

## **Refinement of the global core plasma model at low latitudes using stochastic tomography technique with GPS-derived TEC**

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The global core plasma model (GCPM), which is composed of separate models for the ionosphere, plasmasphere, plasma-pause, trough and polar cap, provides plasma density as a function of geomagnetic and solar conditions. We examined its accuracy at low latitudes using GPS-derived TEC obtained at several IGS stations. As a result, we found clear local time and day of year dependent errors. Then, we applied a tomography technique to the errors of the GCPM and derived altitude-local time distributions of them. Most of the errors are distributed at dayside of the ionosphere. This result brings us a correction model for the GCPM.