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

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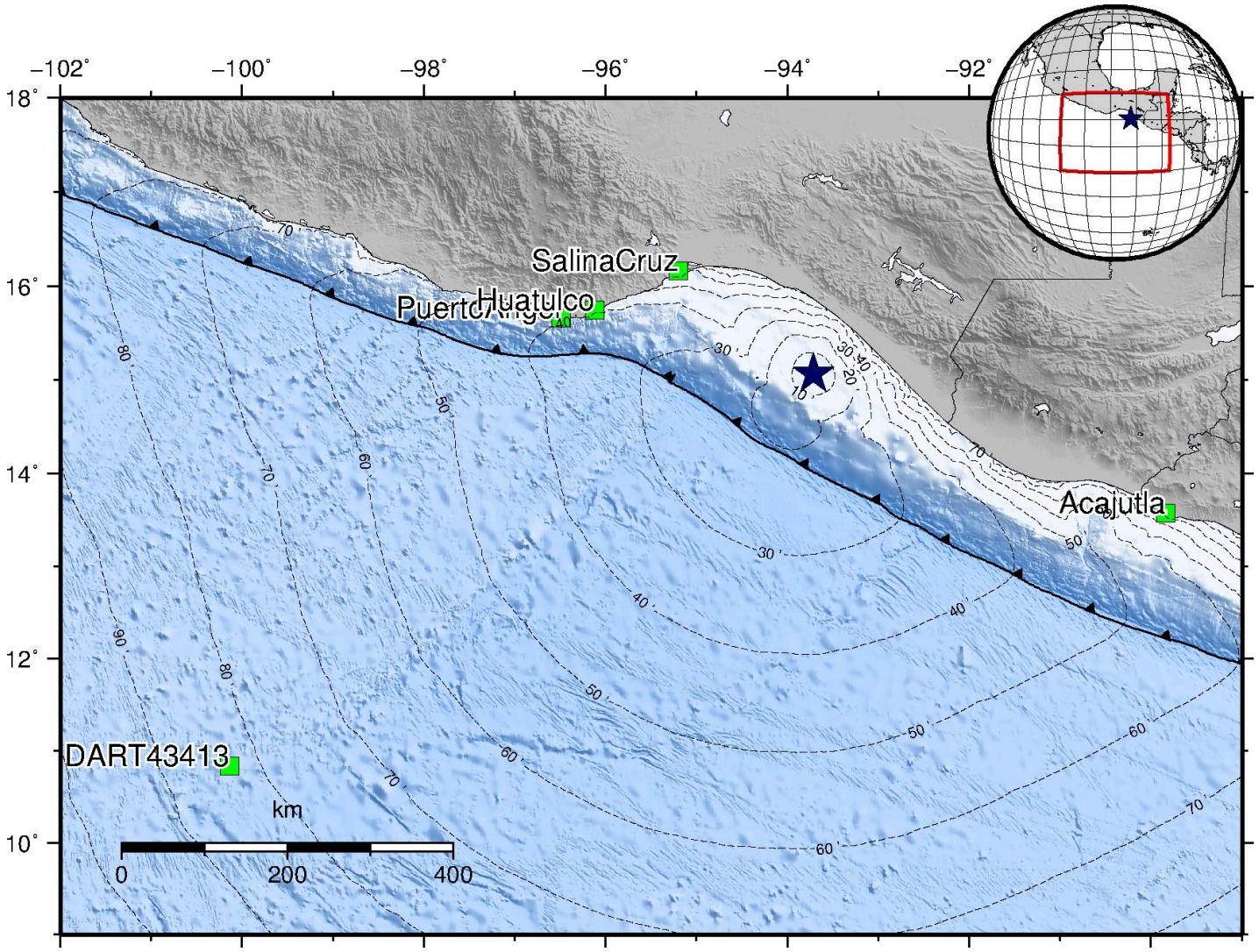
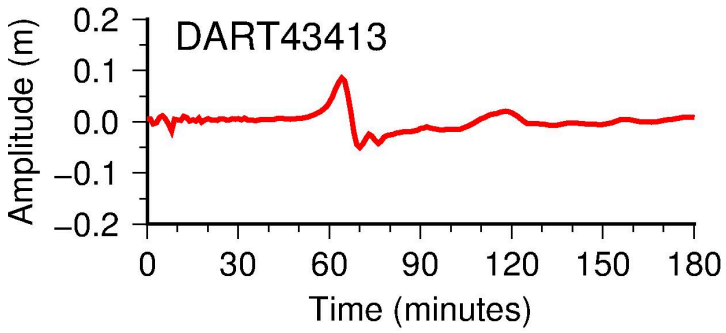
Tsunami Simulation

