

## Supplement figures for *Reply on RC2*

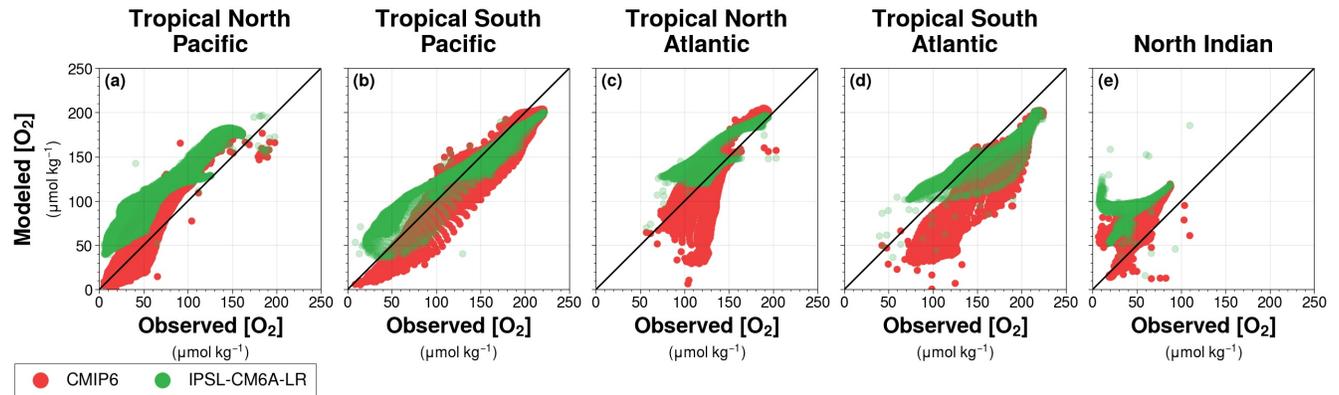


Figure A1: Dissolved oxygen concentrations from the World Ocean Atlas 2018 compared with dissolved oxygen concentrations simulated by the (**green**) IPSL-CM6A-LR Large Ensemble mean and the (**red**) CMIP6 multi-model mean. Values are taken from each grid point between 100 – 1000  $m$  depth for (a) the tropical North Pacific, (b) the tropical South Pacific, (c) the tropical North Atlantic, (d) the tropical South Atlantic and (e) the North Indian Ocean. The **black solid** line indicates the identity function ( $y = x$ ).

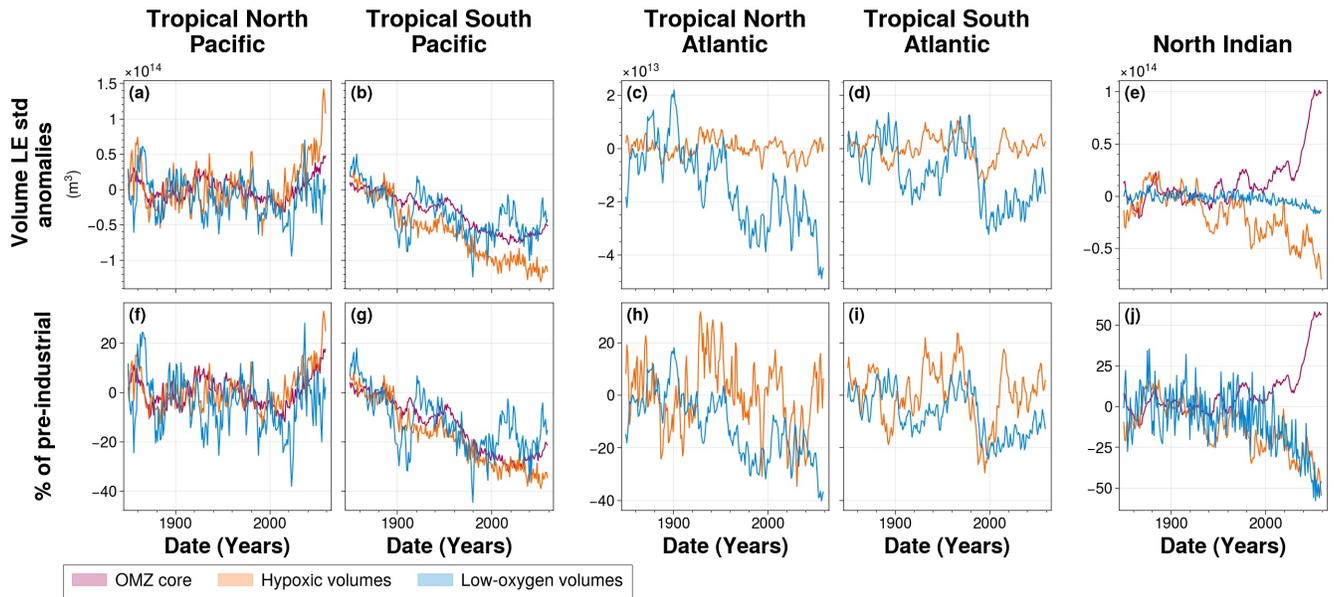


Figure A2: Large Ensemble standard deviation anomalies of 100 – 1000  $m$  OMZ volumes for **(a and f)** the tropical North Pacific, **(b and g)** the tropical South Pacific, **(c and h)** the tropical North Atlantic, **(d and i)** the tropical South Atlantic and **(e and j)** the North Indian ocean. In all panels, colours represent the  $[O_2]$  threshold used to define OMZ volumes : **(purple)** OMZ cores, **(orange)** hypoxic volumes and **(blue)** low-oxygen volumes. The Large Ensemble standard deviation anomalies are calculated relative to pre-industrial period (1850-1900) for the **(a, b, c, d and e)** OMZ volumes and **(f, g, h, i and j)** percentage of pre-industrial mean volume.