Contribution ID: **50** Type: **Oral presentation**

Multiwavelength properties of gamma-ray binary systems

Thursday, 29 October 2015 15:10 (20 minutes)

Several compact binary systems appeared to have spectral energy distributions that peak is gamma-ray energy band. Almost all these sources have been detected in the high energy and very high energy regimes with Fermi/LAT and ground based Cherenkov detectors, respectively. Detection of very high energy photons from these compact sources implies operation of a very efficient particle accelerator in there. Moreover, comparison of the spectra and lightcurves collected with these instruments suggests that there should be present several distinct production sites for gamma-ray emission. Proper implications of these striking facts on particle acceleration theories demands accurate modelling of the physical processes taking place in gamma-ray binary systems. This includes hydrodynamic simulations, calculations of the production and transport of non-thermal emission. In this talk I will present these simulations for two binary systems: LS 5039 and 1FGL J1018.65856.

Primary author: Mr KHANGULYAN, Dmitriy (Rikkyo University)

Presenter: Mr KHANGULYAN, Dmitriy (Rikkyo University)

Session Classification: Gamma-Ray Astrophysics

Track Classification: Gamma-ray Astrophysics