

Supplementary Information for

The role of Atlantic variability in modulating the tropical cyclone formation in the Australian region

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Introduction

This supporting information provides the omitted tables and figures in the main article.

3.1 Correlation and causality analysis

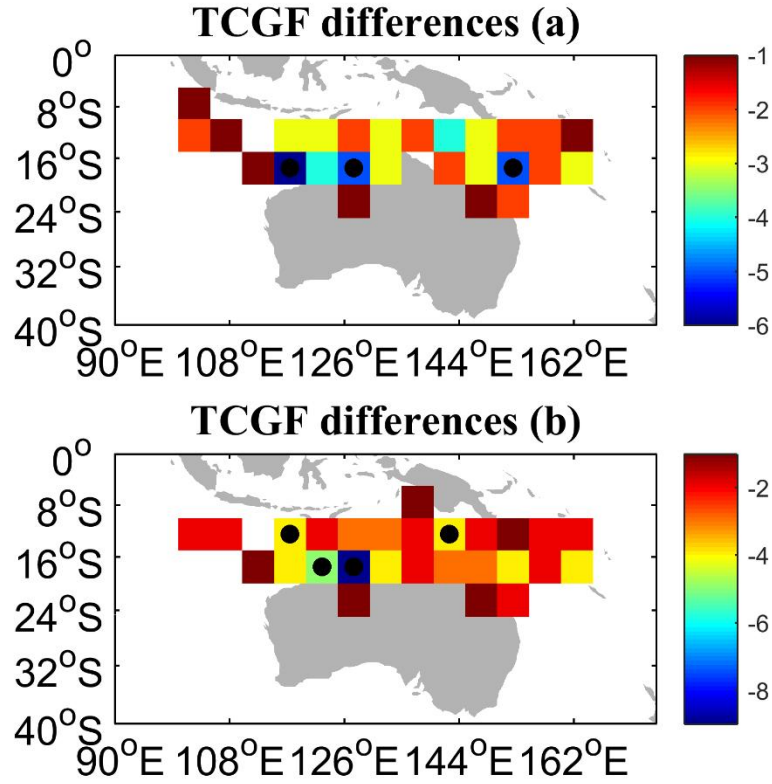


Figure S1. Composite differences of the NDJFMA (November-April) TC genesis frequency (TCGF) over the Australian basin between positive and negative phases of AMO (a), warm and cold NTA years (b) within 5°×5° grid box based on the International Best Track Archive for Climate Stewardship version 3, respectively.

