

## **List of changes made in revised manuscript**

1. Defining subdomains in abstract (lines 11–13)
2. Edits for clarity (line 64)
3. Figure 3 caption and elsewhere in the manuscript: edits for correctness.
4. Edits for clarity (line 334)
5. Edits for clarity (line 351)
6. Rearranging of sentences (lines 443–447)
7. Edits for clarity (line 476)
8. Edits for clarity (line 478)
9. Edits for clarity (lines 479)
10. Edits for completeness (lines 501–502)

Dear Editor:

Thank you for the technical corrections. We have implemented them. Please see below and the indicated lines in the track changes version.

Lines 11-12. You have not defined “northern subdomain” or “southern subdomain”. Either precede them by “a” not “the” or perhaps preferably define them.

Thank you. We have defined the subdomains in the revised manuscript. Please see lines 11–13 in the revised manuscript.

Line 68. Better “mass and atmospheric . . .”

Thank you for the correction. We have revised the sentence. Please see line 64 in the revised manuscript.

Figure 3 panels a1, b1, c1. I think “annual mean” → “mean annual cycle”.

Thank you. We have made this correction here and everywhere in the revised manuscript.

Line 330. “. . . waters . . . are” or “. . . water . . . is”

Thank you. We have made the correction. Please see line 334 in the revised manuscript.

Line 337. What is the basis for the currents shown in figures 9, 11? I guess ORAS5 but missed any statement of that.

ORAS5. This is stated previously and in lines 164–165 of the revised manuscript.

Line 347. “. . . lags . . . are sensitive . . .”

Thank you. We have made the correction. Please see line 351 in the revised manuscript.

Line 423. “shows” → “show”

Thank you. We have made the correction in line 428 of the revised manuscript.

Lines 439. This phrase “convergence . . . surface” is an absolute statement but should only be a difference based only the CHANGES in lines 437-438. There might just be less divergence and less upwelling as in line 438. Then line 441 can state that the change is sufficient to make the absolute statement true.

Thank you. We have revised these sentences. Please see lines 442–449 of the revised manuscript.

Lines 470-472. I think this sentence could be simplified. “sea level” appears twice, and you might just refer to the difference between the two means, omitting “multidecadal increase”.

Thank you. We have made the correction. Please see line 476 in the revised manuscript.

Line 472. Add “subdomain” after “southern”.

Thank you. We have added it. Please see line 478 of the revised manuscript.

Line 473. “expansion” (spelling)

Thank you. We have made the correction. Please see line 479 in revised manuscript.

Line 482. Omit last “the”

Thank you. We have made the correction. Please see line 487 in the revised manuscript.

Line 491. “. . adjustments . . appear . .”

Thank you. We have made the correction. Please see line 497 in the revised manuscript.

I think temperature should be mentioned along with salinity as a low-frequency cause (albeit not necessarily “remote”).

Thank you. We have revised the sentence accordingly. Please see lines 501–503 in the revised manuscript.

Sincerely,  
Hamed