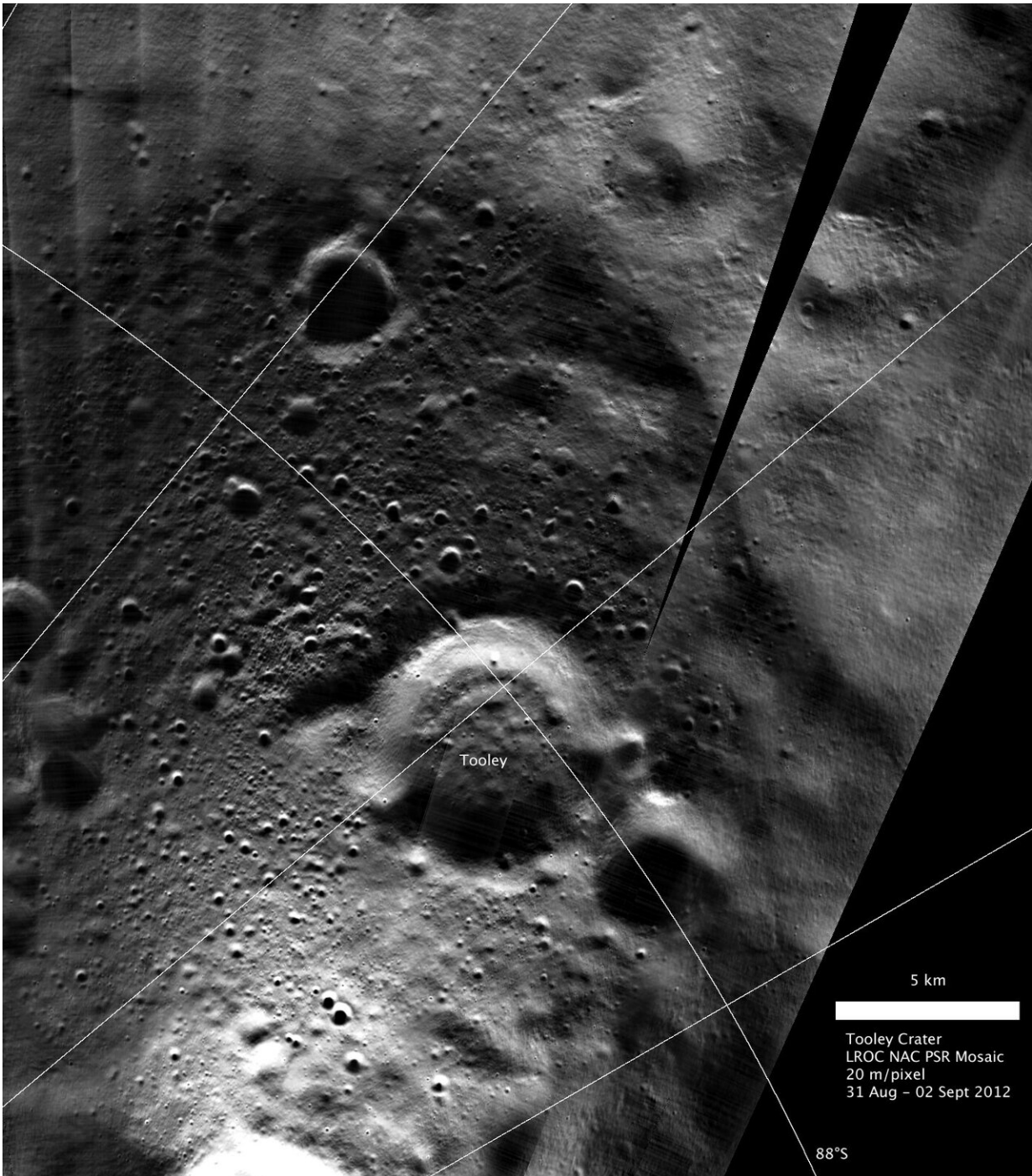


The naming of Tooley crater

January 27 2021, by Vickie Johnson



Tooley Crater is approximately 7 km wide; it is located inside a permanently shadowed region of Shoemaker Crater close to the lunar south pole, making one of the colder areas of the Moon. The image is a mosaic of high resolution of images from the Lunar Reconnaissance Orbiter Camera's (LROC) Narrow Angle Camera in a high gain mode that relies on the reflected light from nearby crater rims. Credit: NASA/Goddard/Arizona State University

Like Einstein, Galileo, and Copernicus, former NASA program manager Craig Tooley now has a place on the Moon named in his honor. Tooley crater is a 7 km crater in a permanently shadowed region of Shoemaker crater near the lunar south pole. The new crater designation is official and can be used in journal articles and other publications.

How do you feel about Craig having a crater named after him?

