

Publications

Diploma Thesis

Meier, H.E.M., 1989: Nonlineare, plane plasma waves in Pulsar magnetospheres – an approach to take radiation reaction into account (in German). Diploma thesis, University of Kiel, 125 pp.

Ph.D. Thesis

Meier, H.E.M., 1996: A regional model of the western Baltic Sea with open boundary conditions and data assimilation (in German). PhD thesis, University of Kiel, in: Ber. Inst. f. Meereskunde No.284, D-24105 Kiel, Germany, 117 pp.

Articles in international scientific journals with referee practice

Summary: More than 112 peer-reviewed, accepted manuscripts (Web of Science 109 published articles on 2020-08-03, 4327 times cited, h-index 35, 2 articles highlighted by Nature Climate Change), 2 Eos articles, 25 scientific reports, 9 book chapters, 92 other scientific publications (newsletter articles, conference proceedings, editorials, etc.)

1. Haapala, J., **H.E.M. Meier**, and J. Rinne, 2001: Numerical investigations of future ice conditions in the Baltic Sea. *Ambio*, 30, 237-244.
2. **Meier, H.E.M.**, 2001: On the parameterization of mixing in three-dimensional Baltic Sea models. *J. Geophys. Res.*, 106, 30,997 - 31,016.
3. Döscher, R., U. Willén, C. Jones, A. Rutgersson, **H.E.M. Meier**, U. Hansson, and L.P. Graham, 2002: The development of the regional coupled ocean-atmosphere model RCAO. *Boreal Env. Res.*, 7, 183-192.
4. **Meier, H.E.M.**, 2002: Regional ocean climate simulations with a 3D ice-ocean model for the Baltic Sea. Part 1: Model experiments and results for temperature and salinity. *Clim. Dyn.*, 19, 237-253.
5. **Meier, H.E.M.**, 2002: Regional ocean climate simulations with a 3D ice-ocean model for the Baltic Sea. Part 2: Results for sea ice. *Clim. Dyn.*, 19, 255-266.
6. **Meier, H.E.M.**, and R. Döscher, 2002: Simulated water and heat cycles of the Baltic Sea using a 3D coupled atmosphere-ice-ocean model. *Boreal Env. Res.*, 7, 327-334
7. **Meier, H.E.M.**, and T. Faxén, 2002: Performance analysis of a multiprocessor coupled ice-ocean model for the Baltic Sea. *J. Atmos. Oceanic Technol.*, 19, 114-124.
8. Kauker, F., and **H.E.M. Meier**, 2003: Modeling decadal variability of the Baltic Sea: 1. Reconstructing atmospheric surface data for the period 1902-1998. *J. Geophys. Res.*, 108(C8), 3267, doi:10.1029/2003JC001797.
9. **Meier, H.E.M.**, and F. Kauker, 2003: Modeling decadal variability of the Baltic Sea: 2. Role of freshwater inflow and large-scale atmospheric circulation for salinity. *J. Geophys. Res.*, 108(C11), 3368, doi:10.1029/2003JC001799.
10. **Meier, H.E.M.**, and F. Kauker, 2003: Sensitivity of the Baltic Sea salinity to the freshwater supply. *Clim. Res.*, 24, 231-242.

