

Abstract Submitted
for the DFD10 Meeting of
The American Physical Society

Filtration by eyelashes KRISHNA VISTARAKULA, MIKE BERGIN, DAVID HU, Georgia Institute of Technology — Nearly every mammalian and avian eye is rimmed with lashes. We investigate experimentally the ability of lashes to reduce airborne particle deposition in the eye. We hypothesize that there is an optimum eyelash length that maximizes both filtration ability and extent of peripheral vision. This hypothesis is tested using a dual approach. Using preserved heads from 36 species of animals at the American Museum of Natural History, we determine the relationship between eye size and eyelash geometry (length and spacing). We test the filtration efficacy of these geometries by deploying outdoor manikins and measuring particle deposition rate as a function of eyelash length.

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Date submitted: 05 Aug 2010

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