

Preliminary Tsunami Simulation of the M_w=8.1 (USGS) - 96km SW of Pijijiapan, Mexico (ver.2)

Bruno ADRIANO

Erick MAS

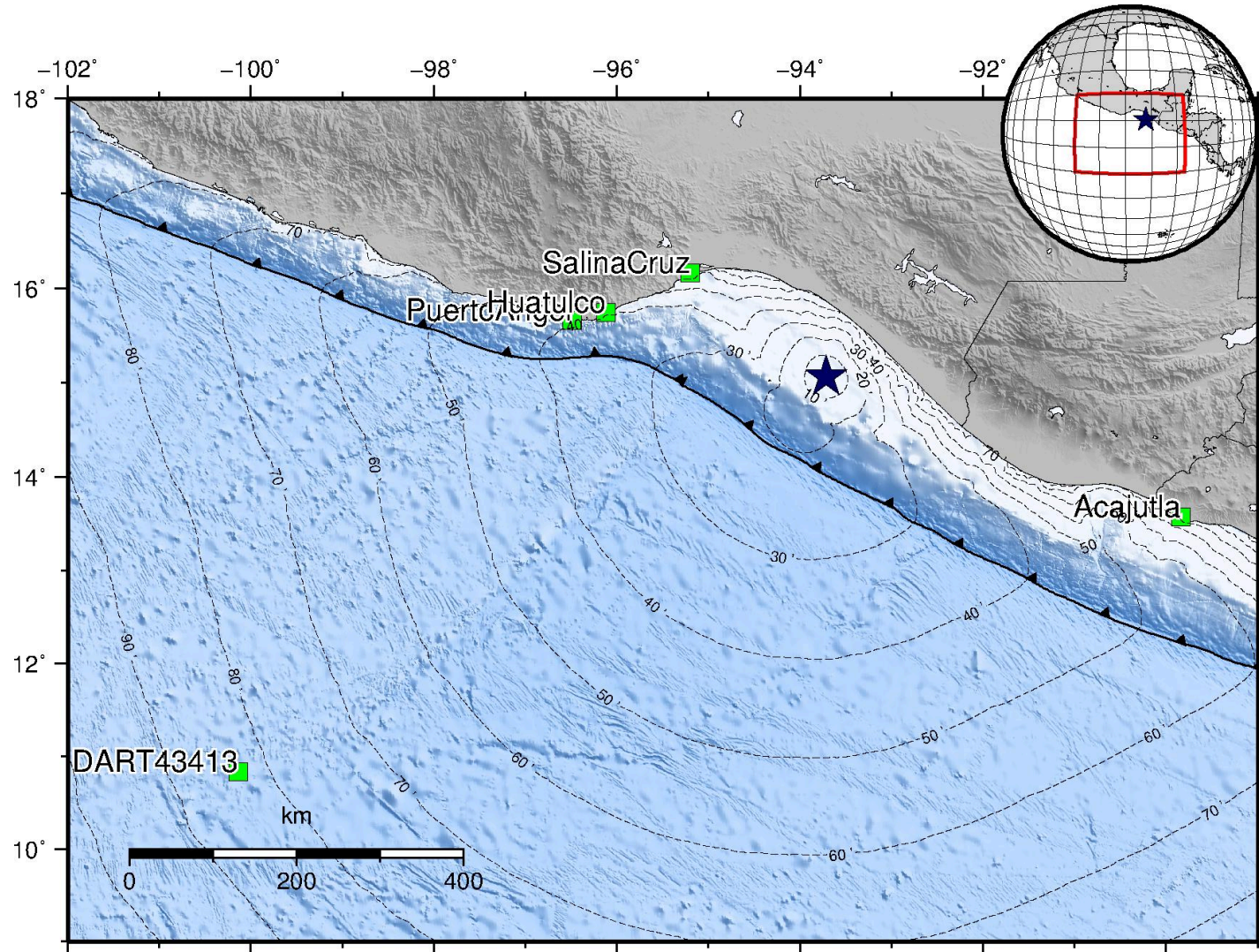
Shunichi KOSHIMURA



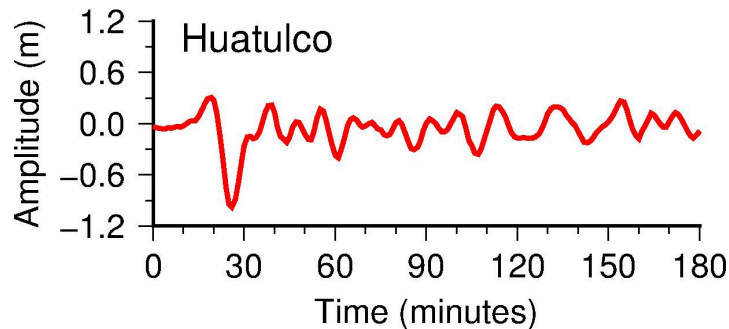
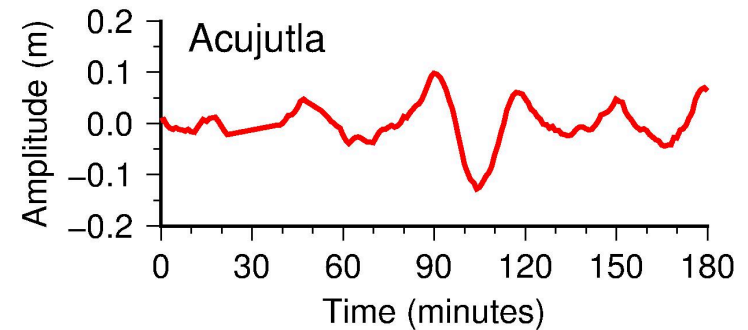
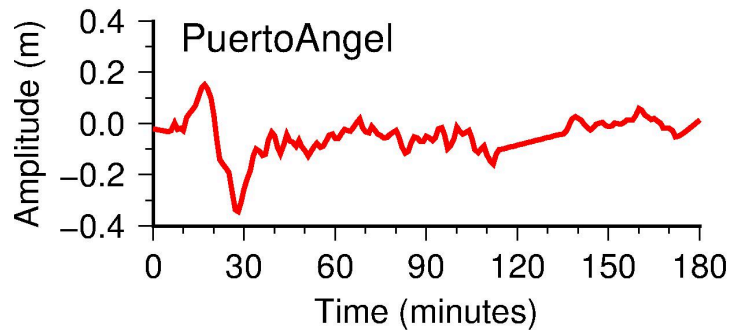
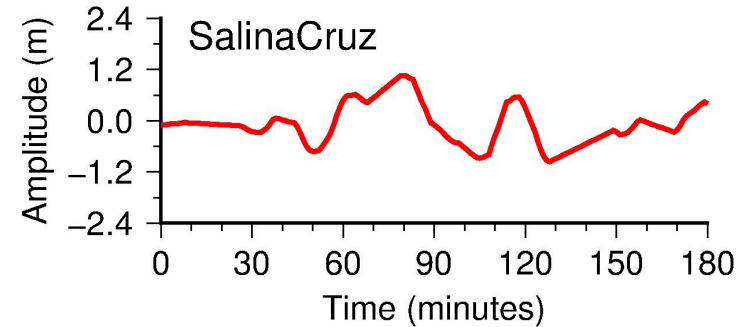
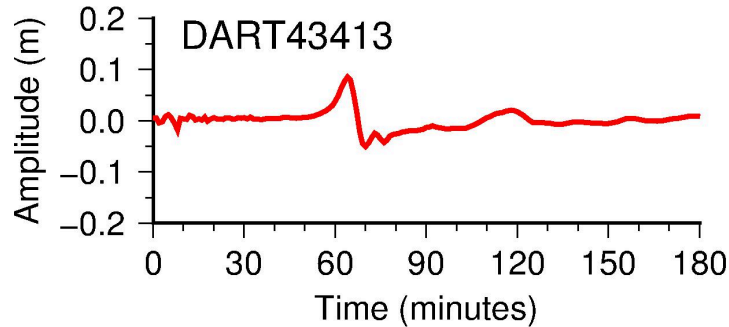
Tsunami Simulation

Lineal Tsunami Modeling

- Spatial grid size: 12arc-seconds (resampled from GEBCO 2014)
- The location of tide gauge stations are acceding to IOC (<http://www.ioc-sealevelmonitoring.org>)
- Zihuatanejo and Maderos stations were not included due to some gaps in the data.



