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Prof. Eugene N. Parker, a solar physics legend who first proposed the concept of the solar wind and is thus a namesake of the Parker Solar Probe mission passed away on 15 March at the age of 94. His great contributions to the field of solar physics were summarized in the obituary published by the University of Chicago:

“Parker was internationally known for proposing the concept of the solar wind—an idea that was first met with skepticism to outright ridicule. The theory was later proven to be correct, reshaping our picture of space and the solar system. Parker went on to revolutionize the field of astrophysics, unraveling the complex physics behind magnetic fields in space and the dynamics of plasma. In August 2018, at the age of 91, he became the first person to witness the launch of their namesake spacecraft.

Born in 1927 in Houghton, Michigan, Parker completed his undergraduate degree in physics from Michigan State University in 1948 and his Ph.D. from Caltech in 1951. He spent time as an instructor and assistant professor at the University of Utah before accepting a position in 1955 at the University of Chicago, where he remained for the rest of his career.

In 1957, Parker was a young assistant professor when he turned his attention to the temperature of the corona of the sun. Running through the math, he determined the conditions should produce a supersonic flow of particles off the sun’s surface. The idea was roundly criticized. “The first reviewer on the paper said, ‘Well I would suggest that Parker go to the library and read up on the subject before he tries to write a paper about it, because this is utter nonsense,’” Parker told UChicago News in 2018. The paper might not have been published but for Parker’s colleague at the University, Subrahmanyan Chandrasekhar. The editor of the journal and a future Nobel laureate, Chandrasekhar didn’t like the idea either—but he couldn’t find a flaw with Parker’s math, so he overrode the reviewers and published the paper. Shortly afterward, in 1962, NASA’s Mariner II spacecraft flew to Venus and encountered a constant stream of particles. This flow, called the solar wind, turned out to be incredibly influential on the workings of the solar system, including our lives on Earth.

Over his career, Parker also went on to study cosmic rays and the magnetic fields of galaxies, among many other related topics. His seminal ideas include the origin of magnetic fields, known as dynamo theory; rapid dissipation of magnetic fields; the structure of magnetized shock waves; and the diffusion of high-energy cosmic rays. His name is littered across astrophysics:

the Parker instability, which describes magnetic fields in galaxies; the Parker equation, which describes particles moving through plasmas; the Sweet-Parker model of magnetic fields in plasmas; and the Parker limit on the flux of magnetic monopoles.

In 2017, NASA announced that it was naming its landmark solar mission after Parker as a recognition of his contributions to the field of heliophysics. On the morning of Aug. 12, 2018, Parker was at Cape Canaveral with three generations of his family to witness the launch of his namesake Parker Solar Probe, which has since completed multiple revolutions around the sun and collected extraordinary data." [text selected from the obituary published in uchicago news]