

**Ly $\alpha$  RADIATION INFLUENCE TO IONOSPHERIC D-REGION:  
QUIET IONOSPHERIC D-REGION (QIONDR) MODEL**

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We present the Quiet Ionospheric D-Region (QIonDR) model to analyze periodical variations of ionospheric parameters induced by changes in the incoming solar hydrogen Ly $\alpha$  line intensity. The model is based on data collected in the ionospheric D-region observations utilizing very low/low frequency (VLF/LF) signals. It provides: (1) a procedure for estimation of ionospheric parameters during quiet midday periods as a function of the daily sunspot number, related to the long-term variations during solar cycle, and the seasonal parameter, providing the seasonal variations, and (2) a procedure for determination of ionospheric parameters during the entire daytime using their midday values. QIonDR model is applied to VLF data acquired in Serbia that are related to the DHO and ICV signals emitted in Germany and Italy, respectively. We show time evolutions of the daytime Wait's parameters over the middle and low latitudes, and analytical expressions for midday parameters valid over a part of Europe.

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