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Supporting Information for

**Interannual Variability of Lower Equatorial Intermediate Current Response to ENSO in the Western Pacific**

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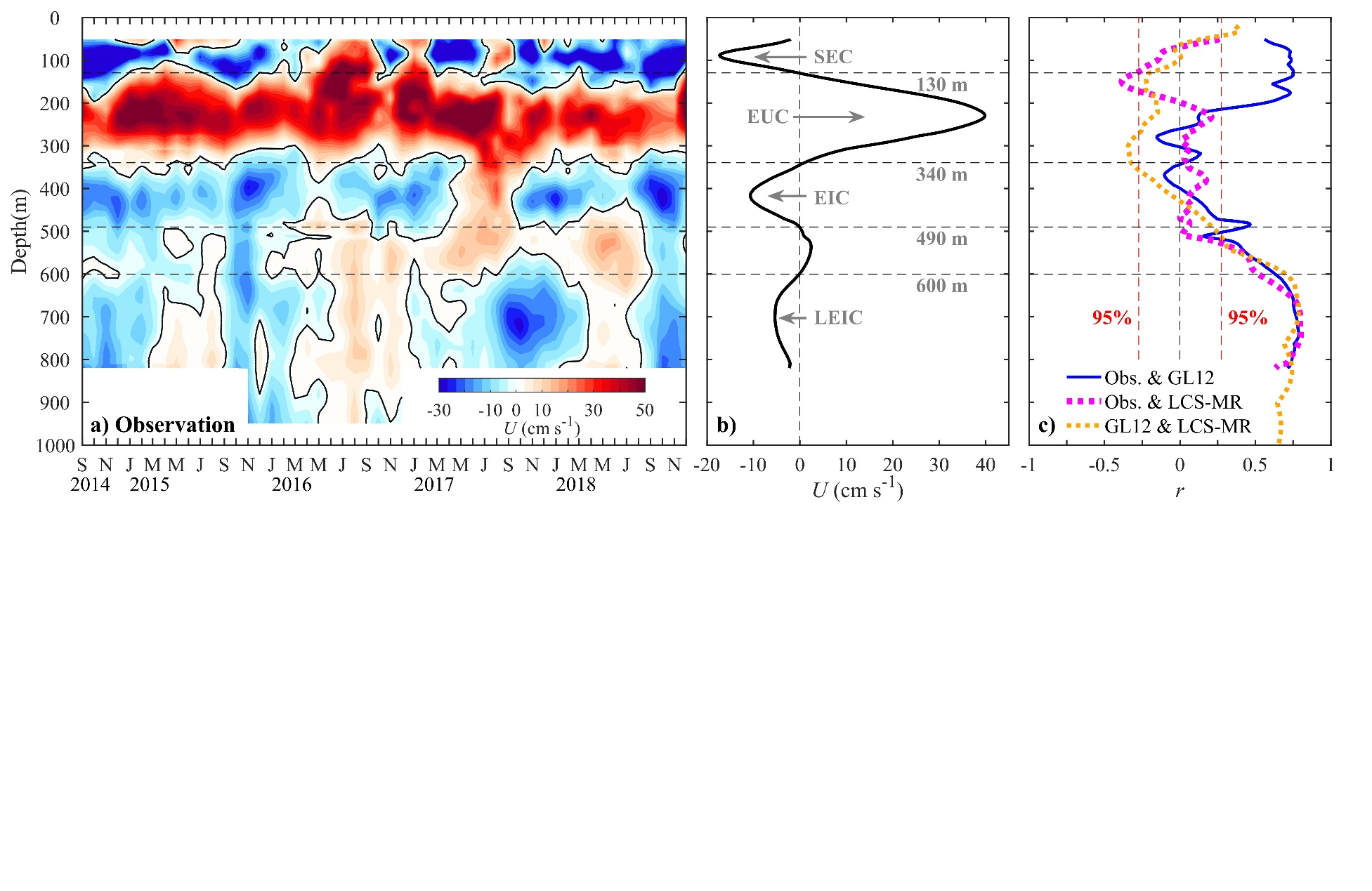
