



EGUsphere, referee comment RC1
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Comment on egusphere-2022-1145

Anonymous Referee #1

Referee comment on "Meteotsunami in the United Kingdom: the hidden hazard" by Clare Lewis et al., EGU sphere, <https://doi.org/10.5194/egusphere-2022-1145-RC1>, 2022

Key results: Examination of the occurrence of meteotsunamis in the UK from 1750 to 2022. Authors Identified 95 meteotsunamis by investigating literatures, tide gauge records, and meteorological data.

Originality: This work may be considered as a review or an update of the previous studies such as Thompson et al. (2020) and Williams et al. (2021). For example, the seasonality of meteotsunami in the UK is already shown in Williams et al. (2021).

Data and methodology: generally good. Authors stated the data sources and outlined the methodologies clearly.

Clarity and context: generally very good. I have minor comments on this.

General comments:

- The authors need to clarify the original findings of this study which are different from the previous ones. Because this study shares similarities with Williams et al. (2021) in the methodology and results.
- It is unclear how the authors treated wind-driven waves. Wind-driven waves can induce infragravity(IG) waves which have periods of 2-30 minutes.

Minor comments:

L346 "This effect can be particularly apparent if the meteotsunami interacts with the continental slope where the wave can arrive hours after the original storm has dissipated or moved on." I believe the authors mention Greenspan resurgence. Authors need to add references (Greenspan 1956, Bechle et al. 2016 and other recent studies) here.

L354 "tends is" -> is

L355 " So, unless you are looking at the data you would not even know they had happened." We do not need this sentence.

L367 Then, it would be great if authors can suggest other locations for tide gauges.

L384 "course" -> coarse

References:

Thompson, Julian, et al. "UK meteotsunamis: a revision and update on events and their frequency." *Weather* 75.9 (2020): 281-287.

Williams, David A., et al. "An 8-yr meteotsunami climatology across northwest Europe: 2010–17." *Journal of Physical Oceanography* 51.4 (2021): 1145-1161.

Greenspan, Harvey Philip. "The generation of edge waves by moving pressure distributions." *Journal of Fluid Mechanics* 1.6 (1956): 574-592.