## 2021 CAP Virtual Congress / Congrès virtuel de l'ACP 2021



Contribution ID: 37 Type: Oral not-in-competition (Graduate Student) / Orale non-compétitive (Étudiant(e) du 2e ou 3e cycle)

## **Constraints on Axions from GW170817**

Thursday 10 June 2021 12:56 (3 minutes)

As you know, first gravitational wave event GW150914(binary black hole) has been observed by LIGO on Sep. 14, 2015. And most importantly, first binary neutron star coalescence event GW170817 has been observed with a signal noise ratio upto 33, which allows us to make constraints on axion field! Here, we first time use axion charged binary neutron star waveform model to give a constaint on axion field.

Authors: LYU, Zhenwei (University of Guelph); Mr ZHANG, Jun

Co-authors: Mr YANG, Huan; SAGUNSKI, Laura; Prof. SAKELLARIADOU, Mairi

Presenter: LYU, Zhenwei (University of Guelph)

Session Classification: R2-4 Advances in Nuclear and Particle Theory (DTP/PPD/DNP) / Avancées

en physique nucléaire et physique des particules (DPT/PPD/DPN)

Track Classification: Theoretical Physics / Physique théorique (DTP-DPT)