

MILLENNIAL TO ORBITAL CHANGES IN PRECIPITATION DURING THE LAST 30 ky IN CENTRAL BOLIVIAN ANDES FROM SPELEOTHEM RECORDS

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The past activity of the South American summer monsoon (SASM) has been broadly studied during the last decades based on sediment cores records from Titicaca lake and Salar Uyuni as well as from Ice cores such as Sajama and Illimani among a significant number of other records. Despite the fact that a relatively large number of records is available in the context of S. America paleoclimatology, there are still critical open questions about these records that require independent studies of past precipitation changes. We are presenting a new speleothem record from caves in Torotoro Park, central Bolivia, where the climate today is semi-arid and dominated by SASM's regime. A composite record of six speleothems that goes back the last 30 ky suggests the climate during the full glacial period was wetter than during most of the Holocene which is consistent with the existence of fresh lake development in areas nowadays covered by evaporite deposits. The record also indicates an intensification of monsoonal rainfall during the Heinrich Stadial events 3, 1 and Younger Dryas. It is clear the positive impact of millennial to centennial events scale on SASM's precipitation in the Holocene period that is correlated to cooler condition in North Atlantic.