11. **Meier, H.E.M.**, R. Döscher, and T. Faxén, 2003: A multiprocessor coupled ice-ocean model for the Baltic Sea: Application to salt inflow. *J. Geophys. Res.*, 108(C8), 3273, doi:10.1029/2000JC000521.
12. Wang, J., R. Kwok, F.J. Saucier, J. Hutchings, M. Ikeda, W. Hibler III, J. Haapala, M.D. Coon, **H.E.M. Meier**, H. Eicken, N. Tanaka, D. Prentki, and W. Johnson, 2003: Working towards improved small-scale sea ice-ocean modeling in the Arctic seas. *EOS, Trans. AGU*, 84(34), 325, 329-330.
13. Räisänen, J., U. Hansson, A. Ullerstig, R. Döscher, L.P. Graham, C. Jones, **H.E.M. Meier**, P. Samuelsson, and U. Willén, 2004: European climate in the late twenty-first century: regional simulations with two driving global models and two forcing scenarios. *Clim. Dyn.*, 22, 13-31.
14. Döös, K., **H.E.M. Meier**, and R. Döscher, 2004: The Baltic haline conveyor belt or the overturning circulation and mixing in the Baltic. *Ambio*, 33, 261-266.
15. Döscher, R., and **H.E.M. Meier**, 2004: Simulated sea surface temperature and heat fluxes in different climates of the Baltic Sea. *Ambio*, 33, 242-248.
16. **Meier, H.E.M.**, R. Döscher, and A. Halkka, 2004: Simulated distributions of Baltic sea ice in warming climate and consequences for the winter habitat of the Baltic ringed seal. *Ambio*, 33, 249-256.
17. **Meier, H.E.M.**, B. Broman, and E. Kjellström, 2004: Simulated sea level in past and future climates of the Baltic Sea. *Clim. Res.*, 27, 59-75.
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19. **Meier, H.E.M.**, 2005: Modeling the age of Baltic Sea water masses: Quantification and steady state sensitivity experiments. *J. Geophys. Res.*, 110, C02006, doi:10.1029/2004JC002607.
20. Kjellström, E., R. Döscher, and **Meier, H.E.M.**, 2005: Atmospheric response to different sea surface temperatures in the Baltic Sea: Coupled versus uncoupled regional climate model experiments. *Nordic Hydrology*, 36 (4-5), 397-409.
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22. **Meier, H.E.M.**, 2006: Baltic Sea climate in the late twenty-first century: a dynamical downscaling approach using two global models and two emission scenarios. *Clim. Dyn.*, 27(1), 39-68, doi: 10.1007 / s00382-006-0124-x.
23. **Meier, H.E.M.**, R. Feistel, J. Piechura, L. Arneborg, H. Burchard, V. Fiekas, N. Golenko, N. Kuzmina, V. Mohrholz, C. Nohr, V.T. Paka, J. Sellschopp, A. Stips, and V. Zhurbas, 2006: Ventilation of the Baltic Sea deep water: A brief review of present knowledge from observations and models. *Oceanologia*, 48(S), 133-164.

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25. **Meier, H.E.M.**, 2007: Modeling the pathways and ages of inflowing salt- and freshwater in the Baltic Sea. *Estuarine, Coastal and Shelf Science*, Vol. 74/4, 717-734.
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27. Eilola, K., **H.E.M. Meier**, and E. Almroth, 2009: On the dynamics of oxygen, phosphorus and cyanobacteria in the Baltic Sea; a model study. *J. Marine Systems*, 75, 163-184.
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34. Hordoir, R., and **H. E. M. Meier**, 2012: Effect of climate change on the thermal stratification of the Baltic Sea - a sensitivity experiment. *Clim. Dyn.* , 38:1703-1713, doi: 10.1007/s00382-011-1036-y. (published on-line 4 March 2011)
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39. **Meier, H.E.M.**, H.C. Andersson, K. Eilola, B.G. Gustafsson, I. Kuznetsov, B. Müller-Karulis, T. Neumann, O. P. Savchuk, 2011: Hypoxia in future climates: A model ensemble study for the Baltic Sea. *Geophys. Res. Lett.*, 38, L24608 (highlighted by Nature Climate Change, A. Brown, 2012: Low oxygen outlook, Vol. 2, p. 75, 2012, doi:10.1038/nclimate1406, published online 27 January 2012)
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41. **Meier, H. E. M.**, B. Müller-Karulis, H. C. Andersson, C. Dieterich, K. Eilola, B. G. Gustafsson, A. Höglund, R. Hordoir, I. Kuznetsov, T. Neumann, Z. Ranjbar, O. P. Savchuk, and S. Schimanke, 2012: Impact of climate change on ecological quality indicators and biogeochemical fluxes in the Baltic Sea - a multi-model ensemble study. *AMBIO*, 41 (6), 558-573, doi:10.1007/s13280-012-0317-y, <http://www.springerlink.com/content/n5158p42n133/>
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62. **Meier, H. E. M.**, A. Rutgersson, and M. Reckermann, 2014: Baltic Earth - A new Earth System Science Program for the Baltic Sea Region. *EOS, Trans. AGU*, 95(13), 109-110 (listed by AGU's Sharing Science Web site (<http://sites.agu.org/sharingscience>) as a good example for potential authors to emulate)
63. Pemberton, P., J. Nilsson, and **H. E. M. Meier**, 2014: Arctic Ocean freshwater composition, pathways and transformations from a passive tracer simulation. *Tellus A*, 66, 23988, <http://dx.doi.org/10.3402/tellusa.v66.23988>.
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