

*Poster*

## **DIAGNOSTICS OF THE SOLAR X-FLARES IMPACT ON THE LOWER IONOSPHERE THROUGH SEASONS BASED ON VLF-NAA SIGNAL RECORDINGS**

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An analysis of four solar flare X-ray irradiance effects on VLF signal amplitude and phase delay variations on the NAA/24.0 kHz signal trace, during period of time from December 2005 to September 2006, was carried out. Solar flare data were taken from GOES12 satellite one-minute listings. For VLF data recordings at the Institute of Physics, Belgrade, Serbia, the AbsPAL system was used. It was found that solar flare events affected VLF wave propagation in the Earth-ionosphere waveguide in way that lower ionosphere electron density height profile changes, according to variation of estimated parameters, sharpness and reflection height, being different for these solar flare events.

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## **ANALYSIS OF INFRARED AND OPTICAL SPECTRAL PROPERTIES IN AGN SAMPLE**

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We analyzed some spectral properties of infrared and optical spectra in type 1 AGN sample, i.e. the broad line AGNs. The infrared and optical spectral properties are compared in order to investigate the possible geometrical and physical connection between the Broad Line Region which produces the broad emission lines in optical spectra and dusty torus which produces part of infrared spectra. Especially, we investigate the characteristics of silicate emission/absorption features observed  $\sim 10 \mu\text{m}$ , and its possible connection with line parameters of the broad emission line component.