

Title: Basics of Coronal Mass Ejection: Observational Perspective
Speaker: Zubair I. Shaikh

Abstract: Coronal mass ejections (CMEs) are large-scale loops or bubble-like magnetic structures emitted from the [Sun](#) into the heliosphere. They carry solar coronal plasma into interplanetary space, thus providing a natural laboratory to investigate physical processes. CMEs cause extreme space weather conditions near the Earth and other planets. CMEs are now considered significant natural hazards because they cause large solar energetic particle (SEP) events and major geomagnetic storms, which endanger humans and their technology in space and on Earth. They also pose hazards for spacecraft throughout the heliosphere. Thus, studies of CMEs are significant from both scientific and technological points of view. Here, in this talk, we will discuss the basics of CMEs, observational tool, structural morphology, plasma properties, propagation and dynamics, prediction of CME parameters, etc.