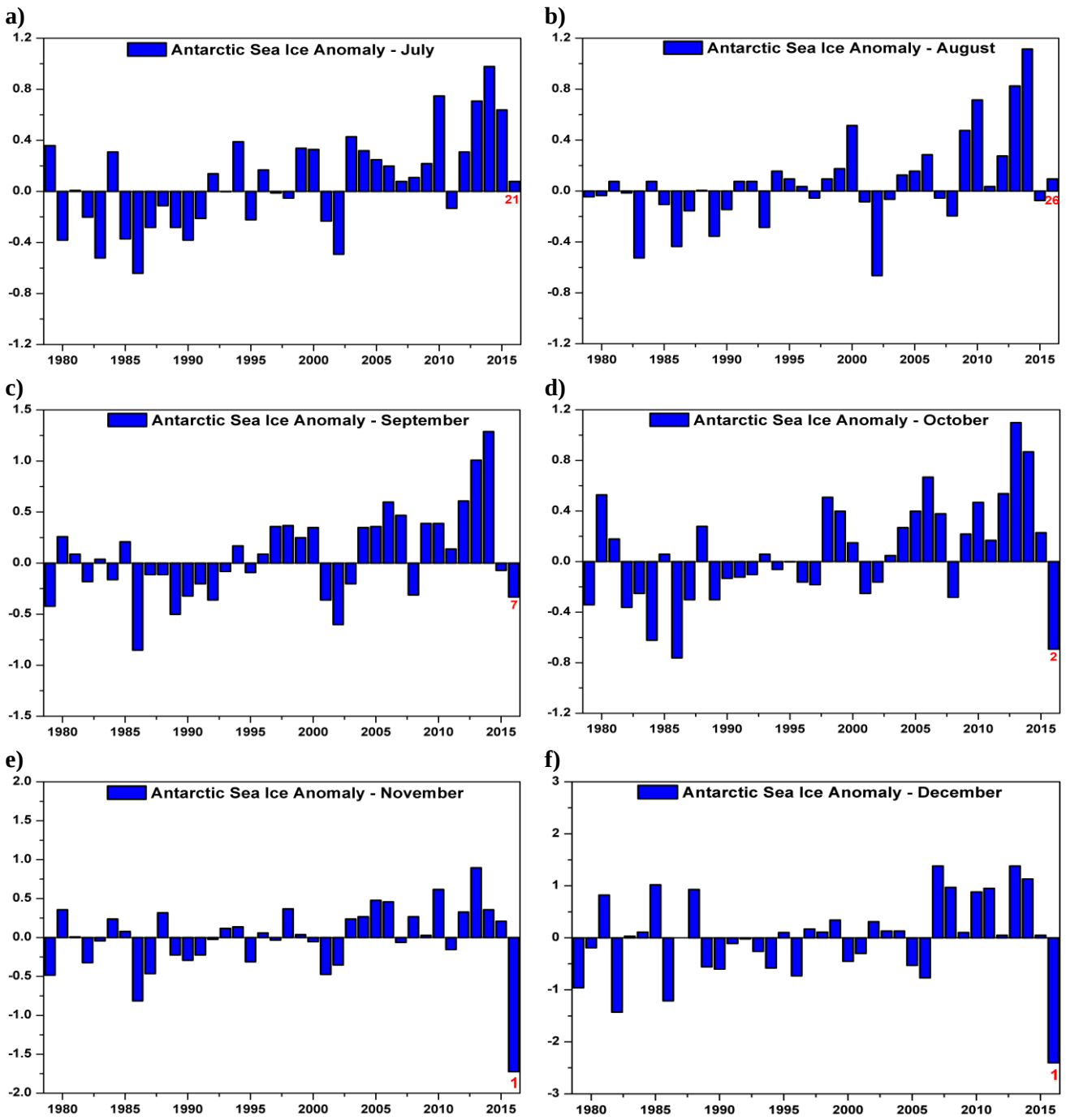

Figure S1. Monthly Antarctic sea ice extent anomalies: a) July 2016; b) August 2016; c) September 2016; d) October 2016; e) November 2016 and f) December 2016.

