

Catching supermassive black holes with Rubin-LSST: Towards novel insights and discoveries into AGN science

Contribution ID: 19

Type: **not specified**

Broad Line Region reverberation mapping

Wednesday, 24 July 2024 11:45 (25 minutes)

Reverberation mapping (RM) approach to the Broad Line Region (BLR) started over 40 years ago and revolutionized our knowledge of this region. However, the geometry of the region is much more complex than was expected, and the physical processes are also complex so a number of key questions remain unsolved (origin of the clouds, exact dynamics and geometry, possible presence of dust). In addition, our expectations from the modelling accuracy rises with the hope to use the BLR light echo for measuring the distances to AGN needed for cosmological applications.

LSST will increase the number of sources with RM measurements by three orders of magnitude but will create at the same time considerable problems of data limitations and possible systematic issues. Careful approach to object selection will be necessary for high quality results.

Funding request, please specify

Primary authors: Prof. CZERNY, Bozena (Center for Theoretical Physics); Dr PRINCE, Raj (Department of Physics, Institute of Science, Banaras Hindu University, Varanasi); PANDA, Swayamtrupta (Laboratorio Nacional de Astrofísica, Itajuba); Mr JAISWAL, Vikram K. (Center for Theoretical Physics)

Presenter: Prof. CZERNY, Bozena (Center for Theoretical Physics)

Session Classification: Reverberation Mapping