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# Web services interface for Space Weather: NeQuick 2 web and experimental TEC Calibration

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A web front-end has been recently developed and released to allow retrieving and plotting ionospheric parameters computed by the latest version of the model, NeQuick 2.
NeQuick is a quick-run ionospheric electron density model particularly designed for trans-ionospheric propagation applications. It has been developed at the Aeronomy and Radiopropagation Laboratory (now T/ICT4D Laboratory) of the Abdus Salam International Centre for Theoretical Physics (ICTP) - Trieste, Italy with the collaboration of the Institute for Geophysics, Astrophysics and Meteorology (IGAM) of the University of Graz, Austria. To describe the electron density of the ionosphere up to the peak of the F2 layer, NeQuick uses a profile formulation which includes five semi-Epstein layers with modelled thickness parameters.
Through a simple web interface users can exploit all the model features including the possibility of computing the electron density and visualizing the corresponding Total Electron Content (TEC) along any ground-to-satellite straight line ray-path.
Indeed, the TEC is the ionospheric parameter retrieved from the GPS measurements. It complements the experimental data obtained with diverse kinds of sensors and can be considered a major source of ionospheric information. Since the TEC is not a direct measurement, a "de-biasing" procedure or calibration has to be applied to obtain the relevant values from the raw GPS observables.
Using the observation and navigation RINEX files corresponding to a single receiver as input data, the web application allows the user to compute the slant and/or vertical TEC following the concept of the "arc-by-arc" offsets estimation.
The combined use of both tools, freely available from the T/ICT4D Web site, will allow the comparison of experimentally derived slant and vertical TEC with modelled values.
An online demonstration of the capabilities of the mentioned web services will be illustrated.