Abstract Submitted for the DFD19 Meeting of The American Physical Society

Stickslips with Granular Particles JC TSAI, Inst. of Physics, Academia Sinica, CHENG-EN TSAI, National Central Univ. — We study the emergence of stick-slip instabilities with densely packed granular particles that are sheared continuously. Such behavior occurs in a route of transition between suspension dynamics and plastic flows, as a result of changing the shear rate. Counterpart experiments are designed in order to identify the origin of stick-slips between two particles. We discuss the possible connection between the system-sized avalanches and the local instabilities.

Date submitted: 26 Jul 2019 Electronic form version 1.4