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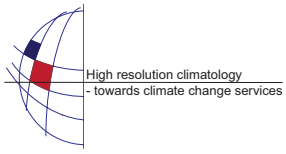

Ships' logbooks and North Atlantic air circulation reconstructions 1685 – 1750

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Much attention has been given to the study of documentary records that chronicle climatic events in Europe over the past half-millennium and more. It is inevitable that such sources have focussed on events on land. Hitherto it has often been assumed that correspondingly useful and contemporary material is not available for the oceans. This assumption is incorrect, and recent activities by the authors of this contribution have drawn increasingly wide attention to the vast fund of information available in the logbooks of ships, and particularly those of the Royal Navy. For the pre-instrumental period, which can be taken as before the mid-nineteenth century, some 120,000 logbooks reside in British archives containing over 20,000,000 days of observations of wind force and direction. This presentation takes a sub-sample of this huge collection and confines its attention to the North East Atlantic region, focussing on the seas around the British Isles. A daily record of wind force and direction has been abstracted and worked up into monthly-aggregated values for the period 1685 to 1750. We review the changing nature of air circulations over this critical period, which includes the Maunder Minimum and the years of gradual but by no means consistent warming that marked the first half of the eighteenth century. Conclusions are drawn about the fashion in which the organisation of the air circulations are reflected in, and help to, explain the temperature fluctuations of that period. Conclusions are also drawn concerning the changing patterns of wind strength and