Biogeosciences Open Access
Discussions

Interactive comment on "Riding on the fast lane: how sea turtles behave in post-nesting migration" by Y.-H. Wang et al.

F. Ascani

fascani@hawaii.edu

Received and published: 2 August 2014

1. It would have been nice if the investigators would have considered the use of surface drifter data to strengthen their results and construct confidence intervals.

   • The first use of this dataset would have been to estimate the probability that a surface drifter passing nearby Lanyu Island could have also veered off to the east. I predict that this probability will be low and it will strengthen and quantify more the conclusion concerning the swimming behavior of the turtles. (If the investigators want to do that, I suggest to use only surface drifters that pass near Lanyu Island at about the same period of the year as the start dates of the three turtles, in order to avoid biases.)

   • If there are surface drifters that did veer off to the east, the investigators

could potentially use this subset to construct confidence interval for their correlation coefficient and PCA analysis with their estimated swimming velocity. How? Just re-do the analysis concerning the swimming velocity with the surface drifter subset. That will provide you with, for instance, the amplitude of correlation coefficient that you might expect *without swimming behavior* and *considering the error in the estimated ocean current velocity*. In other words, it will enable the investigators to reject or not the null hypothesis that the signal observed in the swimming velocity is only due to a combination of passive behavior and error in the ocean current estimates.

2. Fossettle *et al.* (2012) is not referenced

Sincerely

Francois Ascani
Assistant Professor, Marine Science
University of Hawaii at Hilo