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The 27 February 2010 tsunami in satellite altimetry data and comparison to numerical model results

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Tracking changes in sequential alongtrack altimetry data have provided spatial signatures of ocean-wide wave propagation and dispersion for strong tsunamis, such as the one generated from the 26 December 2004 Indian Ocean megathrust earthquake. Similar analyses can also be used for tsunamis of lesser amplitudes. However, natural oceanic variability on synoptic to monthly timescales tends to interfere, or mask tsunami signals. We present analyses results from alongtrack altimetry data and from a numerical tsunami model for time periods before and after the Chilean 27 February 2010 earthquake and identify tsunami wave segments in these data, based on their statistical properties.