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High Strain Rate Properties of Water Ice. RYAN POTTER, JOSEPH CAMMACK, TOM POLLARD, CHRISTOPHER BRAITHWAITE, University of Cambridge — Understanding the properties of water ice at high rates is important for the application of understanding target materials for space penetrators. This paper discusses some of the challenges of studying ice at high rates including sample manufacture and preparation, environmental control of apparatus and how to achieve variation in the tested material to better simulate extra-terrestrial ice. Results from some of the experiments will be discussed, showing progress in investigating strain rate variation, density variation and ice-sand composites.

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