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NeQuick bottomside analysis at low latitudes

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NeQuick ionospheric electron density model produces the full electron density profile in the ionosphere starting from the F2 layer peak value. Each part of the profile is modeled using Epstein layer formalism. Simple empirical relations are used to compute the thicknesses of each semi-Epstein layer. It has been observed that when NeQuick model is used to estimate Total Electron Content at low latitudes the modeled values tend to underestimate the observed ones. Beside the F2 peak values, the most important profile parameter is the thickness of the F2 layer bottomside. The present study focuses on NeQuick model behaviour at low latitudes comparing modeled profiles parameter with the ones extracted from experimental data mostly from African and Indian sector at different levels of solar activity for various seasons and different local times. Possible model improvements are discussed.