Response to editor

Editor comment:

The paper has been significantly improved both through a thorough revision of the English and modifications in accordance with the reviewer's suggestions. There are a few additional changes to include before acceptance in ACP.

1. Please define the superscripts and subscripts appearing in the terms in equation 1.

Response: Thanks for your suggestion; it has been revised as "tthe second term on the right side $\sum_{n=1}^{N} T_n^{mtw} \cos{(n\omega_0 + \psi_n^{mtw})}$ refers to migrating tides with n = 1, 2, 3, 4 corresponding to the diurnal, semidiurnal, terdiurnal and 6-h periods, T_n^{mtw} and ψ_n^{mtw} are the amplitude and phase of the migrating tide" in line 137-140.

2. Line 137: Change is migrating tides, and T_r1 is the remnant.

Response: According to your suggestion, it has been revised as "the second term on the right side $\sum_{n=1}^{N} T_n^{mtw} \cos{(n\omega_0 + \psi_n^{mtw})}$ refers to migrating tides with n = 1, 2, 3, 4 corresponding to the diurnal, semidiurnal, terdiurnal and 6-h periods, T_n^{mtw} and ψ_n^{mtw} are the amplitude and phase of the migrating tide, and ε is the remnant of the temperature variability which could not be represented by the first two terms." in line 137-141.

3. Line 169: It isn't clear what "ratio" means in this sentence. The ratio of what? I think that you intend state that the tide can be specified through its magnitude and phase. Please modify this sentence.

Response: According to your suggestion, it has been revised as "The monthly DW1 can be specified through its amplitude and phase." in line 173.

4. Line 247: Change "phase anomaly is not drifted much" to "phase anomaly does

not vary much".

Response: Thanks for your suggestion; it has been corrected.

5. *Line 350 and 363: Should be McLandress not McCandless or Mclandress.*

Response: Corrected.

6. *Line 408: The terms are not aligned with the text and should be.*

Response: Corrected.