



**AMS**  
American Meteorological Society

## Supplemental Material

© [Copyright 2023 American Meteorological Society](#) (AMS)

For permission to reuse any portion of this work, please contact [permissions@ametsoc.org](mailto:permissions@ametsoc.org). Any use of material in this work that is determined to be “fair use” under Section 107 of the U.S. Copyright Act (17 USC §107) or that satisfies the conditions specified in Section 108 of the U.S. Copyright Act (17 USC §108) does not require AMS’s permission. Republication, systematic reproduction, posting in electronic form, such as on a website or in a searchable database, or other uses of this material, except as exempted by the above statement, requires written permission or a license from AMS. All AMS journals and monograph publications are registered with the Copyright Clearance Center (<https://www.copyright.com>). Additional details are provided in the AMS Copyright Policy statement, available on the AMS website (<https://www.ametsoc.org/PUBSCopyrightPolicy>).

Supporting Information for  
**Decadal enhancement in the effect of El Niño in the decaying stage on the  
pre-flood season precipitation over Southern China**

CHUJIE GAO<sup>a,b</sup> AND GEN LI<sup>a,\*</sup>

<sup>a</sup> *College of Oceanography & The National Key Laboratory of Water Disaster  
Prevention, Hohai University, Nanjing, China*

<sup>b</sup> *Key Laboratory of Meteorological Disaster, Ministry of Education (KLME) &  
Collaborative Innovation Center on Forecast and Evaluation of Meteorological  
Disasters (CIC-FEMD), Nanjing University of Information Science and Technology,  
Nanjing, China*

\*Corresponding author: Gen Li, Email: [ligen@hhu.edu.cn](mailto:ligen@hhu.edu.cn)

**Contents of this file**

Supplementary Figures S1-S4.

**Introduction**

The Supporting Information contains four figures that support the analyses in the main text.

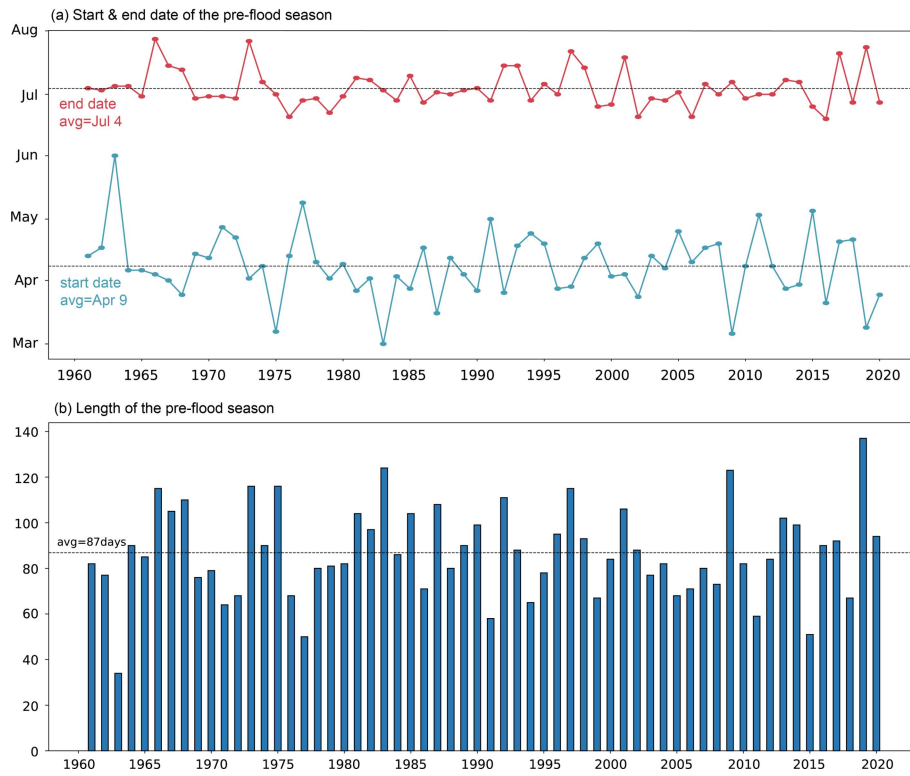


FIG. S1. (a) The start and end dates of the pre-flood season over South China and their long-term means during 1961-2020. (b) The length (units: d) of the pre-flood season over South China during 1961-2020.

