

Making extraterrestrial sand dunes in a lab

Sand dunes arise under a breeze, or under a ponderous tide; they also appear on other planets with atmospheres intermediate in density between air and water. The form that the dunes take reveal the properties of the sand and of the atmosphere. Controlled experimentation, however, is challenging since the length scales of dune formation on earth are typically very large. They can be made smaller, however, by varying the properties of the gas and sand, which is the aim of this project: to design and build a facility that generates laboratory-scale dunes and to quantify the relationship between their form and the properties of the sand and atmosphere in which they arise.

To apply please send a letter and CV to Professor Gregory Bewley <gpb1@cornell.edu>.