



Transport and mixing in the Faroe Bank Channel overflow

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The overflow of cold dense water from the Nordic Seas, across the Greenland-Scotland Ridge and into the north Atlantic is usually divided into two main branches. The Denmark Strait and the Iceland-Scotland branches accounting for about 50% each. The Iceland-Scotland overflow consists of three sub branches, the Iceland-Faroe Ridge and Wyville-Thomson Ridge, and through the Faroe Bank Channel (FBC). The FBC is the deepest path across the ridge and accounts for one-third of the total overflow. In 1995, as a part of the Nordic WOCE, a monitoring system for the FBC was deployed and has been in operation since. Shorter time series exist for the other branches and in the down stream plume. Our main focus will be on observations and model results for the transport and mixing in the FBC overflow. The observed FBC transport is relatively stable but shows some interannual variability. It decreased from 1995 to 2000 followed by a increase to record maximum in 2003 and since then decreased to a minimum in 2005. The model results agree very well with the observed transport and variability.