«A Microquasar Odyssey: Unveiling the Complexities»



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X-ray polarimetry in Microquasars

X-ray polarimetry provides a powerful new window into the geometry and physical conditions of the innermost regions of microquasars. In this review, I will present recent results from the IXPE mission that have revealed the X-ray polarimetric properties of accreting compact objects across different accretion states. These polarimetric signatures offer direct insight into scattering environments and emission mechanisms near the event horizon, placing constraints on coronal geometry, its optical depth, system inclination, and potential misalignment with the binary orbit. I will also discuss how complementary polarimetric observations in the optical and radio bands contribute to a unified, multiwavelength view of accretion and ejection in microquasars. Case studies of key black hole systems will illustrate how X-ray polarimetry is reshaping our understanding of relativistic accretion flows.

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