



Supplement of

Stratospheric modulation of Arctic Oscillation extremes as represented by extended-range ensemble forecasts

Jonas Spaeth and Thomas Birner

Correspondence to: Jonas Spaeth (jonas.spaeth@physik.uni-muenchen.de)

The copyright of individual parts of the supplement might differ from the article licence.

Supplement

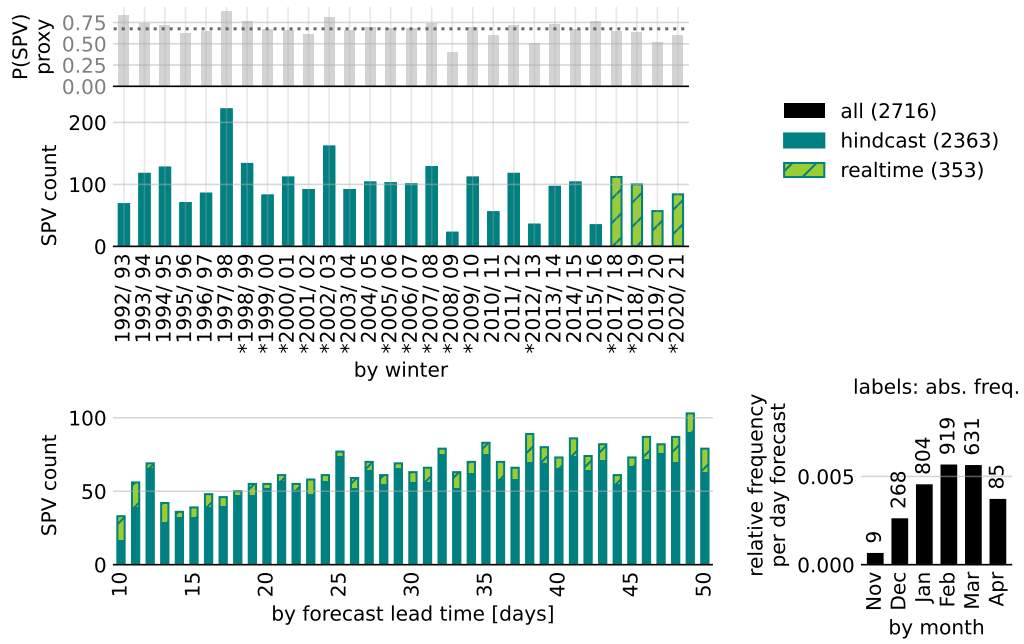


Figure S1: As in Fig. 1, for UKMO p-SSWs.

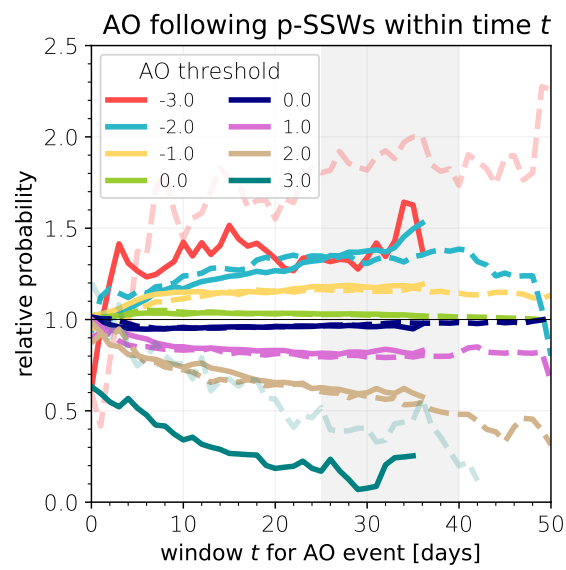


Figure S2: Relative probability of AO extremes following SSWs within time t . Values larger than 1 indicate that AO events occur more often compared to climatology. Windows of 25 to 40 days (gray shaded) are used to compute an average relative probability increase.