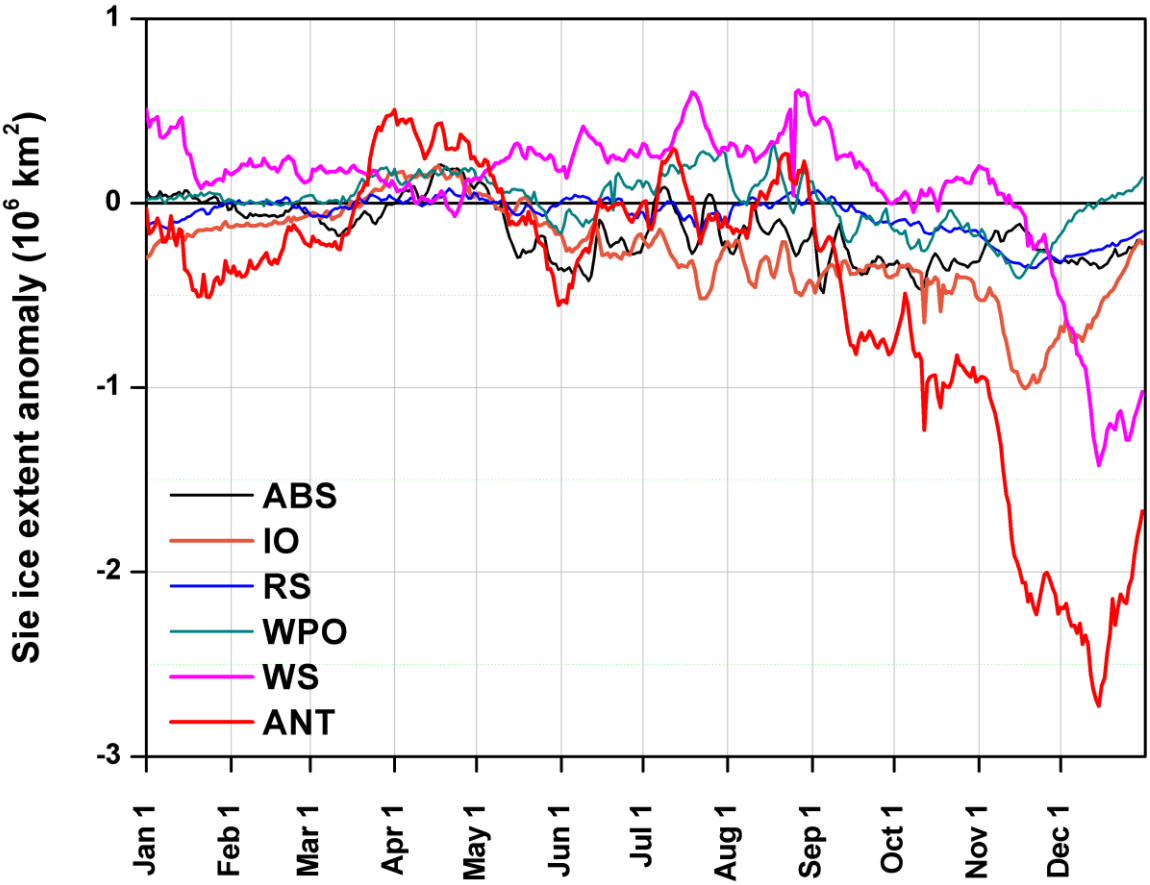

Figure S2. Daily sea ice extent anomalies for the year 2016: ABS (black), IO (orange), RS (blue), WPO (green), WS (magenta) and Antarctica (red).

