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Ionospheric effects of the solar eclipse on March 20, 2015

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Solar ultraviolet radiation is one of the factors directly acting on the upper layers of the earth's atmosphere and the ionosphere. Daily variations of the electron concentration in the lower ionosphere are connected exactly with it. D and E ionosphere layers are the upper wall of the waveguide for ELF / VLF signals. The change of the height, electron concentration, and conductivity of these regions can lead to a change of the amplitude and phase of the ELF / VLF signals, and the frequency of the Schumann resonances. These effects were investigated during the total solar eclipse on March 20, 2015. The region of the solar shadow (total eclipse) arose at 09:14 UT south of Greenland and was observed until 10:18 UT near the North pole.