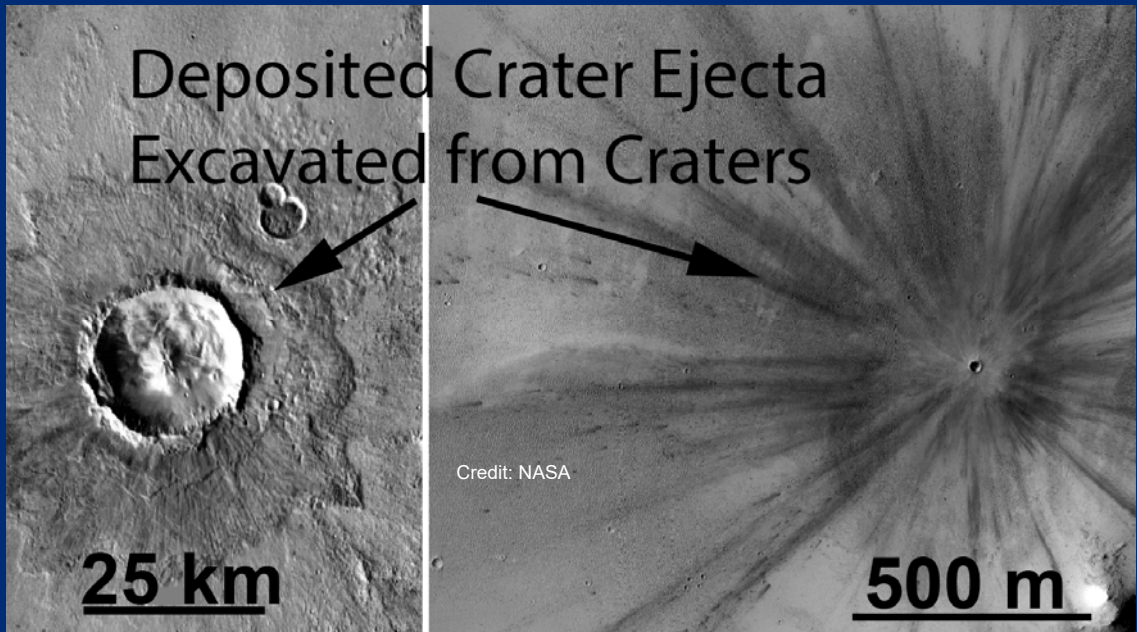
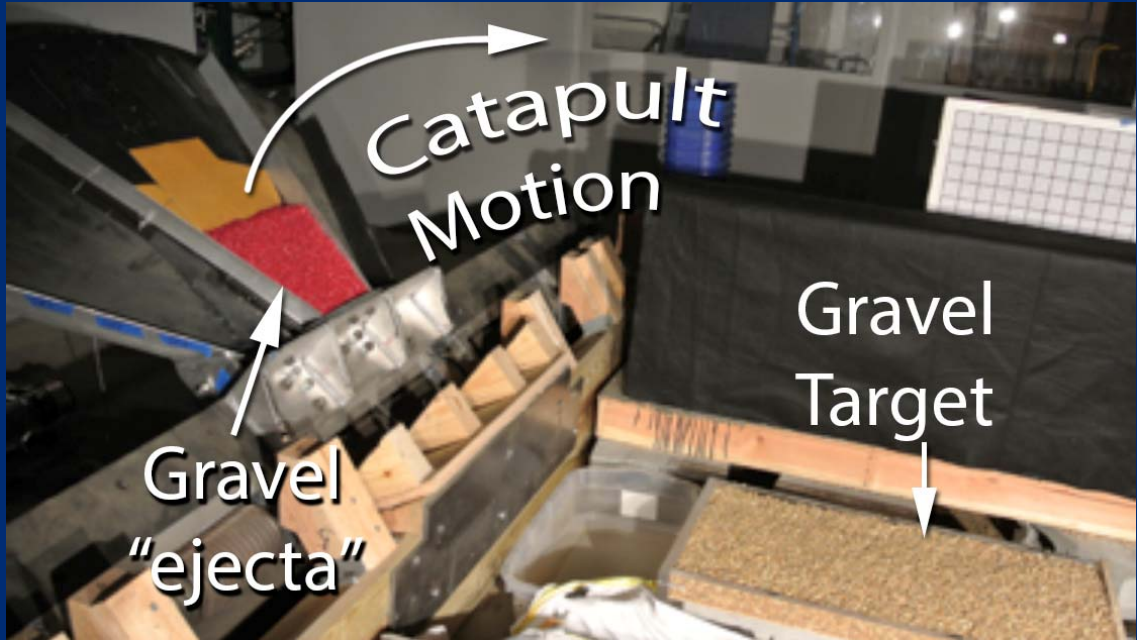
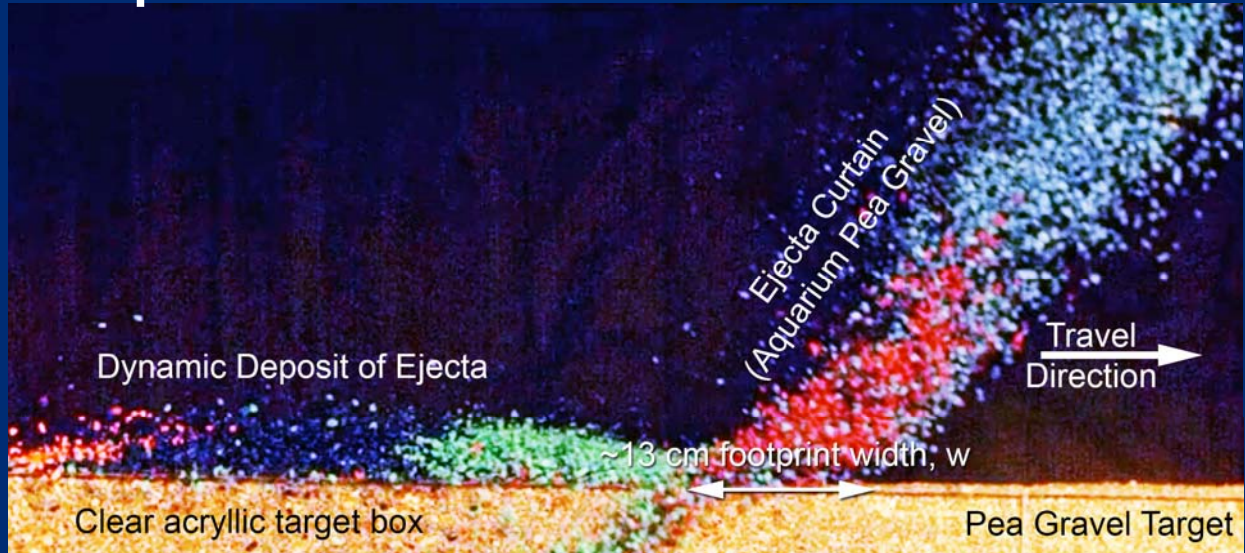


