



ARCTIC RESEARCH CENTRE (ARC)
AARHUS UNIVERSITY
<http://arctic.au.dk>

21 SEPTEMBER 2012

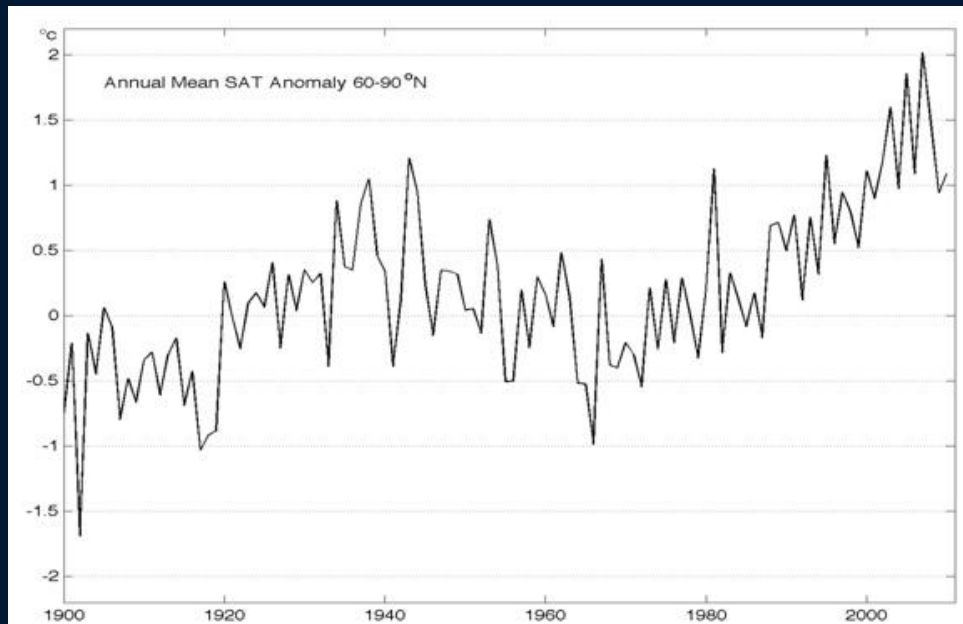
STATION NORD

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AARHUS UNIVERSITET
ADJUNGERET PROFESSOR
INSTITUT FOR KEMI, BIO- OG MILJØTEKNOLOGI
SYDDANSK UNIVERSITET

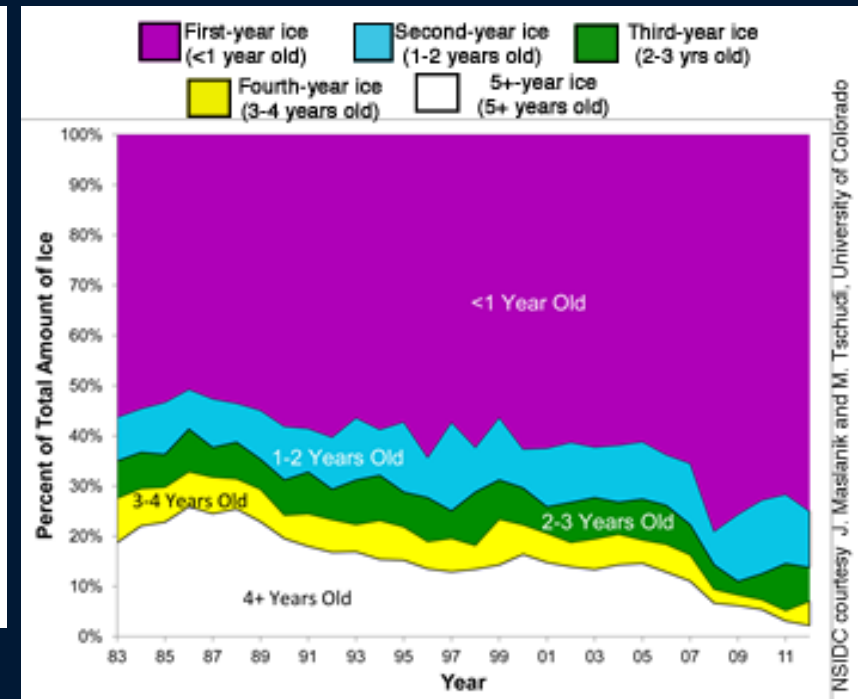
HSK@DMU.DK



ET ARKTIS UNDER FORANDRING



(www.NOAA.GOV)

