

EGU2020-1348

<https://doi.org/10.5194/egusphere-egu2020-1348>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## Atmospheric measurements over oceans on German research vessels

**Stefan Kinne**

Max-Planck-Institute, Aerosol and Climate, Hamburg, Germany (stefan.kinne@mpimet.mpg.de)

Ground-based remote sensing of atmospheric properties complements satellite remote sensing from space. Hereby the well-defined solar background of ground-based samples offers data of higher accuracy, which help to constrain (needed) assumptions in global data-sets of satellite remote sensing and earth system modeling. With ground monitoring largely limited to land or island surfaces, efforts have been made to add at least a few reference data over oceans with atmospheric remote sensing activities during ship cruises of opportunity. This presentation reports on recent voyages with German Research vessels (i.e. SONNE, MERIAN, METEOR and POLARSTERN) and how samples on these voyages have contributed to a better representation of marine properties for aerosol, trace-gases and clouds. Aside from establishing references for satellite remote sensing and modeling, relationships among different atmospheric properties also offer observational constrains for parametrizations of atmospheric processes in modeling.