

## **PALEOCLIMATIC RECORD OF SPELEOTHEMS FROM CENTRAL BRAZIL**

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Most paleoclimatic data from Central Brazil derive from palinological studies of lake sediments. Those studies have revealed large-scale variations in temperature and rainfall during the last 30 ky. Because of the poor time resolution of most lake sediments studies, we decided to approach paleoclimatic studies in this area using speleothems (cave concretions, such as stalagmites, stalactites and flowstones). Indeed, the widespread occurrence of caves related to Proterozoic limestones in Central Brazil allows a relatively easy access to this kind of record. The first results of this study show that oxygen isotope variations along two stalagmites from Cortina Sagrada Cave (near Brasília, DF) are well correlated with variations in temperature based on palinological studies for the last 30 ky BP. Moreover, a stalagmite from the Paineiras cave (near Formosa, GO) presents geochemical and mineralogical variations along its growing axis that may be related to climatic variations. For instance, in a calcite stalagmite from Paineiras, a thin (2 mm) layer of aragonite was encountered. This layer was dated at  $\pm 4$  ky BP. We argue that the precipitation of aragonite occurred during a warmer period, and may be correlated with the widespread occurrence of 4 ky BP charcoals described in lake sediments and in soils from different areas in Brazil.