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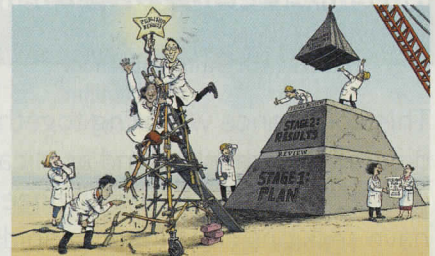
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220 PALAEOANTHROPOLOGY Age and context of mid-Pliocene hominin cranium from Woranso-Mille, Ethiopia
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225 STRUCTURAL BIOLOGY Structure and mechanogating of the mammalian tactile channel PIEZO2
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ON THE COVER

A matter of time

The atomic clock measures time based on transitions between two states of an atom. Two papers edge us closer to the first nuclear clock — based on transitions between states in a nucleus. Benedict Seiferle and colleagues directly measured the transition energy of thorium-229 from the ground state to the first excited state, and Noboru Sasao and colleagues used X-rays to excite ^{229}Th to the second excited state, which quickly decayed to the first excited state. [PAGES 202, 238 & 243](#)



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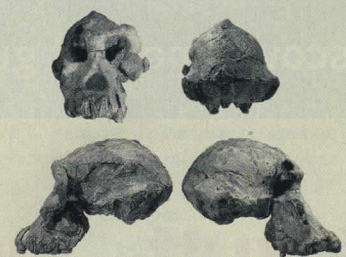
287 VIROLOGY Structures of influenza A virus RNA polymerase offer insight into viral genome replication
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291 STRUCTURAL BIOLOGY Structure and mechanism of mitochondrial proton-translocating transhydrogenase
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Cranium find suggests hominin species co-existed. [PAGE 214](#)



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