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Title: Viewgraphs for w20_marsimpacts

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Viewgraphs for w20_marsimpacts

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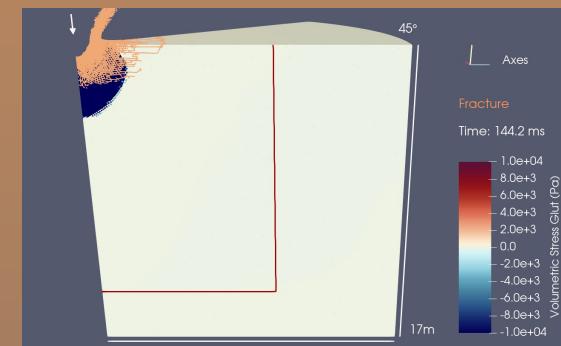
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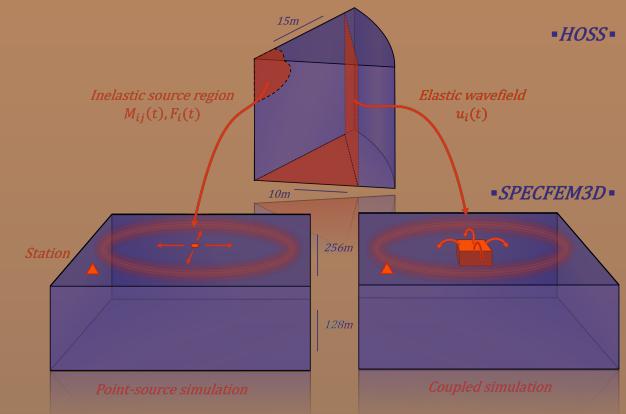
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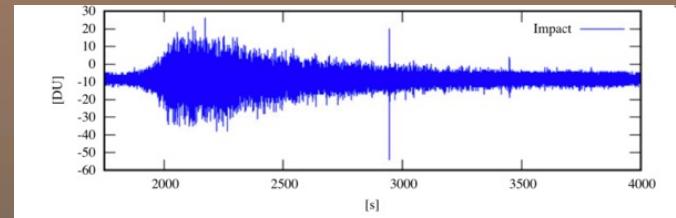
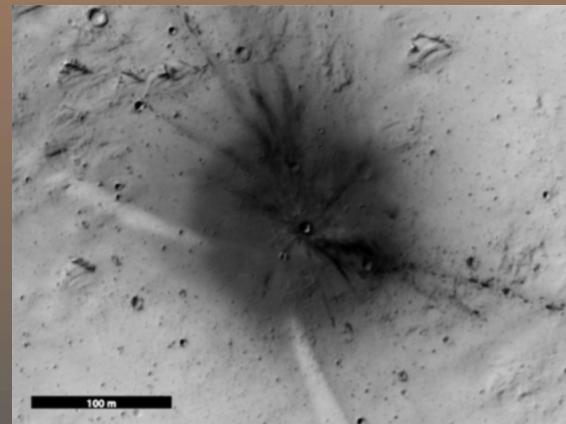
HOSS: finite-discrete element method for impact modeling.

COUPLING TWO CODES



SPECFEM3D: spectral element method for seismic modeling.

FOR THE DEVELOPMENT OF NEW SEISMIC MODEL OF IMPACTS



Left: New dated impact site with complex blast zone, including a complex albedo structure. Image credit NASA/JPL/University of Arizona. Figure from (Daubar et al. 2016). Top: seismic record of a lunar impact recorded on January 13, 1976.

Modelization of a 1000m/s impact

γ_i^V, γ_i^S : equivalent forces of the impact.
 $\gamma_i^V \approx -\partial_j \Pi_{ij}, \quad \gamma_i^S \approx \Pi_{ij} n_j$ (and other terms...)

Stress Glut : $\Pi_{ij} = \psi_{ij} - S_{ij}$
 $=$
 Ideal – Real stresses

