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The XMM-Newton and NuSTAR monitoring campaign of MrK 359: a close view of the inner flows

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We conducted a broadband multi-epoch campaign to observe the nearby Narrow Line Seyfert 1 galaxy Mrk 359. The monitoring consisted in 5 simultaneous XMM-Newton/NuSTAR observations (50 ks each) over a timescale of 10 days. During the campaign, Mrk 359 showed significant intra-observation variability, as well as among the pointings. Changes in the spectral slope occurred down to days timescales. A remarkable and variable soft-excess dominates the soft X-ray band.
Besides a prominent and variable Fe Kalpha emission line, statistically significant absorption features at higher energies are also observed suggesting the presence of outflowing material.
We report on the broadband phenomenological modelling which reproduces the data-set, with particular emphasis on physically motivated Comptonisation models in a two-corona scenario.
Finally, the obtained results on Mrk 359 will be discussed and compared with outcomes from similar monitorings performed in the past.

Topic

Active Galactic Nuclei: accretion physics and evolution across cosmic time

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