

All robotic eyes on comet for Mars flyby

October 19 2014

All eyes on Mars—robotic or otherwise—were focused toward a comet the size of a small mountain set to whiz past the Red Planet on Sunday.

NASA's fleet of Mars-orbiting satellites and robots on the planet's surface were primed for the flyby of the [comet](#), known as Siding Spring (C/2013 A1).

It was set to hurtle past Mars at a close distance of about 88,000 miles (141,600 kilometers) on Sunday at 2:27 pm (1827 GMT).

NASA hopes its spacecraft will be able to photograph the once-in-a-million-years encounter as the comet passes.

Astronomers do not expect it will come any where near colliding with Mars, but they do hope it will be close enough to reveal clues about the origins of the [solar system](#).

That is because the comet is believed to have originated billions of years ago in the Oort Cloud, a distant region of space at the outskirts of the solar system.

Dan Brown, an astronomy expert at Nottingham Trent University in Britain, said comets like this one are "essentially dirty icy snowballs with rocks and dust embedded in frozen gasses.

"It is on its first run towards the center of our solar system and its material is virtually unchanged by the rays of the sun and can give us an

insight to the material composition of our early solar system 4.6 billion years ago."

The comet is flying through space at a breakneck speed of 122,400 miles (197,000 kilometers) per hour.

The comet is around a mile wide and is only about as solid as a pile of talcum powder.

NASA has moved its Mars orbiters so they will not be damaged by the comet's high-speed debris.

Even as the Mars Reconnaissance Orbiter, Mars Odyssey and MAVEN have been repositioned to avoid hazardous dust, scientists hope they will be able to capture a trove of data for Earthlings to study.

NASA's two rovers—Curiosity and Opportunity—will turn their cameras skyward and send back pictures of the comet's pass in the coming days, weeks and months, the US space agency said.

The comet has traveled more than one million years to make its first pass by Mars, and will not return for another million years, after it completes its next long loop around the sun.

The comet was discovered by Robert McNaught at Australia's Siding Spring Observatory in January 2013.

Its flyby of Mars is not likely to be visible to sky watchers on Earth.

But the encounter is of great interest to scientists, particularly since there are so many spacecraft on and around Mars to record it.

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