

Interactive comment on “A new assessment of global mean sea level from altimeters highlights a reduction of global trend from 2005 to 2008” by M. Ablain et al.

E. Leuliette (Referee)

Eric.Leuliette@noaa.gov

Received and published: 3 March 2009

General comments

I agree with all of the comments made by Referee #2 and Don Chambers. In particular, I am also concerned with the computation of the error analysis raised by these reviewers.

Specific comments

The authors should improve Section 5, which describes a results of tide gauge calibrations. If I understand the text correctly, a global land motion correction was made

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



based on available the co-located GPS sites. Does this mean that no vertical land motion correction was made to the ~70 tide gauges with no nearby GPS measurements? In page 42, lines 3-4, I do not understand what is meant by "they are calibrated together in order to be used". What was the maximum separation between a gauge and GPS site? Was the inverted barometer applied to the altimetry data in order to compute the calibration? How were the tides removed from the tide gauges? When the drifts are computed for each time series, are the gauges equally-weighted, or does the method effectively weight each altimeter-tide gauge residuals as Mitchum's method does? What is the error on the vertical land motion correction? Leuliette et al. and Beckley et al have reported that the formal error on the trend fit to the 15-year mean sea level data is negligible. Is that case in this analysis?

page 32, lines 10-11: Since November 2005 MSL is accurately measured by a single satellite.

page 34, line 27: Please describe how the spurious measurements were removed.

page 35, lines 14-16: What is the estimated errors on the 3-year and 5-year trends? What rates are significant?

page 35, lines 24-25: Please explain why you expected smaller rates for the 5-year window.

page 36, lines 11-15: The Jason-1 radiometer is prone to periodic offsets rather than drifts.

Technical corrections

page 32, line 19: Church and White 2006 is not in the bibliography.

page 32, line 22: Leuliette et al. 2004 is not in the bibliography.

page 34, line 3: Center should be Centre.

page 34, line 20: Gaspard should be Gaspar.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)

page 35, line 11;page 35, line 26;page 36, line 1: The enya ($\sim\{n\}$) is missing from Nino and Nina.

page 42, line 5: Capitalize "African".

page 42, line 12: Write out ULR.

Interactive comment on Ocean Sci. Discuss., 6, 31, 2009.

OSD

6, S41–S43, 2009

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

