



Defining The Little Ice Age

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The 'Little Ice Age' (LIA) is possibly the best-documented climatic anomaly of the past. A wide range of datasets portrays the LIA as a period characterised by a harsh climate that worsened living conditions for people across Europe, primarily in terms of cooler temperatures. Regardless of the vast amount of data covering the LIA there is presently no consensus concerning its spatial manifestation (was it regional or global?), its temporal constraints (when did it occur?) or the large-scale dynamics associated with it (which mechanisms did it involve?), although there is no shortage of suggestions. Based on a new compilation of data reflecting atmospheric circulation at both high and low latitudes, we show here that the LIA lasted for roughly 400 years (~ 1400–1800 AD). During this period at least four major atmospheric circulation systems on Earth (Northern Annular Mode (NAM), Intertropical Convergence Zone (ITCZ), El Nino-Southern Oscillation (ENSO) and West African Monsoon (WAM)) co-varied on decadal to centennial timescales. This pattern of convergence suggests that a stronger coupling between these circulation systems were an important pre-condition for the realisation of the LIA.