

2010年チリ地震津波の数値計算

越村俊一・今村文彦

東北大学大学院工学研究科

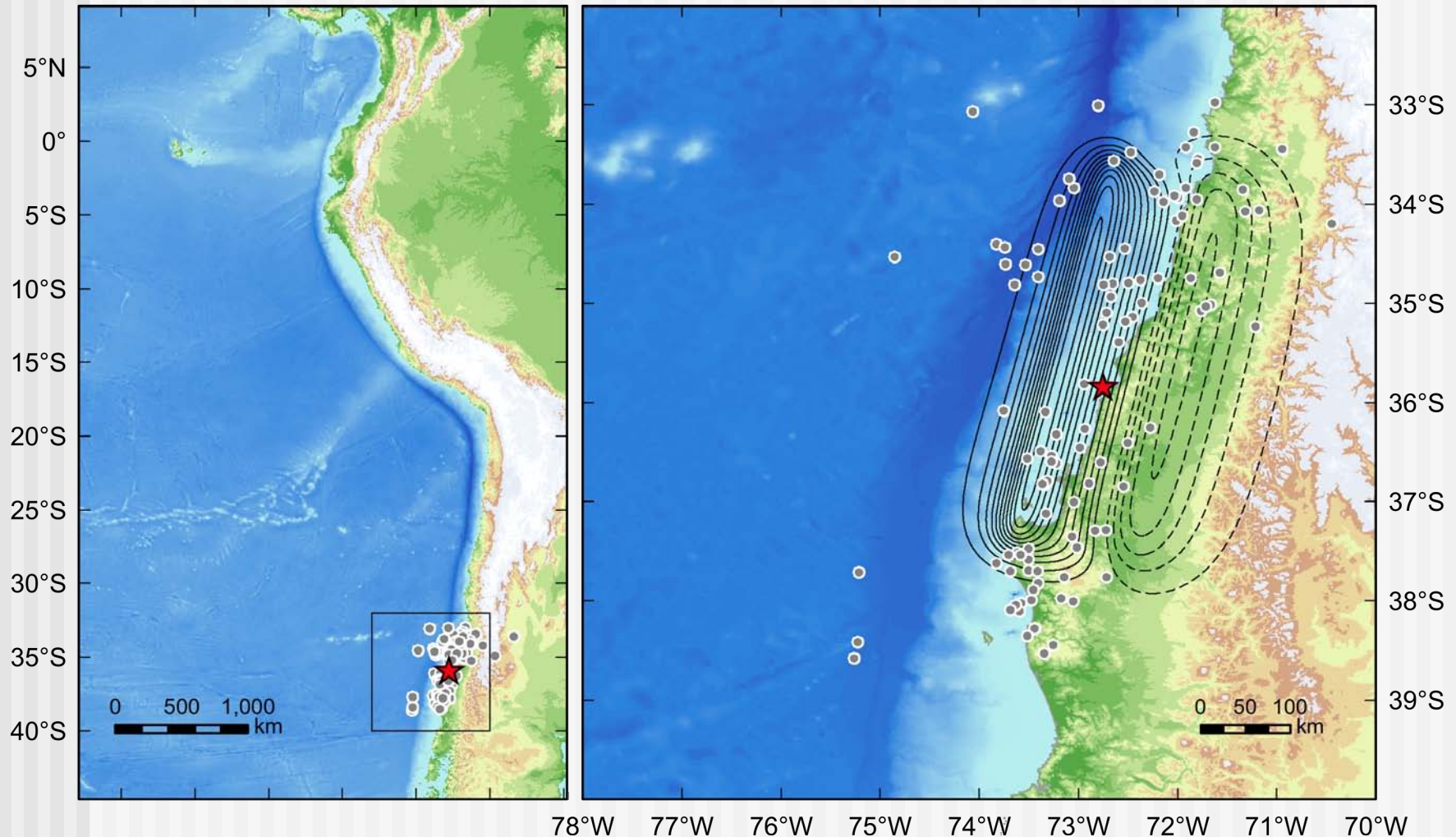
災害制御研究センター

27 February 2010 off the coast of Chile

