



30 Years of Denmark Strait Overflow Observations linked with decadal Wind Stress and hydraulic Forcing Variability

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The Denmark Strait Overflow represents the densest contribution to the deep branch of the Atlantic Meridional Overturning Circulation. Continuous Acoustic Doppler Current Profiler measurements carried out at the sill since 1996 revealed considerable interannual transport variability of the overflow. The transport changes are consistent with hydrographic measurements of the upstream reservoir height which has been observed since the 1970s, and the wind stress over the Iceland Sea. Here, all available hydrographic and wind stress observations of the past 30 years are combined with the recent ADCP data to obtain an estimate of the decadal variability of the Denmark Strait Overflow.