3.2 Large-Scale Circulation Patterns

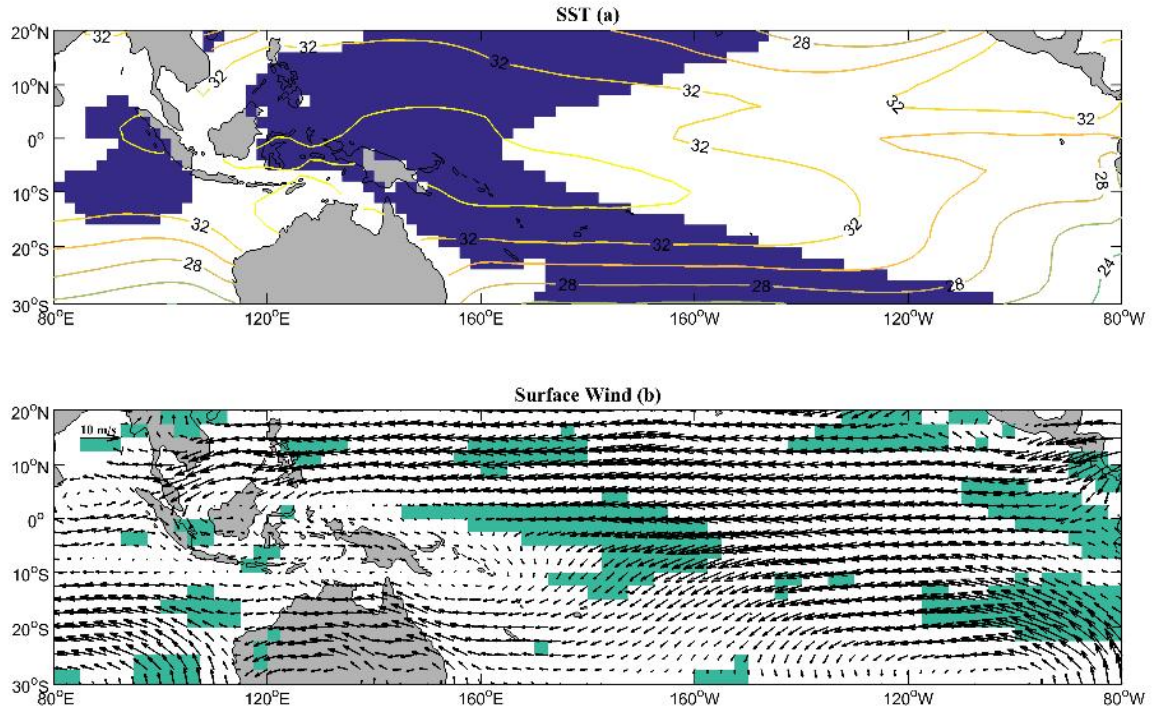


Figure S2. Regressions of SST (a) and 850 hPa horizontal wind (b) during NDJFMA onto the interannual ASO AMM index for 1972-2016. Regression coefficients exceeding 95% confidence level are stippled.

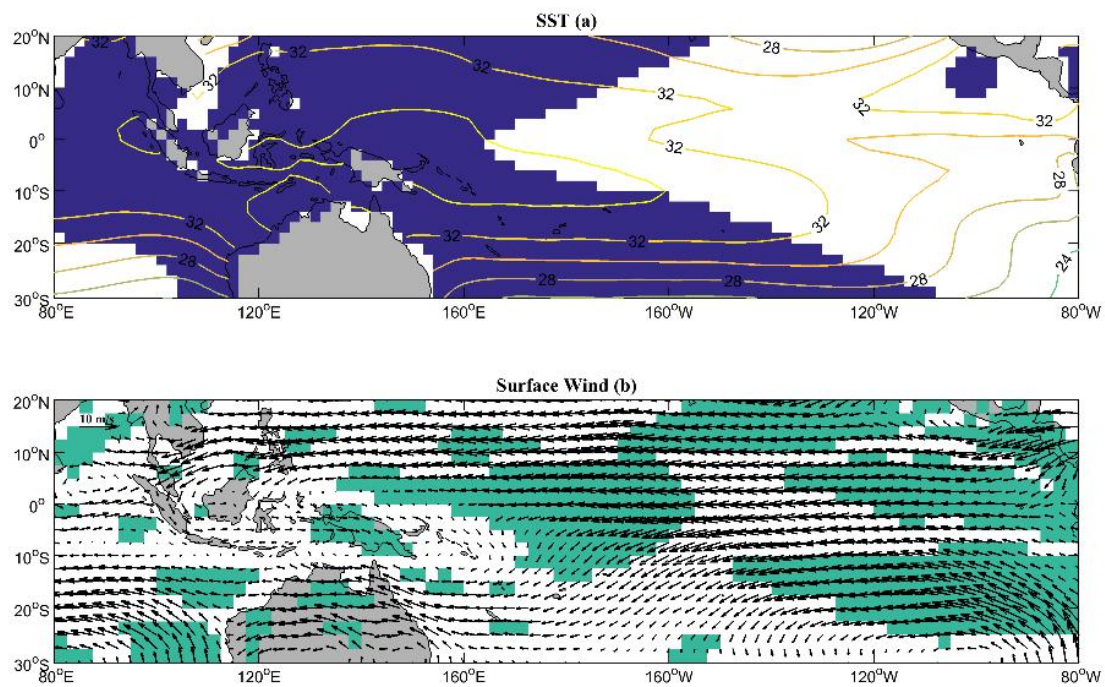


Figure S3. Regressions of SST (a) and 850 hPa horizontal wind (b) during NDJFMA onto the interannual ASO AMO index for 1972-2016. Regression coefficients exceeding 95% confidence level are stippled.

