

Astrophysics Seminar

Monday, March 27, 2017



The Birth and Growth of Supermassive Black Holes: Coming of Age with Space Telescope Imaging Spectrographs

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The past 20 years have revealed that supermassive black holes play an essential role in the formation and growth of galaxies. Every massive galaxy hosts a supermassive black hole in its center, and the black hole's mass is tightly coupled to the mass of the galaxy. Remarkably, the black hole - galaxy connection has been "self-maintained" from the adolescent universe to the current epoch, in both Milky-Way progenitors and massive cluster galaxies, governed by coupled black hole accretion and galaxy star formation. Until recently the "chicken-or-egg" birth of galaxies and supermassive black holes has remained mysterious. I will show how imaging spectrograph surveys with the Hubble Space Telescope are revolutionizing our understanding of black hole formation, revealing a fossil record of massive black hole seeds in tiny galaxies. Similar imaging spectrographs are flagship survey instruments on the upcoming JWST, WFIRST, and Euclid space telescopes, enabling an exciting future for understanding the birth of primordial galaxies and their black hole seeds.



3:30pm in CAS 502. Refreshments served at 3:15pm in CAS 500.

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Next Week
Esra Bulbul
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