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Nanodust detection at 1 AU from radio spectra analysis on Cassini

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We analyze the spectra measured by the radio and plasma wave instrument onboard Cassini during the spacecraft phase cruise close to Earth orbit. They exhibit bursty signatures similar to those produced by ionization of fast dust grains impacting the spacecraft at a high rate. The observed wave level and spectral shape are compatible with impacts of nanoparticles picked-up by the solar wind and accelerated to about 300 km/sec, as predicted by the simulations, with an average flux compatible with that observed by STEREO.