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Southern Hemisphere anticyclonic circulation drives oceanic and climatic conditions in late Holocene southernmost Africa

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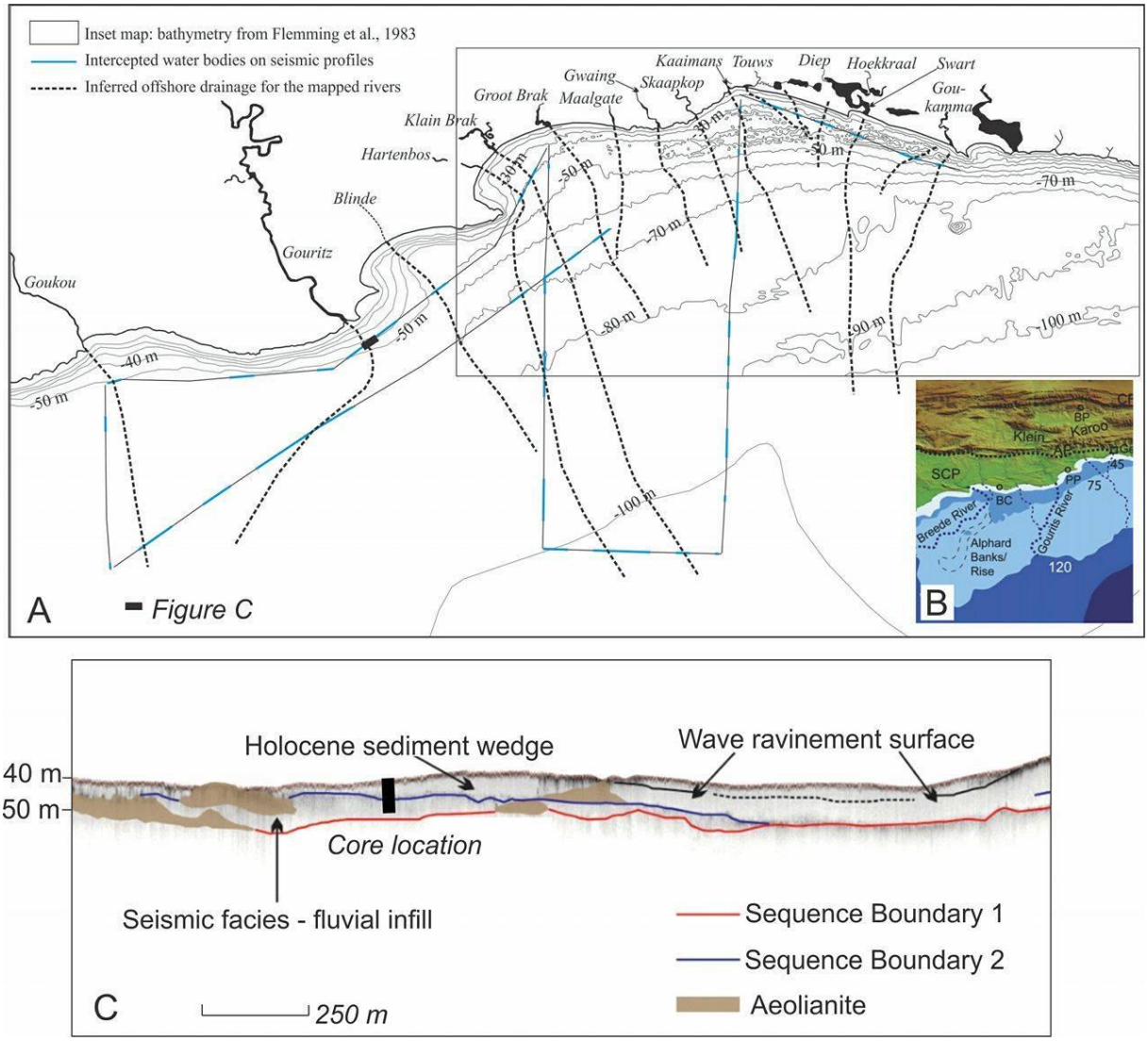

Fig.S1 (A) Paleodrainage of the South Coast, prior to infilling and subsequent burial of the channels to form the smooth surface of the continental shelf (from Cawthra, 2014). Bathymetry is derived from Flemming et al. (1983) and regional GEBCO datasets. (B) Inset map shows inferred drainage on the shelf from Compton (2011). (C) Pinger seismic profile showing the context of the core.

