



## **Tropical impact on the East Asian winter monsoon**

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The tropical impact on the East Asian winter monsoon (EAWM) is examined in an ensemble of atmospheric general circulation model runs that use relaxation towards the ERA-40 reanalysis in the tropics for winters between 1960/61 and 2001/02 and performed with a recent version of the European Centre for Medium-Range Weather Forecasts (ECMWF) model. 25% of the interannual variance of the EAWM can be reproduced in the ensemble mean by the model experiments with relaxation, even though the influence from ENSO appears to be weak according to the investigation of the ECMWF and the NCEP/NCAR reanalysis data. The implication is that there is the possibility of enhanced predictability for the EAWM resulting from improved forecast skill in the tropics as a whole. Prescribing observed sea surface temperature and sea ice without using relaxation cannot reproduce the interannual variability of the EAWM in our experiments, questioning the usefulness of uncoupled atmosphere models in this region, consistent with previous studies.