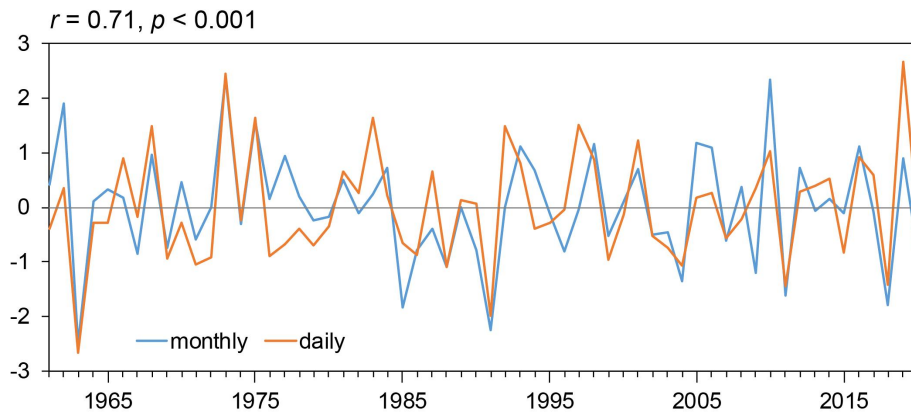


FIG. S2. Standardized time series of the AMJ precipitation in monthly grided data (blue line) and the pre-flood season precipitation in daily data (orange line) for the period of 1961-2020. The  $r$  and  $p$  denote the correlation coefficient and its significance level, respectively.

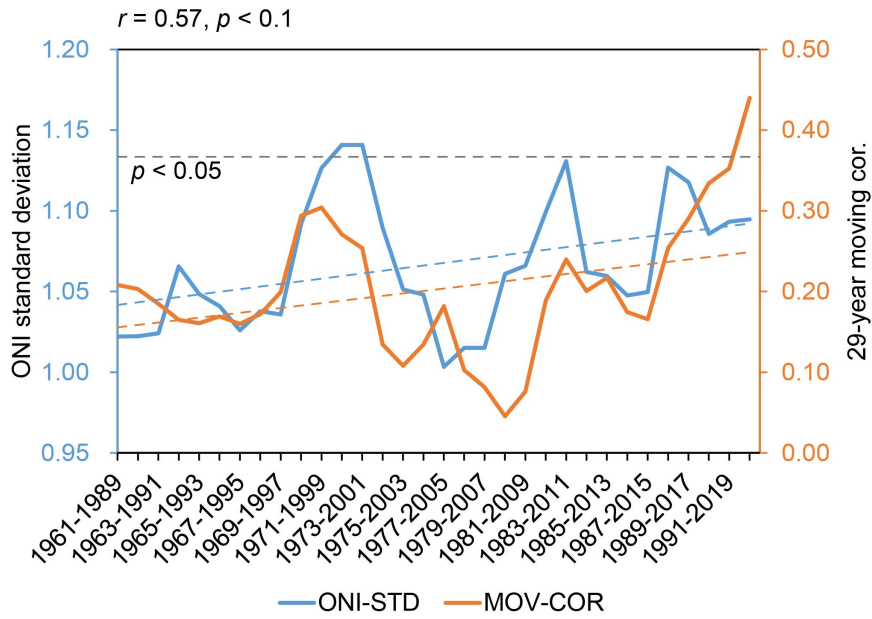


FIG. S3. The 29-year moving standard deviation of the winter ONI (blue line), and 29-year moving correlation coefficient between the winter ONI and the SC precipitation anomaly in the following AMJ (orange line) for the period of 1961-2020. The blue and orange dashed lines denote the linear trends of the two variables, respectively. The gray dashed line denotes the significance level of  $p < 0.05$  for the 29-year moving correlation coefficient. The years on the X-axis denote the 29-year window. The  $r$  and  $p$  denote the correlation coefficient between the moving standard deviation and correlation and its significance level, respectively.

