

# ***Interactive comment on “Evidence of coastal trapped wave scattering using high-frequency radar data in the Mid-Atlantic Bight” by Kelsey Brunner and Kamazima M. M. Lwiza***

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Dear Dr. Huthnance it is an honor for you to comment on our paper. We are very grateful for your comments. I would like to respond to your last three paragraphs.

1. The goal of calculating the ratio of CTW kinetic to the total kinetic energy was to assess the significance of CTWs. Given their nature being seasonal we computed the energy by squaring the velocities before averaging during the season when they are most prevalent, not the whole year. However, the denominator was the annual average of the squared velocities. Squaring before averaging prevents the signals canceling each other. I must admit in the manuscript as it appears on the website the overbar is

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very small. We will have to find a way to make it larger.

2. With regards to wave energy density, we borrowed this idea from Dong Ping's paper of 1980. He used it in a similar fashion that is applied to wind wave energy density per area. If we take  $u^2 + v^2$  to represent energy, then energy density  $E = (u^2 + v^2)/AH$ , where  $A$  is area and  $H$  is depth. Therefore, energy density per unit area  $E' = (u^2 + v^2)/H$ . Based on your comment we need to emphasize that our computation represents energy density per area.

3. A note on the personal gripe. With all due respect sir, you will find that language (or use of) is not always logical. When I first got in New York I fought against the term, but after being ignored for a long time, I realized that the locals can call it what they want. Good example is Lake Nasser for Aswan Dam, and a physical oceanography example is 'tsunami', which was borrowed from the Japanese language (meaning harbor wave as in seiche) to avoid use of the term tidal wave!

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