

LA-UR-22-21854

Approved for public release; distribution is unlimited.

Title: Viewgraphs for w20_seismicsources

Author(s): Larmat, Carene
Lei, Zhou
Rougier, Esteban
Knight, Earl E.
Euser, Bryan Jeffry

Intended for: Website of the IC program at LANL
Report

Issued: 2022-03-01



Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by Triad National Security, LLC for the National Nuclear Security Administration of U.S. Department of Energy under contract 89233218CNA000001. By approving this article, the publisher recognizes that the U.S. Government retains nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Viewgraphs for w20_seismicsources

HOSS is based on finite-discrete element modeling to capture the complex physics of explosions.

PI: Carène S. Larmat, Geophysics Group (EES-17), LANL, carene@lanl.gov, 505-667-2074.

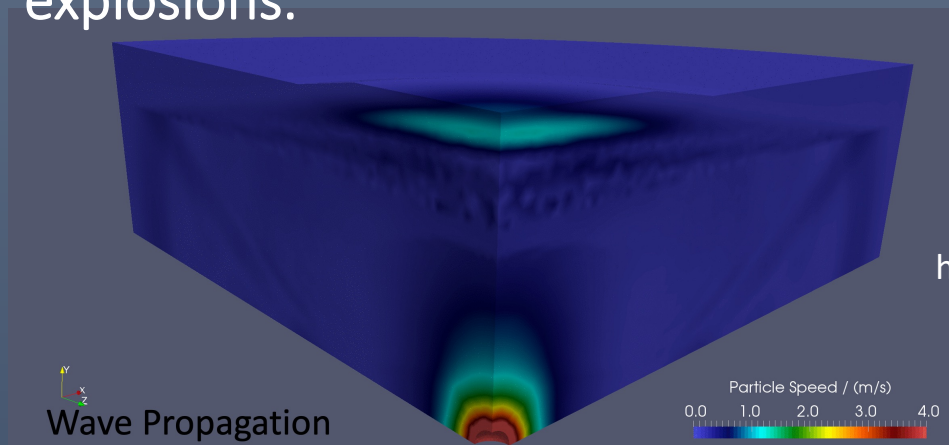
Co-Investigators:

Zhou Lei, EES-17, LANL, zlei@lanl.gov

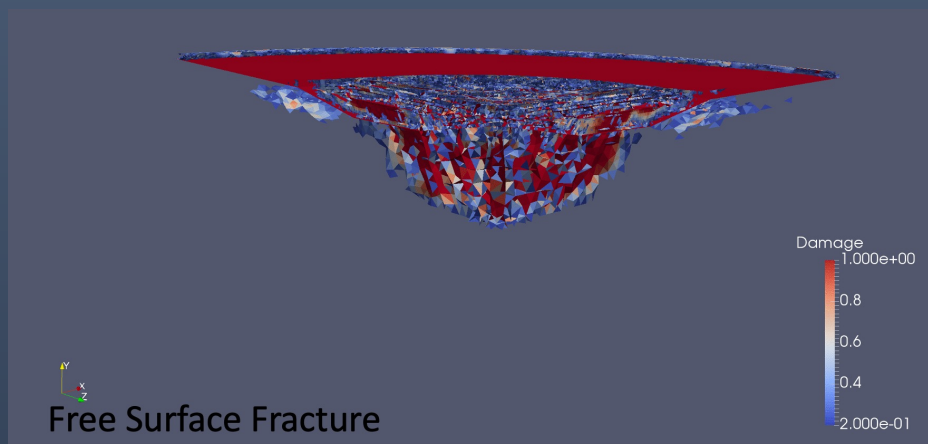
Esteban Rougier, EES-17, LANL, erougier@lanl.gov