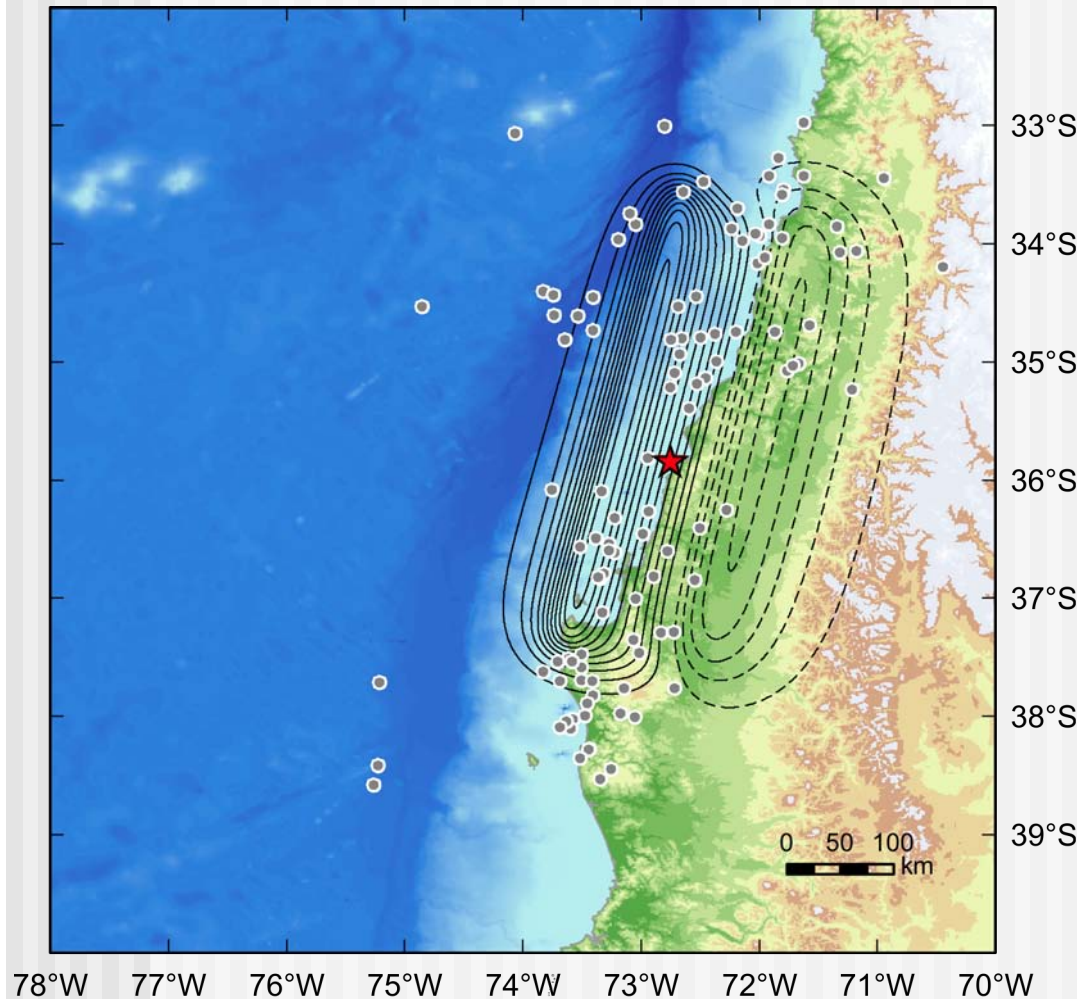
03:34:14 AM at epicenter

06:34:14 UTC

95°W 90°W 85°W 80°W 75°W 70°W 65°W



Tsunami Source Model



