

China unveils 2020 Mars rover concept: report

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A view from the 'Kimberley' formation on Mars, taken by NASA's Curiosity rover

China has unveiled illustrations of a Mars probe and rover it aims to send to the Red Planet at the end of the decade in a mission that faces "unprecedented" challenges, state media said on Wednesday.

China, which is pouring billions into its space programme and working to catch up with the US and Europe, announced in April it aims to send a spacecraft "around 2020" to orbit Mars, land and deploy the rover.

Zhang Rongqiao, chief architect of the project, said Tuesday they were

targeting July or August of that year for the launch, the Xinhua news agency reported.

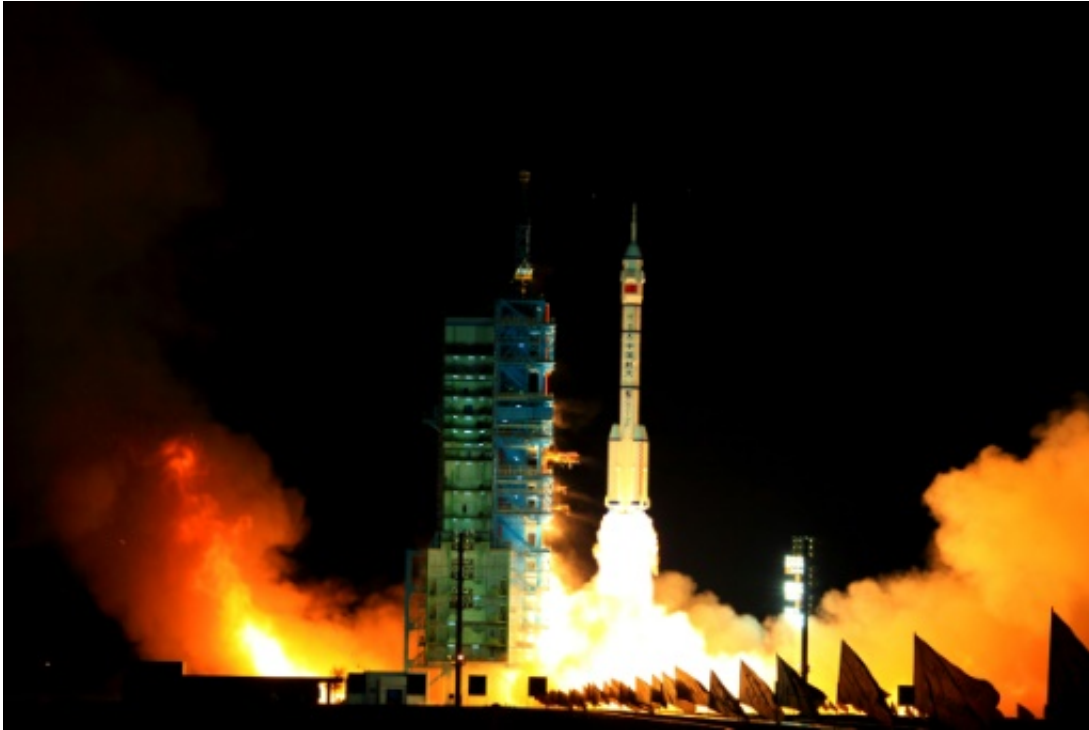
"The challenges we face are unprecedented," the report quoted him as saying.

A Long March-5 carrier rocket will be dispatched from the Wenchang space launch centre in the southern island province of Hainan, Xinhua said, citing Ye Peijian, a mission consultant.

The lander will separate from the orbiter at the end of a journey of around seven months and touch down near the Martian equator, where the rover will explore the surface, it said.

The 200-kilogramme (441 pounds) rover has six wheels and four solar panels, and will operate for around 92 days, according to Xinhua and other Chinese media reports.

It will carry 13 sets of equipment including a remote sensing camera and a ground-penetrating radar to study the soil, environment and inner structure of Mars and look for traces of water and ice, Xinhua said.



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The nation's first lunar rover was launched in late 2013, and while it was beset by mechanical troubles it far outlived its expected lifespan, finally shutting down earlier this month.

But for the most part China has so far replicated activities that the US and Soviet Union pioneered decades ago. It has already been beaten to Mars by Asian neighbour India, which put a low-cost probe into orbit around the Red Planet in September 2014.

The US has landed two rovers on Mars and the former Soviet Union and the European Space Agency have also sent missions to the planet.

China's first attempt to send a satellite into Mars orbit floundered in 2011 when the Russian rocket carrying the payload failed to make it out of the Earth's orbit.

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