"First of all, it is a great honor. It makes me very proud of my brother and warms my heart every night when I look up at the Moon and think about his crater and his achievements. I am in constant awe of the impact that Craig had at NASA and the lengths that everyone at NASA and in the space sciences community have gone to honor his memory." -Matt Tooley

This act pays homage to the numerous accomplishments and indelible contributions Tooley made to NASA's exploration community during his 34 years of service. After Tooley's passing in September, 2017, members of NASA's Lunar Reconnaissance Orbiter (LRO team) wanted to memorialize Tooley by having a lunar crater named after him. They petitioned the International Astronomical Union Working Group for Planetary System Nomenclature, which approved their request to name a

lunar crater after Tooley, the former LRO project manager from NASA's Goddard Space Flight Center in Greenbelt, Maryland.

What would Craig think about having a crater named after him?

"He didn't care much about the physical markers or awards, though he certainly got a lot of them. This is different—it's very meaningful, and he would have loved it. He probably would have said something about how none of the achievements would have been possible without the great teams he worked with, and that this was just the culmination of many different people's work. But also, he would have been so touched." -Terri Rutledge (Craig's widow)

Tooley oversaw LRO's successful launch in 2009, and the mission continues to make groundbreaking discoveries of Earth's closest celestial neighbor. He transitioned into the same position for the Magnetospheric Multiscale (MMS) mission, a quartet of spacecraft launched in 2015 to study our planet's magnetosphere and provide insight into the phenomenon of magnetic reconnection.

Tooley came to Goddard in 1983 after receiving his bachelor's in mechanical engineering from the University of Evansville in Indiana. He later earned a master's in the same field from the University of Maryland, College Park, in 1990. He joined the Flight Projects Directorate in 1996. In doing so, he built a reputation as the go-to guy for some of NASA's highest-profile missions, leveraging years of technical experience to become the consummate project manager.

Tooley became Deputy Project Manager for the Triana mission, laying the groundwork for the climate observation mission which would later be resurrected as DSCOVR. He helped develop procedures and train

astronauts for the Hubble Space Telescope's fourth servicing mission in 2002. He then headed Hubble's Instrument Development Office, overseeing the development of instruments that were installed during the fifth and final servicing mission in 2009.

In his most recent position as Applied Engineering and Technology Directorate Deputy Director, Tooley used the knowledge he acquired over the years to push Goddard's capabilities forward, championing new and emerging technologies such as advanced electronics systems, CubeSats, and SmallSats.



Craig Tooley. Credits: NASA/Goddard Space Flight Center

"Craig grew up watching Apollo missions, reading science fiction, and launching model rockets. So, for Craig, working at NASA was like a

dream come true. Even though he worked very hard, and when needed took things very seriously, working at NASA for him was always fun. He believed in NASA's mission, and liked being a part of it." -Matt Tooley

His accomplishments as an engineer enabling science and exploration go well beyond LRO. He served as the [mission](#) manager and mechanical lead for five successful Spartan 201 heliophysics missions deployed during space shuttle missions flown on STS-56, STS-64, STS-69, STS-87, and STS-95. LRO, DSCOVR, and MMS are still in operation today.

He was the recipient of numerous awards, most notably two NASA Outstanding Leadership Medals—among the Agency's highest honors—for his work on the LRO and MMS missions.

Tooley's memory will be forever etched into space exploration with the naming of one of the MMS spacecrafts as "Craig." His most enduring legacy to Goddard, however, will be the many teams and individuals he impacted both personally and professionally, all embodying his spirit of discovery and innovation. Tooley exhibited an infectious optimism for spaceflight, and as a manager, he always advocated for inclusive leadership and open communication. His passion for and approach to NASA work produced many dedicated teams and successful missions throughout his career.

What did working for NASA mean to him?

"It was his life's passion, besides his family—he loved his work and he inspired others to love it as well. He also fiercely loved mentoring younger folks, especially women and folks of color who haven't traditionally been represented in these kinds of careers. He would get so excited telling stories of how those he had mentored were successful. Even if space exploration wasn't someone's particular passion, he was a role model for loving your

work.

He also embodied lifelong learning: we would talk about how he had read up on some specific statistics or modeling approach to better understand the complexities one section of his team was currently facing. Even when he was sick and in between hospital visits, he set out to learn to program in Python and proudly showed us how he had made a simple Graphical User Interface to calculate orbital trajectories with his newfound skills." -Terri Rutledge

What were some of Craig's hobbies?

"He loved hiking, camping, and being outdoors—growing up, we heard stories of our parents' backpacking adventures, and the acquisition of a 1971 VW camper bus after we were born brought even more fun. He also inculcated a love for reading, particularly science fiction, in us, which was surely intertwined with his passion for space; we grew up reading Issac Asimov, Robert Heinlein, and other classics." -Ursula & Maia Tooley (Craig's daughters)

Tooley's legacy and crater will serve as "True North" for his wife Terri, their daughters Ursula and Maia, his NASA colleagues, and other members of his family and friends.

Provided by NASA's Goddard Space Flight Center

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