

Field-aligned current generated by the ionospheric Sq dynamo - Mechanism and effect on the geomagnetic Sq field

Masahiko Takeda[1]

[1] Data Analysis Center for Geomag.and Space Mag., Kyoto Univ.

Ionospheric dynamo drives not only the ionospheric currents generating geomagnetic Sq field but also the inter-hemispheric field-aligned currents. At the solstices the currents flow as if the dynamo action is stronger in the summer hemisphere. The generation is mostly due the difference of the conductivity distribution between the hemispheres.