Boston University College of Arts & Sciences Center for Space Physics

2025 SPACE PHYSICS SEMINAR SERIES

Cometary Science near the Sun

Comets are conglomerates of rock and often ice that visibly volatilize as they approach the Sun. Near-Sun observations provide a unique and valuable dataset toward understanding cometary behavior and evolution. Comets interior to Earth's orbit permit forward scattering diffraction characterization of their dust activity. Interior to Mercury's orbit, rocky materials become volatile, providing a natural laboratory to probe the structure and composition of the otherwise refractory component of cometary nuclei. Observing near the Sun, however, presents unique challenges that require specialized instrumentation and techniques to overcome. In this talk, I will discuss use of both space- and ground-based telescopes to evaluate the behavior of comets within a few degrees from the Sun, what they may tell us about our solar system, and how they may affect us down on Earth.

Thursday, February 6th

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3:30 - 4:30 p.m. 725 Commonwealth Ave | Room 502 **Dr. Qicheng Zhang** Lowell Observatory