

Black Hole Spin in AGN and its Implications for Galaxy Evolution

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The angular momentum of a supermassive black hole (SMBH) is a vitally important quantity in astrophysics. Measuring the spins of SMBHs in active galactic nuclei (AGN) can inform us about the relative role of gas accretion vs. mergers in recent epochs of the life of the host galaxy and its AGN. Black hole spin is also thought to play a pivotal role in triggering relativistic jets, enabling the SMBH to influence its surroundings out to scales much larger than its gravity allows. Advances in theoretical modeling as well as observational sensitivity in the Chandra/XMM-Newton/Suzaku era are finally producing robust constraints on the spins of a handful of SMBHs, but this science is still very much in its infancy. I will discuss our current knowledge of the distribution of SMBH spins in the local universe. I will also address prospects for improving the accuracy, precision and quantity of these spin constraints in the next decade and beyond with instruments such as NuSTAR, Astro-H and ATHENA.

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