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Propagation and Dissipation of Elasto-Plastic Stress Waves in Two Dimensional Ordered Granular Media

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Highlights

- An experimental setup is constructed to elasto-plastically load 2D ordered granular media and embedded piezoelectric sensors record the arrival time and force profile at certain locations within the packing.

- Elasto-plastic wave propagation in a 2D ordered granular system is modeled using the molecular dynamics simulator LAAMPS.

- Diameter tolerance is included in the simulations to mimic the effect of gaps in the experimental setup and the resulting numerical scatter in arrival time and peak force is similar to the experimental scatter for those quantities.

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