



Mössbauer Spectroscopy of Samples from the Skaergaard Intrusion

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The Skaergaard intrusion in East-Greenland has provided insights into differentiation processes of basaltic systems. Mineralogically, iron containing minerals show well known compositional trends and changes in relative abundances suggesting extreme igneous differentiation of a closed system.

Here we present Mössbauer spectra of representative bulk samples from the intrusion. The data supports generally the previously documented trends in mineralogy and composition of Fe bearing minerals, but also gives new insights into oxidation states and oxidation products, especially of samples of the roof zone (upper border series).

Moreover, the new data add to the current knowledge of how to interpret Mössbauer spectra of basalt samples.