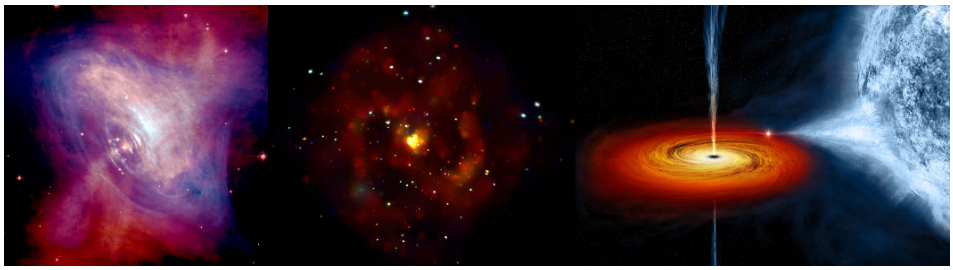

Contribution ID: **82** Type: **not specified**

# On the properties of corona in Seyfert 1 galaxies

*Tuesday, April 4, 2023 12:10 PM (15 minutes)*

In the radio-quiet category of active galactic nuclei (AGN), the observed X-ray emission is believed to originate in the hot corona close to the vicinity of the accretion disk. Despite the numerous X-ray studies on AGN, we still do not have a clear understanding of the nature of the corona, such as its geometry, shape, location and the physical processes that power it. Parameters that can put constraints on the nature of the X-ray corona in AGN are the power law index and the high energy cut-off in the observed X-ray continuum. During the last decade, there has been progress in our understanding of the corona in AGN, owing to the availability of high signal-to-noise data covering a wide range of energies from NuSTAR. Utilizing the data from NuSTAR, we have carried out a systematic investigation of the coronal properties of a sample of about 140 Seyfert 1 type AGN. Of these, we could determine the temperature of the corona in about 36 sources from the physical model fits to the observed X-ray spectra. We investigated various correlations between the corona's properties and the AGN's physical properties from these measurements. Also, from analysis of multi-epoch data available for a few sources, we found evidence for variation in the temperature of the corona in two sources, namely MCG+08-11-011 and NGC 3227. Details of the results will be presented in the meeting.

## Presentation Type

Oral

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