

# Our curiosity

## NASA's Mars programme faces budget cuts, but developing countries may step into the breach

**I**F MARTIANS exist, those in the vicinity of the Gale Crater were in for a treat this Monday: *Curiosity* reached their planet. NASA's Jet Propulsion Laboratory erupted in cheers when the unmanned rover ached its landing, having braved the much-discussed seven minutes of terror in a feat of creative engineering that lowered the 900 kg monster onto the surface using a parachute and thick cables. Nuclear-powered *Curiosity*, the size of a small car, now appears to be at home in its new environs, already tweeting pictures and conducting scientific experiments that will tell us more about Mars — and, it is hoped, about Earth.

*Curiosity's* mission to Mars will attempt to determine the life-sustaining possibilities of the red planet. Over the next two years, it will hunt for signs of extra-terrestrial life, partly by searching for evidence of water. On its way, *Curiosity* will also take mineral samples for analysis and study Mars's biosphere more thoroughly than before. The \$2.5 billion project is an opportunity to compare and contrast the story of the evolution of life on Earth with conditions on Mars, to start to answer the question of how much of an accident

life is. Mars is the one planet in the solar system that was formed in a way similar to Earth. In exploring Mars, humanity also explores a record of its own history.

As things stand, *Curiosity* is likely to mark NASA's last hurrah for its Mars programme, with almost \$300 million due to be shaved off from its planetary science budget for 2013 and no new projects planned beyond 2014. The Mars programme budget could decrease from \$587 million today to \$189 million by 2015. But countries like India and China are stepping into the breach. India is planning an \$80 million satellite mission to Mars to study the planet's atmosphere, while China has been rapidly expanding its space programme and this June managed to manually dock a spacecraft to an orbiting module, becoming only the third nation after the US and Russia to have accomplished this. Manned missions have been all but eliminated from NASA's portfolio, but for India and China they remain the culmination of space ambitions. Here's a tantalising thought: just as the world economy has shifted to accommodate new and emerging centres of power, so too might the space programme.