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Linking Ordovician – Silurian "hot" black shale deposition in North Africa and Arabia to deglaciation.

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In keeping with current ideas on the origin of organic C-rich black shales, the Early Palaeozoic "hot shale" hydrocarbon source rocks of North Africa have been hypothesized to have been deposited in association with continental margin oceanic upwelling (Lüning et al (2000)) or continental run-off during Hirnantian deglaciation (Armstrong et al (2005)). Organic geochemical evidence, regional distribution and analogy with modern anoxic fjords have been used to support continental run-off as a hypothesis. This hypothesis predicts an increase in concentration of continental run-off proxies (Si/Al, K/Al etc) and a concomitant increase in productivity proxies and water column anoxia proxies. Ba and TOC can be used as proxies for palaeo-productivity, whilst Mo, V and U provide a series of proxies for water column anoxia. The thermally immature lower hot shales of the Batra Formation (Jordan); equivalent to the Tanezzuft formation on the Saharan Platform provide a unique opportunity to test for the predictions of the run-off hypothesis. In this poster we will present new inorganic geochemical data that provide a proxy for continental run-off and water column anoxia and hence an independent test of the run-off hypothesis.