

Joy after seven minutes of terror at NASA lab

August 6 2012, by Romain Raynaldy

After years of hard work and seven minutes of terror, workers of NASA's Jet Propulsion Laboratory here let out their tears of joy.

"Touchdown confirmed," said a member of mission control at the laboratory as the room erupted in cheers at the touchdown of their \$2.5-billion Mars Science Laboratory and Curiosity rover on the surface of the Red Planet, breaking new ground in the US-led search for signs of alien life.

"We are wheels down on Mars. Oh, my God!"

Just minutes before that, a small control room packed with mission specialists had plunged into anguished silence as everyone watched images on the screens of the main control room, where all present could follow Curiosity's progress step by step.

"Seven minutes of terror" was how NASA characterized the extremely sophisticated operation that preceded the actual landing.

An initial round of applause came when Curiosity sent its first signal before entering the <u>Martian atmosphere</u>.

A second sigh of relief was when the ship opened its parachute.

But the most difficult part was yet to come: the vessel had to stabilize before an overhead crane, using nylon cables, gently placed Curiosity on



the Martian soil -- an operation that had never before been conducted.

At 10:32 pm local time (0532 GMT) this was accomplished and cries of joys filled the JPL: "Hell, we did it!"

The joy was palpable in the newsroom as project managers passed around Mars chocolate bars to employees, the JPL's "shadow army" of people who never appeared on cameras but worked doggedly for eight years to make the historic moment possible.

Intoxicated by their success, the JPL workers -- all dressed in commemorative blue polo shirts with "August 5" embroidered on the heart -- poured into the press conference room.

When the mission managers rose to the podium, the "blue shirts" rose as well, waving small American flags and chanting "EDL! EDL! EDL!" for the Entry, Descent, Landing team.

Those were a few minutes of joyful chaos, where every employee did a high-five with their supervisors, including Adam Steltzner, head of the EDL, who would dissolve in tears a few minutes later.

Beth Fabinsky, an engineer at JPL, said that when the magic word "contact' was uttered, she had an extraordinary feeling.

"It was amazing, better than we could have ever expected," Fabinsky told AFP. "I've been on a few missions where we've had success and that feeling beats anything I can imagine in my life yet.

"Everybody was terrified because this is the most complex mission that JPL has ever endeavored," she recalled. "There are so many things that could have gone wrong and they didn't and that was amazing. The fact that this one succeeded, it's got a little bit of miracle in it. So we're all



thankful."

Gurkirpal Singh, who designed the guidance system for the last minute of descent, said he hardly had time to react.

"It was picture perfect," he said. "It was better than we could have ever hoped for.

"When I hear about the touchdown, it was a tremendous relief," Singh recalled. "You worry about a lot of things. It's a wonderful feeling.

"For the touchdown, you just rely on data. But the picture is undeniable. You cannot argue with a picture."

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