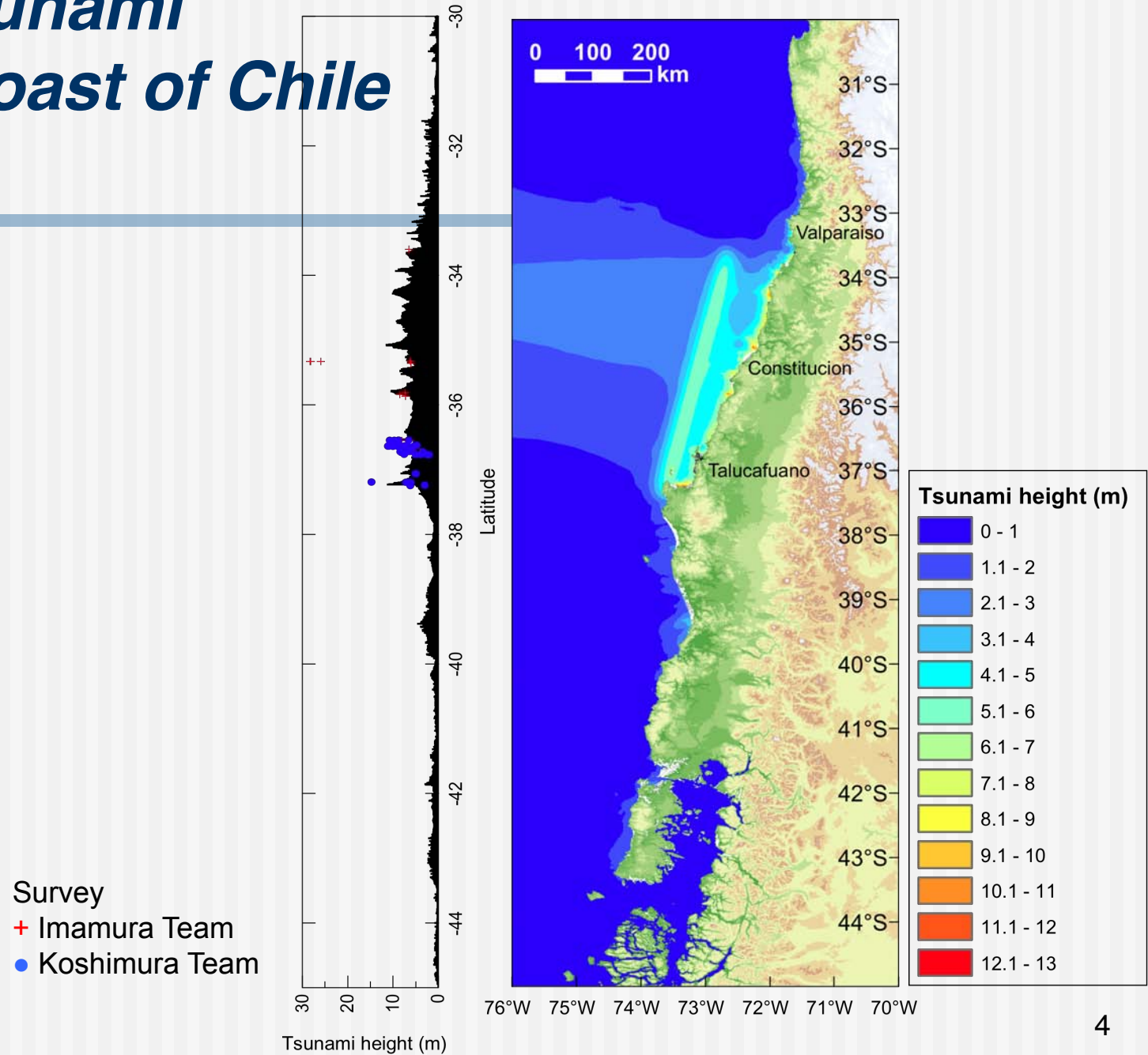
$M_0 = 2.0 \times 10^{22}$ Nm

Fault Length / Width : 450 km / 100 km
(Strike, Dip, Slip) = (16, 14, 104)