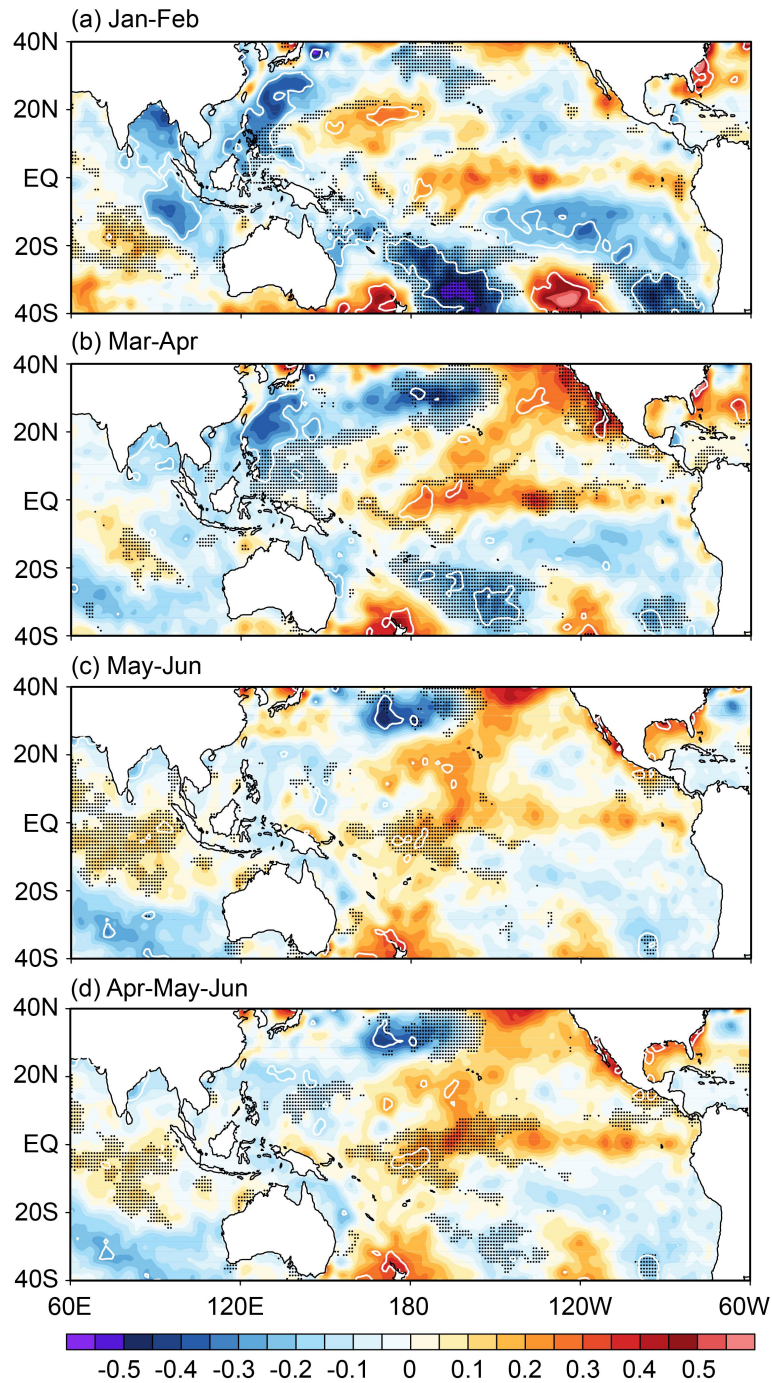


FIG. S4. Composite differences of the SST (units:  $^{\circ}\text{C}$ ) in (a) January-February, (b) March-April, (c) May-June, and (d) AMJ for the El Niño events between the periods of 1961-1991 and 1992-2020 (the late period minus the early period). The SST data are linearly detrended before statistical analyses. The white lines encircle the areas significant with  $p < 0.1$ . The dotted areas denote the SST anomaly apart from the climatology are significant with  $p < 0.05$  in the El Niño events only during 1991-2020 (excluding the significant areas during 1961-1991).