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## **Radio diagnostics of plasmoids in a flare current sheet**

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**Abstract.** First a relationship between the plasmoids and drifting pulsating structures (DPSs) observed during solar flares is shown. Based on results of the MHD and particle-in-cell (PIC) simulations a physical role of these plasmoids in the magnetic field reconnection and particle acceleration is explained. Then using a 2.5-D PIC model we study the electromagnetic (radio) emission generated during tearing and coalescence processes in a flare current sheet. In agreement with DPSs we found that this emission has a quasi-periodic character as shown by wavelet spectra. Detailed analysis reveals that the pulses of the emission are produced at locations between two interacting plasmoids at times just before their coalescence into larger one. The quasi-period of these pulses is shorter than that of the global oscillation of the resulting plasmoid. It is probably due to an interference of electromagnetic waves in space between the coalescing plasmoids.