

Mars rover Curiosity sends home first color photo

Irene Klotz, Reuters

(Reuters) - NASA's newly landed Mars science rover Curiosity snapped the first color image of its surroundings while an orbiting sister probe photographed litter left behind during the rover's daring do-or-die descent to the surface, scientists said Tuesday.

Curiosity's color image, taken with a dust cover still on the camera lens, shows the north wall and rim of Gale Crater, a vast basin where the nuclear-powered, six-wheeled rover touched down Sunday night after flying through space for more than eight months.

The picture proved that one of the rover's key instruments, a camera known as the Mars Hand Lens Imager, or MAHLI, was in good working order affixed to the end of Curiosity robot arm.

Designed to take magnified, close-up images of rocks and other objects, or wide shots of landscapes, the camera currently remains stowed on the rover's deck. But once in full operation, scientists can use it to capture fine details with a resolution as high as 13.9 microns per pixel -- several times finer than the width of a human hair.

"It works. It's awesome. Can't wait to open it and see what else we can see," Curiosity scientist Ken Edgett told reporters on Tuesday.

The latest images were relayed to Earth during the rover's first full day on the Red Planet, following a descent through the Martian atmosphere and touchdown on Sunday night that NASA hailed as the most elaborate and challenging ever in robotic spaceflight.

The \$2.5 billion project is NASA's first astrobiology mission since the Viking probes of the 1970s, and the landing came as a much-welcome success for a space agency beleaguered by science budget cuts and the recent cancellation of its 30-year-old space shuttle program.

The primary mission of Curiosity, touted as first fully equipped mobile laboratory ever sent to another world, is to search for evidence that the planet most similar to Earth now harbors, or once hosted, the key ingredients necessary for the evolution of microbial life.

But mission controllers at the Jet Propulsion Laboratory in California plan to put the rover and its instruments through several weeks of thorough checks and trial operations before gradually beginning science exploration in earnest.

They want to be sure the car-sized vehicle and its sensitive components came

Mars rover Curiosity sends home first color photo

Published on Electronic Component News (<http://www.ecnmag.com>)

through the tricky, jarring final leg of Curiosity's 352 million-mile (566 million-km) journey to Mars without damage.

Encased in a protective capsule, the rover blasted into the Martian sky at 17 times the speed of sound and slowed itself using friction from steering through the thin atmosphere.

Closer to the ground, the vessel was slowed further by a giant, supersonic parachute before a jet backpack and flying "sky crane" took over to deliver Curiosity the last mile to the surface at 10:32 p.m. PDT on Sunday (1:32 a.m. EDT on Monday/0532 GMT on Monday).

A day later, NASA's sharp-eyed Mars Reconnaissance Orbiter surveyed the scene from a vantage point 186 miles above the planet and found Curiosity's approach to Gale Crater littered with discarded equipment used to position the rover near a towering mountain rising from the crater floor.

"You can see all the components of the entry, descent and landing system," said camera scientist Sarah Milkovich.

The satellite's "crime scene" image, released Tuesday, lays out the trail of debris beginning about 1,312 yards from Curiosity's landing site. That is where the heat shield came to rest it was jettisoned during descent.

The back shell of the capsule, which contained the parachute, ended up about 673 yards away from the rover. The last part of the elaborate landing system, the rocket-powered "sky crane" crash-landed 711 yards away after lowering Curiosity to the ground on a tether.

Mars Reconnaissance Orbiter's image shows the heat shield in a region dotted with small craters, while Curiosity is surrounded by rounded hills and fewer craters. To the north is a third type of terrain riddled with buttes, mesas and pits.

"If it were up to me I would go to where those three come together, so we could start to get the flavor of what's going on here in terms of the different geologic materials," Edgett said.

Scientists expect it will be weeks until Curiosity begins roving and months before it heads to the 3-mile (5-km) high mountain at the center of the crater, the primary target for the two-year science mission.

Scientists believe the mound, known as Mount Sharp, may have formed from the remains of sediment that once completely filled the basin, offering a potentially valuable geologic record of the history of Mars.

(Editing by [Steve Gorman](#) [1] and [Lisa Shumaker](#) [2])

Mars rover Curiosity sends home first color photo

Published on Electronic Component News (<http://www.ecnmag.com>)

Source URL (retrieved on 08/29/2014 - 11:08am):

http://www.ecnmag.com/news/2012/08/mars-rover-curiosity-sends-home-first-color-photo?qt-video_of_the_day=0

Links:

[1] <http://blogs.reuters.com/search/journalist.php?edition=us&n=steve.gorman>
&

[2] <http://blogs.reuters.com/search/journalist.php?edition=us&n=lisa.shumaker>
&