

## **Supplementary Information for**

### **A Lagrangian Analysis of Pockets of Open Cells over the Southeast Pacific**

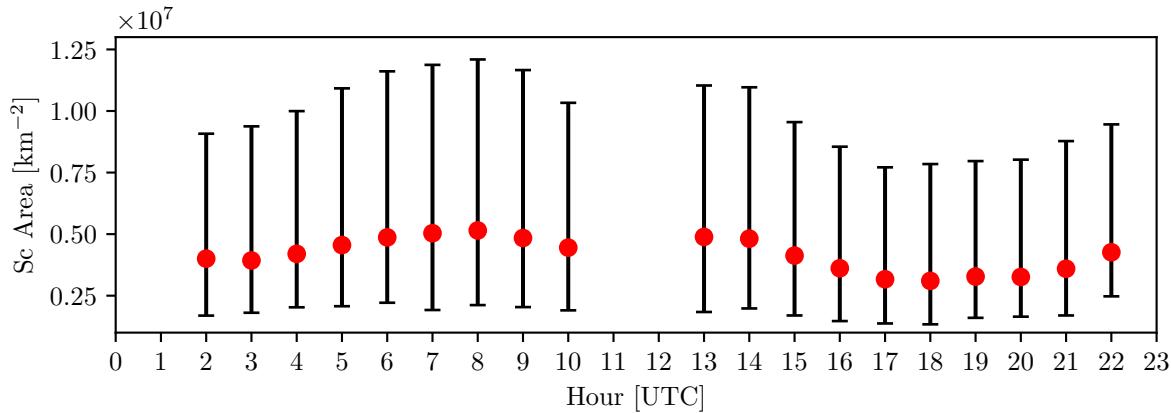
Kevin M. Smalley<sup>1</sup>, Matthew D. Lebsack<sup>1</sup>, Ryan Eastman<sup>2</sup>, Mark Smalley<sup>3</sup>, and Mikael K. Witte<sup>4</sup>

