



## **Group Velocity Tomography for Central Mexico Using a Mixed Set of Surface Waves Measurements from Regional Events and Noise Correlations**

Arturo Iglesias (1), Sara Ivonne Franco-Sánchez (1), Robert W. Clayton (2), Shri K. Singh (1), and Xyoli Pérez-Campos (1)

(1) Depto. Sismología, Instituto de Geofísica, UNAM, Mexico City, Mexico, (2) Seismological Laboratory, California Institute of Technology, Pasadena, Ca., USA.

As a part of the MesoAmerican Subduction Experiment (MASE), a seismic campaign consisting of 100 broadband seismometers was deployed in South Central Mexico for about two years (2005-2006). Stations were located along a line of  $\sim 500$  km with an inter-station distance of  $\sim 5$  km.

By using well located regional earthquakes, a surface wave tomography for the region has been recently published. Results from this work show important group velocity variations along the line.

However, given the geometry of the array, resolution decreases dramatically away from the line of the experiment. Additionally, the Mexican National Seismological Service (SSN) has a  $\sim 40$  broadband-station network distributed along the country. Simultaneous continuous records of both networks allow extracting Green's functions between pairs of stations and obtaining dispersion curves.

In this work we present the preliminary results of surface wave tomography combined by measurements of group velocity (Rayleigh waves) obtained from regional events recorded in MASE and SSN stations, and those obtained from noise correlations of pair of stations for periods  $5 \text{ s} < T < 50 \text{ s}$ .