Normal shock propagation in a granular funnel ERIN RERICHA,
University of Maryland, JONATHEN BOUGIE, JACK SWIFT, HARRY SWIN-
NEY, University of Texas at Austin — We examined the propagation of a normal
shock formed in a quasi-two dimensional funnel. We compare results from experi-
ment and MD simulations to a Hugoniot-Rankine type approximation of the inelastic
continuum equations. Both MD and experimental results show behavior similar to
the simplified equations, but inelastic collisions cause evolution of the shock unac-
counted for in this simple approximation. We find the flow parameters behind the
shock and the shock speed as a function of inelasticity compare well with an asymp-
totic solution of a set of inelastic equations proposed by Goldshtein, et al [1-2].

[1] A. Goldshtein et al. *JFM* **287**, 349 (1995).
[2] V. Kamenetsky et al. *Phys of Fluids* **12**, 3036 (2000):

Erin Rericha
University of Maryland

Electronic form version 1.4