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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Marine Rapid Environmental Assessment in the Gulf of Taranto: a multiscale approach" *by* N. Pinardi et al.

Anonymous Referee #1

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The manuscript describes a oceanographic sampling experiment carried out to in the Gulf of Taranto in the Northern Ionian Sea. Four oceanographic campaigns were performed during around 10 days in October 2015, measuring T and Salinity profiles in both open ocean and coastal areas for a set of sampling stations covering the whole area with different spatial resolution. This multi scale approach has been followed to describe by means of a synoptic set of measurements both the large scale and the meso-scale circulation in the Gulf. The obtained results highlight the effectiveness of this approach as a possible standard procedure to be followed in case of MREA for this area.

The paper falls within the scope of the journal. The arguments treated are very interesting and promising, nevertheless a moderate revision of the manuscript is required before being published.

As a general comment, I suggest to do not only concentrate on the observational strategy and the obtained results but also to deepen the discussion on the usefulness of the specific aforementioned strategy in view of both a support to operational oceanography and to the management of the emergencies at sea (pollution, S&R etc.,). Some comments should be specifically included into the Discussion section.

Following, some specific comments and suggestions are provided:

Page 3, line 20: "We argue that .. The MREA experiment partially clarified these questions". In the following, any paragraphs specifically dealing with this issue are not found. Some information should be added in the results sections or, if not fundamental with respect to the scope of the paper, maybe the sentence should be changed.

Page 3 and figure 3: I suggest to use different colors to highlight the sampling points of each survey.

Page 4: how do you compute the average ? The adopted procedure should be explicated.

Page 4, line 13: "the subsurface temperature maximum" probably it is the salinity.

Page 4: some more details about the meteorological conditions during the 10 days measurements, e.g the wind intensity and directions, could help with the comprehension of the results. Especially when comparing the LS1 and LS2 sampling results.

Page 5: paragraph from line 16 to line 21 need to be rephrased, it is not completely clear.

Page 5, line 26: why only CS1 and LS2 were combined together ? It is better to explain.

Page 5 and figure 8: I suggest to include in the panels some number or letters to identify properly the dynamic structures.

Page 6: in the left top panel, in the northwestern corner of the image, the small gyre subsequently observed in right top panel seems already existing or at least starting.

Also the dynamic eigth analysis and the geostrophic velocity fields (figure 13) seem to put into evidence. I am not sure this could be a reasonable evidence or just a speculation.

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