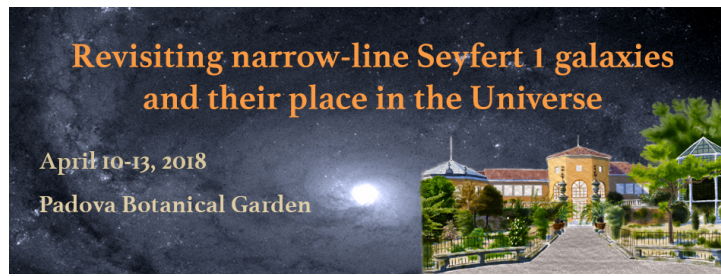


Revisiting narrow-line Seyfert 1 galaxies and their place in the Universe



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The variability of soft X-ray excess and UV emission : a case study of a NLS1 II Zw 177

Thursday 12 April 2018 10:50 (20 minutes)

Narrow Line Seyfert 1 (NLS1) galaxies are a unique class of active galactic nuclei. This class shows rapid variability in the X-ray and the UV/optical bands. Normally, the NLS1 consists of strong soft excess below ~2 keV and the broad / narrow iron lines near 6 keV along with dominating power-law continuum in the X-ray band. The origin of the soft X-ray excess is a mystery since its discovery in 1990's. We present the results from our own ~130 ks and an old ~13 ks XMM-Newton observations of a NLS1 II Zw 177. We found strong soft excess below 2 keV in both observations and we applied physical models such as the blurred reflection from inner ionized accretion disk and the optically thick, cool Comptonization to investigate the origin of soft excess. Our study reveals that soft X-ray excess is described very well by the blurred reflection from the partially ionized disk as well as by the optically thick, cool Comptonization. Interestingly, time resolved spectroscopy with U band exposures and corresponding X-ray favors that the soft X-ray excess is likely due to the blurred reflection phenomenon. The changes in the UV emission is possibly related to the variations in the accretion flow.

Motivation

Gathering of all Astronomers working in a similar research field is always fruitful and such a meeting enhances the interaction among Astronomers. Such a meeting becomes very important when you are about to complete your research and want to tell your work to the community directly. This is why I am very much interested to give a presentation of my work on NLS1.

Grant

yes

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