ORIGIN AND EARLY EVOLUTION OF CORONAL MASS EJECTIONS

Xin Cheng

School of Astronomy and Space Science, Nanjing University, China

Coronal mass ejections (CMEs) and flares are the large-scale and most energetic eruptive phenomena in the solar system and may lead to serious space weather effects. To estimate and even predict the possibility of CMEs/flares, much attention was paid to investigate their origin and early evolution in the past decades. In this review talk, I will begin with various observational manifestations of magnetic flux rope, which is believed to be a fundamental structure resulting in CMEs/flares. Then, I will discuss the initiation and early evolution of magnetic flux rope toward a CME/flare.