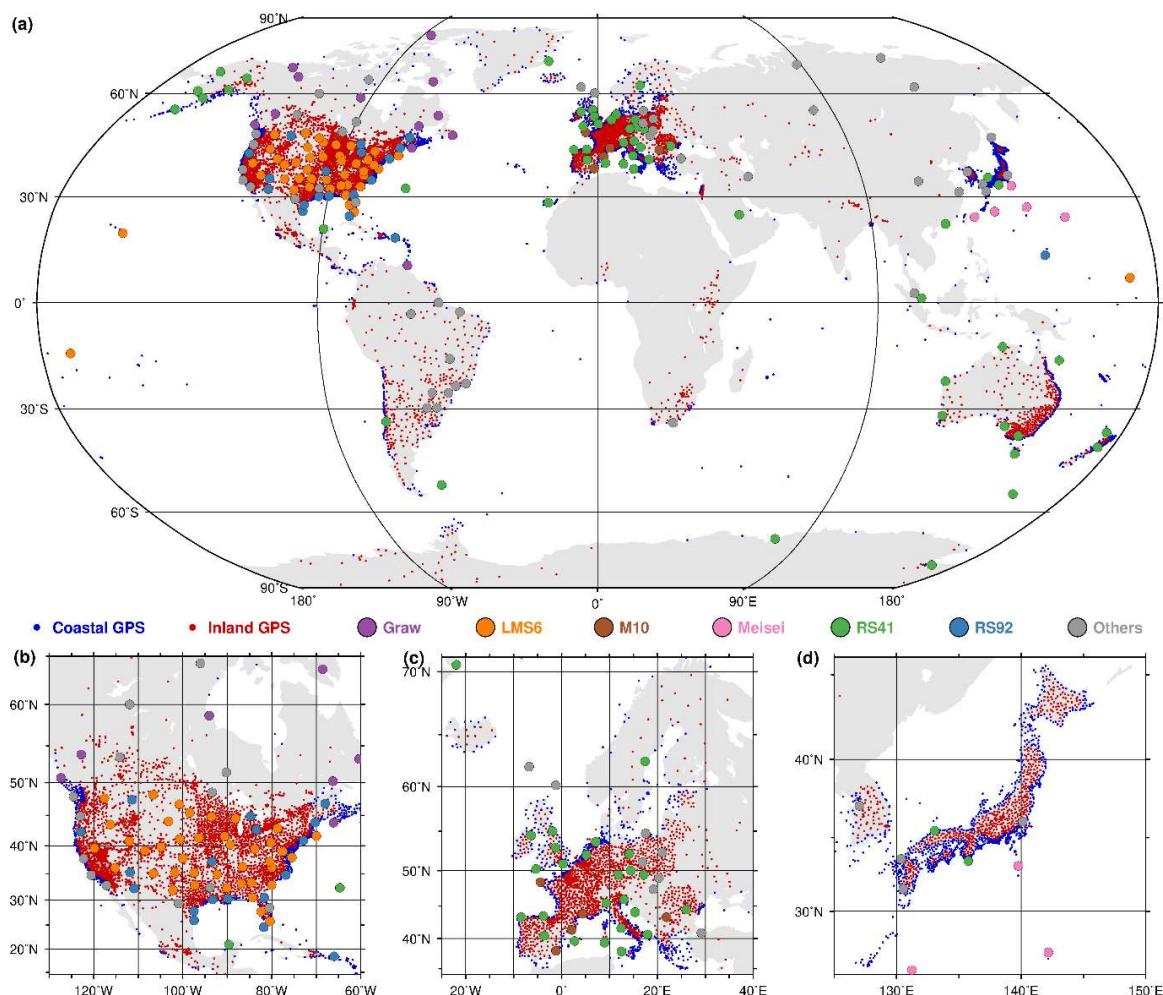


## Responses to Frank Fell (Community Comment)

<https://doi.org/10.5194/essd-2022-274-CC1>

We are currently establishing a total column water vapour data record from Sentinel-3 MWR observations covering the global ice-free global ocean. The dataset presented by Yuan et al. has a potential to serve as ground-truth and therefore is of significant interest to our work, especially since it contains many GPS coastal stations.

**Reply:** Thanks a lot for your comments and we are glad to see that our dataset is beneficial to the community. We carried out a statistical analysis on the distance-to-sea (SeaDist) of the GPS stations and modified Fig. 1 as below, which could be interesting to you. The result shows that 3,745 out of the 12,555 (29.8%) GPS stations are located within 20 km of coastline.



**Figure 1.** (a) Geographical distribution of the 12,555 GPS stations and 182 radiosonde stations. (b–d) zoomed in figures for USA, Europe, and Japan, respectively. There are 3,745 GPS stations located within 20 km of coastline and they are labelled as Coastal GPS (blue dots), whereas the other 8,810 stations are labelled as Inland GPS (red dots). The different radiosonde types are labelled in various colours.