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Decrypting AGN Spectra

Friday 14 March 2025 16:05 (1h 55m)

(Presentation and/or progress poster)

I am developing software to decrypt the complex UV-optical spectra of the gaseous region surrounding accreting supermassive black holes (SMBHs), such that we may advance our understanding of central SMBHs further. Emission from these regions is cryptic at best. Due to the highly energetic environment, physical gas components which contribute to the UV-optical spectrum move at high speeds, causing severe emission line blending. It is therefore necessary to investigate how these complex spectra may be decomposed using techniques which have both physical and statistical grounds, while also ensuring that the software is fast enough to compete with its other well-established counterparts. Although the resultant code has many moving parts, relying on even more statistical tests, the poster/talk will describe the overall approach to tackling a central problem which after 60 years has not been properly addressed.

Field of study

Astrophysics

Supervisor

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Session Classification: Poster session: Enjoy the posters!