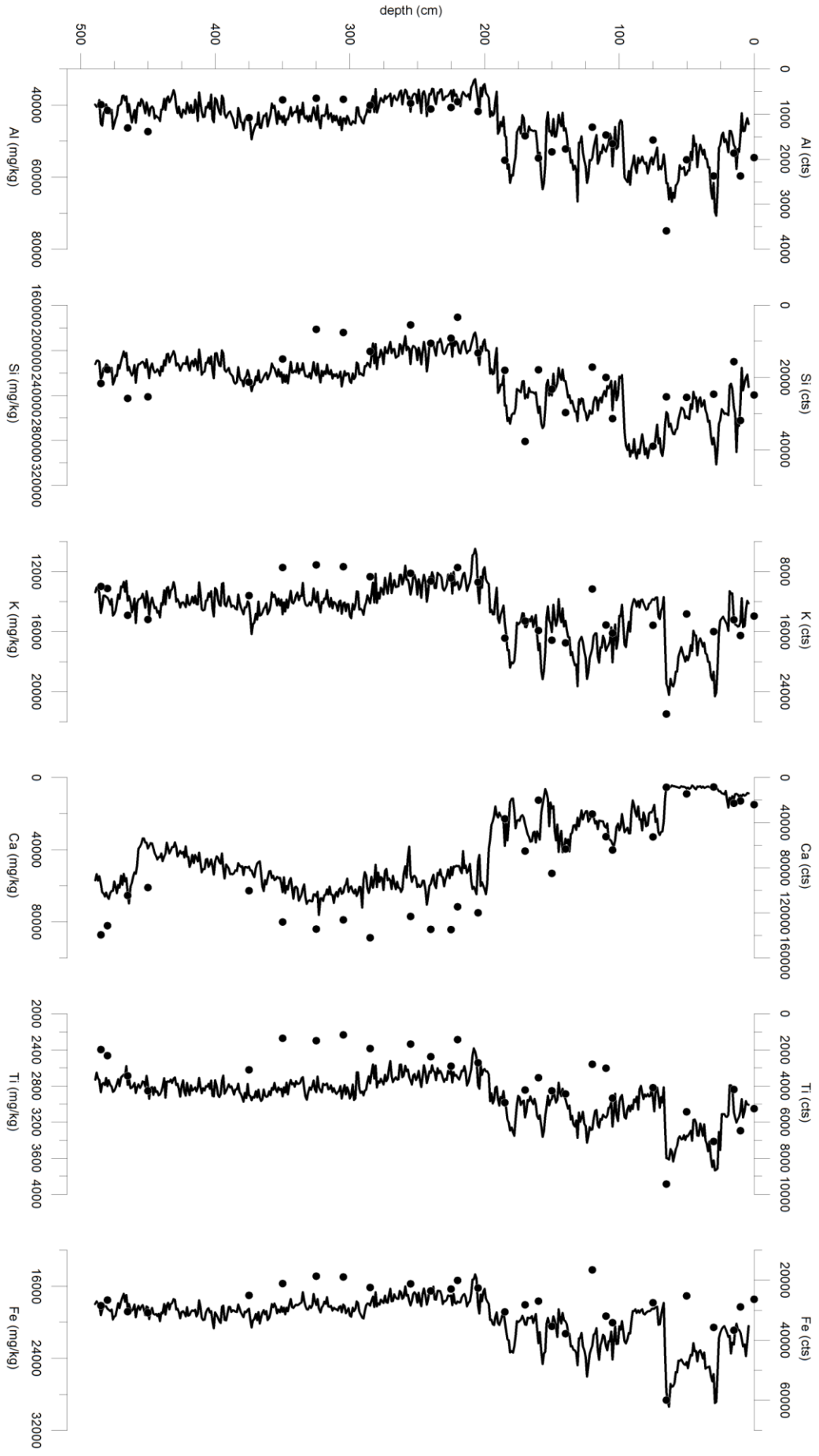

Fig. S2 XRF-data of the GeoB18308-1 plotted against depth (m). Scanning data (cts) is indicated by the curve whereas discrete measurements (in mg/kg) are plotted as squares.