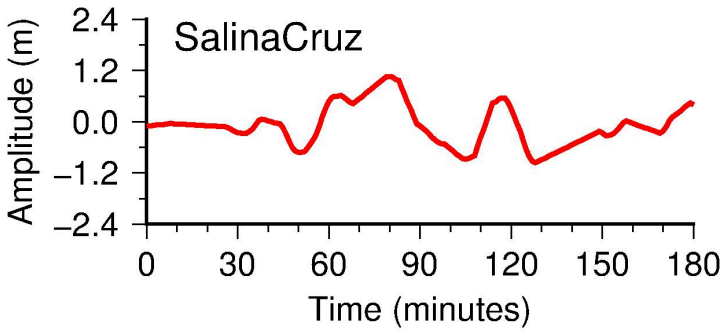
Lineal Tsunami Modeling

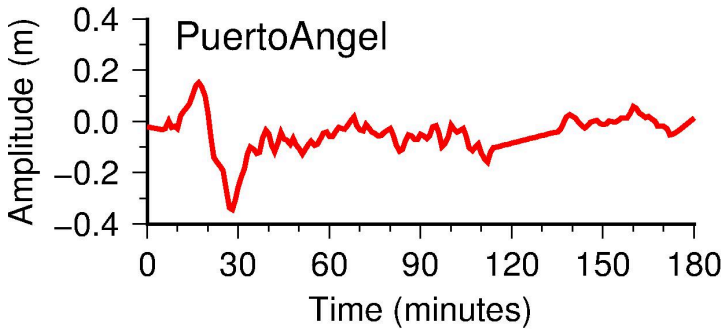
- Spatial grid size: 12arc-seconds (resampled from GEBCO 2014)
- The location of tide gauge stations are acceding to IOC (http://www.ioc-sealevelmonitoring.org)
- Zihuatanejo and Maderos stations were not included due to some gaps in the data.

