

Cosmic Origins UV STIG's presents the 12th
Quorum for Ultraviolet Exploration of Science and Technology
(QUEST12) virtual seminar on Friday 26 April 2024 at 14:00 -15:00 EDT on
<https://zoom.us/j/2824137831>

Kevin France (University of Colorado, Boulder) will discuss

The Smallsat Technology Accelerated Maturation Platform (STAMP): Advancing Ultraviolet Science, Workforce, and Technology for the Habitable Worlds Observatory

Abstract:

NASA's Great Observatories Maturation Program (GOMAP) will advance the science definition, technology, and workforce needed for the Habitable Worlds Observatory (HWO) with the goal of a Phase A start by the end of the current decade. GOMAP offers long-term cost and schedule savings compared to the 'TRL 6 by Preliminary Design Review' paradigm historically adopted by large NASA missions. Many of the key technologies in the development queue for HWO require the combined activities of 1) facility and process development for validation of technologies at the scale required for HWO and 2) deployment in the 'real world' environments of mission Integration & Test and long duration on-orbit operations. In this talk, I will present a concept for the Smallsat Technology Accelerated Maturation Platform (STAMP), an integrated facility, laboratory, and instrument prototype development program that can be applied to any of NASA's Future Great Observatories.

In this presentation, I will provide a background to the status and technology maturation needs for a UV instrument on HWO and describe of how the STAMP concept could be applied to advance new broadband optical coatings, high-sensitivity ultraviolet detector systems, and multi-object target selection technology to TRL 6 with a flight demonstration mission. I will present an outline of an ESPA Grande-class mission that could incorporate these critical path HWO technologies on an accelerated timescale, building on current ROSES SAT+APRA programs, to reduce cost and schedule risk for HWO while conducting a compelling program of preparatory science and workforce development with direct benefits for HWO mission implementation in the 2030s.

Instructions for joining UV STIG mail list https://cor.gsfc.nasa.gov/stigs/uvstig/maillist/uvstig_maillist.php