Dislocation : 15 m

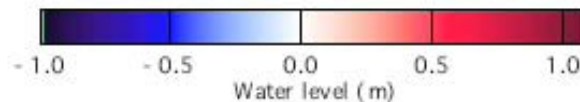
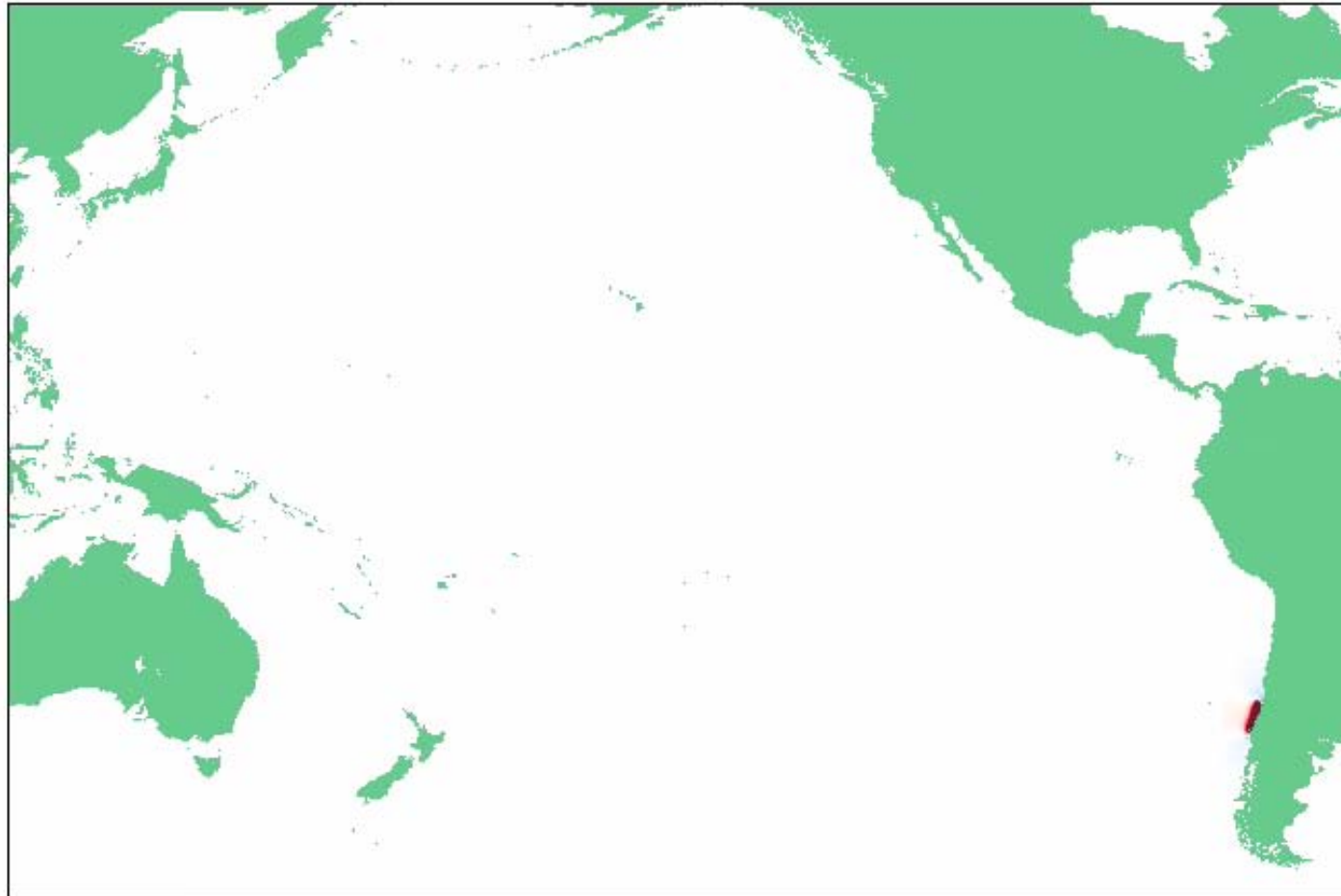
断層寸法はWells and Coppersmith
(1994)の経験則で決定

