

## Astronomy & Astrophysics Division Seminar

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Title : Probing the central engine in Seyfert 1 galaxies

Speaker : Dr. Main Pal (PRL, Ahmedabad)

Date : 08.02.2018 (Tuesday)

Time : 16:00 Hrs

Venue : Seminar Room # 113/114 (Thaltej Campus)

### **Abstract:**

Understanding the nature of the unresolved central engine has reached to a great level in Seyfert 1 galaxies. Though we do not understand actual character of the central engine, we study these sources through timing as well as spectroscopic tools. Using these tools, we investigate them in the multi-wavelength range such as the UV/Optical as well as the X-ray bands. One of the major interest is to understand the UV/Optical emission variability and its connection to the X-ray emission. In this direction, I will be discussing about the recent results on a narrow line Seyfert 1 galaxy NGC 4593 and a broad line Seyfert 1 galaxy 1H 0419-577. In the NGC 4593, I have made a detailed study on strongly correlated UV/Optical/X-ray emission and I found that the real disk may not be as the predicted one Shakura-Sunyaev standard disk. In the 1H 0419-577, the marginally correlated UV/Optical/X-ray emission show a complex origin of the UV/Optical variability possibly a mixture of reprocessing and the changes in the geometry of X-ray emitting corona. I will also present some ongoing work on a NLS1 Mrk 766. This shows moderate harder when brighter state and soft emission is leading to the hard emission.

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