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Ionospheric scintilations over the polish LOFAR station PL610

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Using polish station PL610 of international LOFAR interferometer we present here observations of ionospheric scintillation over station.

Scintillation phenomenon occurs as a result of variations in the refractive index of the medium through which waves are traveling. In particular Earth's ionosphere is strongly variable medium where high density gradients occure. Scintillation measurements may be successfully used to study the irregular structure of the ionosphere.

The LOFAR telescope operates at frequencies from 10 to 240 MHz thus provides good opportunity to broad-band study of ionospheric irregularities.

During the local mode periods four strong radio sources (LOFAR bright A-team sources) were observed in order to measure ionospheric scintillations.