Contribution ID: **59** Type: **not specified**

The curvature emission model of unusual neutron star candidate 1RXS J141256.0+792204 (Calvera)

Friday 28 October 2022 13:00 (15 minutes)

The non-thermal emission theory is constructed, interpreting the observational properties of the unique pulsar 1RXS J141256.0+792204 (Calvera) in X-rays that is believed to be thermally emitting isolated neutron star. Calvera was observed in the X-rays with XMM Newton /EPIC twice for a total exposure time of 50 ks. It is unique isolated pulsar, because it cannot be detected by radio, optical and gamma-rays, however, it is detectable through the purely thermal emission in soft X-rays. A different approach of curvature emission scenario is considered, giving the spectral energy distribution that is in a good agreement with the XMM-Newton observational data, which can be also successfully fitted with the pure Planckian spectral shape. We do not argue against thermal emission scenario relying on spectral analysis results, as additional observational properties are acquired for distinguishing between existing emission scenarios.
The work was supported by Shota Rustaveli National Science Foundation of Georgia (SRNSFG) [FR-18-14747]

Author: Ms KEVLISHVILI, Natia (Institute of Theoretical Physics, Ilia State University, Tbilisi, Georgia)

Presenter: Ms KEVLISHVILI, Natia (Institute of Theoretical Physics, Ilia State University, Tbilisi, Georgia)

Session Classification: High energy astronomy and astronomical physics