

The review is pasted below in **black** font; our response are provided below in **blue** font.

Response to Reviewer #1

The authors have clarified their focus in the introduction and added confidence intervals for the trends. I am happy with the manuscript as it is.

The second reviewer had reservations about the use of models in the manuscript, but I think the kind of basic dynamical question the authors are asking is well-suited to models since one does not expect the conclusions of the study to be sensitive to the biases in the models as long as the models have sufficient resolution.

Response: We thank the reviewer for the positive feedback. We are glad that the revisions have addressed the concerns and improved the manuscript.

Response to Reviewer #3

The authors have addressed the previous referees comments and modified the manuscript substantially.

A final revision suggestion, is:

Line 46. Because of the GS' meandering nature, it is challenging to analyze changes in its mean path. Wavelike fluctuations and eddies breaking off with faster currents than the GS itself make direct velocity observations ineffective for tracking the path east of 70oW (Fuglister and Voorhis, 1965).

I suggest that you delete "Because of the GS' meandering nature, it is challenging to analyze changes in its mean path. Wavelike fluctuations and eddies breaking off with faster currents than the GS itself make direct velocity observations ineffective for tracking the path east of 70oW (Fuglister and Voorhis, 1965). As a result, proxies like the above-mentioned T15 and T12 criteria are often used." as this repeats information provided in the previous paragraph. I would begin this paragraph with "While the T15 and T12 proxies are still used, other commonly used proxies for the position of the GS and North Wall, are based on sea surface height (SSH) from".

Response: We thank the reviewer for this helpful suggestion. Following the reviewer's recommendation, we have removed the repeated text and revised the paragraph. Lines 46-47 now read: *While the T15 and T12 proxies are still used, other commonly used proxies for the position of the GS are based on sea surface height (SSH) from satellite altimetry (Andres, 2016; Chi et al., 2019; Rossby et al., 2014).*