



Preface to the Proceedings of the 27th Annual Wisconsin Space Conference

New Windows

What were the top space science stories of 2017? The LIGO announcements that opened the era of multi-messenger astronomy? The discovery of six earth-sized planets orbiting the star TRAPPIST-1? Cassini's grand finale plummet into Saturn's atmosphere? Organic molecules on Ceres? The list of contenders is long. While tragedy and global instability demanded our attention this year, we should not forget what an amazing year 2017 was for advancing our understanding of and our place in the universe.



On August 21, I found my place in the universe on the roof of a parking garage on the campus of Oregon State University in Corvallis, Oregon. At the kind invitation of Catherine Lanier and the Oregon Space Grant Consortium, I saw my first total solar eclipse. Like so many that day, I found myself unprepared for the experience of totality. As someone who spends his life studying the mysteries of the cosmos great and small, I was fully prepared to be underwhelmed by the experience. I mistook understanding for experiencing and thought one would stand in for the other. But as the shadows raced across the landscape, the sudden starry night and dark moon reminded me of the difference between knowing and experiencing. Both necessary, neither alone sufficient. As three-year olds know best, we need to test our understanding through experience. There is no other way.

The eclipse was dramatic and wonderful. The highlights noted above were equally dramatic and wonderful but easy to miss in the noise of the news day. The difference between the discovery of organic material on Ceres and the predictable sliding of moon between earth and sun is not in intrinsic significance or import. The reason we hear less about Ceres or TRAPPIST-1 is because we are not invited to directly experience these discoveries the way the way we experience an eclipse. We can learn and know about these things, but as the Great American Eclipse taught me, that is far different than experiencing them. Imagine the public support and appreciation for science if we all shared in the experience of these discoveries. The Space Grant program provides exactly this kind of direct, hands-on experiential learning and discovery to thousands of students across the country. We help deliver unique and transformative *experiences* to our students every year and I hope you enjoy reading about some of them here!

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