

## LA-UR-14-24348

Approved for public release; distribution is unlimited.

Title: 3D Variations in Seismic Wavespeed and Mass Density in the Crust and

Upper Mantle of SE Asia from Joint Inversion of Seismic and Gravity

Data

Author(s): Maceira, Monica

van der Hilst, Robert D.

Zhang, Haijiang

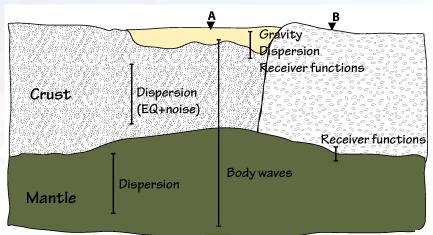
Intended for: Program review (RMR2014)

Issued: 2014-06-13



3D Variations in Seismic Wavespeed and Mass Density in the Crust and Upper Mantle of SE Asia from Joint Inversion of Seismic and Gravity Data

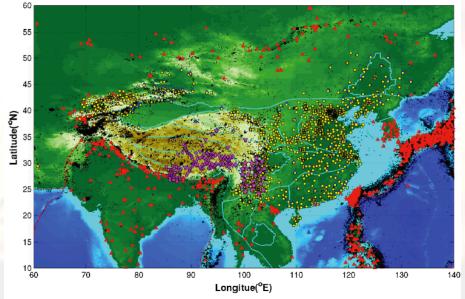
2-S-IMS-Hi



Simultaneous joint inversion of seismic and gravity observations has multiple advantages as well as challenges.

## **Application to SE Asia:**

- (1) Very good station coverage to take advantage of receiver functions interpolation.
- (2) Improved computer code to address gravity filtering artifacts, one-step surface wave dispersion inversion, and multi-scale wavelet inversion.



## **APPLAUSE**

Zhang, H., M. Maceira, P. Roux, and C. Thurber, 2014, Joint Inversion of Body-Wave Arrival Times and Surface-Wave Dispersion for Three-Dimensional Seismic Structure Around SAFOD, Pure and Applied Geophysics, Special edition on Crustal Fault Zones, <a href="http://dx.doi.org/10.1007/s00024-014-0806-y">http://dx.doi.org/10.1007/s00024-014-0806-y</a>

## **APPLAUSE**