

# No Regrets over this Lost Opportunity

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**It was recently announced that the planet Mars has at least one thing in common with planet Earth — all good things come to an end.**

In this case, the good thing is the recently announced and documented (Feb. 12) demise of the Mars rover Opportunity. NASA launched the rover in 2003 for a 3-month mission that improbably lasted almost 15 years (Opportunity's sibling — Spirit — hung on until 2011.).

Yes, the intrepid rolling robot that spent 15 years scouring the surface of the Red Planet for information and beaming it back to NASA is no more. Thomas Zurbuchen, head of NASA's science missions, made the announcement at the space agency's Jet Propulsion Laboratory in Pasadena, California. What ensued was a rather solemn memorial service commemorating "our beloved Opportunity."

Apparently concerns were raised last June when Opportunity's earthbound handlers received a transmission (the final one, as it turned out) that "started to look worrying." The rover reported that its batteries were running low and — not unlike a death scene in a bad movie — "it was getting dark." Some months later Opportunity "was swallowed by a dust storm that took over the entire planet."

There had been NASA efforts to resuscitate Opportunity — to no avail.

The end elicited comments that even HAL would take to heart, such as — "This is a hard day," said project manager John Callas a gathering of hundreds of mourners that oversaw Opportunity (and its long-deceased — if less remembered — identical twin, Spirit). "Even though it's a machine and we're saying goodbye, it's still very hard and very poignant. But we had to do that. We came to that point."

But that was only a small part of the final sign-off, as many other expressions of grief orbited the Twittersphere, e.g.:

Writer Jocelyn Rish tweeted how she "never imagined" she'd "be sitting at my computer crying over a last message from a robot on Mars, but here I sit wiping away tears. Job well done, Oppy."

Graphic designer Dan Mason cited Dylan Thomas to express his regrets, tweeting:

*"Do not go gentle into that good night,  
Old age should burn and rave at close of day;  
Rage, rage against the dying of the light."*

And Sulu (you may know him as George Takei), helmsman of the Enterprise, also weighed in: "A sad, sad development for Opportunity and for NASA. Perhaps one day we shall find you again, friend, when humans finally set foot on Mars." (But nothing from Captain Kirk.)

This from Dr. Tanya Harrison, director of research at ASU NewSpace, who described the mood at the propulsion laboratory as the end became clear, Tweeting — "There was silence. There were tears. There were hugs. There were



The NASA Mars rover Opportunity; it landed on Mars in 2004 and proceeded to cover 28 miles on the Red Planet — lasting well beyond its expected 90-day mission (Photo AFP/NASA).

memories and laughs shared."

For instance, according to Steve Squyres, the Mars Rover Mission's principal investigator, "Back in the early days of the mission, we instituted Rover wake-up songs for fun. So we'd play a song each morning (to waken) the rover." But by the end, no music — from the Rolling Stones to Motley Crue — was capable of rousing Opportunity.

Squyres was asked to identify any favorite photos or transmissions received from Opportunity and Spirit.

"They sent back so many things over the years, it's hard to pick a favorite. It really is just the accumulation of 15 years of beautiful data. There were other certainly ones that were surprises. I remember the first time we found a meteorite. Probably my favorite image of the entire mission came on the 12th day of Spirit's mission, when we took a picture looking back at our first ever real tracks on Mars. We had all six wheels on Martian soil, and that for me was the culmination of 16 years of trying to make something like that happen."

But after 15 successful years in operation, "We tried everything we could think of to make contact with Opportunity and didn't get any contact," said Squyres, "We sent our final command to the vehicle, and I was asked by the team to choose what would be the final musical communication. (I) settled on "I'll Be Seeing You" by Billie Holiday." It's final verse:

*I'll find you in the morning sun  
And when the night is new  
I'll be looking at the moon  
But I'll be seeing you*

Or as yet another Twitter user (dutchess-becky) put it binarily:

"Dear Opportunity, 01000111 01101111 01100100  
01110011 01110000 01100101 01100101 01100100  
00100000 01001111 01110000 01110000 01111001, from A  
Martian Fan."

Or, in short: "Godspeed Oppy." **PTE**

(Sources: MarsNasa.gov, Wikipedia and NYTimes.com.)