Japan Geoscience Union Meeting 2010

(May 23-28 2010 at Makuhari, Chiba, Japan)

©2009. Japan Geoscience Union. All Rights Reserved.

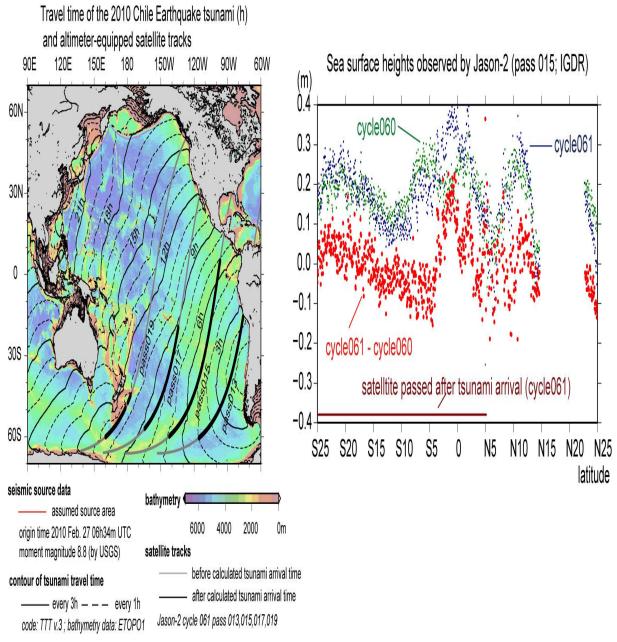


MISO50-P08 Room: Convention Hall Time: May 23 17:15-18:45

On real-time tsunami detectability of satellite altimetry: Case study with data during Feb 2010 Chile earthquake tsunami

Yutaka Hayashi^{1*}, Norihisa Usui¹, Masafumi Kamachi¹, Shunichi Koshimura²

¹Meteorological Research Institute, ²Graduate School of Eng., Tohoku Univ.



Jason-2, which is equipped with a satellite altimeter, flew over the tsunami propagation area in the southwest Pacific approximately 5, 7, 9, and 11 hours after the occurrence of the 2010 Feb Central Chile earthquake (Left Figure; cycle 061, pass 013, 015, 017, 019).

According to the IGDR altimetry products of Jason-2, which are distributed to users about 1 - 1.5 days from the observation, sea surface height difference between cycle 061 (approximately 5 hours after the earthquake) and cycle 060 (approximately 10 days before) has two short waves (apparent wave length is approximately 500 kilometers) near the equator along pass 015(Right Figure). We are examining if these include somewhat tsunami component.

We will discuss on the poster whether it is possible to extract tsunami component from the sea surface height data obtained beneath above-mentioned satellite passes. We are also planning to discuss about necessary technical seeds to realize real-time analysis of sea surface height data and extraction of tsunami components from altimetry products.

Keywords: Jason-2, The 27 February 2010 Central Chile earthquake tsunami, IGDR, trans-ocean tsunami, satellite remote sensing technology, tsunami monitoring