

**LA-ICP-MS U-Pb data of detrital zircon and  $^{40}\text{Ar}/^{39}\text{Ar}$  ages combined with C and Sr isotopes in the Neoproterozoic Mbuji-Mayi Supergroup (Democratic Republic of Congo): implications for basin evolution**

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The Mbuji-Mayi Supergroup is a SE-NW siliciclastic-carbonate failed rift basin, extending from northern Katanga to Congo River Basin. New U/Pb laser ablation data on BI detrital zircon grains, C and Sr isotopes on BII carbonates and  $^{40}\text{Ar}/^{39}\text{Ar}$  ages on a dolerite sample are presented in this study. The detrital zircon age spectra yield min-max ages of  $1176 \pm 21$  Ma and  $2870 \pm 16.9$  Ma, indicative for SE-NW detrital provenances. C and Sr isotopes results are reported to the Late Precambrian C and Sr chemostratigraphical curves around 800-850 Ma. A disturbed  $^{40}\text{Ar}/^{39}\text{Ar}$  age spectrum on a dolerite gives an age of  $\pm 880$  Ma. The age is consistent with palaeontology. The Mbuji-Mayi Supergroup would therefore have been deposited between 1176 to 800 Ma (instead of between  $1150 \pm 15$  to  $948 \pm 20$  Ma), and is correlated with the Roan Katanga Group. It implies new correlations between these two large basins.