Contribution ID: **73** Type: **Oral**

Gamma-ray View of the Transient Sky

Tuesday 8 July 2025 16:00 (15 minutes)

The gamma-ray emissions of transient phenomena provide critical insight into the nature of the most extreme environments in the Universe. Observing the energetic outbursts of active galactic nuclei, supernovae, neutron star mergers, tidal disruption events, and a variety of Galactic sources at GeV to TeV energies is a crucial component of modern multi-wavelength and multi-messenger studies. Transient astronomy is thus expected to rapidly expand as next-generation gamma-ray facilities come online, such as the Cherenkov Telescope Array Observatory (CTAO) and the Southern Wide-field Gamma-ray Observatory. Quickly following up on the triggers of radio and optical telescopes, such as from the upcoming Vera C. Rubin Observatory, will be essential for comprehensive multi-wavelength studies. Probing the nature of gamma-ray transients could be assisted by establishing a transient-focused worldwide network of Cherenkov telescopes, particularly in the Southern Hemisphere. In this talk, I will introduce the different classes of transients in the gamma-ray sky and provide an overview of the related CTAO key science projects. In addition, I will present the prospects of re-establishing gamma-ray telescopes in Australia.

Author: LEE, Simon

Presenter: LEE, Simon

Session Classification: Transients