

*Invited lecture*

## **IONOSPHERIC PERTURBATIONS INDUCED BY SOLAR X-RAY FLARES**

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The solar X-ray flare as one of the most intensive perturbers of the ionosphere induces variations in parameters of plasma in this part of the atmosphere (Nina *et al.* 2012, Nina and Čadež 2014) and, consequently, affects propagation of telecommunication signals (Bajčetić *et al.* in press). Keeping in mind that propagation of electromagnetic waves in some medium depends primarily on the ambient electron density distribution, the analysis of induced variations of properties of this plasma parameter is very important in investigations of space weather influence on telecommunications.

This work presents a study of variations in electron density characteristics in the ionospheric D-region during a solar X-ray flare based on monitoring the low ionosphere by the 23.4 VLF radio signal emitted in Germany and recorded in Serbia.

### **References**

- Bajčetić, J., Nina, A., Čadež, V. M., Todorović, B. M.: *Thermal Science*, in press, doi:10.2298/TSCI141223084B.  
Nina, A., Čadež, V. M., Srećković, V., Šulić, D.: 2011, *Baltic Astronomy*, **20**, 609.  
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