



## ***Interactive comment on “Coastal complexity of the Antarctic continent” by Richard Porter-Smith et al.***

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The authors have produced an interesting and first-ever (for Antarctica) analysis of coastal complexity using methods previously used on other continents (Australia, at least). They describe the mathematics and statistics of the approach quite well (it seems clearly written and reasoned, and the math is not opaque), and note the - potential- importance and usefulness of the analysis in terms of studies of coastal ice and ocean conditions, and biodiversity.

The study is well-written and I have mostly minor comments. I would encourage the authors (and editor) to consider asking for some kind of 'case study' or close-up assessment of a region of interest, perhaps near Davis Base or McMurdo (places with lots of existing literature) and describe in qualitative or semi-quantitative terms how

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the coastal type is reflected in the physical characteristics of the sea ice, biological environment and variability, or geology and erosion history..... it would make a stronger case that this is not just a topological exercise, but something that could potentially be mined for scientific application. The authors do a fair job of making this case in general terms, but two or three paragraphs looking at the results in a particular area would be a good addition. Not an essential addition for publication, but one that would be nice to see.

Please also note the supplement to this comment:

<https://essd.copernicus.org/preprints/essd-2019-142/essd-2019-142-RC2-supplement.pdf>

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Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2019-142>, 2019.

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