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Title: Rocket Ignition Detection Using Data Collected by Smartphones

#### Abstract

This work presents a preliminary method of detecting rocket ignition sequences using data from a network of smartphones with multi-modal sensor systems. Unique characteristics of ignition signals are identified from data collected at 10-100 km ranges during launches of SpaceX Falcon 9 and ULA Atlas V rockets. These characteristics are used to construct algorithms for near-real-time acoustic detection and identification of rocket ignition.