Supporting Information for "Effects of balanced motions and unbalanced internal waves on steric height in the mid-latitude ocean"

Xiujie Zhang¹, Xiaolong Yu^{1,2,3}, Aurélien L. Ponte⁴, Wenping Gong^{1,2}

¹School of Marine Sciences, Sun Yat-sen University, Zhuhai, China

 $^2 \mathrm{Southern}$ Marine Science and Engineering Guangdong Laboratory (Zhuhai), Zhuhai, China

³Fujian Provincial Key Laboratory of Marine Physical and Geological Processes, Third Institute of Oceanography, Xiamen, China

⁴Ifremer, Université de Brest, CNRS, IRD, Laboratoire d'Océanographie Physique et Spatiale, IUEM, Brest, France

Contents of this file

1. Figures S1 to S3

February 24, 2024, 6:36am



Figure S1. Monthly averaged values of steric height at 80 db, and the standard deviation computed for each month is illustrated by the vertical bars.





Figure S2. Convergence of the second-order steric height structure functions at 80 dbar. The black, blue and red lines denote total, sub-inertial and super-inertial motions, respectively. Each panel corresponds to the separation r given in the title.

February 24, 2024, 6:36am



Same as Figure 4, but with the sea level associated with barotropic tides Figure S3. artificially added in the steric height time series.