



Using marine observations to create a marine humidity climate monitoring record

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Historical observations of near-surface humidity are available over many parts of the land and ocean surface for many decades. Compared to temperature, humidity observations are more sparse and issues of quality are more complex. There are many similarities between observations of humidity over land and ocean - data sparsity, missing data, random error and inhomogeneity due to changing instruments and practices over time have to be dealt with. However, marine humidity observations have additional quality issues related to changing ship heights over time, bias between screened and hand-held instruments and solar heating of the instruments due to the ship structure. There is also the added complexity of very sparse data temporally and the fact that ships move. This talk describes the creation of a marine humidity monitoring product HadISDH.marine and the steps taken to deal with the various issues pertaining to marine humidity observations. This is a sister product to the existing HadISDH.land and first-look comparisons can be made between near-surface humidity over land and ocean.