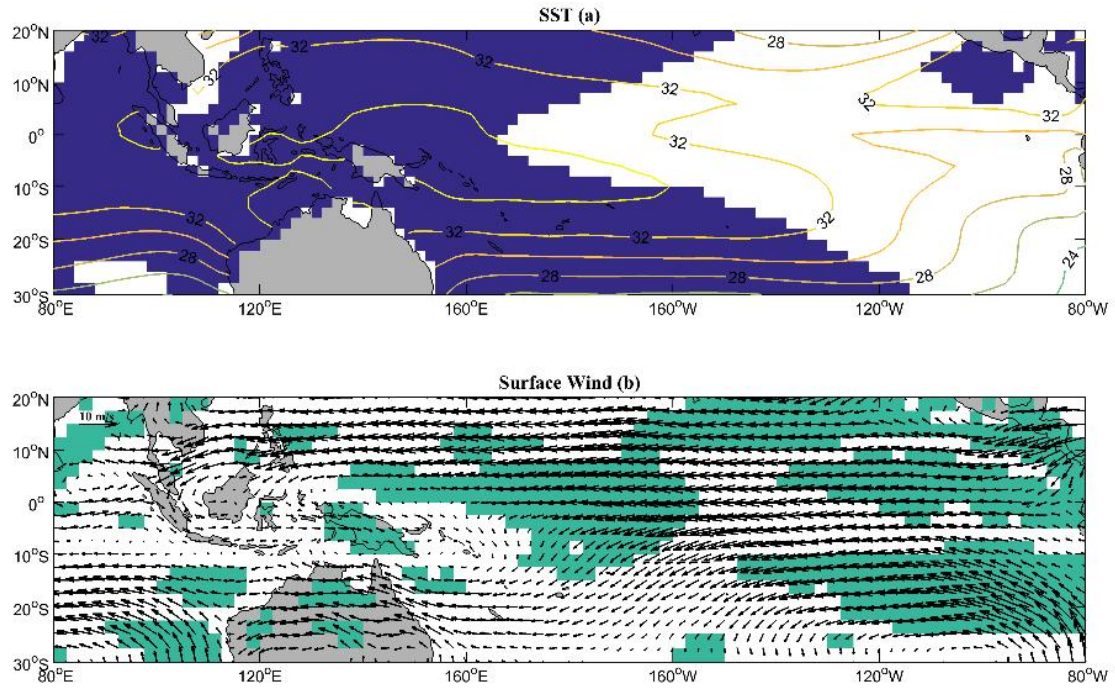


Figure S4. Regressions of SST (a) and 850 hPa horizontal wind (b) during NDJFMA onto the interannual ASO NTA SST index for 1972-2016, after excluding the MJJ (May-July) Nino3.4 influence. Regression coefficients exceeding 95% confidence level are stippled.

