



PAUL JOSEPH BROWN / P-I

UW astronomer Don Brownlee is awaiting a tiny pinch of precious, 4.5 billion-year-old comet dust.

Stars don't always align for astronomer couple

BY TOM PAULSON
P-I reporter

For a world-renowned astronomer, the University of Washington's Don Brownlee spends an awful lot of time looking in what would seem the wrong direction.

"I'm usually looking down, into a microscope," Brownlee said.

This is because his expertise is in cosmic dust, one type of which is now called "Brownlee particles." The UW astronomer is now awaiting a tiny pinch of precious, 4.5 billion-year-old comet dust collected by NASA's Stardust spacecraft. It's been a long time coming, this seven-year mission, the realization of a dream conjured up decades ago.

Brownlee's wife, Paula Szkody, also a UW astronomer, conducts herself more appropriately for this branch of science. Szkody looks skyward and is an expert on binary star systems, specifically an exotic manifestation of the pairing of stars called "cataclysmic variables" in which one sucks matter away from the other.

"Most stars in the universe, actually, are binary," Szkody noted.

Brownlee and Szkody are also binary, the two astronomers having met in the early 1970s as graduate students at the UW. Brownlee, who grew up mostly

in California, was in the UW's first graduate research class in astronomy until I was a senior in college at Cal (the University of California at Berkeley)," Brownlee, 61, noted. An electrical engineering student, he had always been more interested in "hands-on" stuff, tinkering with gizmos and so forth.

"I wasn't that interested in astronomy until I was a senior in college at Cal (the University of California at Berkeley)," Brownlee, 61, noted. An electrical engineering student, he had always been more interested in "hands-on" stuff, tinkering with gizmos and so forth.

Even with the NASA Stardust mission heavily managed and run by the space agency or its contractors, Brownlee still tends to tinker. He recently built a tiny precision saw at his UW lab that he will use to slice the comet dust particles out of the capture material (a superlight glass foam called aerogel) and into fine sections for electron microscope analysis.

What changed him that senior year at Cal, in the mid-1960s, was an opportunity to run an interplanetary dust collector on a Gemini mission. He became hooked on the mysteries of cosmic dust and pursued it by launching weather balloons and eventually following his Berkeley professor, Paul Hodge, to launch the UW graduate research program in astronomy.

"Our history is written at the submicron level, in these inter-

stellar grains," Brownlee said. Answering how Earth came to be this wet planet teeming with all manner of life is of special interest to him.

Brownlee and another UW colleague, Peter Ward, have written several books that contend Earth is an exceedingly unusual and fragile place — that the universe is largely hostile to life and that, based on the evidence so far, it seems unlikely that we will ever find other planets out there hosting very complex life forms.

"I don't agree with him at all on that one," Szkody said. She smiled, noting that her downward-looking spouse is arguing a point based on a lack of evidence as opposed to any definitive evidence that Earth is indeed a rarity in the universe.

"Life is fairly easy to create, but I think planets like Earth are going to be rare," responded Brownlee. We shouldn't take it for granted, he said, or engage in faith that it is somehow a divine creation that will be magically sustained forever.

Finding out more about how we came to be, Brownlee said, may help us learn how to survive in a universe stacking the odds against us being here in the first place.

Szkody and Brownlee have two grown children, Allison, 24, an environmental scientist, and Carson, 21, a computer science senior at Gonzaga University.