



## **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.  $^{18}\text{O}$ ,  $\delta^{13}\text{C}$  (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