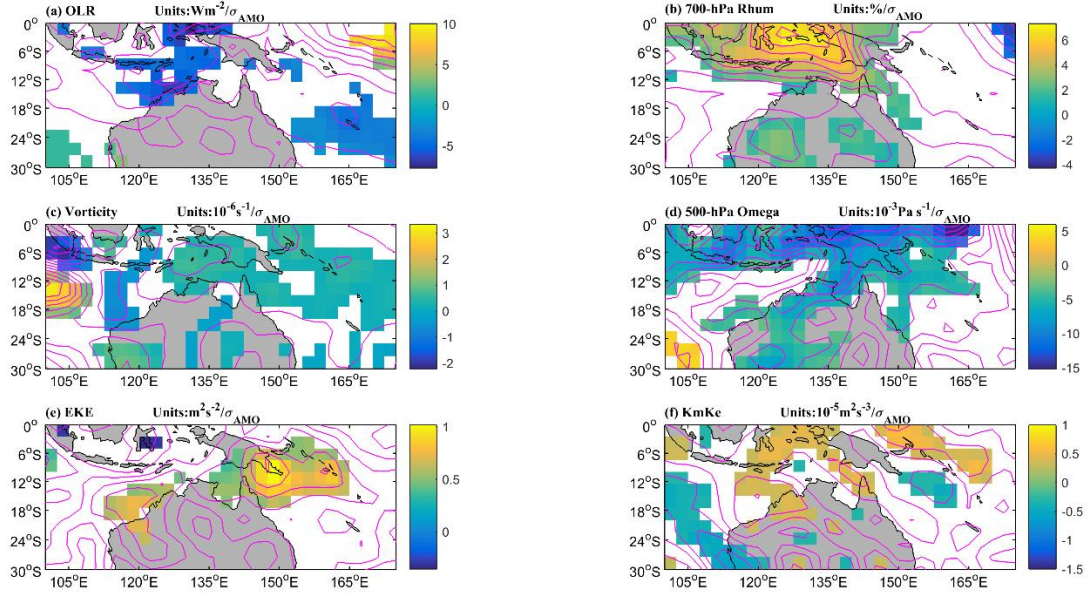


Figure S5. Lagged regressed fields of (a) OLR, (b) 700 hPa relative humidity, (c) 850 hPa relative vorticity, (d) 500 hPa vertical velocity, and (e) eddy kinetic energy (EKE), at 850 hPa during NDJFMA with respect to the interannual ASO NTA SST index. Regression coefficients exceeding 95% confidence level are stippled.

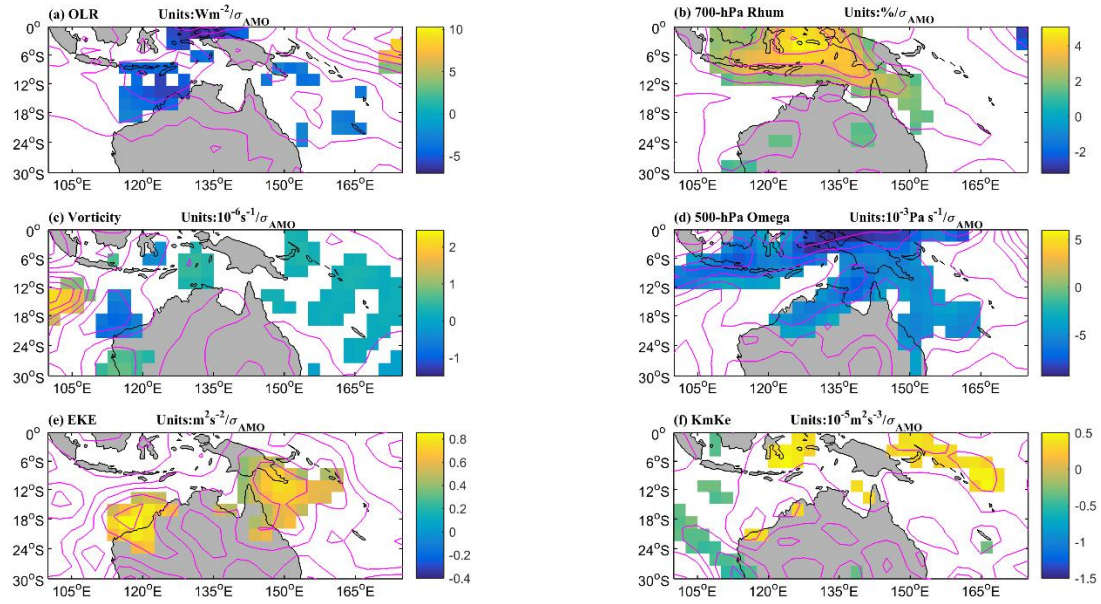


Figure S6. Lagged regressed fields of (a) OLR, (b) 700 hPa relative humidity, (c) 850 hPa relative vorticity, (d) 500 hPa vertical velocity, and (e) eddy kinetic energy (EKE), at 850 hPa during NDJFMA with respect to the interannual ASO AMM index. Regression coefficients exceeding 95% confidence level are stippled.