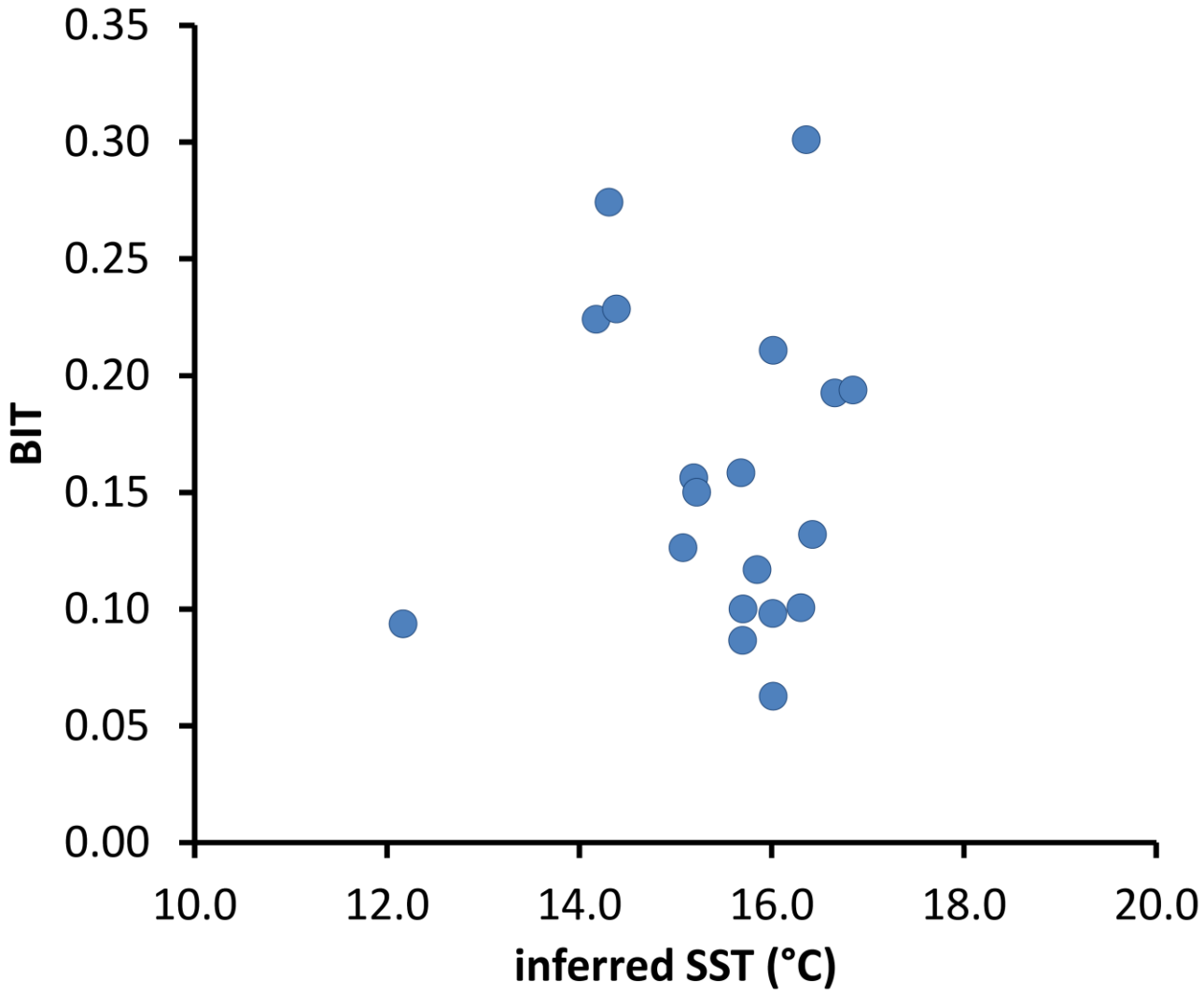

Fig. S3 BIT and SST (inferred from TEX_{86}^{H}) bipolt showing a lack of correlation and thus excluding the possibility of high terrestrial input.

