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On the skewness of the annular mode

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The annular mode is the dominant mode of variability of the extra-tropical northern hemisphere winter circulation. Its spatial structure and temporal behaviour is reasonably well reproduced in comprehensive coupled GCM's as well as in the much simpler dry, quasi-geostrophic three-layer model of Franco Molteni. Its corresponding probability density function is unimodal and skewed and is found to be sensitive to small variations in external forcings. Idealised simulations with the QG model are utilized to understand the change in skewness of the annular mode in climate scenario simulations with the coupled ECHAM/OMI model of the MPI in Hamburg.