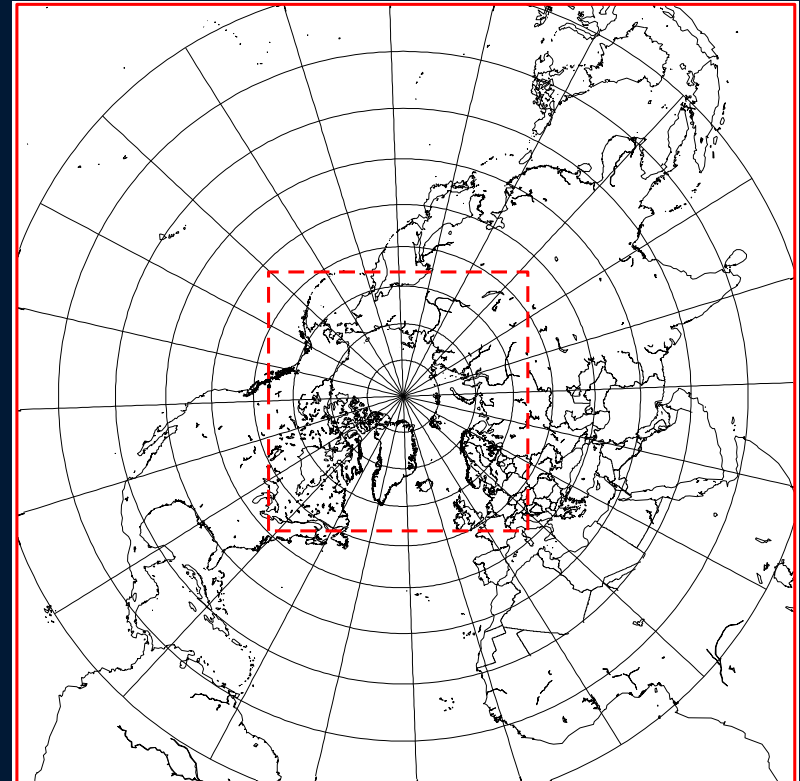
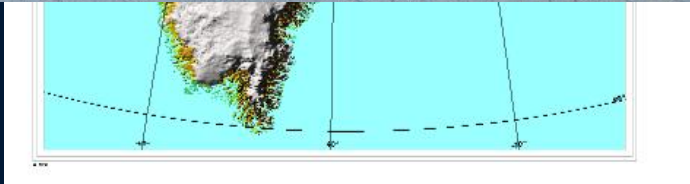
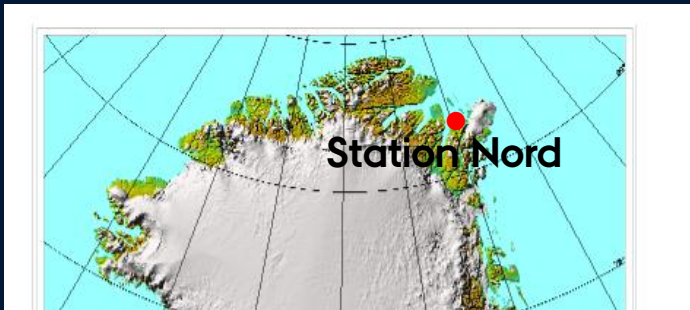


NSIDC courtesy J. Maslanik and M. Tschudi, University of Colorado

Sammensætningen af havisen ændrer sig (<http://nsidc.org>)



