



Flare quasi-periodic pulsations detected in multiple wavelengths

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Quasi-periodic pulsations (QPPs) are frequently identified as regular periodic pulses in light curves of solar/stellar flares. They carry rich features of time characteristics and plasma emissions of flare cores, which are helpful to diagnose the corona of the Sun and Sun-like stars. The flare QPPs could be detected in almost all of the electromagnetic wave bands, and their quasi-periods could appear in a broad range from sub-seconds to a few minutes. However, the physical mechanism responsible for the generation of QPPs is still an open issue. It is likely that different classes of QPPs are produced by different mechanisms, since the quasi-periods are often dependent on the observed channels. In this talk, I will present multi-wavelengths observations of flare QPPs, mainly focus on the wavebands of hard X-ray, γ -ray, Ly α , mid-ultraviolet Balmer Continuum, and low-frequency radio, which are closely associated with nonthermal electrons or energetic particles periodically accelerated by the repetitive magnetic reconnection. I will also discuss the application of flare QPPs and some limitations of the QPP model in our study.

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Note: Abstract should be in (full) double-columned one page.