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

S. Dobricic et al.

Received and published: 13 February 2007

Reply to referee #1

We would like to thank you for very useful comments that helped to improve the presentation of the manuscript.

1. The suggestion for updating error covariances more frequently is now explained in the last paragraph of Conclusions.

2. We did not consider this important aspect in our original manuscript. Now there is a new figure (Fig. 5) which shows the r.m.s. of SLA misfits as a function of the day of the forecast in the weekly run. The discussion is given in the fourth paragraph of Section 3.1.

3. Fig. 4 shows a typical distribution of satellite tracks. The third and the forth para-
graphs in Section 3.1 discuss the importance of the crossing of tracks. There is also a new figure which supports our findings (Fig. 6).

4. A repeated inspection of misfits showed that the large error in January 2005 was due to a profile which was wrong. In the weekly system it was eliminated before the calculation of misfits. On the other hand, in the daily system it was eliminated only after the calculation of misfits, before performing the analysis. Therefore, the wrong profile was not assimilated by any experiment, but it appeared in the diagnostics shown in Fig. 7. In the revised manuscript we removed this profile from the diagnostics in all experiments. We apologize for this error.

5. The figure became very small during the processing of our original manuscript by the publisher. This time we will check its size more carefully.

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