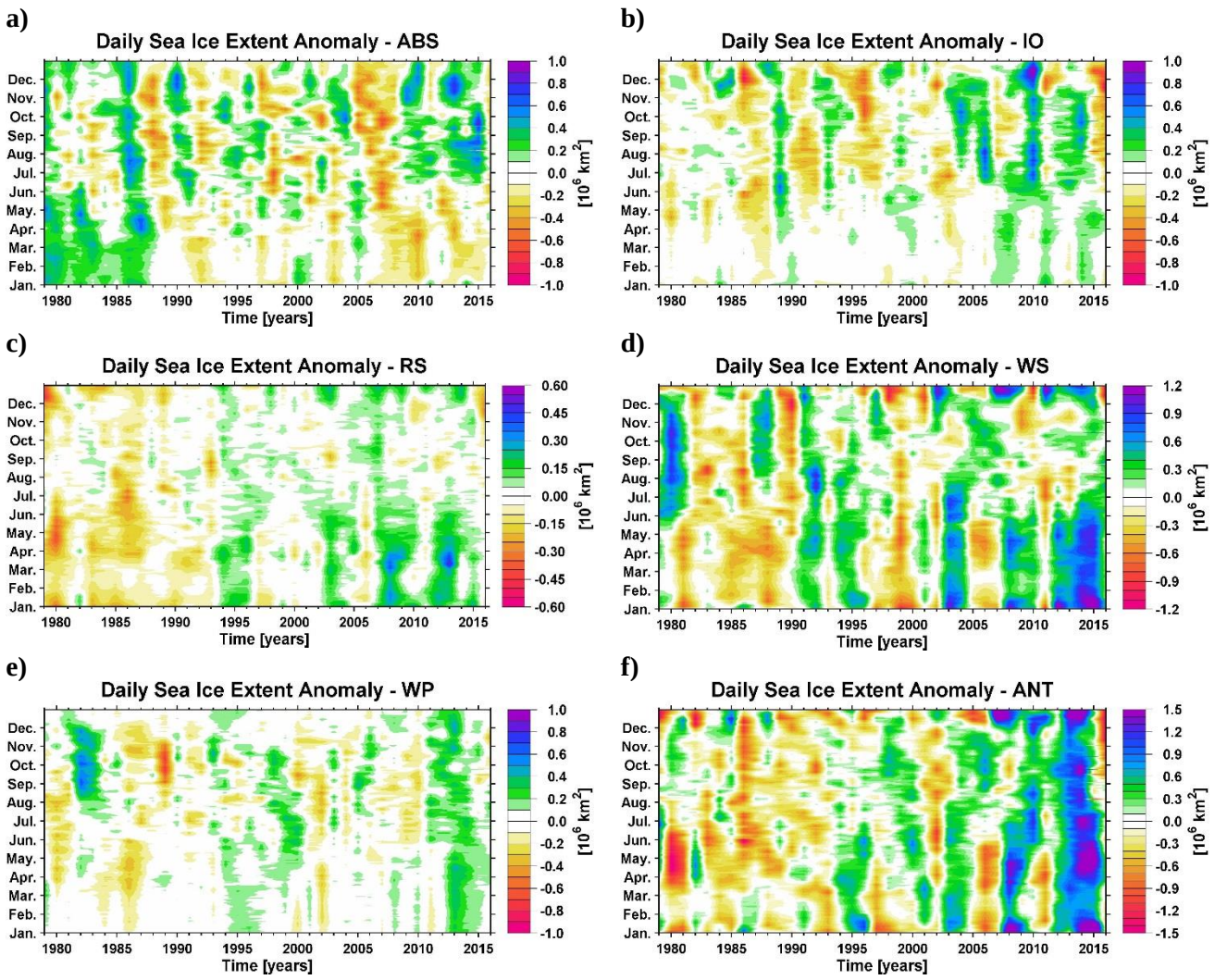

Figure S3. Daily sea ice extent anomalies over the period 1979 - 2016: a) ABS; b) IO; c) RS; d) WS; e) WPO and f) Antarctica.