Local Tsunami Pacific coast of Chile

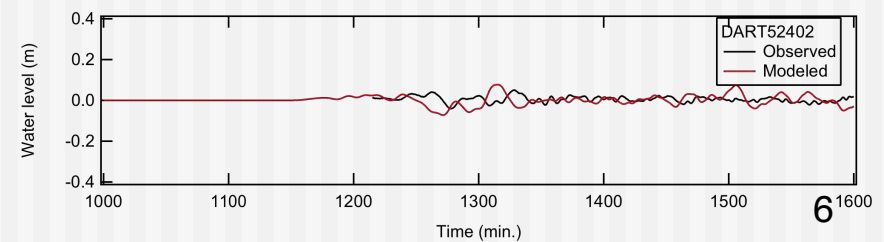
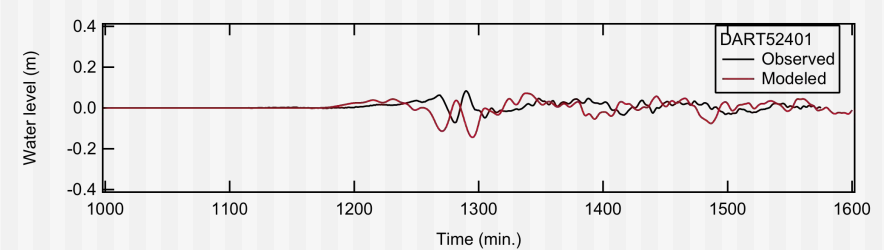
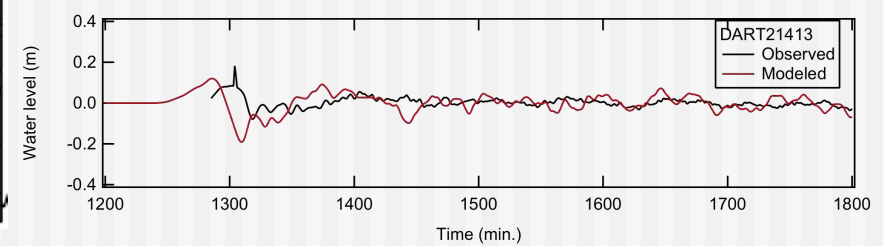
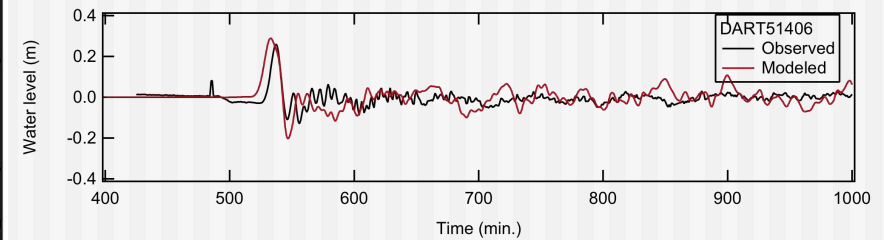
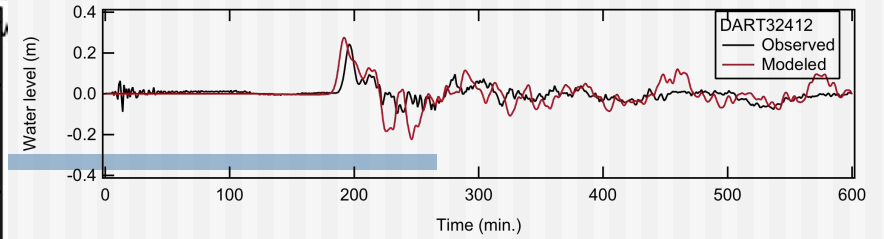
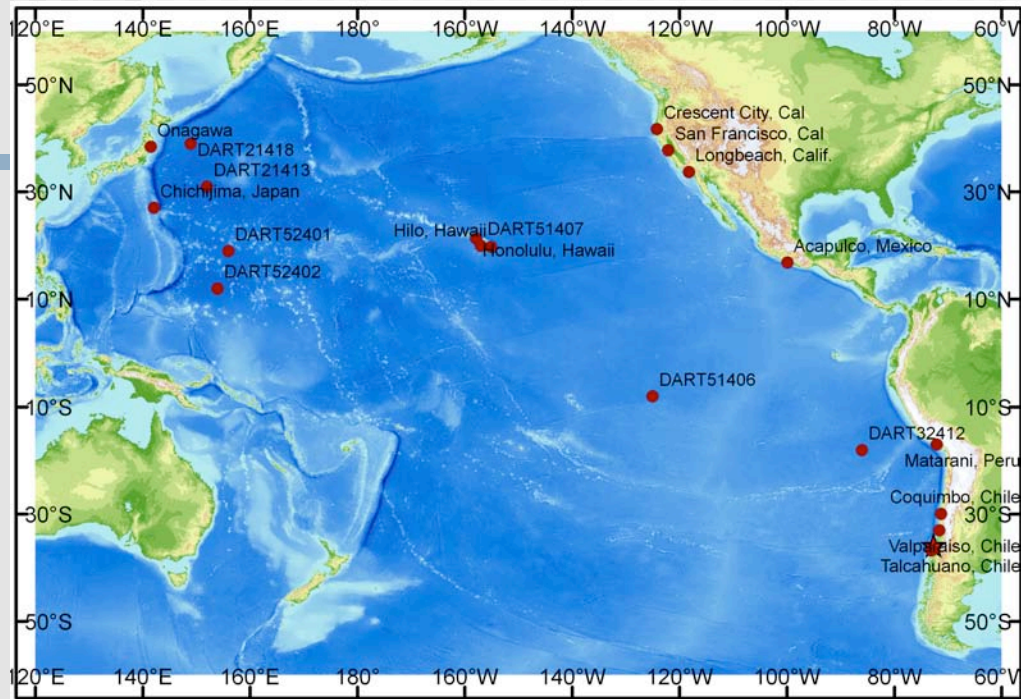