MEASUREMENTS AND MODEL

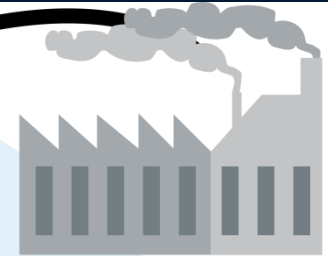


MM5 DEHM model domains

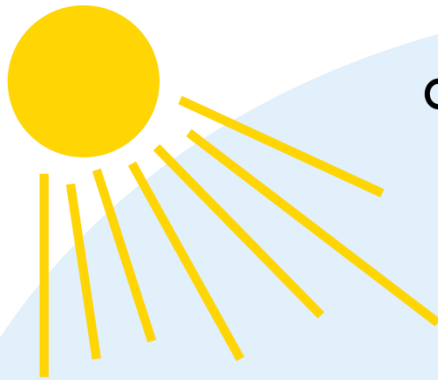
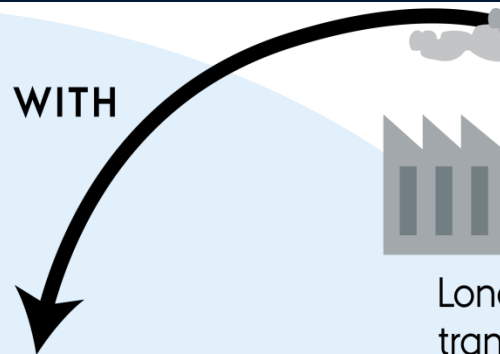


CLIMATE INTERACTION WITH

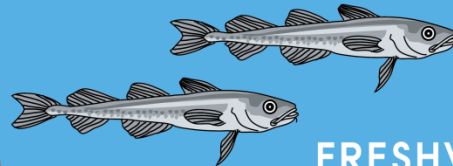
- atmosphere
- geosphere
- biosphere
- pollution



