SOLID EARTH SENIDARS

HIGH-RESOLUTION RECORDS OF THE EARTH'S MAGNETIC FIELD (EMF) IN SPELEOTHEMS



SIHIS (CLL)

Speleothems are secondary mineral deposits formed in caves. Magnetic minerals deposited in their thin laminations are capable of preserving the orientation and intensity variability of the Earth's Magnetic Field (EMF) at subannual to millennial time-scales. Records from speleothems are mostly continuous and unaffected by diagenetic alteration or compaction. Once calibrated with precise radiometric datings, this magnetic record provide high time-resolution picture of the EMF, and excellent alternative to reconstruct and improve Paleosecular Variation models of the last millennia. Magnetic minerals contained in speleothems are sourced from the soils capping the cave, and thus the magnetic properties of speleothems may reflect climate conditions like precipitation and temperature at the time of deposition. Thus, the study of speleothem magnetism can provide, in addition to EMF records, environmental time-series records. Here I provide an example of the paleomagnetic record of a speleothem from the Central region of Portugal and discuss the implications in the calibration of recent PSV models.





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