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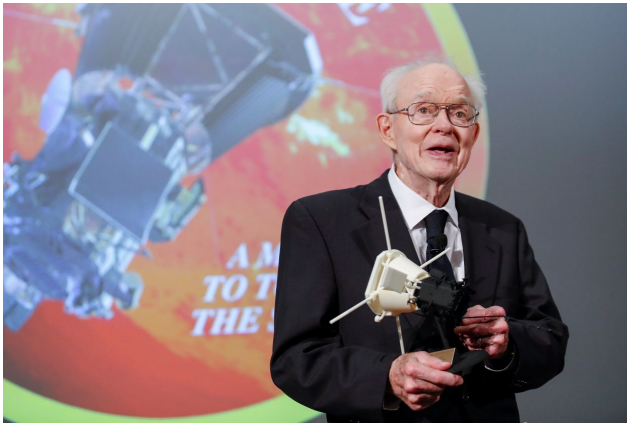
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OPINION | COMMENTARY

## NASA's New Probe Sails Into the Solar Wind

Its namesake, Eugene Parker, is a living legend of astrophysics.



Astrophysicist Eugene Parker receives a model of the Parker Solar Probe, Chicago, May 31, 2017.

PHOTO: KAMIL KRZACZYNSKI/REUTERS

*By Angela V. Olinto*

Aug. 9, 2018 6:54 p.m. ET

The astrophysicist Eugene Parker found only doubters 60 years ago when he proposed that a type of “wind” flows from the sun. Now NASA is sending up a spacecraft named in his honor. The Parker Solar Probe, set to launch Saturday, will fly closer to the sun than any previous mission. It will investigate why the sun’s atmosphere is hotter than the sun itself, how to protect earthly electric grids from space weather, and more.

I came to know Eugene Parker in the 1990s as a fellow astrophysicist at the University of Chicago. By that time he was a legend who had built a completely new field. No one had expected that when he first proposed the concept of solar wind in 1958.

Back then, scientists tended to believe that the space between our sun and the planets was empty. Mr. Parker suggested instead that it contained a wind of the sun’s particles and magnetic fields. When he submitted his paper to the *Astrophysical Journal*, it was rejected. The paper saw the light of day only because the journal’s editor, future Nobel laureate Subrahmanyan Chandrasekhar, agreed to publish it over the reviewers’ objections.

But Mr. Parker never wavered, and no one could find a problem with his physics or math. He was vindicated four years later, when NASA's Mariner 2 probe confirmed the existence of solar wind.

For this breakthrough and his work since, Mr. Parker is regarded as the father of modern heliophysics. As NASA scientists tell it, the decision to name the new probe after him—the first time that honor has been bestowed on a living person—was easy.

Great advances in science often stem from a willingness to challenge convention. Galileo was convicted of heresy in 1633 after he insisted that the sun was the center of the solar system. Everyone scoffed at the 19th-century physician Ignaz Semmelweis when he argued that doctors ought to wash their hands between patients. The science of plate tectonics, proposed by Alfred Wegener in 1912, didn't become widely accepted until the 1970s.

Scientists can be narrow-minded like anyone else. But the scientific method overcomes this failing, as new theories and ideas are constantly tested against data. Science demands a willingness to challenge and be challenged.

At 91, Mr. Parker still loves the unexpected. Discussing the solar probe recently, he said that “we have to be prepared for some surprises—things that we never thought of, or things that we thought of but were not correct.”

The launch of the Parker Solar Probe vindicates not only Eugene Parker's ideas but also his vision of science as an arena for both uncommon daring and humility. It's never clear where the next great advance will come from, or how it may challenge today's assumptions. To forge new paths, scientists must be brave enough to try new ideas—and confident enough to risk being proven wrong.

*Ms. Olinto is dean of the Division of the Physical Sciences at the University of Chicago.*

*Appeared in the August 10, 2018, print edition.*

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