2010 Ocean Sciences Meeting
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Cite abstracts as **Author(s) (2010), Title, *Eos Trans. AGU, 91*(26), Ocean Sci. Meet. Suppl., Abstract xxxxx-xx**

Your query was:
zaron and sc=physical

HR: 1400h
AN: **PO33D-05**
TI: On the temporal variability of low-mode internal tides in the deep ocean
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AB: In situ measurements of internal tides are typically characterized by high temporal variability, with strong dependence on stratification, mesoscale eddies, and background currents commonly observed. Thus, it is surprising to find phase-locked internal tides detectable by satellite altimetry. An important question is how much tidal variability is missed by altimetry. We address this question in several ways. We subset the altimetry by season and find only very small changes -- an important exception being internal tides in the South China Sea where we observe strong seasonal dependence. A wavenumber-domain analysis confirms that throughout most of the global ocean there is little temporal variability in altimetric internal-tide signals, at least in the first baroclinic mode, which is the mode that dominates surface elevation. The results of this study have important practical implications for the anticipated SWOT wide-swath altimeter mission, for which removal of internal tide signals is critical for observing non-tidal submesoscale phenomena.
DE: [4560] OCEANOGRAPHY: PHYSICAL / Surface waves and tides
DE: [4562] OCEANOGRAPHY: PHYSICAL / Topographic/bathymetric interactions
SC: Physical Oceanography (PO)
MN: 2010 Ocean Sciences Meeting

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