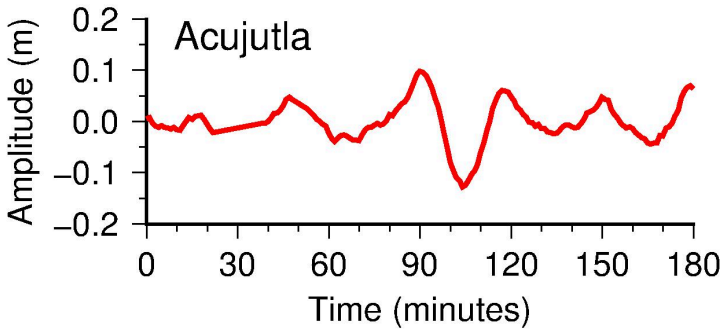


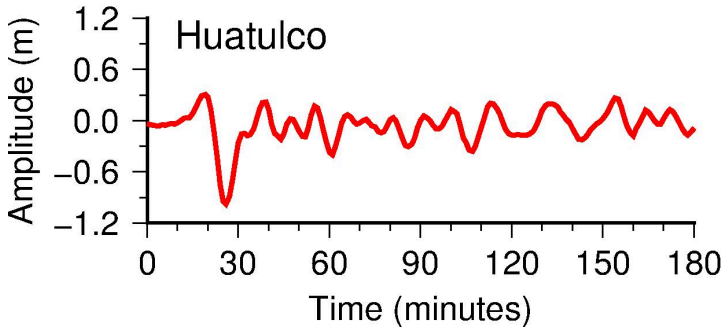
Recorded Tsunami Data









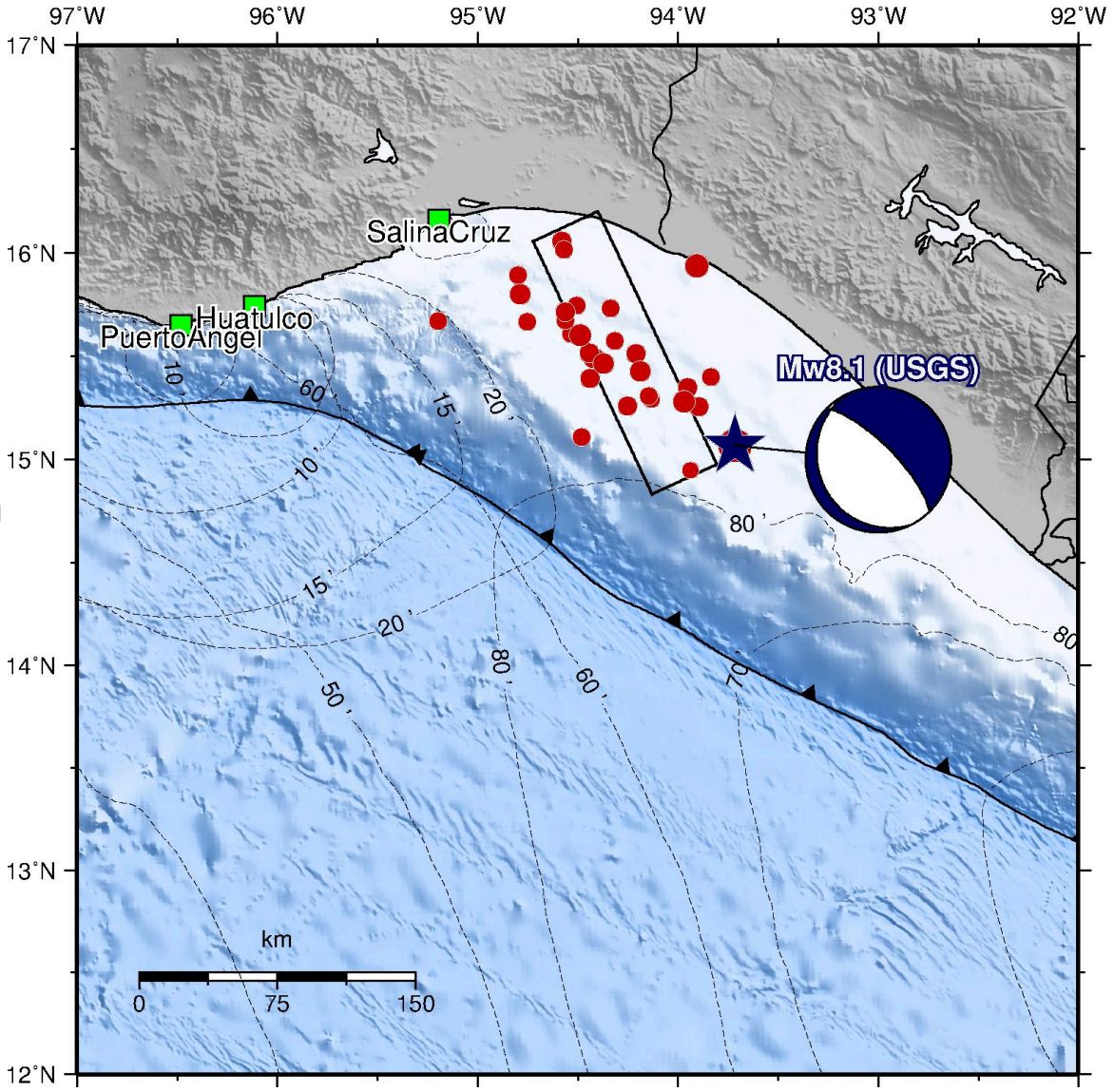


- The tidal signal was removed by fitting a simple polynomial functions (GMT software).
- All data was resampled to 1 minute interval.