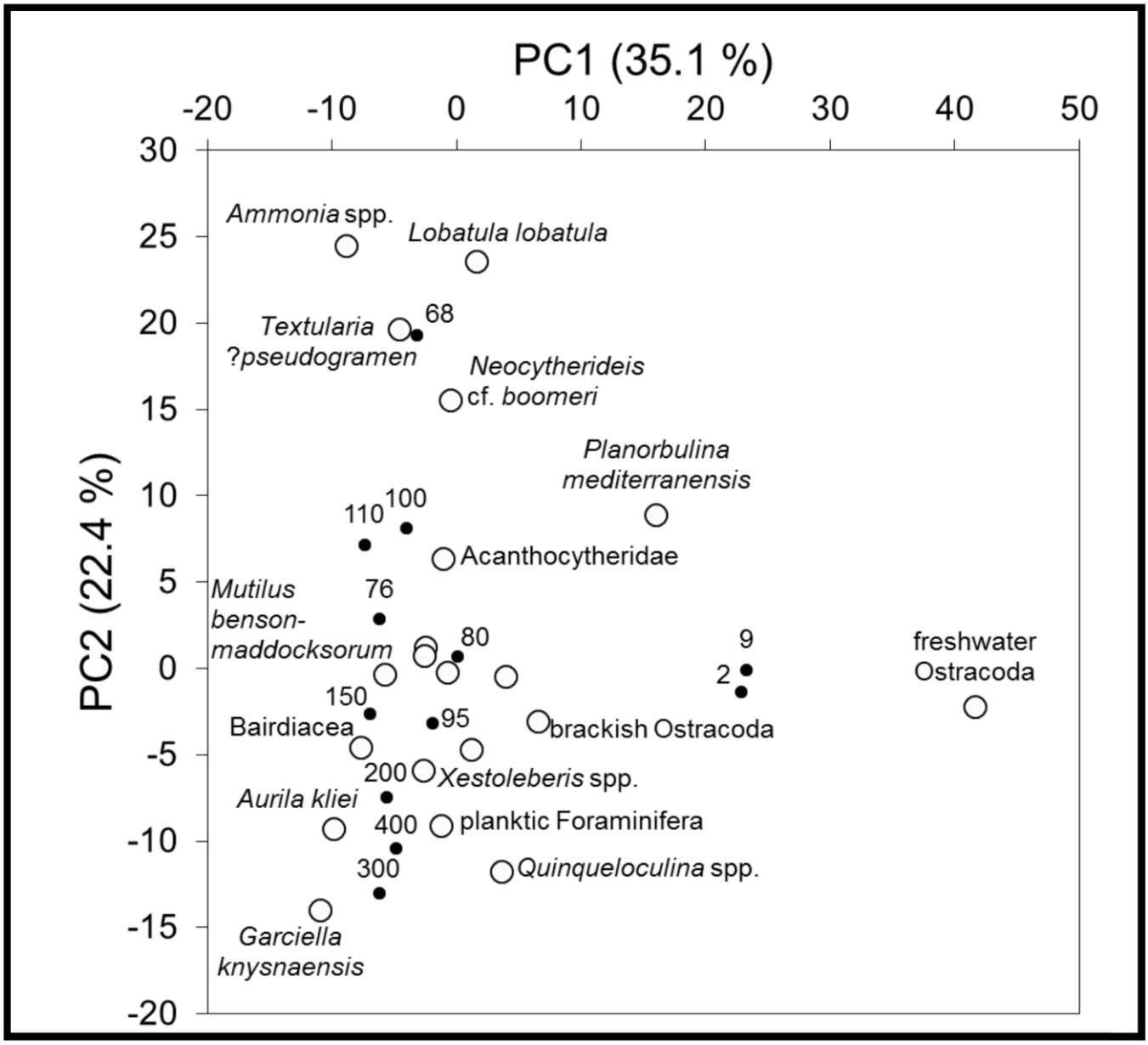

Fig. S4 Crossplots for axes 1 and 2 of a Principal Component Analysis (PCA) on microfossil distribution in core GeoB18308-1. High positive loadings of freshwater ostracods on axis 1 explaining 35.1% of variation. We assume input of continental material to be the best descriptor of this component. Axis 2 explains 22.4% of variation and is characterized by suspension feeders as the foraminifer Lobatula lobatula and sand dwelling species as the ostracod Neocytherideis cf. boomeri at high loadings or planktic foraminifera sedimenting in calm water at low loadings. The probable explaining environmental factor for this axis is turbulence of the water or input of particulate organic matter.

