

Probing the Genesis of Supermassive Black Holes: Emerging Perspectives from JWST and Expectation toward New Wide-Field Survey Observations

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UNCOVERing the Nature of "Little Red Dots"

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One of the most surprising results from JWST has been the discovery of a large population of compact red sources at $z > 4$, with very red rest-frame optical colors, blue UV slopes, and broad Balmer lines. The compact sizes and luminous broad lines strongly suggest that these objects are powered by accreting supermassive black holes, but their lack of evidence for X-ray emission or hot dust in the mid-infrared calls that conclusion into question. Regardless, their high number densities ($\sim 2\text{--}5\%$ of the galaxy population) makes them an important new contribution to the high-redshift galaxy census. I will discuss our ongoing efforts to understand the nature of this population, and what they may teach us about the growth of black holes and/or galaxies.

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