

Abstract Submitted  
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**Marangoni Convection and Deviations from Maxwells' Evaporation Model** PHIL SEGRE, Physics Dep., Emory Univ., Atlanta, Ga, 30322, EDDIE SNELL, Hauptman-Woodward Medical Research Institute, Buffalo, New York, 14203, DAN ADAMEK, AZ Technology, NASA Marshall Space Flight Center, Huntsville, Alabama, 35812 — We investigate evaporation and natural convection from thin pools of volatile liquids. We find that evaporation rates can deviate from the classical Maxwell evaporation model, and that deviations become larger with increasing liquid volatility. High resolution thermal IR imaging is used to characterize the Marangoni convective patterns that can arise during evaporation. We develop a heat balance model to connect the evaporation rates to the convective dynamics, and show that the convective flows are the source of the deviations from Maxwells' evaporation model.

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