

Contribution ID: 127

Type: Poster

## Simulating Tidally-Locked Companions in Compact Object Binaries: Assessing the Impact of Irradiation on Dynamical Mass Measurement

We have developed a Python tool for simulating the optical observations of tidally-locked companions in compact binary systems based on the Roche potential and the PHOENIX spectral library. The tool generates phase-resolved spectra and light curves observed from a given viewing angle. With the simulations, we aim to investigate the impact of the irradiation effect on the observed radial velocity curves, and assess the potential biases introduced in binary mass measurements.

### Section

Stars/Star Clusters

**Primary authors:** CHAO, Huan-Ping (National Cheng Kung University); LI, Kwan-Lok (National Cheng Kung University)

**Presenter:** CHAO, Huan-Ping (National Cheng Kung University)

**Session Classification:** Poster-Stars