Tsunami modeling

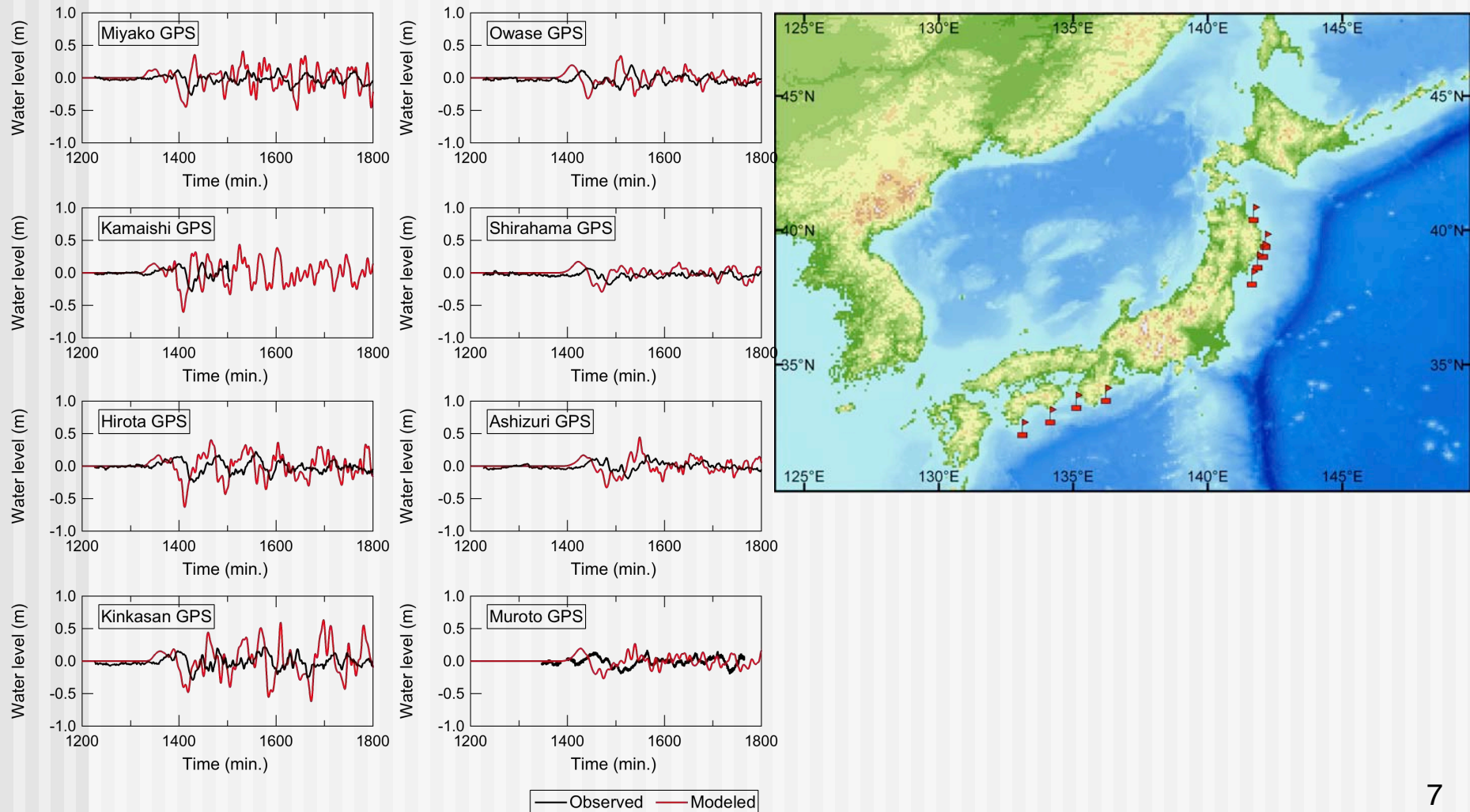
Pacific-wide tsunami propagation



