

## ***Interactive comment on “Predictions for oil slicks detected from satellite images using MyOcean forecasting data” by G. Zodiatis et al.***

**G. Zodiatis et al.**

gzodiac@ucy.ac.cy

Received and published: 8 October 2012

General Comments: We agree that discussion of the quality and validation of SAR observations would be valuable but it is beyond the scope of this investigation. A brief description of part of the Medslik model is included in this paper for completeness; the model has never been published before except in the Medslik Manual which is freely available with the model itself. The use of MyOcean data was a critical part of such studies as this so it is fair to mention this in the title. Sec 3.1. Title modified partially as suggested (but see the end note). A remark is added to the effect that diffusion is not included. Sec 3.2. Title modified (again see note at the end). P 1983. Lines 22-25 have been moved to the end of Sec 2 with just a brief reference here. P 1985, lines 20-21. The algorithm described in this section appears complicated and we wanted

C1125

to clarify that it has all been automated as part of the Medslik model. The offending sentence has been rewritten. P 1985. Evaporation and dispersion were of course included. It is a common feature of oil slicks that the floating volume increases to more than double the volume originally spilt in spite of these processes, so dominant is the emulsification. It is true that in the example studied the initial volume is probably overestimated because the area of the polygon is larger than that of the actual oil. P 1986 lines 11-22. This discussion was included as result of comments from the original reviewer who suggested that the existence of the shadow to the east of the slick cast some doubt on our conclusion that the slick movement was steadily eastwards. We believe that it does provide an interesting explanation of this apparent contradiction: the slick movement relative to the water is westwards, leaving the trail behind but the water currents dominate and move the slick eastwards. The existence of the shadow provides consistency between the forecast currents and winds and the slick movement and should not be removed. Sec 4 title. Agreed. P 1987 line 18. Changed as suggested. References Agreed The terms ‘imageries’ and ‘MyOcean’ have been corrected throughout. P 1977. See note at the end. P 1978 line 24 et seq. OK, we were not sure how widely known is the format of tab files. It is modified as suggested. P 1979 line 24. The error is that a minus sign is missing from the second dt. P 1980 line 10. Changed to ‘mean direction’. Fig 5 has been modified and corrected as suggested. P 1984 line 4. Modified roughly as suggested. The figures have been modified. End note (RL): The antithesis of every word in the English language that I can think of that contains the element ‘fore’ is formed by changing this element to ‘hind’. (before-behind, foresight-hindsight, forelegs-hindlegs to mention just a few.) Why should oil spills be different? In fact the term ‘hindcast’ was used, commonly if not universally, in the oil-spill literature prior to 10 or 12 years ago. The word ‘backtrack’ is a verb and means literally ‘to retrace ones steps’ or metaphorically ‘to retreat’ or ‘to withdraw’ any of which is totally inappropriate as an antithesis of ‘forecast’. Moreover ‘forecast’ and ‘hindcast’ can be either verb or noun, ‘backtrack’ is a verb only. I suppose you would have to use the gerund ‘backtracking’ to make a noun though this means the act of backtracking

C1126

rather than the result which is the meaning of the noun 'forecast'. The fact that some of our non-native-english co-authors have fallen victims to the recent fashion of using the term 'backtrack' only makes it more unfortunate.

In the attached zip file is the modified text following the above reply to the referee's comments, as well attached are the new modified images for the figure 3,5,6,9, as per the referee's request.

Please also note the supplement to this comment:

<http://www.ocean-sci-discuss.net/9/C1125/2012/osd-9-C1125-2012-supplement.zip>

Interactive comment on Ocean Sci. Discuss., 9, 1973, 2012.

C1127

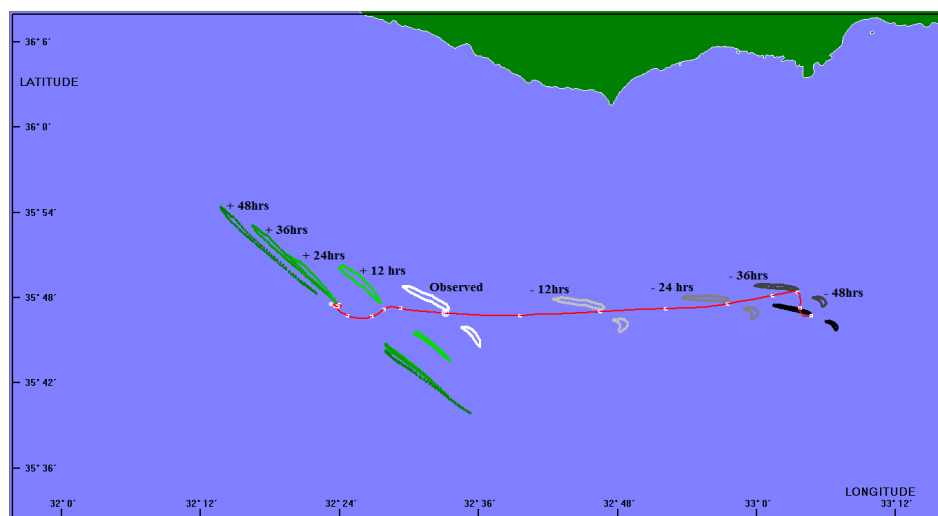


Fig. 1.