Earl E. Knight, EES-17, LANL, knigthe@lanl.gov

Bryan J. Euser, EES-17, LANL, beuser@lanl.gov



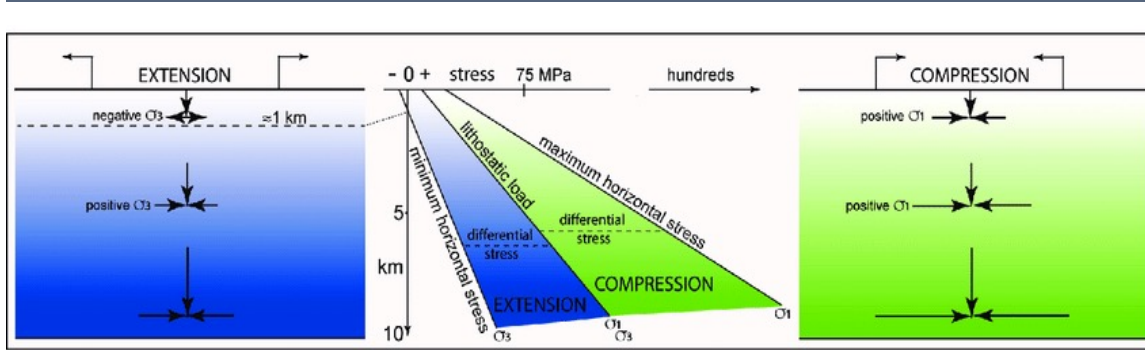
high-strain rate regime



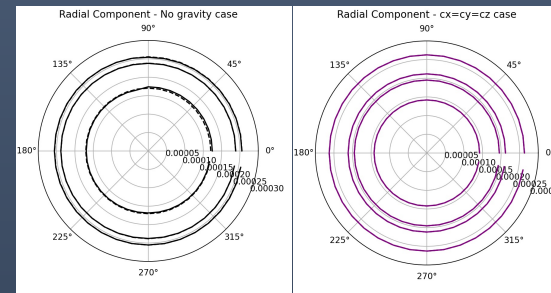
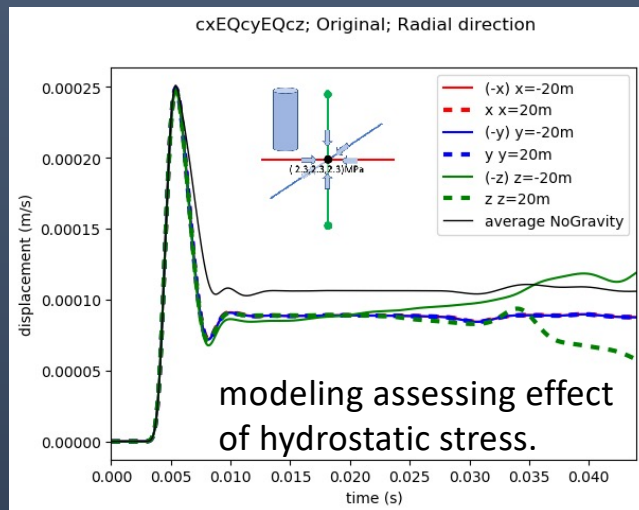
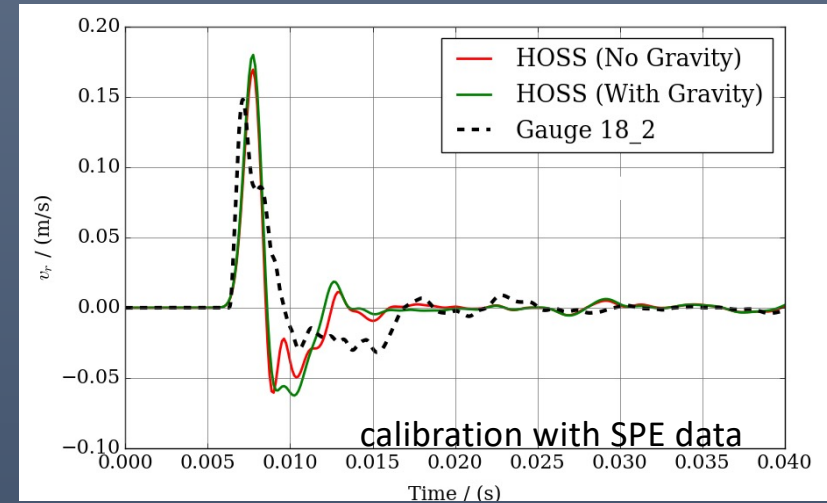
fracturing, cratering

w20_seismicsources IC Project - Feb 2022

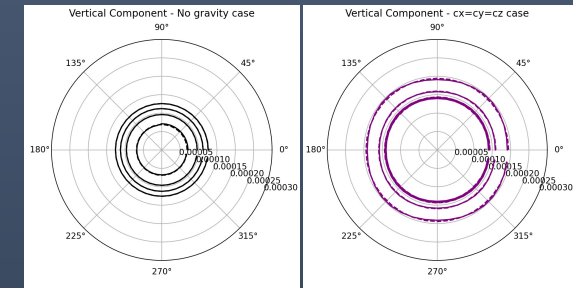
Calibration of near-source modeling for underground explosions in geophysical model.



state-of-stress within Earth crust



Effect of the amplitude of the radial seismic component.



Effect of the amplitude of the vertical seismic component.