



Phase transition energetics-based mass loss modeling of chondritic Near Earth Objects

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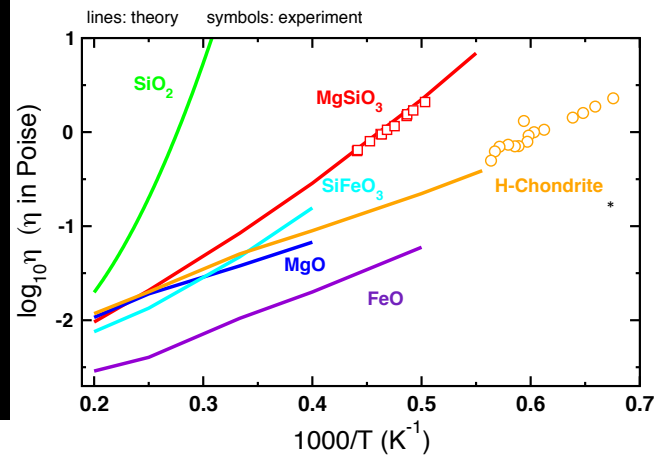
²NASA Ames Research Center

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e-Lightning Talk

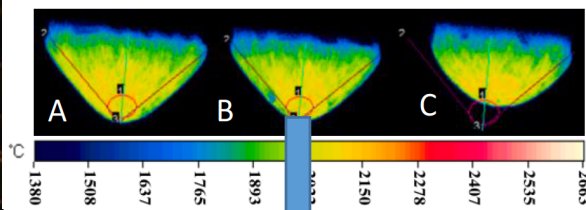
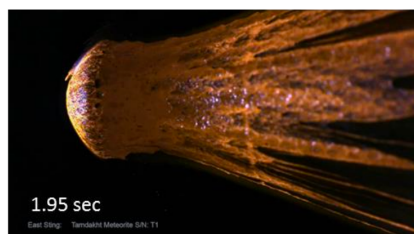
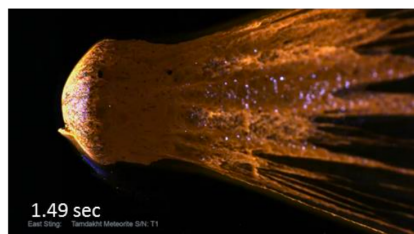
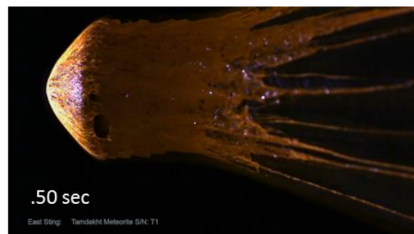


Phase-modified Material Response Modeling

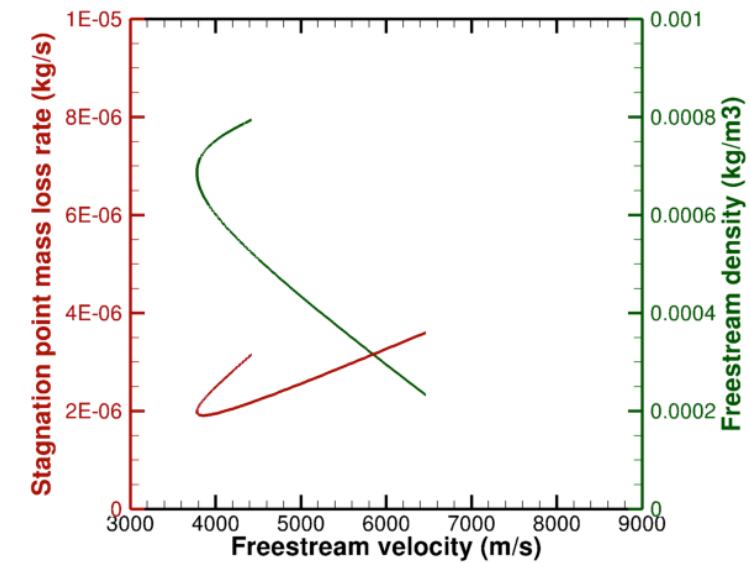
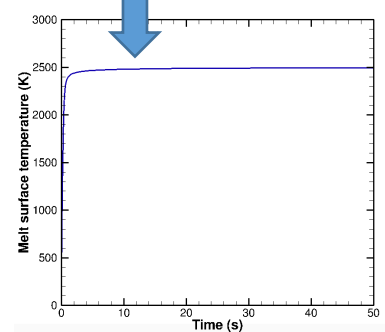


- Ab-initio modeling of viscosities
- High-fidelity H-chondrite melting of small meteoritic samples using boundary layer formalism

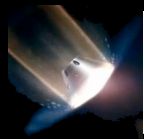
*H-Chondrite experiment contains 4% NaO impurity



Ref: AIAA 2018-4284



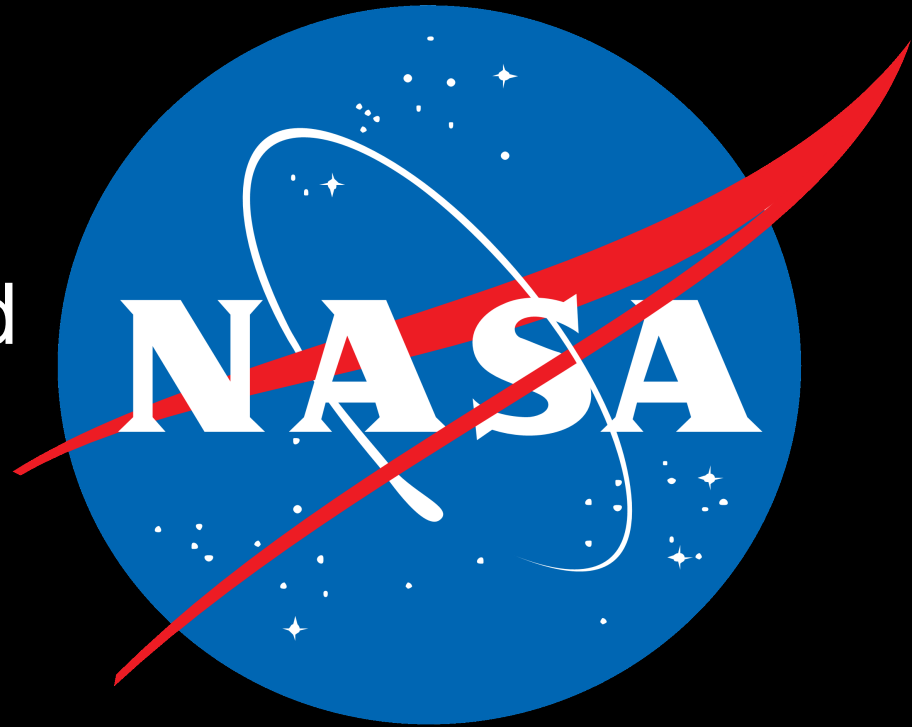
	Quasi steady-state high-fidelity simulations with melting ($R_N < 1$ m)	Traditional estimates without phase change in literature ($R_N > 1$ m)
C_H/Q (kg/J)	1.1 - 1.43E-10	1 - 1.25E-08



Questions?



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