



**Figure 4.** Overview of hydrological and climate patterns over the period 800–2018 CE (the Little Ice Age is identified as a light blue area across the graphs): (a) evolution of the smoothed 11-year Gaussian low-pass filter of annual storm severity index sum—ASSIS (GF)—across the Po River Basin (blue curve), with denoted values of ASSIS (GF) = 98th percentile (dashed blue line) and the peak values (red arrows) of each climatic phase, (b) Atlantic Multidecadal Variability (AMV, green curve; Wang *et al.* 2017); and (c) Wavelet power spectrum for the reconstructed DHEs using a Morley wavelet with 10 cycles (Hammer *et al.* 2001). Colours identify the 0.10 significance level areas. The bell-shaped, black contour marks the limit between the reliable region and the region above the contour where the edge effects occur.