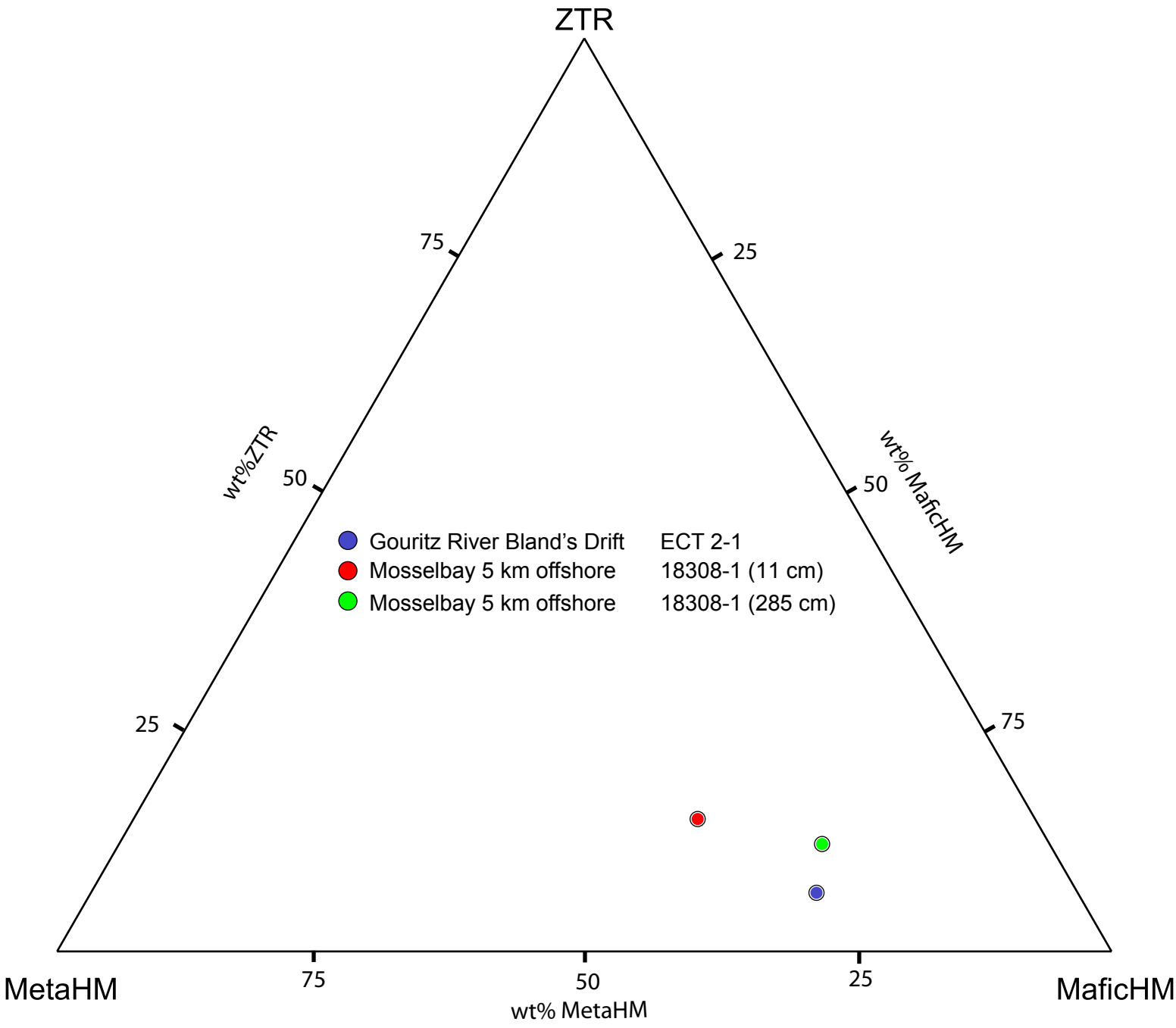

Fig. S5 Heavy mineral suite in silt and sand fraction (15-500 m) collected in Mossel Bay plotted according to their ZTR (zircon-tourmaline-rutile); MetaHM (titanite, epidote, garnet, chloritoid, sillimanite, amphibole): MaficHM (apatite, clinopyroxene, orthopyroxene) content.