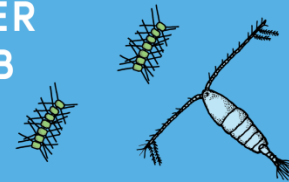
Long range
transport of
contaminant



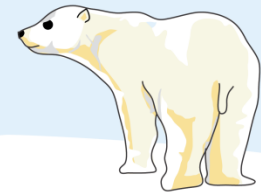
TERRESTRIAL
FOOD WEB



FRESHWATER
FOOD WEB

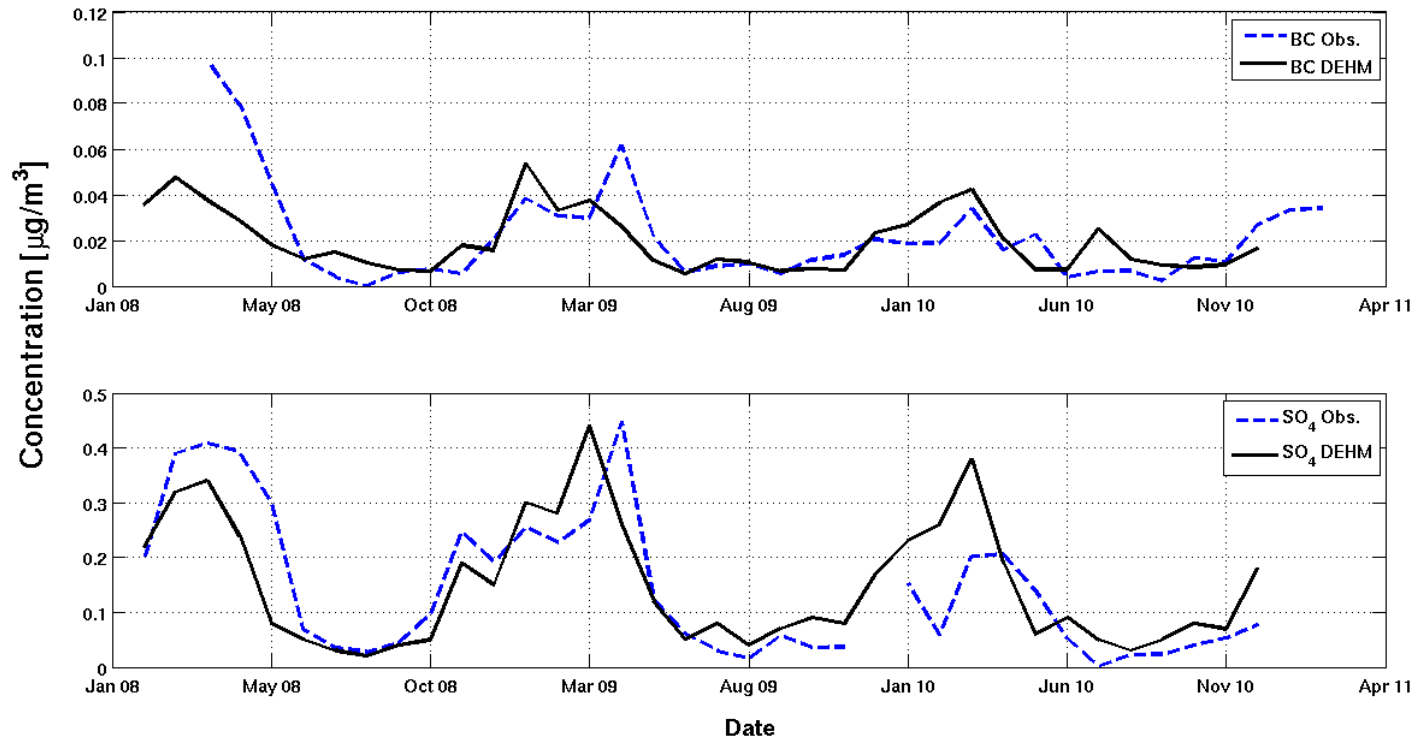


MARINE
FOOD WEB



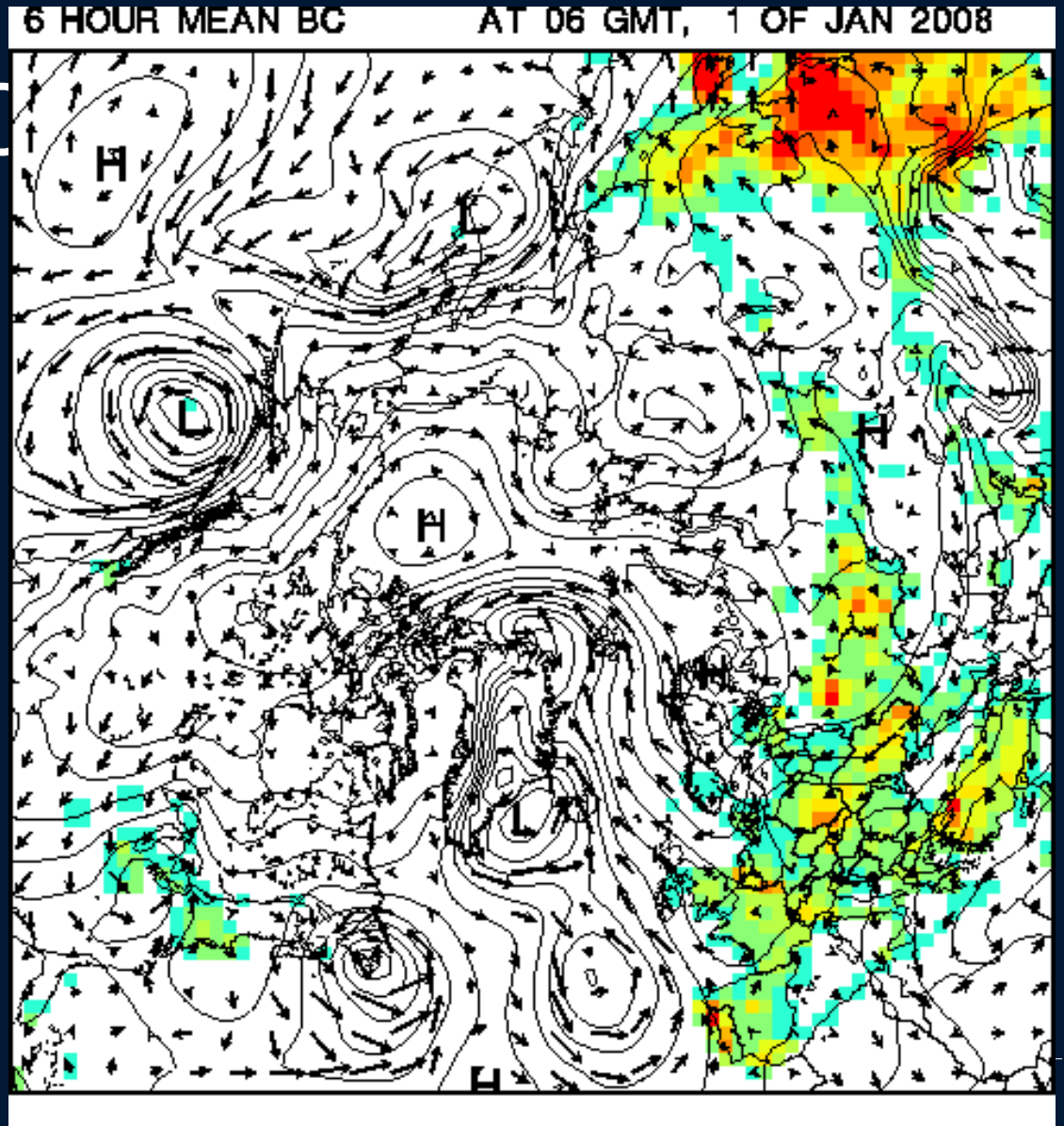


> Sod (Black carbon)



