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Modelling continuum anisotropy and super Eddington accreting quasar spectra

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Emission from the **Broad-line regions (BLR) in active galaxies** are produced primarily by photoionization processes, driven by the continuum arising from an underlying, complex structure circumscribing the black hole. **Modelling the broad-band spectral energy distribution** (SED) that ionizes these gas-rich BLRs is key to understanding the various radiative processes leading to the emission of emission lines from diverse physical conditions. ***We focus on a long-standing issue of the anisotropic continuum from the very centres (~10-100 Rg) of these active galaxies***. This is a direct consequence of the development of a funnel-like structure in the vicinity of the black hole due to a marked increase in the accretion rates, in addition to the almost standard disk at larger radii.

> **Incorporating the radiation emerging from such a structure in our photoionization modelling, we are successful in replicating the observed emission line intensities, in addition to the remarkable agreement on the location of the BLR with current reverberation mapping estimates.**

This study allows us to locate the super Eddington sources along the main sequence of quasars and constrain the physical conditions of their line-emitting BLR, eventually allowing us to use these fascinating sources to understand better the cosmological state of our Universe.

Primary author: PANDA, Swayamtrupta (Center for Theoretical Physics / Nicolaus Copernicus Astronomical Center, Warsaw)

Co-author: Prof. MARZIANI, Paola (INAF-Astronomical Observatory of Padova, Italy)

Presenter: PANDA, Swayamtrupta (Center for Theoretical Physics / Nicolaus Copernicus Astronomical Center, Warsaw)

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