



Segregation time-scales in model granular flows

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Segregation patterns in natural granular systems offer a singular picture of the systems evolution. In many cases, understanding segregation dynamics may help understanding the system's history as well as its future evolution. Among the key questions, one concerns the typical time-scales at which segregation occurs. In this contribution, we present model granular flows simulated by means of the discrete Contact Dynamics method. The granular flows are bi-disperse, namely exhibiting two grain sizes. The flow composition and its dynamics are systematically varied, and the segregation dynamics carefully analyzed. We propose a physical model for the segregation that gives account of the observed dependence of segregation time scales on composition and dynamics.

References

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