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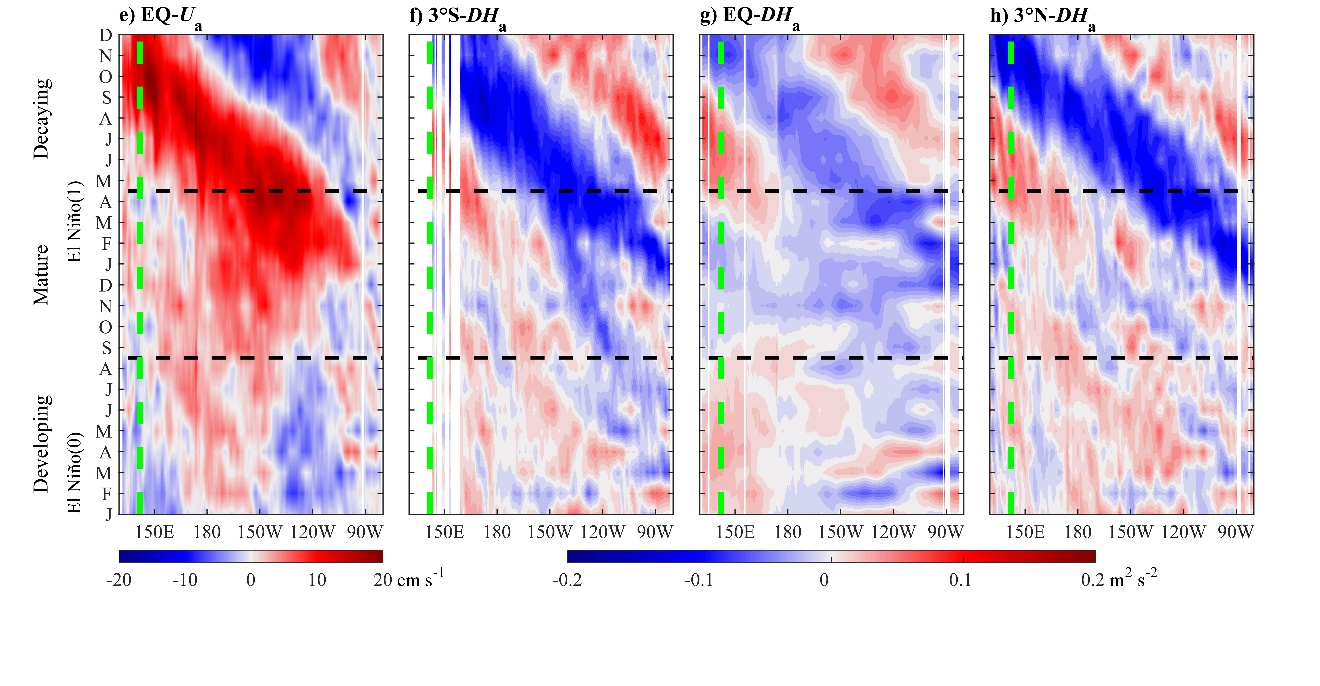
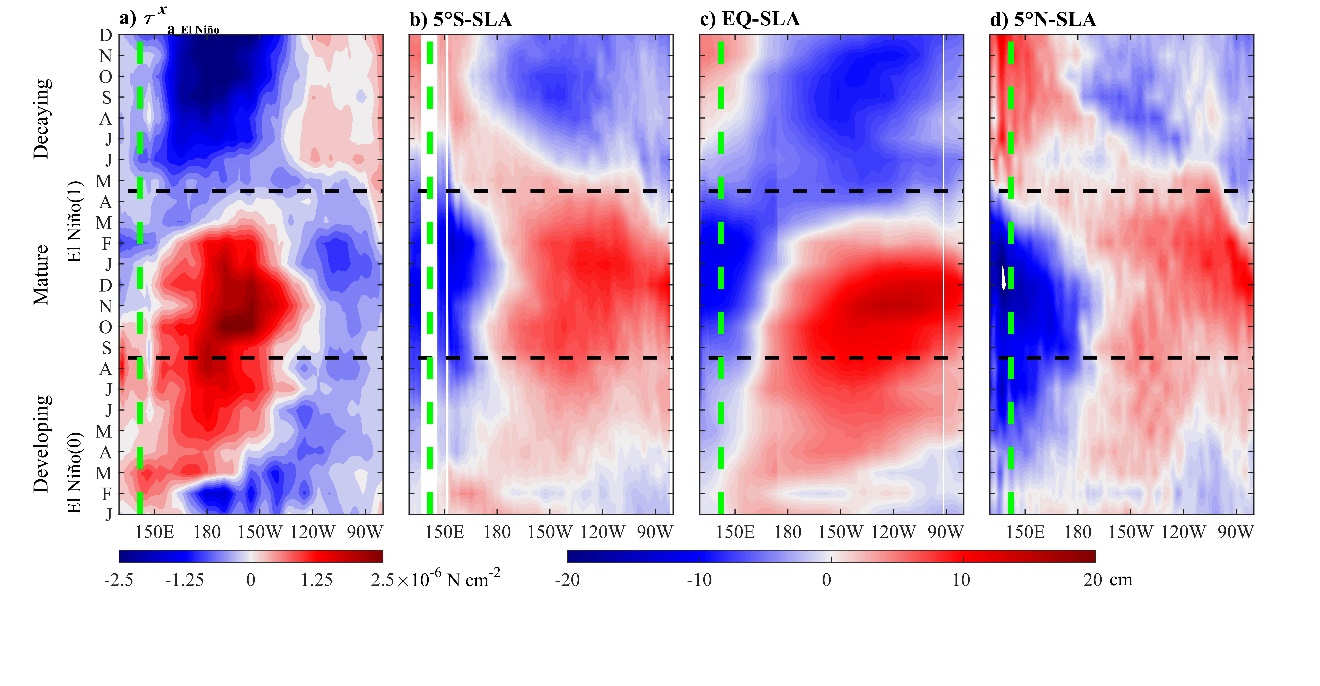
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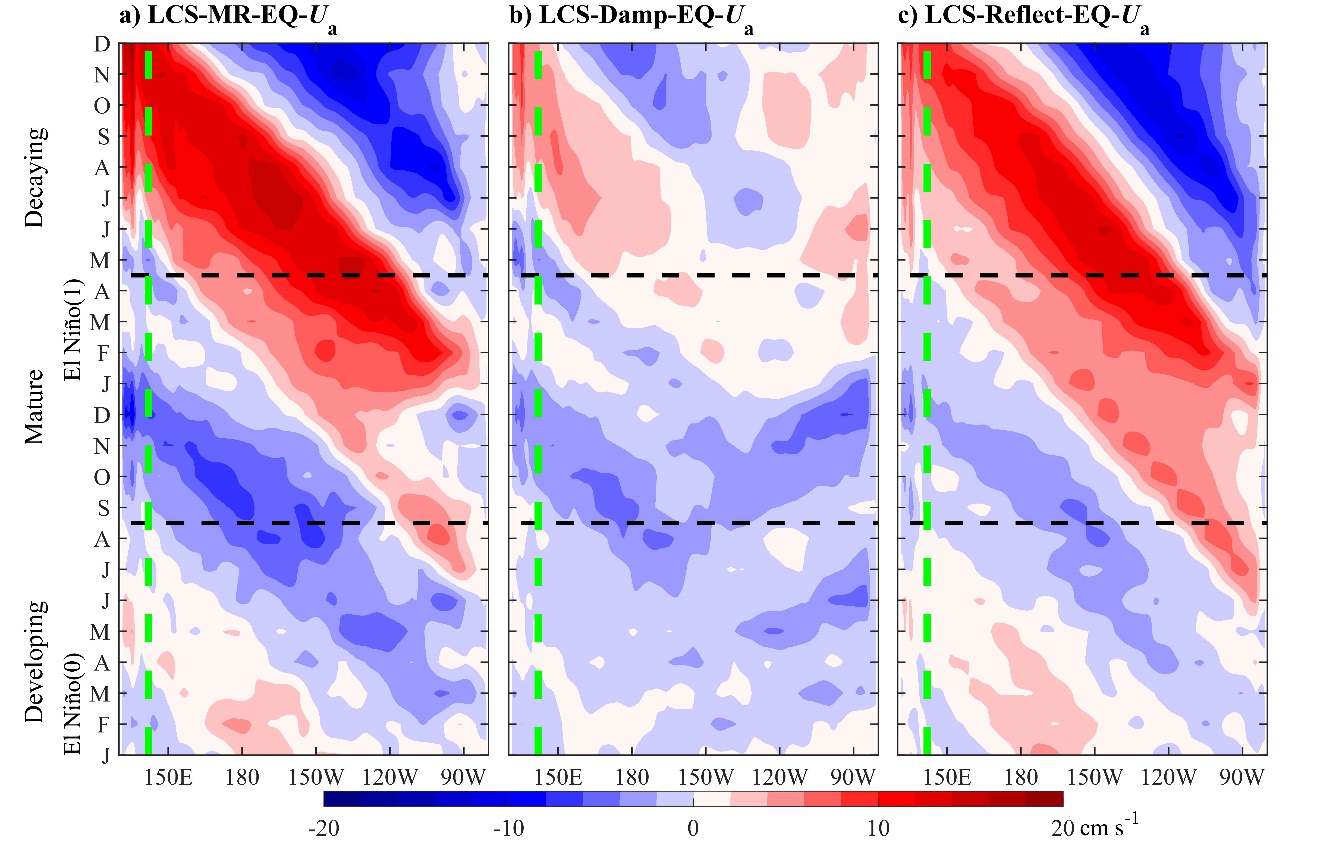
Figures S1 to S3



