I am very pleased that this version of the manuscript is infinitely easier to read and absorb than the version I reviewed before. The authors should be credited with a thorough revision and response to earlier reviews. The paper now reads like a nice introduction to the use of the 4 organic proxies evaluated here, and has some important take away points.

As the authors acknowledge, the small annual temperature range in the study area limits some of the resolution on what they can say about the different temperature proxies. As they say, they also cannot distinguish the importance of annual production relative to monsoon transition period, as that time of the year has an SST identical to mean annual. However, the coastal SCS location does have some virtues: the region has a large seasonal temperature range and the sediments also receive significant terrestrial/riverine inputs, allowing the authros to assess the confounding influence of non-marine inputs.

Coastal sediments do have a disadvantage in the complexity of organic matrices. In my experience, complete separation of alkenones from co-eluting peaks can be very challenging. The authors have done standard purifications, but the use of a of 6oC/minute GC temperature during alkenone elution time is not optimal to resolve interferences. I would like to see more attention in the methods section to how confident the authors can be that they have uniquely identified the critical compounds for each proxy. Some representative (i.e. not the "best") chromatograms as supplemental material would be helpful for a critical reader.

The evaluation of the different proxies seems quite reasonable. The authors do have to exclude a fair number of outliers, but, since the raw data are included, and the criteria explicitly discussed, I think the data culling is appropriate.

I would urge the authors to be more critical of the utility of the TEX index:

"The better agreement of TEX_{86} temperature estimates with EAWM SSTs suggests that conditions during the EAWM period may be favourable for the bloom of the autotrophic ammonia oxidizing Thaumarchaeota, the activity of which is enhanced at low light availability and high ammonia concentrations "

In fact, the TEX index-derived SST departs badly from ANY seasonal SST and also shows very wide scatter in comparison to the other proxies

And later:

Overall, we observed good agreement between measured annual mean or seasonal SSTs and temperature estimates based on 510 the four proxies discussed here, after excluding samples with obvious signs of terrigenous supply of the respective lipids.

This belies the very bad departure of the TEX estimates from the other proxies, and also the very large scatter in inferred temperatures- I'd say that TEX is distinctively problematic in this setting.

I would welcome the authors' response to my remaining critical comments but I would urge publication following minor revision.