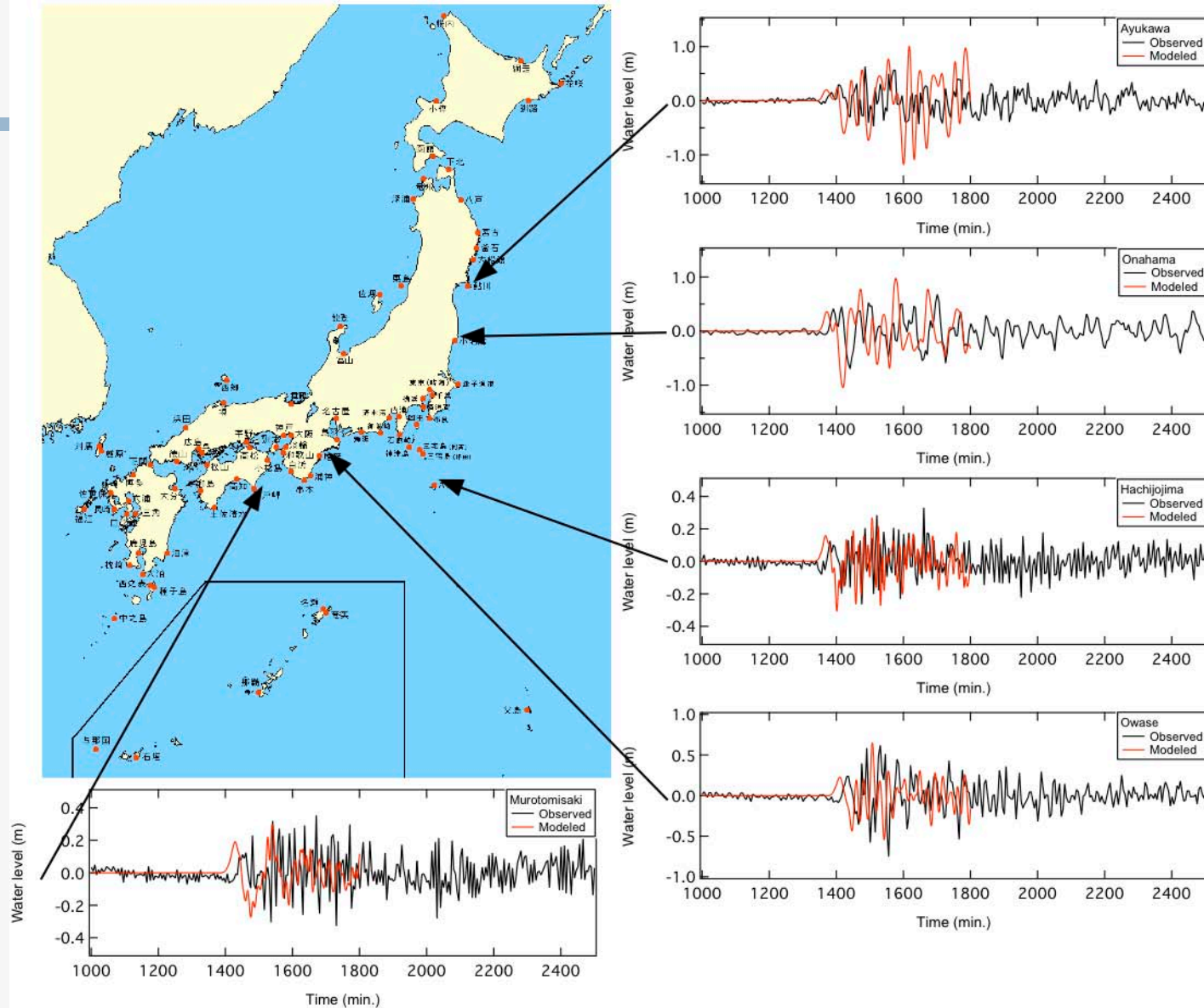
Mid-ocean Propagation



Offshore GPS Buoy (NOWPHAS + GPS Tsunami Buoy)

