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# LOW IONOSPHERIC REACTIONS ON TROPICAL DEPRESSIONS PRIOR HURRICANES

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## Abstract

We study the reactions of the low ionosphere during tropical depressions (TDs) which have been detected before the hurricane appearances in the Atlantic Ocean. We explore 41 TD events using very low frequency (VLF) radio signals emitted by NAA transmitter located in the USA and recorded by VLF receiver located in Belgrade (Serbia). We found VLF signal deviations (caused ionospheric turbulence) in the case of 36 out of 41 TD events (88%). Additionally, we explore 27 TDs which have not been developed in hurricanes and found similar low ionospheric reactions. However, in the sample of 41 TDs which are followed by hurricanes the typical low ionosphere perturbations seem to be more frequent than other TDs.

*Keywords:* tropical depressions; low ionosphere; VLF signals; Atlantic ocean

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