

Ocean height indicator of climate

October 7 2005

U.S. and Canadian authors say an index of sea surface heights gathered by satellites could be a useful indicator of long-term climate cycles.

Recording sea surface temperatures is one way of monitoring ocean conditions corresponding to long-term climate cycles such as el Nino and the Pacific Decadal Oscillation, the climate cycle thought to be the main component of sea surface temperature variation in the Northern Pacific, according to lead author Patrick F. Cummins, Fisheries and Oceans Canada, Institute of Ocean Sciences, in Sidney, British Columbia.

The study, published in the Geophysical Research Letters, said that as temperatures change during these cycles, so too would sea surface height, since water expands and contracts as it heats and cools.

The study authors compared satellite measurements of sea surface height in the northeast Pacific Ocean from 1993-2004 to recordings of sea surface temperature in the region during the same period. The sea surface height measurements proved to be as accurate as temperature measurements as indicators of ocean conditions resulting from long-term climate cycles as well as being more consistent.

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Citation: Ocean height indicator of climate (2005, October 7) retrieved 23 March 2023 from <https://phys.org/news/2005-10-ocean-height-indicator-climate.html>

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