Recorded Tsunami Data

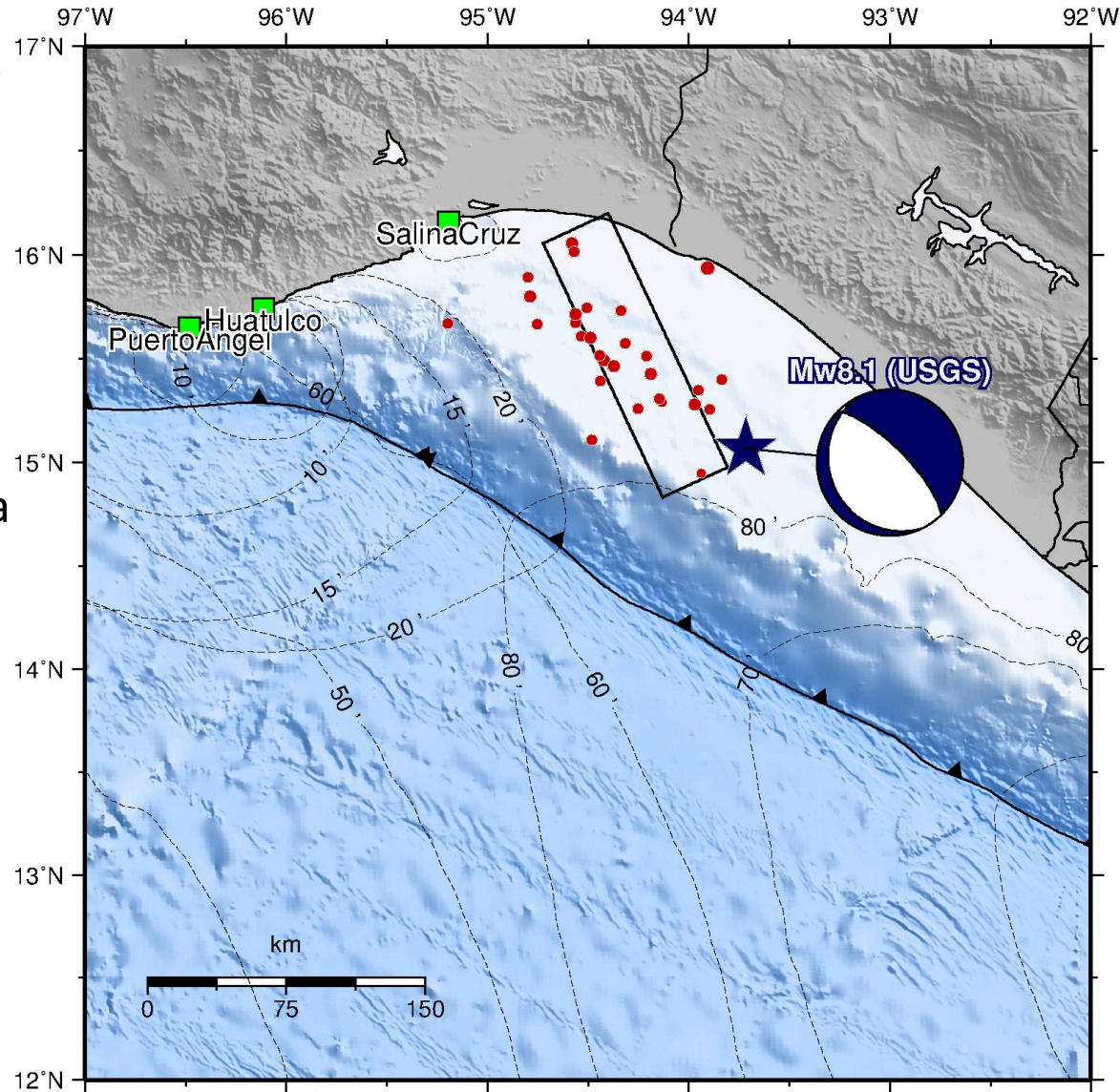


- The tidal signal was removed by fitting a simple polynomial functions (GMT software).
- All data was resampled to 1 minute interval.

Tsunami Source

USGS W-phase Moment Tensor solution (ver.3)

- The fault length, width and slip are 150 km, 40 km, and 9.5 m respectively. (Papazachos et al., 2004).
- The location of the fault area was set using the aftershock distribution (USGS) and the inverse tsunami travel time from tide gauge stations.

