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**U-Pb geochronology on impact-zircon using Secondary Ion Mass Spectrometry.**

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The Suvasvesi North and South structures in central East Finland are thought to be the remnants of a binary meteorite impact event [1].  $^{40}\text{Ar}/^{39}\text{Ar}$  age spectra of impact melt rock samples yielded ages of ~85 Ma for the northern structure and ~0.72 Ga for the southern structure, inconsistent with a binary impact [2]. To clarify the age of the Suvasvesi South structure, we carried out U-Pb isotopic analyses and REE analyses on zircons in two rock samples altered to different degrees by the impact using the Heidelberg ion probe (Cameca IMS 1280 HR).

Results of the trace element analyses show chondrite normalized REE patterns with anomalously high abundances of LREE relative to igneous zircons. A first evaluation of the U-Pb isotopic data yields U/Pb and Pb/Pb ages which define a discordia with an upper intercept of 1.8-2.0 Ga, while part of the zircon data yield concordant values at the lower discordia intercept of 0.1 Ga, so far consistent with the  $^{40}\text{Ar}/^{39}\text{Ar}$  age of the North structure.

[1] Werner, S. et al. (2001). MPS 36, A223 (supp.).[2]

Schmieder, M. et al. (2009). Abstr. #5005. 72<sup>nd</sup> MetSoc.

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