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Unexplained voltage signals from granular materials TROY SHINBROT, Rutgers University, KAREN DANIELS, North Carolina State University, CHRIS MARONE, Pennsylvania State University, THEO TSIU, Rutgers University — Powders and grains exhibit unpredictable jamming-to-flow transitions that manifest themselves on geophysical scales in catastrophic slip events such as landslides and earthquakes, and on laboratory/industrial scales in profound processing difficulties. Over the past few years, insight into these transitions has been provided by new evidence that slip events may accompanied, or even preceded, by electrical effects. In this talk, we describe three independent experiments using organic powders, polymeric disks, and glass particles, all of which generate unexplained voltage signals.

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