**Figure S1**. (a) Time-depth variations of observed monthly zonal current *U* during September 2014-December 2018 at 0º, 142ºE. (b) The vertical distributions of (b) observed time-averaged *U* and (c) zero-lag correlation coefficients *r* between observed and modeled zonal current anomaly *U*a. The depth ranges of zonal currents are indicated in panel b. The red dashed lines in panel c denote coefficients that are significant at 0.05 level.



**Figure S2**. Longitude-time plots of composite (a) ERA-Interim zonal wind stress anomaly (*τx*a\_El Niño) averaged between 5°S-5°N, SLA along (b) 5°S, (c) the equator, and (d) 5°N, (e) *U*a at the equator, and dynamic height anomaly *DH*a along (f) 3°S, (g) the equator, and (h) 3°N averaged between 600-820 m in GL12. The black dashed lines in each panel are used to separate the developing [January(0)-August(0)], mature [September(0)-April(1)], and decaying [May(1)-December(1)] stages based on the *τx*a\_El Niño evolution. The green dashed line in each panel denotes the longitude of the mooring site.



**Figure S3**. Longitude-time plots of composite *U*a at the equator averaged between 600-820 m from (a) LCS-MR, (b) LCS-Damp, and (c) LCS-Reflect. The black dashed lines in each panel are used to separate the developing [January(0)-August(0)], mature [September(0)-April(1)], and decaying [May(1)-December(1)] stages based on the *τx*a\_El Niño evolution in Figure 3a. The green dashed line in each panel denotes the longitude of the mooring site.