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Study of Solar radio Type III bursts observed simultaneously by Nançay ground-based stations, and Cassini and Wind spacecraft

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We report on Solar Type III bursts observed during the Cassini's flyby of the Earth from 09th to 14th Sept., 1999. Combining the ground-based and space observations we analyse the time profile of common Type III bursts in a large frequency range from 164 MHz to few kilohertz. Hence the metric and the decametric wavelengths are detected by the Nançay radio-heliograph and the decametric arrays, respectively. The Cassini/RPWS and Wind/WAVES lead us to mainly study the hectometric and kilometric wavelengths. We find that during the considered period more than 100 Type III bursts are detected but only few were simultaneously observed by spacecraft and ground-based stations. We show through one example the method which is applied to characterize the dynamic spectrum of the Type III burst and its variation from the high (150 MHz) to the low (10 kHz) frequencies. Particular interest will be given to the Type III source locations and the presence, or not, of fundamental-harmonic pairs.