

Re: suppose there was an earth sized watermelon?

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From: Odysseus (*odysseus1479-at_at_yahoo-dot.ca*)

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Patrick Powers wrote:

>

> *Scott Robinson <dscottr@bellatlantic.net> wrote in message news:<b1a7q0pemprrgv0a1529tocbe73475ri0d@4ax.com>...*

> >

[snip]

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> > *A water planet would be hot at the center.*

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> *I'm inclined to believe it, but then why does the ocean get colder as one descends, while earth grows hotter?*

AFAICT it's because colder water -- down to 4°C -- is denser than warmer, and sinks. Great as the pressures get in the deep oceans, they're insignificant compared to those in the interior of a planet, at least as far as they affect convection &c.; I don't know how water behaves under extreme pressure, but I can imagine it solidifying to a degree, inhibiting convection and other transport mechanisms sufficiently to trap heat in the core. But even if so, there would remain a surface region where the usual regime, involving water in a liquid state, allows heat to be carried upward from the depths.

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Odysseus