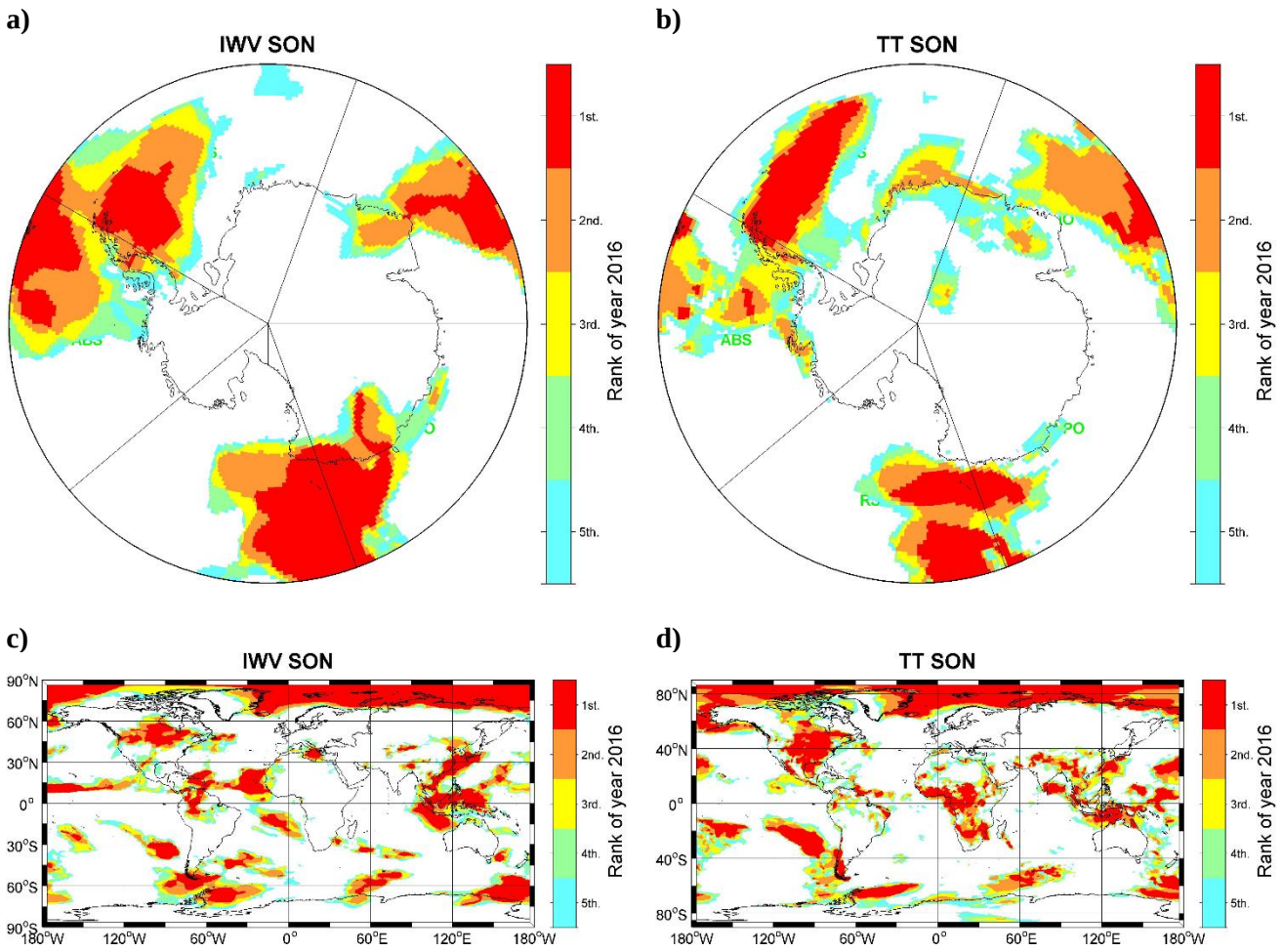

Figure S4. Top-five ranking of 2016 autumn (September-October-November) for: a) the wettest SON over the Southern Hemisphere; b) the warmest SON over Southern Hemisphere; c) the wettest SON at global level and d) the warmest SON at global level. 1 means the wettest/warmest SON since 1979, 2 signifies the second wettest/warmest SON since 1979, etc. All ranks higher than 5 are shown in white. Analyzed period: 1979–2016.