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Restoration of the NNE margin of the exposed Scandinavian Caledonides

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The NNE margin of the exposed part of the Scandes comprises a thin sliver of rocks likely deformed in the pre-Caledonian Timanian orogenic event, lying to the north of the strike-slip Trollfjorden-Komagelva Fault. The pre-Caledonian restored position of this sliver, probably representing a much larger block now at depth below post-Caledonian sediments in the Barents Sea, is thus important for our understanding of the Scandes and their relationship to the Timanides during plate accretion. Neoproterozoic to ?earliest Cambrian rocks to the north of the fault are $\sim$15 km thick whilst directly to the south, the Neoproterozoic to basal Ordovician rocks are only $\sim$5 km thick, or much less. Correlations of these successions are problematic due to the differing facies, with only one relatively fixed tie point. Other correlations across the fault have been proposed, but these have proved difficult to substantiate. Currently, the amount of lateral displacement on the Trollfjorden-Komagelva Fault remains uncertain. Earlier models based on palaeomagnetic and metamorphic data both suggested that in the order of a few hundred kilometres of dextral movement occurred. Geochemical data do allow detailed correlations to be made across the fault and these, when combined with branch-line and balanced section restorations based on detailed structural data both enable a better constrained displacement estimate to be made and also clarify the Neoproterozoic to basal Ordovician pre-Caledonian basin geometry.