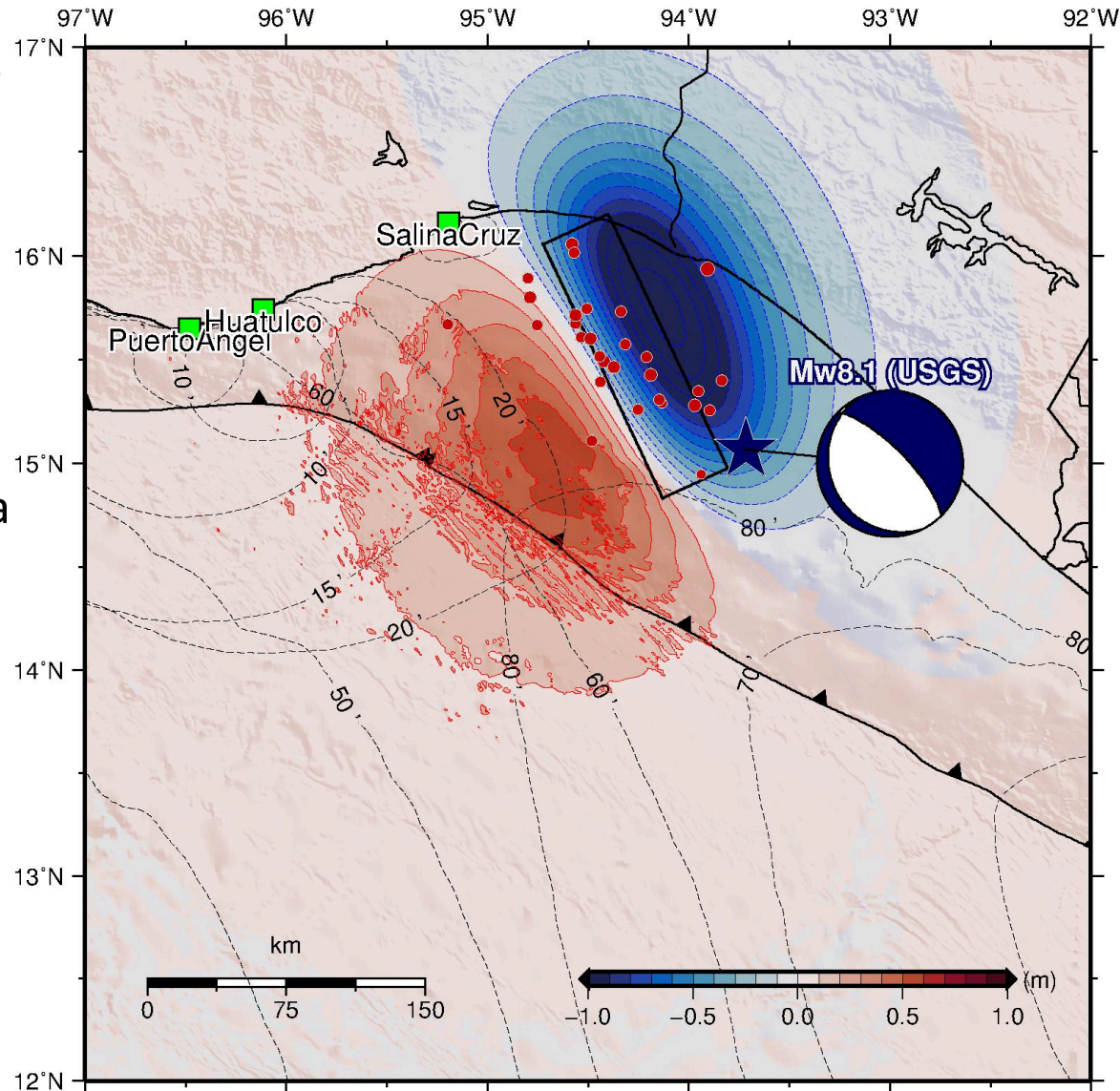


Tsunami Source

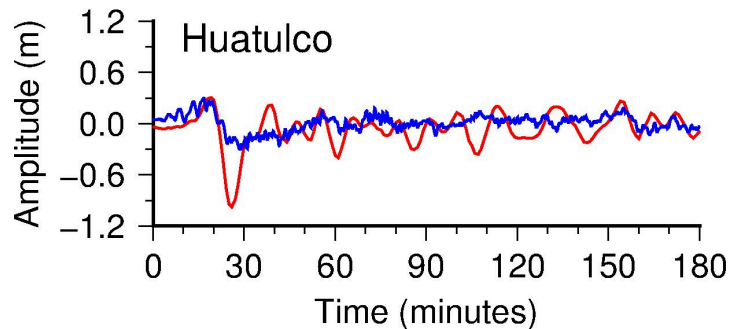
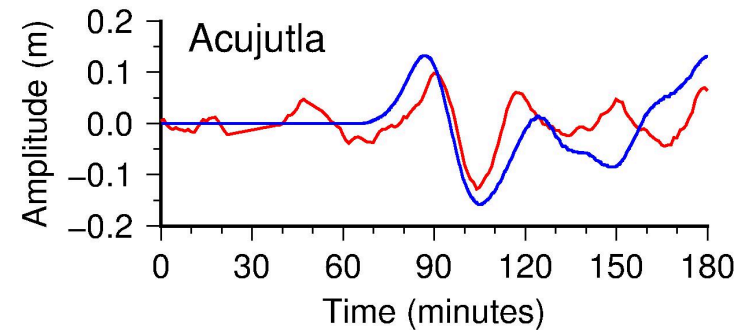
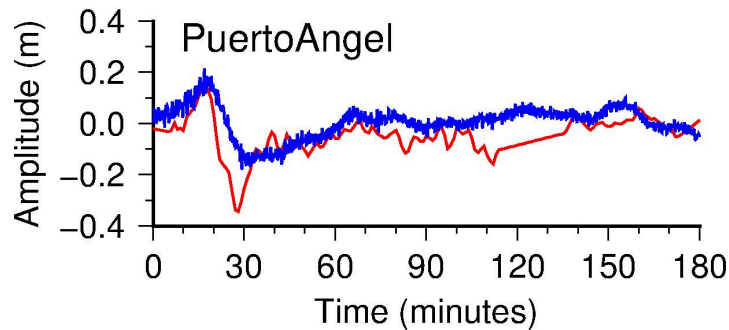
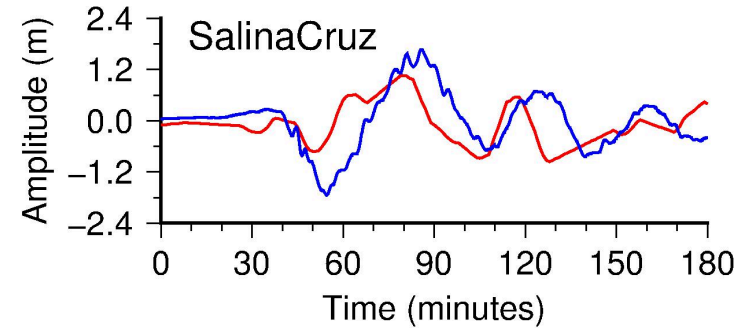
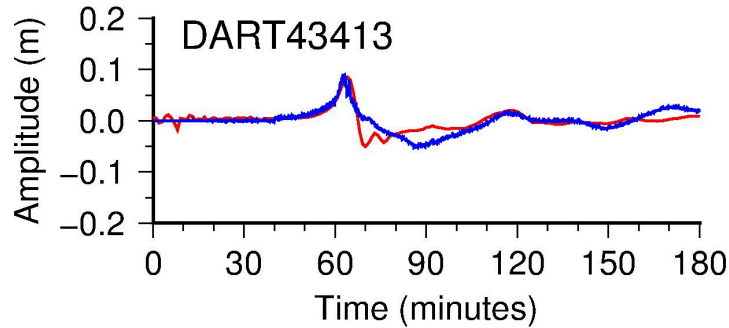
USGS W-phase Moment Tensor solution (ver.3)

- The fault length, width and slip are 150 km, 40 km, and 9.5 m respectively. (Papazachos et al., 2004).
- The location of the fault area was set using the aftershock distribution (USGS) and the inverse tsunami travel time from tide gauge stations.

(Strike= 155° , Dip= 18° , Strike= -70°)



Comparison with recorded data



— Synthetic — Recorded

Note that the waveforms in the later phase may not be well resolved because linear modeling.

Maximum Tsunami Height

