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Flying in a sandstorm: granular flow dynamics around an intruder YASIN KARIM, ERIC CORWIN, University of Oregon — Using high-speed imaging and direct force measurements, we study the flow dynamics around an intruder in a quasi-two dimensional granular gas. We also vary the geometry of the intruder and explore how changing the curvature, for instance, affects the lift force. For a given angle of attack, an intruder with a straighter side facing the flow experiences higher lift than one with a more convex side. We use particle image velocimetry to measure flow fields and correlate them with our direct force measurements to elaborate on how granular gas flows respond to changes in intruder geometry.

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