Geophysical Research Abstracts Vol. 17, EGU2015-6404, 2015 EGU General Assembly 2015 © Author(s) 2015. CC Attribution 3.0 License.



## Air-Sea heat fluxes over the Iceland Sea

Gudrun Nina Petersen (1), Ben E. Harden (2), and Ian A. Renfrew (3)

(1) Icelandic Meteorological Office, Reykjavik, Iceland (gnp@vedur.is), (2) Woods Hole Oceanographic Institution, Woods Hole, USA (bharden@whoi.edu), (3) School of Environmental Sciences, University of East Anglia, Norwich, UK (i.renfrew@uea.ac.uk)

On a monthly mean scale the Iceland Sea has been shown to be a region of local heat flux minimum while there are also indications that there may be dense water formation in the region. To investigate if the atmospheric conditions over the Iceland Sea can results in significant high heat flux events on shorter time scales data from a meteorological buoy, that was deployed in the area for about two years, is analysed. The observations are compared to ERA-Interim data, which is shown to generally perform very well for this central Iceland Sea location.

Synoptic-scale weather patterns during different heat flux events are then examined. The high flux events with winds from the north are often found to be short lived and in between there are long period of low fluxes. Thus the high flux events are disguised in annual and monthly means. However, it still remains to be seen whether the heat fluxes in the region are large enough to drive the ocean convection needed to produce dense water.