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Angle of Repose of Small, Conducting and Non-Conducting Plates PAUL J. DOLAN, JR., DENISA S. MELICHIAN, Northeastern Illinois University, ALAN FEINERMAN, University of Illinois at Chicago, REBECCA J. CARLTON, Illinois Wesleyan University, KATHY AUGUSTYN, Evergreen Park Community High School, JUSTIN JOHNSON, Illinois Math and Science Academy — We have investigated the behavior of granular collections consisting of laser-cut shapes from conducting and non-conducting paper, with various cross-sectional shapes (square, rectangular, triangular, circular) and in several sizes and aspect ratios. In particular we have measured the Angle of Repose of piles consisting of large numbers of these particles. While the shape of these particles would suggest that these should behave as thin plates, making quite shallow piles, instead we find that the piles are not shallow, and that the piling is remarkably robust to external disturbances. We will compare our results for various types of materials in various shapes, and also compare these results with what we have observed for larger, symmetric particles.

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