Astronomy Colloquium

Dr. Chad Trujillo

NAU

Oceans Apart but Under the Same Sky

In the last year, I spent several months at two universities on opposite sides of the Earth: the University of Canterbury in Christchurch, New Zealand and Coimbra University in Portugal, a UNESCO World Heritage Site. In this talk, I will discuss more about these two fascinating places, including my involvement with mentoring students at the telescopes on Mt. John, New Zealand and what I did when I found out that Afonso Henriques, the first King of Portugal, was my 26th great-grandfather.

In addition, I'll describe some of the development work I did while on sabbatical including building a Python-based method to download and construct millions of image thumbnails of solar system objects from the Subaru Hyper Suprime-Cam public data archive. We are currently examining these images for signs of comet-like activity as part of our Citizen Science project Active Asteroids. The ultimate goal of the project is to triple the number of known active asteroids, the most interesting of which are dubbed the Main Belt Comets as they are driven by water ice sublimation and are found on stable orbits within the main asteroid belt. It remains a mystery as to why water ice might exist interior to the so-called "snow line" that demarcates the rocky inner planets from the gaseous and icy outer planets. If Main Belt Comets are actually much more common than previously thought, it could indicate that we do not yet fully understand our solar system's formation and evolution.

Chad Trujillo is an Associate Professor in the NAU Astronomy and Planetary Science department. He received his B.S. in Physics with a minor in literature from MIT in 1995 and his Ph.D. in Astronomy from the University of Hawaii in 2000, after which he was a Postdoctoral Scholar at Caltech until 2003. He then worked at Gemini Observatory on the Big Island of Hawaii for 13 years where he held several positions including Astronomer with Tenure and Head of Adaptive Optics. He joined the faculty at NAU in 2016. Dr. Trujillo has discovered hundreds of Kuiper Belt Objects including several dwarf planets and some of the most distant objects in our solar system, as well as Centaurs, comets and active asteroids using ground-based telescopes. He is also very interested in data intensive science especially involving the use of large public datasets.

NAU NORTHERN ARIZONA UNIVERSITY

Department of Astronomy
and Planetary Science

Monday, November 3rd, 2025
3:45 PM MST
Room 103
Physical Sciences bldg 19