

Abstract Submitted  
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**Wet-dog shake** ANDREW DICKERSON, ZACK MILLS, DAVID HU,  
Georgia Institute of Technology — The drying of wet fur is a critical to mammalian heat regulation. We investigate experimentally the ability of hirsute animals to rapidly oscillate their bodies to shed water droplets, nature's analogy to the spin cycle of a washing machine. High-speed videography and fur-particle tracking is employed to determine the angular position of the animal's shoulder skin as a function of time. We determine conditions for drop ejection by considering the balance of surface tension and centripetal forces on drops adhering to the animal. Particular attention is paid to rationalizing the relationship between animal size and oscillation frequency required to self-dry.

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