

The authors thoroughly considered nearly all the comments and suggestions of mine and the other reviewer's and made revisions accordingly. My major comment on the revised manuscript focuses on the discussion on the orbital cycle. As clearly presented in this study, the 405-kyr cycles in all the late Cretaceous proxy records from the tropical Pacific Ocean leave great impression on me. In the revision, however, the authors insisted on taking the precession as the dominant orbital forcing on the XRF-Ba changes (they use it as proxy of export productivity) during the late Cretaceous in the tropical Pacific Ocean, obviously ignoring the eccentricity's role (particularly the 405-kyr long eccentricity cycle) in modulating the hydrological cycle and productivity related carbon cycles. As clearly seen in all the spectral analyses in depth domain (no tuning effects; figure 2, figure S11, S12), both the bulk isotopes and XRF-Ba records display significant 5 m cycles that correspond the 405 kyr long eccentricity cycle according to their age model. All the wavelet analyses of the three proxy records show the same spectral features with the 405 kyr as the strongest and the most continuous cycle. Even though this paper focuses on the XRF-Ba derived productivity record, as they stressed in the rebuttal letter, the most abundant and significant spectral peaks that range from 0.025 to 0.06 (cycles/kyr) include the cycles of both the precession and non-precession bands (figure S12; Please check the MTM spectral analyses in b. Is the unit cycles/meter of the X-axis in b as the same as in a?). Thus, what do these non-precession cycles represent? These non-precession cycles are as significant as the 19-23 kyr precession cycles. We have no doubt that the precession plays an important role in modulating the XRF-Ba derived productivity changes. However, the spectral and wavelet analyses also tell us that the other orbital cycles including those near the precession band and the 405-kyr long eccentricity cycle also play significant roles. This is the reason why I commented on the original draft that why do you only concentrate on the precession band? The CENOGRID climate records from the tropical oceans (Westerhold et al., 2020, Science), a great work led by one of the corresponding authors of this manuscript, display dominant 405-kyr cycles in the hydrological and carbon cycles throughout the whole Cenozoic, which is also one of the focuses of this famous paper. Was the 405 kyr cycle not as important as the precession in the late Cretaceous? At least, you should point out its role and clarify its relationship with the precession in the late Cretaceous tropical Pacific Ocean rather than ignore it and made no change in the revision.