

Abstract Submitted
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Investigation of an Ablative Body under Different Flow Configurations¹ MICHAEL ALLARD, CHRISTOPHER M. WHITE, University of New Hampshire, RYAN CROCKER, YVES DUBIEF, University of Vermont — The erosion of a bluff body low temperature ablator (para-dichlorobenzene) is investigated in various flow configurations. CCD image sequencing is used to quantify the time evolution of the geometrical shape of the ablating body and to compute local surface recession velocity and acceleration. The results for the different flow configurations are compared to evaluate the effect of local flow conditions on the recession rate. Geometrical self-similarity of the ablating body is explored, and the self-similar form is compared to that predicted by the fluid erosion model recently published by Moore *et al.* (Phys. Fluids (2013) 25:116602).

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