



EGU

Media Tips

24 April 2005

EGU General Assembly 2005

What:

Cave sediments: Spectacular Climate Archives

Where:

Wednesday 27/4, 10:30 – 12:00 – Poster Area, Hall Z

Who:

Hubert Vonhof*, Martin van Breukelen, Onno Postma



Hubert Vonhof

Sediments and concretions in caves – e.g. stalactites and stalagmites (speleothems) – are useful archives for climate reconstructions. Recently, research in this field has made enormous advances. Speleothem carbonates in particular provide very detailed information about climate change. For the first time at the EGU General Assembly, a session will be held highlighting these new advances.

Hubert Vonhof: 'On land climate archives are relatively rare. This is now changing rapidly, as new techniques fill in empty areas on the map, and improve the interpretation of these archives in terms of climate parameters (temperature, precipitation, etc.). Speleothems can also be dated quite well, adding high resolution timing to this climate record.'

Vonhof and colleagues developed mass spectrometer techniques enabling them to measure ^2H and ^{18}O in fluid inclusions in speleothems as small as 0.2 microlitre. These stable isotope measurements represent the composition of the groundwater reservoirs from which the speleothems are derived, and which reflect regional climate conditions. In principle, this method can produce climate data with annual resolution.

'In our POSTER we show that our methods can substantially improve climate reconstructions on land. In addition we present climate data from areas where there has been no previous climate record. This includes Sokotra, an island offshore from the Horn of Africa, officially Yemen territory.'

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links

POSTER: **EGU05-A-10116**; Vonhof, H.B.; van Breukelen, M.R.; Postma, O.: [Continuous-flow fluid inclusion oxygen and hydrogen isotope analysis: a progress report](#)

POSTER: **EGU05-A-08767**; van Breukelen, M.R.; Vonhof, H.B.; Kroon, D.: [Results of 1 Year of Cave Monitoring in Cueva de las Lechuzas, Peruvian Amazonia](#)

SESSION: **SSP9 Cave Sediments**: Wednesday, 27 April 2005, 13:30-17:00 – Lecture Room 11.

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