Supplementary of “Solar impacts on decadal variability of tropopause temperatures and lower stratospheric water vapour: a mechanism through ocean-atmosphere coupling”
Figure S1: Deseasonalized anomalies of tropical (20°S-20°N) tropopause temperatures from the GPS-RO (red) and JRA-55 data (blue).
Figure S2: Solar regressed anomalies of (a) temperature and (b) zonal wind using the JRA-55 reanalysis (1958-2013). Areas over 90% statistically significance level are stippled. Autocorrelation effects has been excluded for the statistic test.
Figure S3: Latitude-height cross sections of solar regressed zonal wind anomalies averaged over the western Pacific (135°E-180°E) using the JRA-55 reanalysis (1979-2010). Areas over 90% statistically significance level are stippled. Autocorrelation effects has been excluded for the statistic test.
Figure S4: Same as Figs. 3a-3d, but for the period of 1900-2010 with SST anomalies only.
Figure S5: Wavelet analysis of observed top EMI and bottom ENSO for the period 1900-2014. left Power spectrum for different periods. Areas over 95% statistically significance level are indicated by the black contour line. The cone of influence, where signals are less reliable due to edge effects is cross-hatched. right Power spectrum averaged for the whole time with different periods. The dotted line indicates the 90% level of confidence.