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The Homogeneous MeerKAT & Swift XRT Radio:X-ray Plane

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The radio:X-ray plane is a valuable tool for probing the connection between core accretion and jet production in X-ray binaries during their hard spectral states. Although this correlation was once thought to be universal – and was extended to active galactic nuclei via a mass term –its universality is now questioned due to numerous 'outliers'that deviate from the 'standard'relation. To date, large studies of the plane have combined data from multiple telescopes, introducing uncertainties when converting fluxes to a common frequency and accounting for differing telescope systematics. ThunderKAT was a five-year programme monitoring outbursting X-ray binaries with the MeerKAT radio telescope, and ran alongside SwiftKAT, which obtained quasi-simultaneous Swift/XRT observations. Using these data, we have compiled the largest homogeneous radio:X-ray plane for X-ray binaries to date. I will present the results of this study, and discuss what the refined correlation reveals about accretion and jet physics.

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