

Review on Sánchez-Montes et al., 2019

In my last review, my major concern was the interpretation of the TAR-index in section 4.2 (the late Pliocene onset of the Cordilleran Ice Sheet glaciation). The authors inferred increasing terrigenous input from decreasing TAR-values which is contradictory to the definition of the TAR-index where a decrease in the TAR would point to enhanced relative contributions of aquatic production. The inferences on ice sheet dynamics were questionable accordingly. In the new version the authors discuss this section in more detail and by adding mass accumulation rates of short chain and long-chain *n*-alkanes to their data set they provide much clearer and more comprehensive insights into the interactions of different marine and terrestrial processes reflected by their data (i.e. aquatic production, terrigenous organic matter input, vegetation cover and glacial erosion). Their inferences on glaciation dynamics in the Cordillera is well justified and conclusive, now. I only found a few linguistic issues listed below.

I would like to state again that the paper is a valuable contribution to the discussion on NHG adding an important new dataset from the North-Pacific realm. The paper is written in a concise, comprehensible way and the interpretations are well constrained by the data presented. I recommend to accept the paper for publication.

Detailed comments:

Page 10, line 32: remove the comma at the end of the sentence. Moreover, Duk-Rodin => Duk-Rodkin.

Page 12, line 4: CIS. I suggest to write “Cordilleran Ice Sheet” as is done in all other instances throughout the paper.

Page 13, line 7: replace “concentrations” by “values”

Page 13, line 15: remove the comma after “(as reflected in the,”