Reviewer #5: Review of BAMS 2020 State of the Climate, "Chapter 3: Global Oceans", R. Lumpkin and G. C. Johnson, Eds

Overall comments:
(1) I am very happy to see significance estimates. Are these done uniformly across the different subsections? It would be really nice if there were a section or an appendix describing how these significance estimates are done. I am pretty well versed in statistics and significance estimates, and it is not immediately clear to me what the phrase "5%-95% confidence limits" means (e.g., lines 443-444).
(2) This is a 126-page document. It would be really helpful to reviewers if there were a table of contents, even if it was only one associated with the PDF.

*We can see about that for next year.*

(3) I did not review Section 3i-3j.
(4) This year's report seems more mature and homogeneous than some of the previous year's reports that I have reviewed, and I think it is in pretty good shape. I would like to thank and congratulate all of the authors for making this large effort to document the state of the climate in 2020!

3a: Overview, Lumpkin and Johnson
1. Haiku! That's amazing!
2. OK, well done. Short and fit for purpose.

3b: SST, Huang et al

3c: Ocean heat content
I really enjoyed the discussion around lines 307-346, linking to previous reports and ENSO effects (but this may just reflect my own research bias).
Lines 347-350: It is not clear what part of the preceding clause "as is customary in climate science" is supposed to refer to. This very long sentence could be improved by breaking it into two sentences, and possibly by moving the point being made with "as is customary in climate science" into a footnote.
Lines 347-361: I found myself stumbling over many of the sentences in this paragraph (e.g., the sentince on lines 353-355).
Figure 3.4a: What is the red line of positive 2020 heat content anomaly extending from Africa to South America?

3d: Salinity
Line 383: It would be smoother to say "the vertical density gradient" so as to not give the impression of a singular/plural mismatch.
Lines 395-400: If footnotes are allowed, this sentence would be a good candidate for a footnote.
Figure 3.7c: (SSS 2020-2005 trend) Stippling obscures the plot

3f: (sea level)
Lines 730-731: It is not obvious that "upwelling mesoscale eddy activity also contributed to small-scale areas of negative sea level anomalies". What is the evidence of for this claim? That there are small areas of upwelling? In addition, are these signals significantly different from the long-term trend?