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Shock Waves in Jammed Solids LEOPOLDO GOMEZ, Leiden University, ARI TURNER, UC Berkeley, MARTIN VAN HECKE, VINCENZO VITELLI, Leiden University — We study shock propagation in two-dimensional jammed packings of soft repulsive spheres with Herzian contacts. The critical amplitude above which acoustic waves propagate as shocks displays power law scaling with density and vanishes as the jamming point is approached. Thus close to jamming elastic energy is mainly propagated in the form of shock waves. We determine the characteristic speed and attenuation of the resulting shocks as a function of the amplitude of the initial impulse and applied load.

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