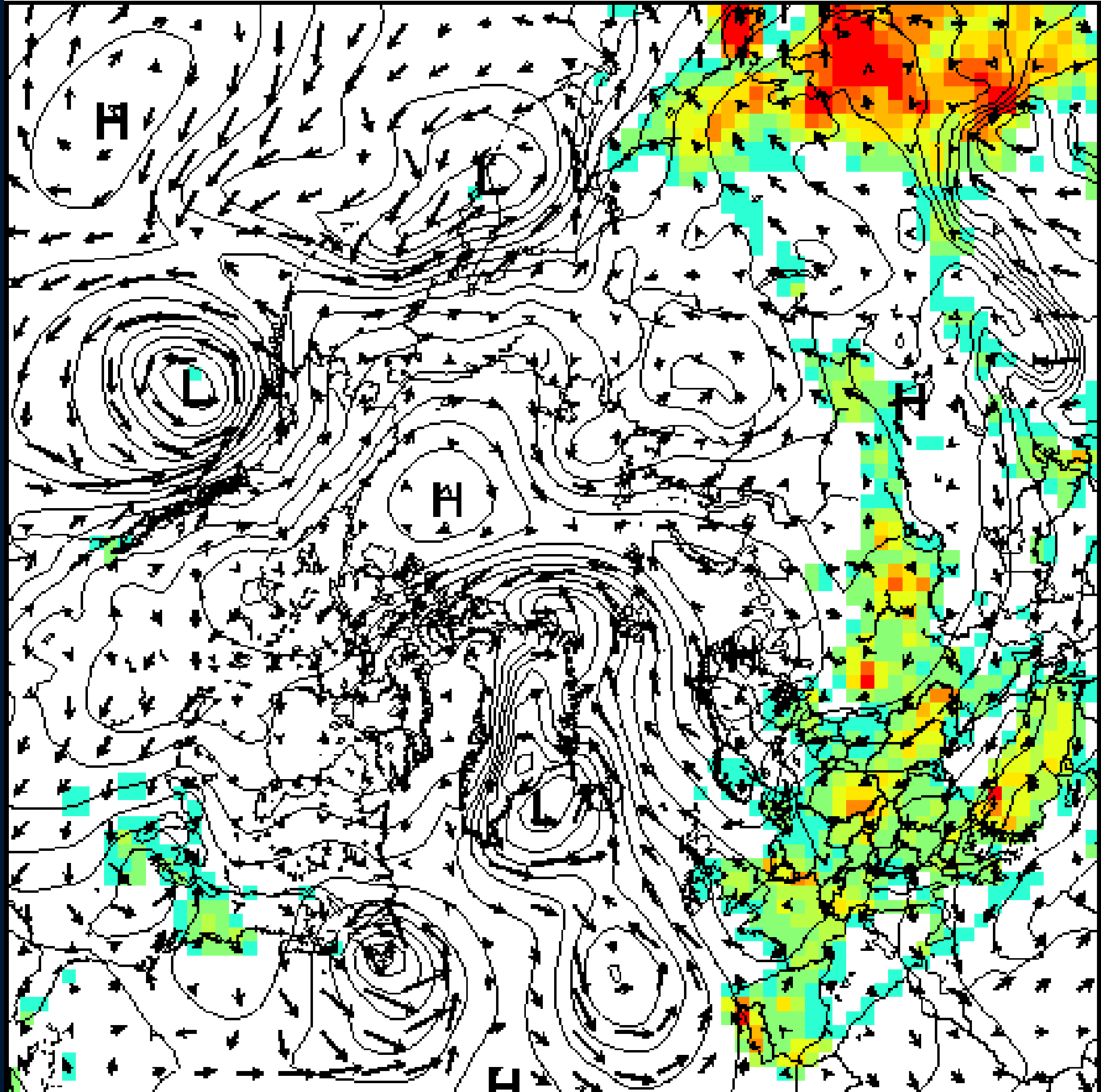


BLACK CARBON



6 HOUR MEAN BC

AT 06 GMT, 1 OF JAN 2008





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NETVÆRK OG PROGRAMMER

- > AMAP
- > WMO-GAW
- > EMEP
- > IASOA
- > EU 7. FP (GMOS, ARCRISK)
- > NMR-TFI (CRAICC, -DEROST)



AMAP-RAPPORTER

- › AMAP, 2011. AMAP Assessment 2011: Mercury in the Arctic. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway. xiv + 193 pp. Contributed to:
 - › **Chapter 2** Where Does Mercury in the Arctic Environment Come From, and How Does it Get There?
 - › **Chapter 3** What is the Fate of Mercury Entering the Arctic Environment?
 - › **Chapter 7** To What Extent will Projected Changes in Global Emissions Affect Mercury Levels in the Arctic Atmosphere and Ocean?
- › AMAP, 2011. The Impact of Black Carbon on Arctic Climate (2011). Arctic Monitoring and Assessment Programme (AMAP), Oslo. 72 pp.



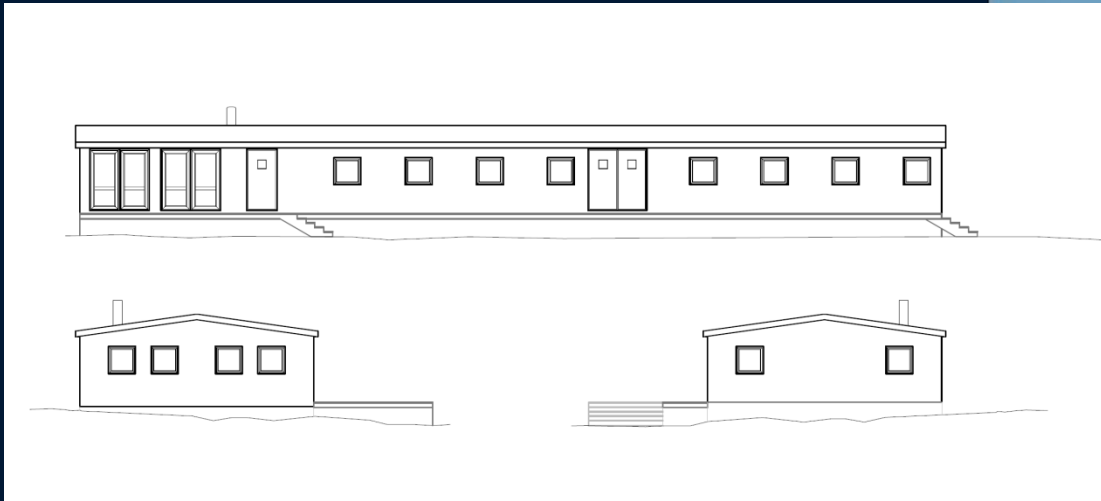
PEER REVIEWED ARTIKLER (6 + 6 STK) 2011 OG 2012