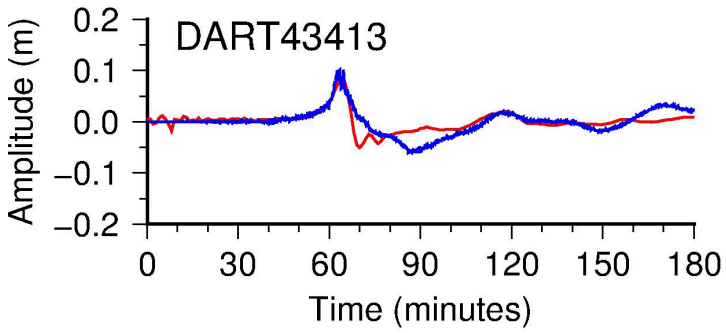
Tsunami Source

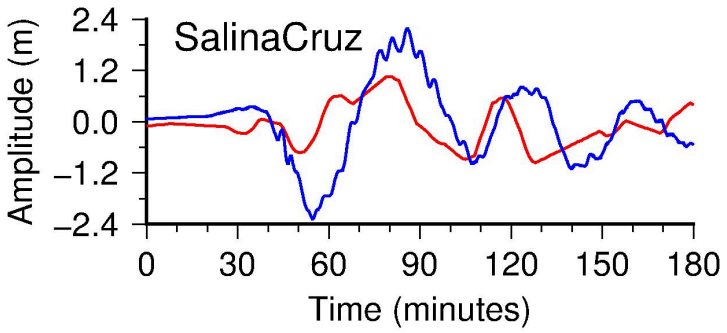
USGS W-phase Moment Tensor solution (ver.3)

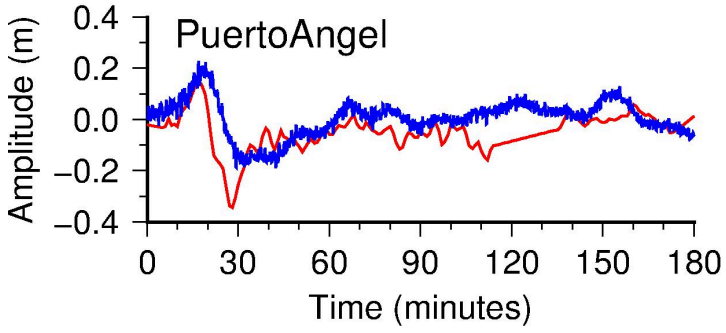
- The fault length, width and slip are 150 km, 40 km, and 9.5 m respectively. (Papazachos et al., 2004).
- The location of the fault area was set using the aftershock distribution (USGS) and the inverse tsunami travel time from tide gauge stations.

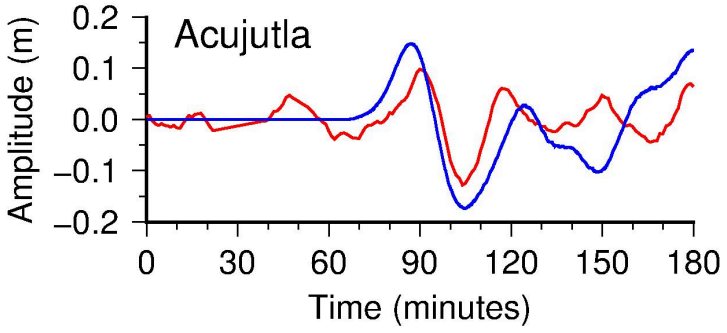


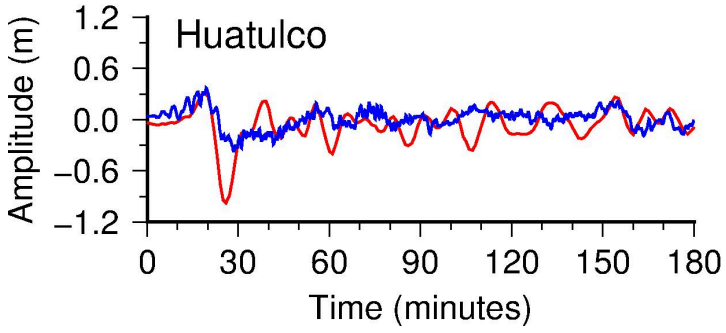
Comparison with recorded data











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

Maximum Tsunami Height