

Reconnaissance U/Th dating of Papua New Guinea speleothem samples
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Speleothems are slow growing ($\sim 100\text{-}1000\mu\text{m}/\text{yr}$) cave decorations (stalagmites, stalactites, flowstones, etc) formed by the precipitation of calcite from drip-water. These are a valuable archive of past climate information because incorporated in the calcite are trace elements, radiogenic and stable isotopes, organic matter, even trapped fluid inclusions, and these trace the environmental and climatic conditions above the cave. Speleothems are also ideal paleoclimate archives because they can be deposited continuously over timescales of 100,000s of years, remain well preserved in the cave environment, and can be dated precisely on an absolute timescale using U-series disequilibrium methods.