

# TEC Maps Over Europe

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We propose, as service provider, to use the existing GPS networks to produce systematic maps of the TEC over Europe and to provide these maps to the geophysical science community firstly on a delayed mode but in a real-time perspective if necessary.

Through a CNES support related to the Demeter mission, this service will be maintained and funded 3 years after the end of this pilot project.

As a means of assessing the state of the ionosphere, GPS measurements of ionosphere total electron content offer several advantages over prior methods: simultaneous coverage encompassing a large spatial domain, continuous coverage in time, and high temporal resolution. Thus, networks of GPS receivers provide an important new means of systematically studying the ionosphere response to solar activity, to solid Earth motions and the links, if any, between these different sources of ionospheric activities.

In addition, during the pilot project, an extent of the service will be studied either through this project or through a complementary french project funded by the Ministry of Research . Satellite data will be added to TEC measurements, to try to obtain more information on the ionospheric profiles themselves.