



X-RAY ASTRONOMY 2019

Current Challenges and New Frontiers in the Next Decade

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Polarimetry of GRS 1915+105 in thermal state with the future IXPE mission

Friday, September 13, 2019 8:12 PM (2 minutes)

I will summarize our recent results on X-ray polarization simulations for the X-ray binary GRS 1915+105 in thermal state with the aim to assess the capability of the future X-ray polarimetry measurements to put independent constraints on black hole spin and orientation of the system. For this purpose, we simulate X-ray polarimetric properties of GRS 1915+105 for the planned Imaging X-ray Polarimetry Explorer (IXPE) satellite. For the simulations, we employ our recently developed KYNBB code to calculate the Stokes parameters using a multicolor black body emission model accounting for thermal radiation from the disk accretion (Dovčiak et al., 2008). We will present our results of the fitting analysis of the simulated data to show the precision of constraints on black hole spin and orientation for different exposures of the planned observation.

Topic

Future missions

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