



Holocene palaeoenvironmental records in PN speleothem (Han-sur-Lesse cave, southern Belgium)

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Speleothem is now regarded as valuable continents archives of climatic conditions, offering a number of advantages relative to other continental archives such as lake sediments and peat cores. High spatial resolution measurements of Mg, U, Sr, Ba were realized by using Laser-Ablation inductively coupled plasma mass spectrometry in the Belgian Pere Noel stalagmite (Han-sur-Lesse cave). A stalagmite from the Pere Noel cave dated by U/Th method, representing 12000 years previously. Trace element variations in speleothem reflect the hydrochemical conditions. ^{18}O , $\delta^{13}\text{C}$ (Verheyden et al., 2008) and chemical composition show a similar patterns along the Pere Noel stalagmite. This similarity suggests that trace elements in speleothems have the potential to provide the high resolution insights into palaeoclimatic variability over the Holocene.

References

Verheyden S., Genty D., Deflandre G., Quinif Y. and Keppens E., 2008. Monitoring climatological, hydrological and geochemical parameters in the Père Noël cave (Belgium): Implication for the interpretation of speleothem isotopic and geochemical time-series. *International Journal of Speleology*, 37(3): 221234