

Interactive comment on “Measurements from the RV Ronald H. Brown and related platforms as part of the Atlantic Tradewind Ocean-Atmosphere Mesoscale Interaction Campaign (ATOMIC)” by Patricia K. Quinn et al.

Anonymous Referee #2

Received and published: 4 January 2021

Review of “Measurements from the RV Ronald H. Brown and related platforms as part of the Atlantic Tradewind Ocean-Atmosphere Mesoscale Interaction Campaign (ATOMIC)” by Quinn et al.

This manuscript described comprehensive atmosphere and ocean data sets acquired the ATOMIC conducted from January to July 2020. The authors provide details of each measurement including sampling strategy, a overview, and inter-platform data comparisons. In situ measurements for various atmosphere and ocean variables on multi-platform are unique and very useful especially for air-sea interaction study in

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addition to lower atmosphere and upper ocean studies. Inter-platform comparisons are also important to realize observation accuracy and uncertainty. Although there are detailed explanations for various measurements, several ambiguous points are also appeared. Thus, I suggest that the authors consider the following comments and then improve the manuscript.

Specific Comments:

Section 2:

- The nominal accuracy should be presented in tables (4-10).
- Available data period might be helpful for reader/user.
- The details for BCO measurements are also needed.

Section 3:

L659-661, L811-812: Figures of fires based on FIRMS associated with the events should be shown.

L700-701: Satellite-derived SSS and SST distributions should be shown to realize front position and structure.

L748: why the authors did not conduct height correction? L755-756: Is there any evidence? Do you have any insight from radiosonde measurements?

Section 4:

Sub-section 4. 3. 2.: I could not catch the point because there are relatively large differences between each comparison. What is the point from the comparisons? Need more explanation.

Minor comments:

- There are different expressions for “nautical miles”. It should be unified.

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- In sub-section 2. 11., abbreviations of CCN, DMA, DMT, should be explained.
- L808: "Jan. 9" might be "Feb.9".

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-331>, 2020.