

***Interactive comment on “Characterising terrestrial influences on Antarctic air masses using radon-222 measurements at King George Island” by S. D. Chambers et al.***

**Anonymous Referee #4**

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Authors successfully measured the very low level of radon-222 concentration in the Antarctic atmosphere, using a 1500 L dual-flow-loop two-filter radon detector. Based on one-year observation of radon concentrations, they characterized the fetch regions of the most terrestrially influenced air masses, and also demonstrated the utility of radon for elucidating transport processes and large-scale circulation characteristics in the Antarctic region. This paper contains very useful information for explaining the long-range transport of air pollutants using radon-222 as a tracer. I strongly suggest that this article should be accepted for publishing in 'Atmospheric Chemistry and Physics' journal.

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One comment; In '3.1 Seasonal and diurnal variability' section; "The seasonal KSG radon cycle is characterised by a broad summer-autumn maximum and winter-spring minimum (Table 2; Fig. 4a)." If possible, it's better for authors to shortly describe the reason why summer-autumn maximum and winter-spring minimum is as observed at Cape Grim.

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