

Interactive comment on “Daily oceanographic analyses by the Mediterranean basin scale assimilation system” by S. Dobricic et al.

Anonymous Referee #2

Received and published: 11 December 2006

General comments

The paper addresses some improvements made to the assimilation technique used in the Mediterranean Forecasting System. The paper is rather short, but generally well written and clear, except for some points that require explanation and/or extension. I suggest that the Authors consider that most readers are not aware of the subject and better explain some points.

a) A problem is related to the text at Page 1986, lines 1-4, and Figs. 3-5. The paper is expected to focus on daily analyses, but the above-mentioned text and figures deal with weekly results and 14-day averages. Particularly Fig. 3 is expected to show daily results, since there are three experiments with daily assimilation, but curves are ap-

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

parently composed of weekly data. Note also that at Page 1982, line 20, it is stated that after June 2004 daily analyses are available and Fig. 3 shows results since October 2004. The conclusions will (hopefully) not change, but reading the paper title, one expects to see something about daily analyses.

b) With reference to Fig. 3, we can see that during most of the 6-month period the curves do not differ much from each other. Is the improvement with daily assimilation significant or not? It would be interesting to extend the analysis after March 2005 (the analysed period seems short). Moreover, is the improvement large enough to balance the complications (if any) in the assimilation system (e.g. in the data flow, in computational time)?

c) The title should be made more precise, since it does not say what “the Mediterranean basin scale assimilation system” is made for and implicitly suggests that it is the only one available in the region.

d) Some figures should be improved.

Specific comments

1) Page 1978, line 8: Please quantify or describe more precisely what “relatively high” is.

2) Page 1978, line 25 and page 1982, line 6: Please explain shortly what FGAT is and/or provide suitable references.

3) Page 1981, lines 6-8: The sentences assume that the reader already knows about the 1993-97 model simulations and the 13 regions. Please provide details and/or references.

4) Page 1981, line 10: The grid spacing (rather than resolution) is almost 7 km in latitude but varies between about 5 km at 44°N and 6 km at 30°N in longitude.

5) Page 1981, lines 21-22: Please give more details on the model estimate and the

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

observations. In particular, which model is used (the same as in this paper?) and what parameters are observed.

6) Page 1983, lines 7-13: The sentence is rather obscure. Please rephrase it.

7) Page 1986, lines 2-4: It is not clear to what extent the r.m.s. of SLA misfits is independent of the assimilated SLA. If I understood correctly, SLA is assimilated every day and the r.m.s. is computed just before the subsequent assimilation, i.e. after only one day, before the correction. Please explain.

8) Page 1986, lines 19 and 25, page 1987, line 2: The word “measured” is misleading since instruments do not measure an r.m.s. but provide data to compute it.

Technical corrections

1) Page 1978, line 20: Replace “is” with “was”.

2) Page 1980, lines 19-20: Replace “Analyses” with “Analysis”.

3) Page 1981, lines 13: (Pinardi et al., 2003) is missing from the reference list.

4) Page 1981, lines 17 and 19: Use a consistent date format throughout the paper (e.g. “on 1 January 2002”).

5) Page 1981, lines 19-20: Please rephrase the sentence to avoid too many “analyses” (e.g. The analyses are ... on a weekly basis ... and daily basis ...).

6) Page 1981, line 25: Replace “2” with “two”.

7) Page 1982, line 8: Replace “2” with “two”.

8) Page 1986, line 7: Replace “then” with “than”.

9) Page 1990, References: Castellari et al. is not referenced to in the text.

10) Page 1991, line 1: Put a space between “internet” and “server”.

11) Page 1993, figure caption: Replace “Position” with “Positions”.

12) Page 1994, figure and caption: a) The short-long dashed and long dashed lines cannot be easily distinguished. b) The horizontal coordinate seems to end around 20 February not 15 March as written in the caption. c) SLA residuals are in centimetres (a misprint, I hope ...).

13) Page 1995, figure caption, line 1: “300” instead of “500”.

14) Page 1997, figure: I suggest to use centimetres for the contour labels, for coherence with fig. 3. This also makes it easier to understand the contour labels in the lower panel.

15) Page 1998, figure: Replace “d)” with “b)” in panel b. Moreover, the figure is small and it is very difficult to see the details of the contours.

Interactive comment on Ocean Sci. Discuss., 3, 1977, 2006.

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