<sup>1</sup>Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA

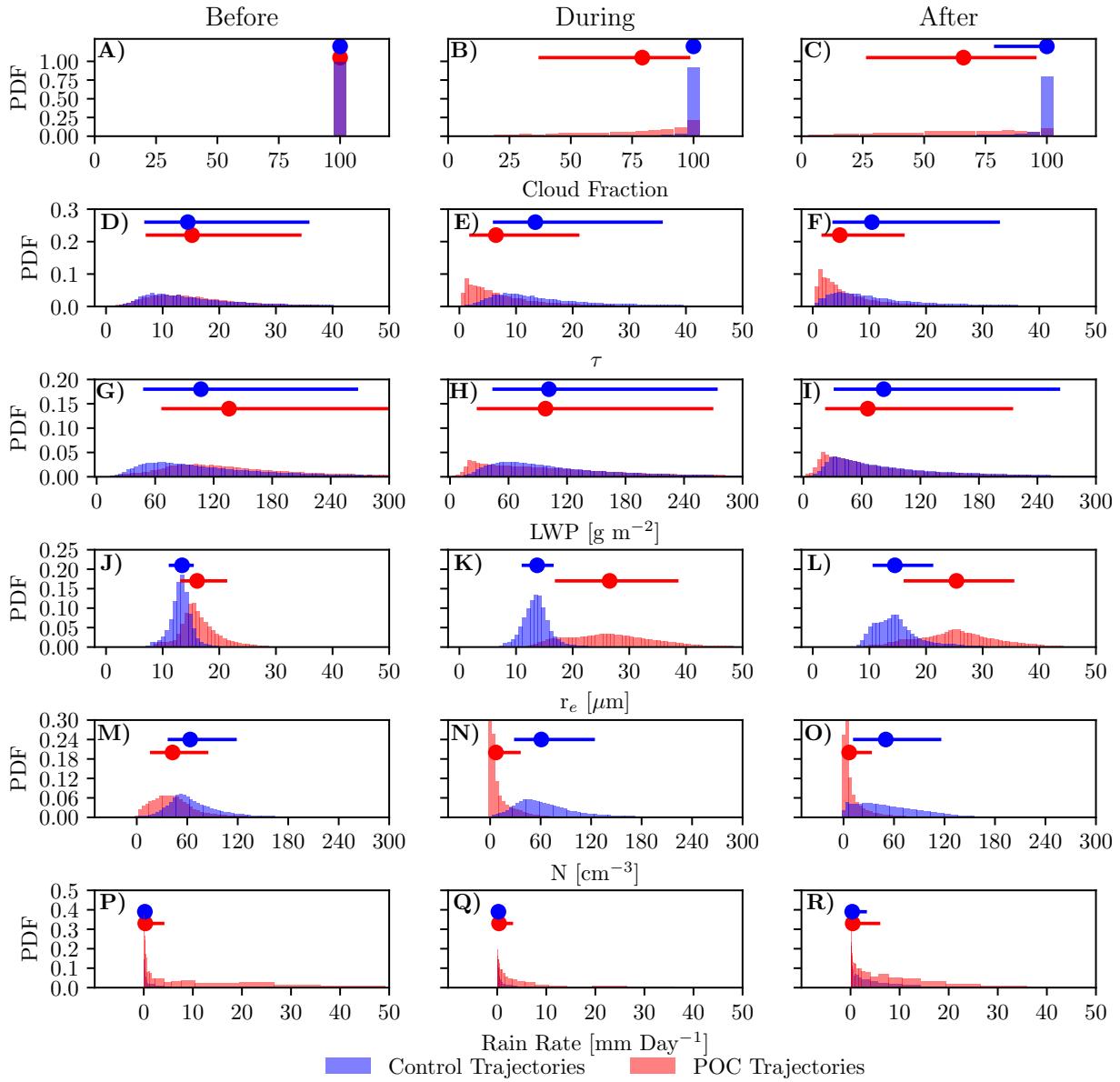
<sup>2</sup>Department of Atmospheric Sciences, University of Washington, Seattle, Washington

<sup>3</sup>Joint Institute for Regional Earth System Science and Engineering, University of California, Los Angeles, California

<sup>4</sup>Naval Postgraduate School, Meteorology, Monterey, California, USA



*Figure S1 The diurnal cycle of stratocumulus area.*



*Figure S2: Daytime histograms of cloud fraction (A, B, and C), cloud optical depth (D, E, and F), liquid-water path (G, H, and I), cloud-top effective radius (J, K, and L), number concentration (M, N, and O), and AMSR-2 rain rate (P, Q, and R) are shown prior to POC development, (A, D, G, J, M, and P) during the POCs lifetime (B, E, H, K, N, and I), and after the POCs end (C, F, I, L, O, and R) are shown. Red values represent the POC trajectories, while blue values represent the control trajectories. The colored dots represent the median of each distribution, and the horizontal lines represent the 10<sup>th</sup>-90<sup>th</sup> percentile spread.*

