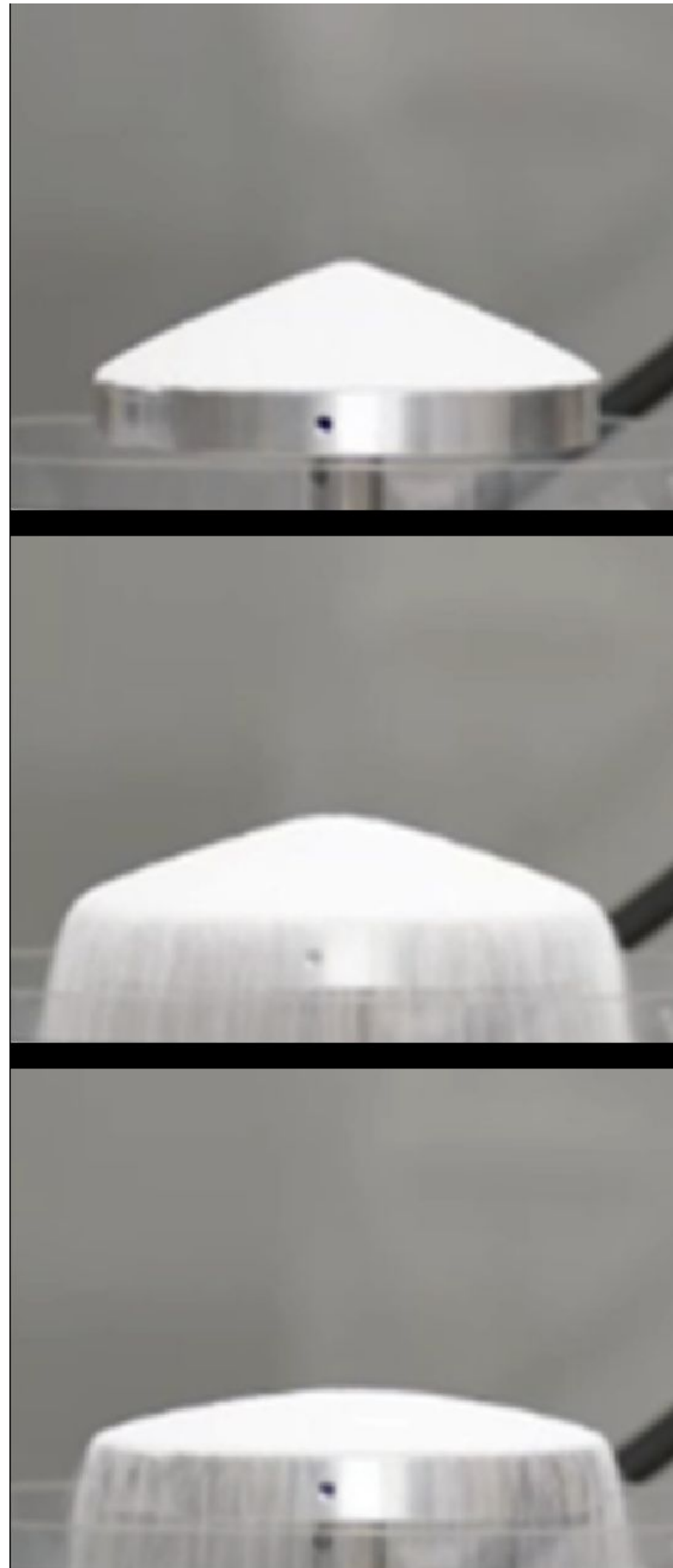


Granular-heap relaxation by vibration

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When a granular heap on a disc is vertically vibrated, its shape is gradually relaxed. This relaxation dynamics relates to various industrial processes, landslide triggering, and planetary surface terrain mechanics. However, it has not been fully understood. In order to discuss the relaxation dynamics, we have to know about the transport law for the granular flow on a vibrated granular heap. Therefore, we performed a simple experiment to obtain a relation between flux and gradient on the vibrated granular flow. According to the experimental result, the granular heap relaxation can be modeled by the completely fluidized flow which is driven by hydrostatic pressure. This result is a bit contrastive to the conventional shear band picture. In the presentation, the details for the granular transport law and corresponding model will be discussed. This work is a collaboration with D. Tsuji and M. Otsuki.