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Climate of the Past
Discussions

Interactive comment on "Oligocene–Miocene paleoceanography off the Wilkes Land Margin (East Antarctica) based on organic-walled dinoflagellate cysts" *by* Peter K. Bijl et al.

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We appreciate the effort reviewer 2 put in reviewing our manuscript for CP. We would like to reply to his/her comments point by point in the supplement to this reply, but so far we are happy to say that based on the comments made, we will be able to significantly improve our manuscript without drastically alter our conclusions. We can provide a much more robust discussion about the significance of Selenopemphix antarctica as indicator for sea ice on the Antarctic margin. With the revised lithological interpretations that are available in Salabarnada et al and will include the Miocene deposits as well, and clearer distinctions between the lithologies, we can now much

better separate our dinocyst assemblages between the lithologic facies. With this we can make much better distinction between glacial nad interglacial paleoceanographic conditions. MEanwhile, the dinoflagellate taxonomic work and our assessment about reworking has been published in Journal and Micropaleontology and is freely available. Further unspecified concerns about speculative nature of the discussion will be thoroughly revisited in a revised version of the manuscript. We provide a point-by-point reply to the concerns in the supplement.

Please also note the supplement to this comment:
https://www.clim-past-discuss.net/cp-2017-148/cp-2017-148-AC2-supplement.pdf

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Fig. 7

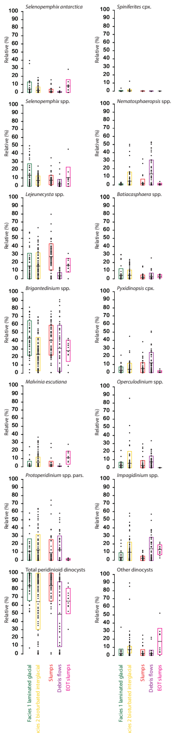
Selenopemphix antarctica
Spiniferites cpx.
Selenopemphix spp.
Nematosphaeropsis spp.
Lejeunecysta spp.
Batiacasphaera spp.
Brigantedinium spp.
Pyxidinopsis cpx.
Malvinia escutiana
Operculodinium spp.
Protoperidinium spp. pars.
Impagidinium spp.
Total peridinioid dinocysts
Other dinocysts
Relative (%)
Facies 1 laminated glacial
Facies 2 bioturbated interglacial
Slumps
Debris flows
EOT slumps

Fig. 1.