# The Dynamics of Crater Ejecta Emplacement

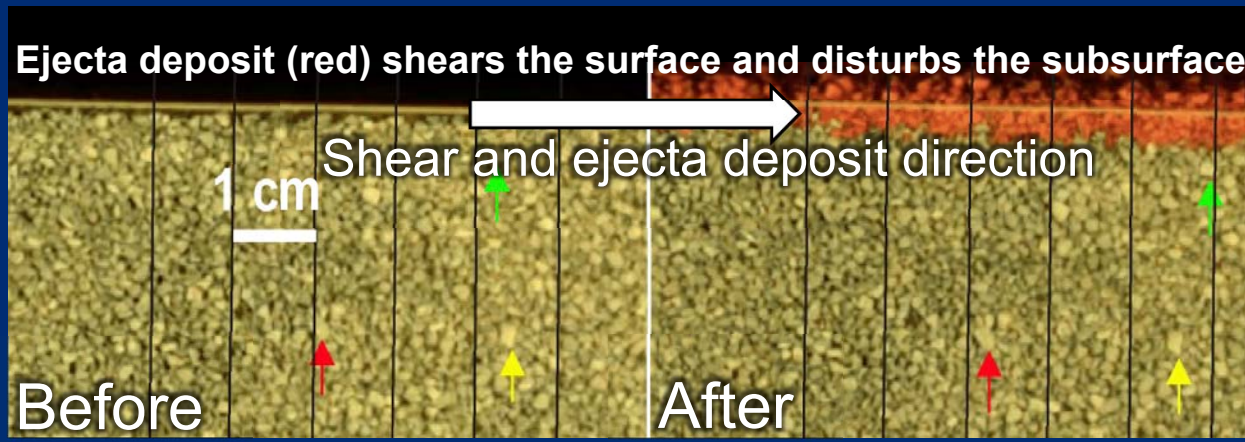
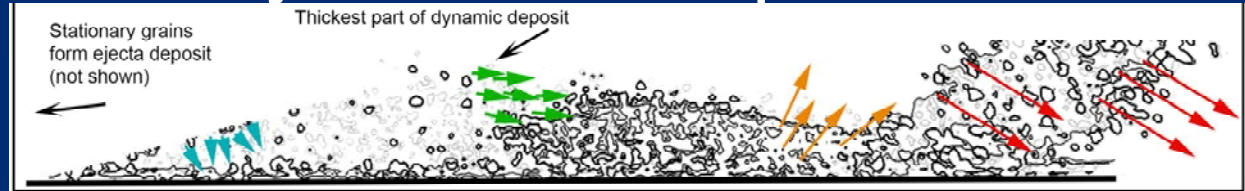
- It is important—but not always clear—how debris excavated from craters (ejecta) interacts with and change planetary landscapes.
- A new, laboratory-based catapult accurately simulates a large wedge of a ballistic ejecta—without having to form a crater—to explore these dynamics and the resulting deposits.
- Results show that ejecta emplacement is a complex process, controlled by granular dynamics, erosion, and deposition that affect planetary landscapes.



## Catapult Simulation



## Inferred Dynamics from Catapult



Laboratory results show that crater ejecta slides violently away from the crater after landing, eroding and shearing the surface and subsurface to significant depths.