C1128

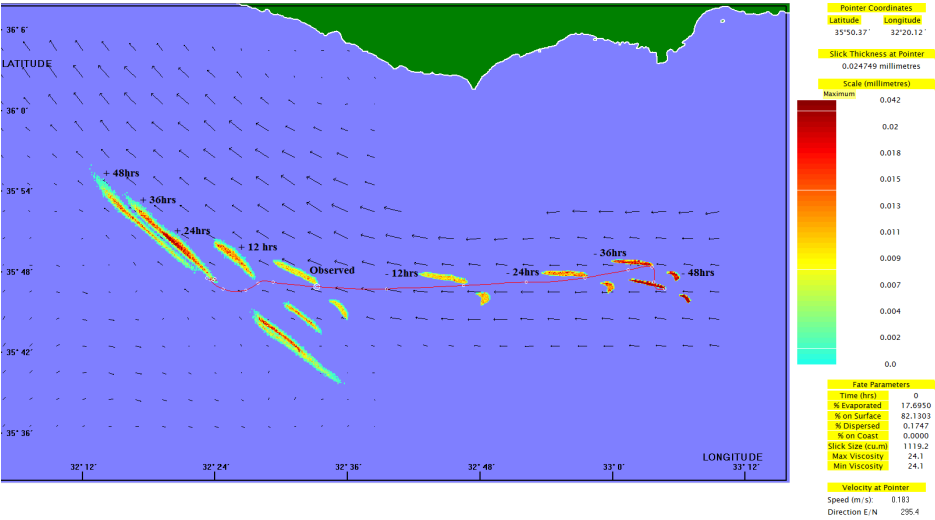


Fig. 2.

C1129

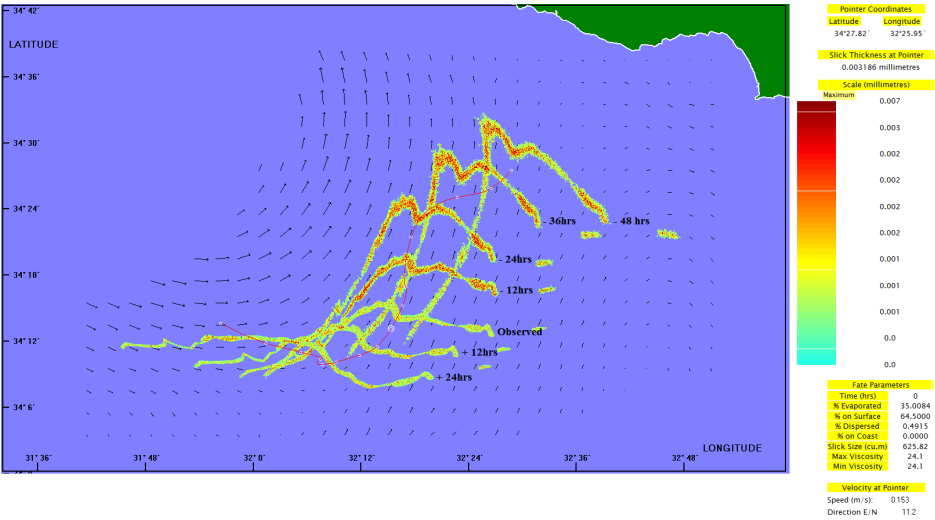


Fig. 3.

C1130

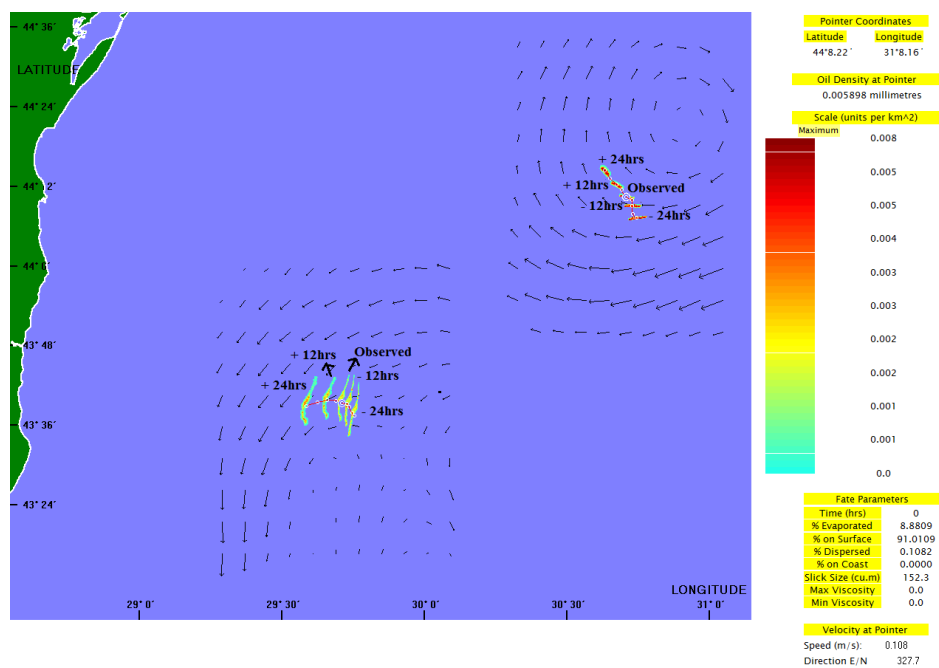


Fig. 4.

C1131