- › Møller, A.K. Barkay, T. Al-Soud, W.A. Sørensen, S.J. Skov, H. and Kroer, N. (2011) Diversity and characterization of mercury-resistant bacteria in snow, freshwater and sea-ice brine from the High Arctic; *FEMS Microbiol Ecol.* Vol. 75. 390–401.
- › Hedegaard, G.B. Gross, A. Christensen, J.H. May, W. Skov, H. Geels, Hansen, K.M. and Brandt, J. (2011) Modelling the impact of climate change on tropospheric ozone over three centuries, *ACPD.* Vol. 11. 6805-6843. doi: 10.5194/acpd-11-6805-2011.
- › Goodsite M. E.; Plane J. M. C.; Skov H. (2012). A Theoretical Study of the Oxidation of Hg0 to HgBr2 in the Troposphere. Correction to *ES&T* vol 38, pg 1772, 2004) in *ES&T*, vol. 46, Issue: 9 5262-5262 DOI: 10.1021/es301201c.
- › Douglas, T.A. Loseto, L. Macdonald, R. Outridge, P. Dommergue, A. Poulain, A. Amyot, M. Barkay, T. Berg, T. Chételat J. Constant, P. Evans, M. Ferrari, C. Gantner, N. Johnson, M. Kirk, J. Kroer, N. Larose, C. Lean, D. Muir, D. Nielsen, T.G. Poissant, L. Rognerud, S. Skov, H. Sørensen, S. Wang, F. Zdanowicz, C. M. (2012) The ultimate fate of mercury deposited to Arctic Marine and terrestrial ecosystems. *Env. Chem.* 9, 321-355.
- › Fenger, M. Sørensen, L.L. Kristensen, K. Jensen B. Nøjgaard J.K. Massling, A. Skov, H. & Glasius, M. (2012) Sources of Anions in Aerosols in Northeast Greenland during Late Winter. *ACPD*, 12, 14813–14836, www.atmos-chem-phys-discuss.net/12/14813/2012/ doi:10.5194/acpd-12-14813-2012.
- › Nguyen, Q.T. Skov, H. Sørensen, L.-L. Jensen, B. Grube, A. G. Massling, A. Glasius, M. and Nøjgaard, J.K. (2012) Source apportionment of particulate matter at Station Nord, North East Greenland. *ACPD*. 12, 1–32, www.atmos-chem-phys-discuss.net/12/1/2012/ doi:10.5194/acpd-12-1-2012.
- › Grube, A. G. Skov, H. Christensen, J. H. Jensen, B. Nguyen, Q.T. Nøjgaard, J.K. Sørensen L. L. and Massling, A. Measurements and characterization of black carbon at Station Nord. Ready for submission to *GRL*, September 12, 2012.
- › Bossi, R. and Skov, H. Three years (2008-2010) measurements of atmospheric concentrations of organochlorine pesticides (OCPs) at Station Nord, North East Greenland. To be submitted to *STOTEN*. October, 2012.
- › Skov, H. Hertel, O. Christensen J. and Nordstrøm C. Update of GEM measurements at Station Nord. *Under preparation for Environmental Chemistry, September 2012.*
- › Skov H. and Christensen J.H. Measured and modelled concentration of sulphur dioxide, sulphate and lead from 1990 to 2011 at Station Nord Northeast Greenland, Station Nord. Under preparation.
- › Bossi, R. Skov, H. Hansen, K.M. and Christensen, J.H. Modelling and measurements of HCHs and selected PCBs in the High Arctic atmosphere. Under preparation December 2011.
- › Skov H. Bossi, R. Christensen, J.H. and Hansen, K.M. PCB and alpha-HCH measurements at Station Nord compared to model (Atmospheric Chemistry and Physics). Manuscript under preparation



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FREMTIDSPLAN



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