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New results about fine structures in dynamic radio spectra of solar flares

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Basing on the data of the 40-800 MHz spectrometer of the Astrophysical Institute Potsdam, and on radio imaging data of the Nancay Multifrequency Radioheliograph of Paris-Meudon Observatory, in combination with data from solar space observatories SOHO, TRACE and RHESSI, we obtained some progress in understanding several spectral fine structure patterns in solar radio data. We will describe some results of solar work with possible interest for interpreting planetary radio emission. These are the use of fiber bursts (excited by coronal whistler waves) for the determination of the magnetic field in the coronal source region. By comparison with extrapolated photospheric field data we can determine the accuracy of this method. I will briefly mention the excitation of radio spike bursts during the collision of coronal loops, and - another result underlining the importance of magnetic reconnection for energy release in the solar corona - the radio signature of the reconnection outflow termination shock in dynamic radio spectra of some solar flares.