

Zhang, S., G. Ren, Y. Ren, and X. Sun, 2019: Comparison of surface air temperature between observation and reanalysis data over eastern China for the last 100 years. *J. Meteor. Soc. Japan*, **97**, 89-103.

<https://doi.org/10.2151/jmsj.2019-004>

Plain Language Summary: This study aimed to improve understanding of the differences in surface air temperature data between homogenized observations and reanalysis (20CR and ERA20C) since the beginning of the 20th century and to address the reanalysis data error.

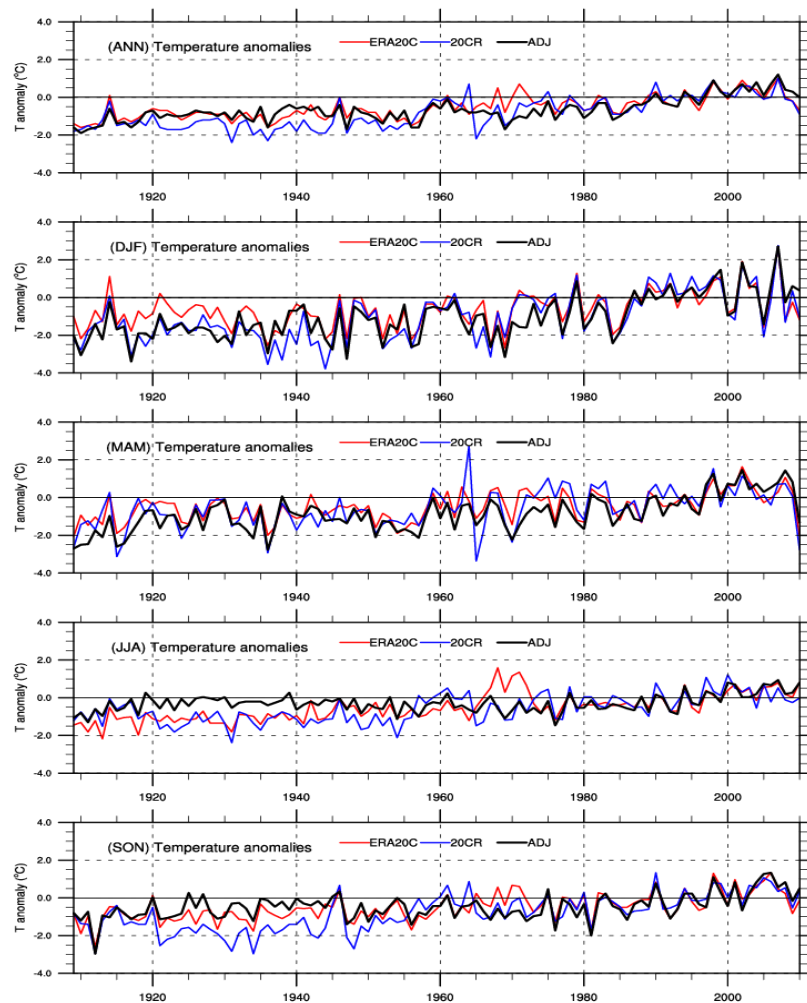


Figure. 1 Annual and seasonal mean surface air temperature anomalies (units: °C) of eastern China during 1909–2010 derived from observation stations (ADJ) and two reanalysis datasets (ERA20C and 20CR) (ANN, annual; DJF, winter; MAM, spring; JJA, summer; SON, autumn)

- For ERA20C and 20CR, there was a high consistency with ADJ in annual variation characteristics after 1975. There were large fluctuations of REA during 1960–1970.
- The differences between 20CR and ADJ were large before the 1950s, and ERA20C was generally closer to ADJ.
- The annual variation characteristics of REA had a higher agreement with those of ADJ in winter and spring than in summer and autumn.