

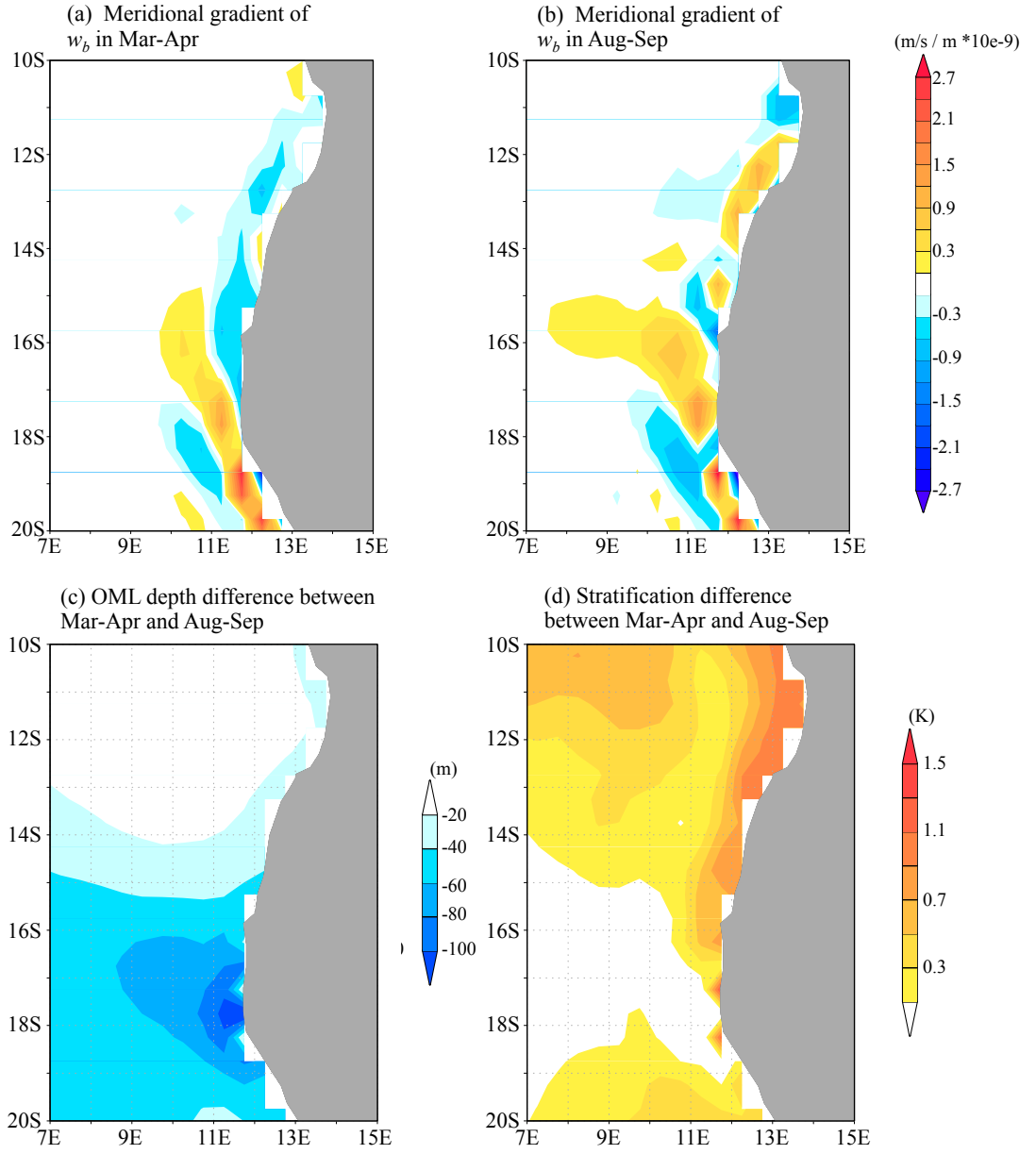


Figure S1. Meridional gradient of the vertical motion at the bottom of OML for (a) March-April mean and (b) August-September means. (c) Difference in OML depth (D in Eq. 3.5) between March-April and August-September mean. (d) Difference in upper ocean stratification ($\Delta\theta$ in Eq. 3.5) between March-April and August-September mean.