



Simultaneous observations of solar sporadic radio emission by the radio telescopes UTR-2, URAN-2 and NDA within the frequency range 8-41MHz

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From 25 June till 12 August 2011 sporadic solar radio emission was observed simultaneously by three separate radio telescopes: UTR-2 (Kharkov, Ukraine), URAN-2 (Poltava, Ukraine) and NDA (Nancay, France). During these observations several type II bursts with double and triple harmonics were registered, as well as type II bursts with complex herringbone structure. The events of particular interest were type II bursts registered on 9 and 11 August 2011. These bursts had opposite sign of circular polarization at different parts of their dynamic spectra. In our opinion we registered the emissions, which came from the different parts of the shock propagating through the solar corona. We have observed also groups of type III bursts merged into one burst, type III bursts with triple harmonics and type III bursts with “split” polarization. In addition some unusual solar bursts were registered: storms of strange narrow-band (up to 500kHz) bursts with high polarization degree (about 80%), decameter spikes of extremely short durations (200-300ms), “tadpole-like” bursts with durations of 1-2s and polarization degree up to 60%.