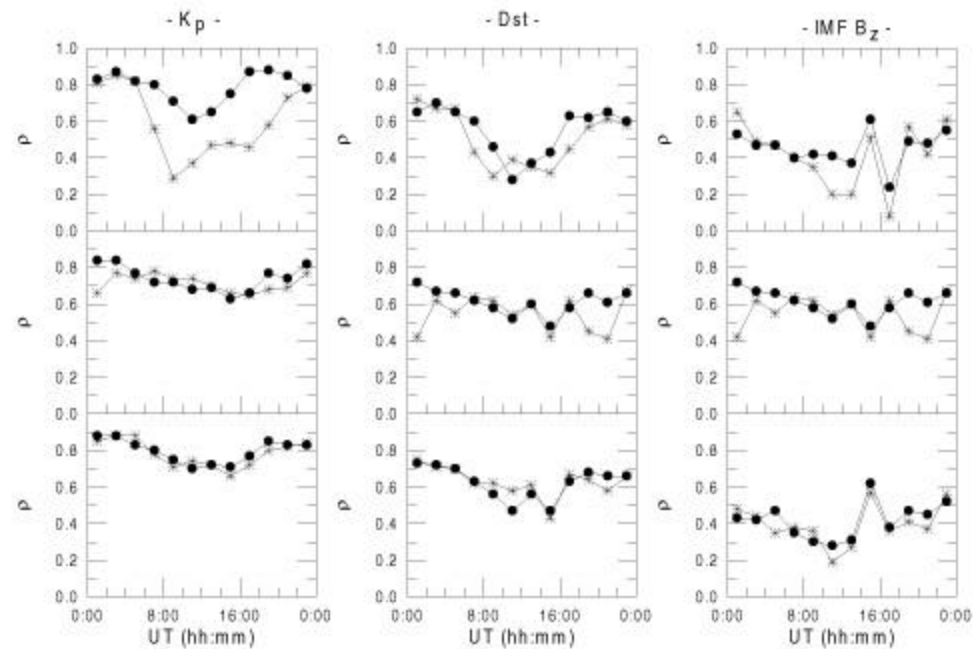
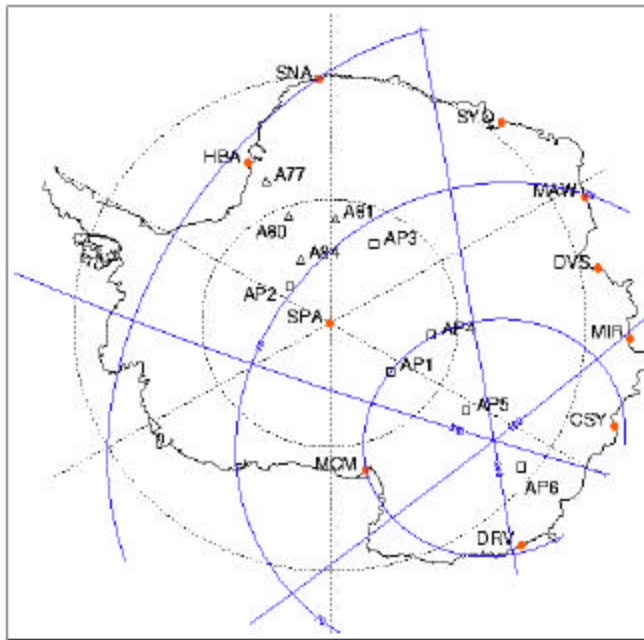


A New High Latitude Geomagnetic Index



Derivation of a new magnetic index focusing on polar cap disturbances.

- Previous attempts to determine a large-scale southern hemisphere activity index were constrained to the use of non-optimally spaced station distributions.
- AGO-P1, AP4, AP5, AP6, along with several manned stations provide optimal spacing for the derivation of such an index.



- Correlations vs time of geomagnetic indices with Kp, Dst, and IMF-Bz component. The top panels show correlation coefficients for AU(•) and AUS-80(*); the middle panels for AL (•) and ALS-80 (*); the bottom panels for AE (•) and AES-80 (•). Each point is shown at the center of the 2-hour interval to which it refers. The best correlation is found with the Kp index, indicating that both AE and AES-80 are in good agreement with activity on a planetary level.