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Impact induced electric field signals observed by the Solar Orbiter/RPW

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A large-amplitude impact-induced like electric field signal is often observed by the Radio and Plasma Wave (RPW) Instrument onboard Solar Orbiter. The signal has a sharp increase followed by an exponential decay, typically observed when spacecraft experiences a dust impact. The amplitude can reach several V/m. The impact dust size can be estimated from the electric field amplitude and is similar to the characteristic dust size near the sun expected from the zodiacal-light observations. On the other hand, the signal's decay time is the order of second, unusually long compared to the dust impact signals previously reported by the other spacecraft. We will show the characteristics of these signals and discuss the origin.