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Interbasinal correlation between Jameson Land and Hold-with-Hope (Northeast Greenland) organic carbon isotope records during the latest Permian–earliest Triassic

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Latest Permian–earliest Triassic sequences in Northeast Greenland were deposited during the main rift phase between the two margins of the Greenland–Norway Basin, and were influenced by several relative sea-level fluctuations. The associated crustal extension created several sub-basins that led to marked lateral thicknesses between the latest Permian and earliest Triassic formations. These formations outcrop along the Northeast Greenland coast and can be followed from Jameson Land around 71°N up to Wollaston Forland around 74.5°N. Due to a latest Permian relative sea-level fall, northern sub-basins show a sedimentary gap close to the Permian–Triassic boundary, while southern sub-basins show continuous sedimentation across the Permian–Triassic transition. Earlier studies focused just on the Permian–Triassic boundary from continuous sections from Jameson Land. This study presents the correlation between two new sections from Jameson Land, and one section of a northern sub-basin (Hold-with-Hope) merging terrestrial and marine geochemical and paleontological data. The combination of organic carbon isotopes, palynofacies and palynology analyses, few ammonoids belonging to the Ophiceratidae family found in the sections, and sedimentological observations provides a robust correlation between both sub-basins, and the first interbasinal organic carbon isotope correlation for Northeast Greenland during the latest Permian–earliest Triassic.