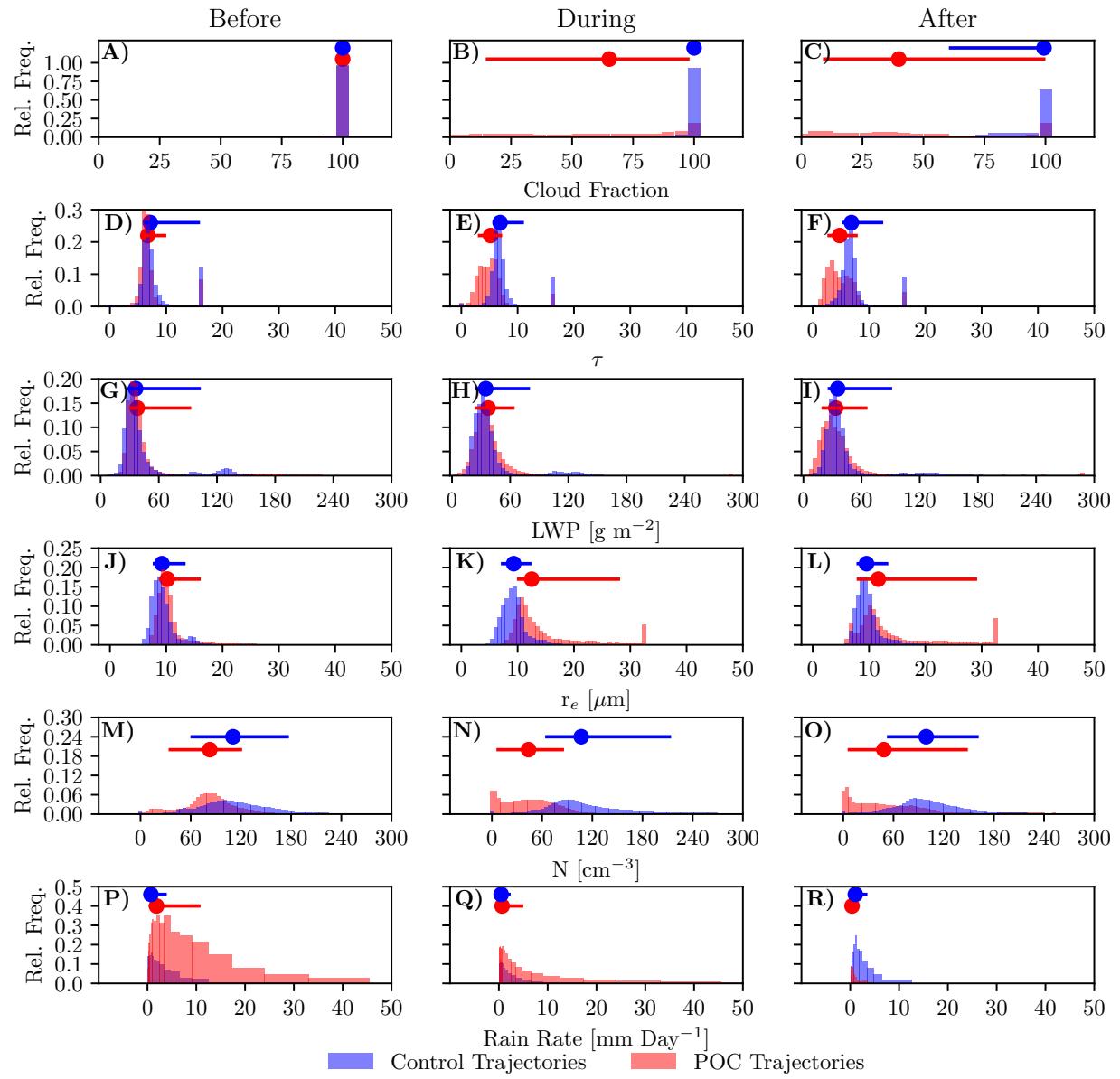
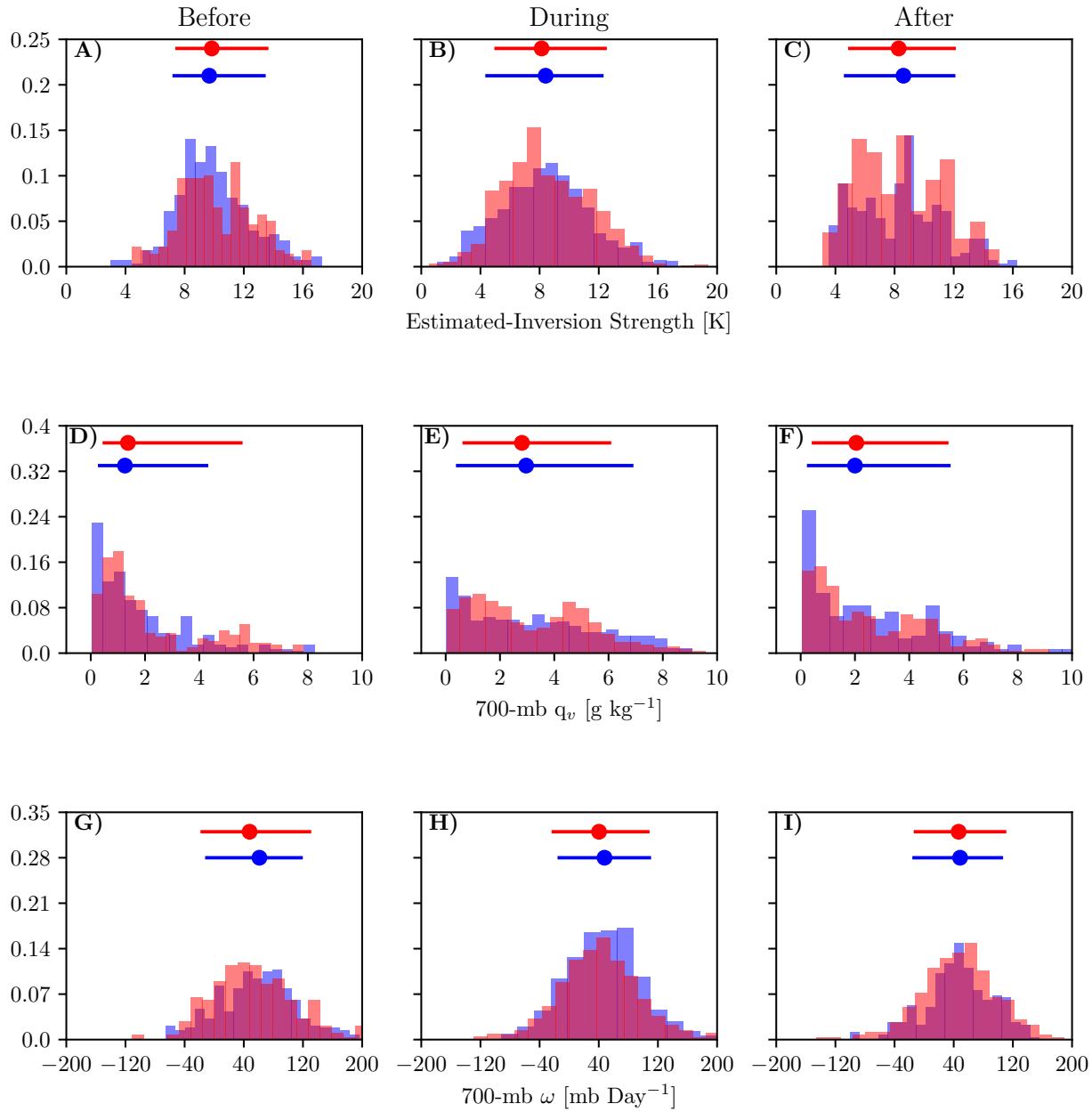


Figure S3: Same as Figure S2 except for the nighttime distributions.



*Figure S4: Histograms of estimated-inversion strength (A, B, and C), 700-mb water-vapor mixing ratio (D, E, and F), and 700-mb omega (G, H, and I), cloud-top effective radius (J, K, and L), number concentration (M, N, and O), and AMSR-2 rain rate (P, Q, and R) for the time before the POCs form (A, D, and G) during the POCs lifetime (B, E, and H), and after the POCs end (C, F, and I) are shown. Red values represent the POC trajectories, while blue values represent the control trajectories. The colored dots represent the median of each distribution, and the horizontal lines represent the 10<sup>th</sup>-90<sup>th</sup> percentile spread.*