

SPECIAL ISSUE

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The standard model of particle physics has been 50 years in the making. Are we finally about to complete our best description of reality?





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Mind reading Brain implant lets people type just by thinking **p10**

Eczema clue Condition linked to the diversity of bacteria on skin **p11**

Earliest shoes

Footprints suggest people wore sandals 100,000 years ago **p14**

Drone triumph AI pilot beats human champions in headto-head races **p16**

Missing matter Giant crater found on a distant world beyond Neptune **p18**

Astronomy

Dawn of a giant new telescope

This startling image reveals the dome of the Extremely Large Telescope (ELT) being built in Chile's Atacama desert, with the sun rising behind it. The ELT will be the world's biggest optical telescope, with operations due to start in 2028 and construction passing the halfway point earlier this year. If you look carefully, you can make out two sunspots on the solar surface, which are actually about the size of planets.





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