Dr. Rachel Dudik named as new Scientific Director, USNO

Dr. Rachel Dudik has been appointed as the new Scientific Director of the U.S. Naval Observatory (USNO), succeeding Dr. Brian Luzum as the Observatory’s chief scientist. Dr. Luzum retired in July, 2022.

The announcement was made by USNO Superintendent CAPT Rip Coke, USN, at an all-hands meeting on December 12. She becomes the sixth person and the first woman to hold the position since it was established in 1958.

As the Observatory’s Scientific Director, Dr. Dudik manages and advocates for the scientific mission and capabilities of USNO’s four major mission areas: Precise Time, Earth Orientation, Celestial Reference Frame, and Information Technologies.

Dr. Dudik received her B.A. in Liberal Arts from St. John’s College in 2002. After St. John’s, she pursued a PhD in Physical Sciences from George Mason University (GMU) with a concentration in Physics and Astrophysics. In 2006, while completing her graduate degree, she received a NASA Graduate Research Fellowship and completed her thesis research at NASA Goddard Space Flight Center. She graduated from GMU in 2008 with a thesis concentrating on the astrophysics of black holes in the infrared, X-ray, and visible spectrum.

In 2008, Dr. Dudik joined the United States Naval Observatory as an instrument scientist in the Astrometry Department. In this role, she was primarily focused on the systems engineering and instrumentation for various high-profile space missions. Dr. Dudik was promoted to Division Chief in 2015, and led the Defense and Mission Support Division of the Astrometry Department from 2015-2018. During this time she managed multiple Astrometry programs including the deployment and automation of three USNO telescope systems and the development of all DoD Celestial Reference Frame star catalogs produced at USNO. She was the Primary Investigator for two DoD Space Experiments Review Board (SERB) star tracker space experiments, both of which were successfully launched on the Space Station (STP-H6) and STP-Sat4 in 2019 and 2020, respectively.

In 2018, Dr. Dudik became the USNO N8/N9 Department Head of Requirements and Assessments. In this role, Dr. Dudik planned, managed, and advocated for USNO budget and manpower.
requirements for all scientific and support departments. During this tenure, she was detailed to support the USNO N6 department in the deployment and migration of USNO mission applications to a new Program of Record network. In this role, she also managed the Navy Risk Management Framework (RMF) authorization for multiple scientific applications and networks at USNO.

Dr. Dudik received the Matthew Henson Award in 2016 for “expertise accomplishment and leadership in the application of meteorology, oceanography, hydrography and precise time and astrometry to war fighting and fleet operations.” She is a member of the International Astronomical Union and the American Astronomical Society. She continues to support the astronomical community, volunteering for NASA and National Science Foundation technical review panels and facilitating the development of young PhD graduates and candidates through USNO internship programs.

Dr. Rachel Dudik, Scientific Director, U.S. Naval Observatory
(Photo by Eliot Dudik)