

Warming oceans may diminish length of day

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German scientists say a redistribution of ocean waters caused by global warming will likely affect the Earth's rotation and the length of days.

Felix Landerer and colleagues at the Max Planck Institute for Meteorology in Hamburg analyzed ocean predictions contained in the Intergovernmental Panel on Climate Change Fourth Assessment. Since increasing heat captured by the oceans might raise sea level, thereby changing the ocean's circulation and affecting the ocean-bottom pressure, they said a significant portion of ocean mass may transfer away from deep waters to shallower shelf areas.

The researchers' model indicates that, by the end of the 22nd century as a result of expected warming, enough water mass could shift toward the Earth's axis of rotation to shorten the length of day by approximately 0.12 milliseconds.

The study is detailed in the current issue of the journal *Geophysical Research Letters*.

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