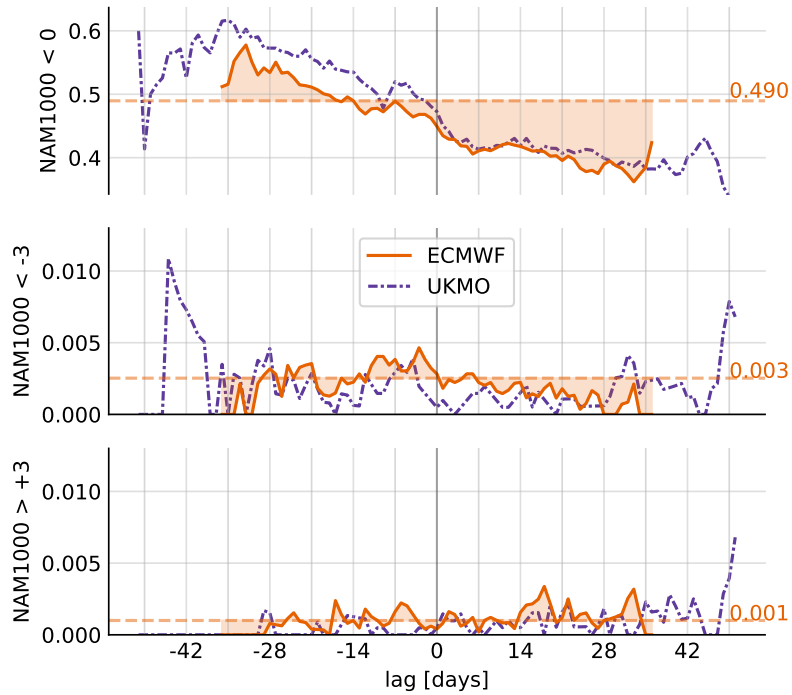


Figure S3: As in Fig. 4, for p-SPVs. Consistent with the average positive AO shift (see Fig. 9), the daily probabilities for $AO < 0$ and $AO < -3$ reduce, whereas the probability for $AO > +3$ slightly increases following p-SPVs, compared to the respective climatological baselines (horizontally dashed).

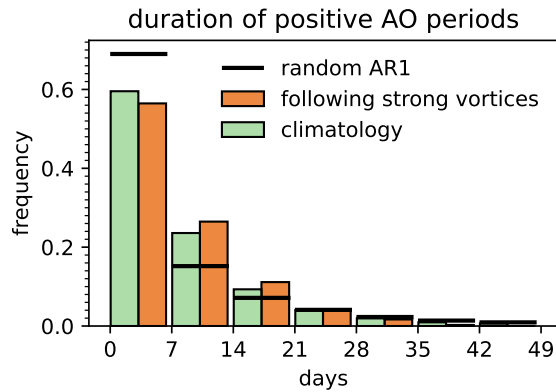


Figure S4: As in Fig. 3, for the duration of positive AO phases following p-SPVs. Compared to climatology, positive AO phases that are longer than 7 days are more likely following p-SPVs. Data from ECMWF.

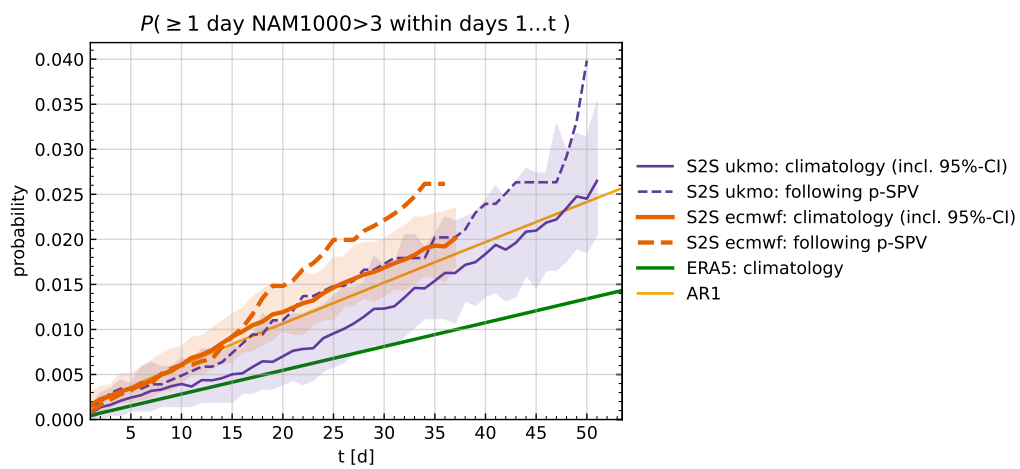


Figure S5: As in Fig. 5, for at least one day $AO > +3$ within days 1 to t , following p-SPVs. For both, ECMWF and UKMO forecasts, the probability relative to climatology is increased following p-SPVs, however, the probabilities are generally lower in the UKMO model.