Abstract Submitted for the DFD06 Meeting of The American Physical Society

Random twists of vanes in granular beds STEPHAN KOEHLER, RAENELL SOLLER, Physics Department, Emory University — We observe that vanes immersed into and withdrawn from granular beds undergo small rotations. For granular beds that are uniformly prepared these rotations are random and scale with the bead size and geometry's dimensions. Preshearing the granular media creates a bias of the random rotations, which is in the opposite direction of the preshear. We propose a simple model based upon releasing residual strains to capture this new phenomenon.

Stephan Koehler Physics, Emory University

Date submitted: 04 Aug 2006 Electronic form version 1.4