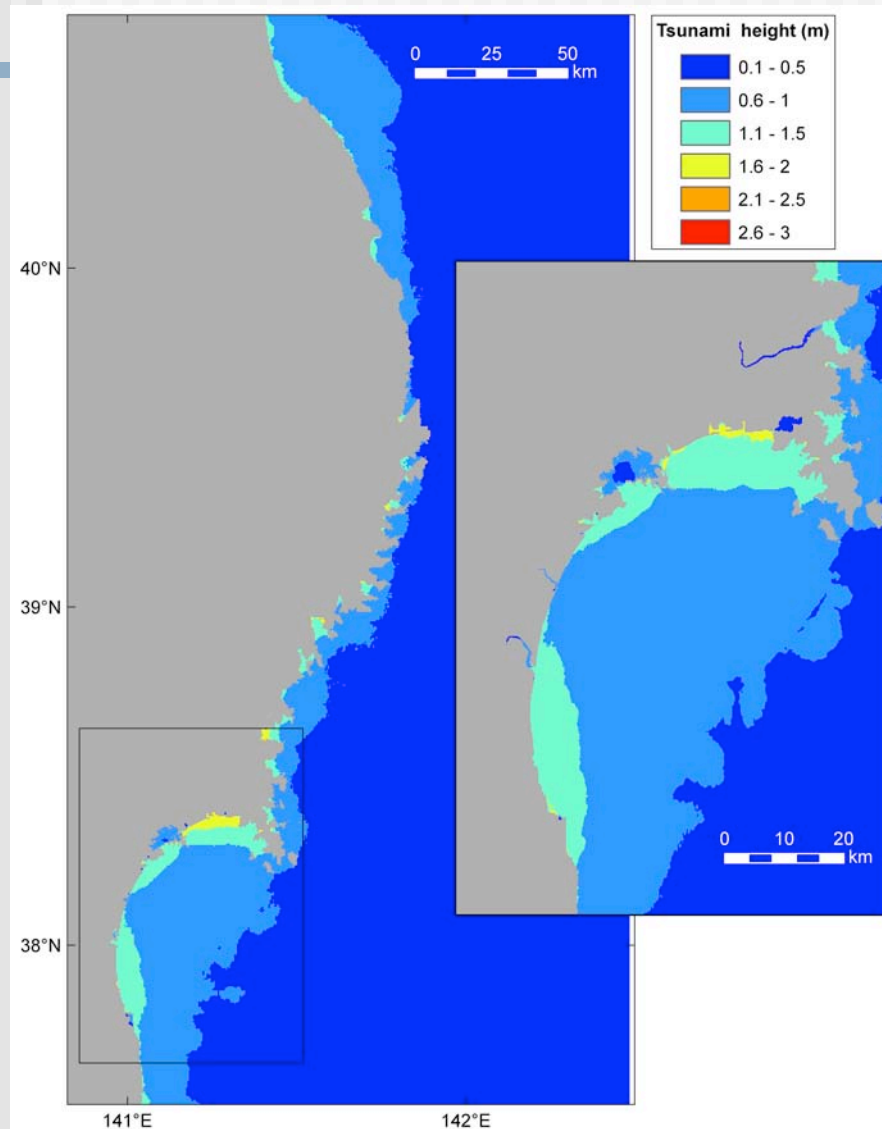


Pacific coast of Japan



Pacific coast of Japan

Numerical model result



支配方程式：非線形長波式
空間格子間隔：450m/150m

- 東北太平洋岸津波高～2.5m
- 仙台湾, 志津川湾, 広田湾, 船越湾等で増幅