PHYSICS AND ASTRONOMY COLLOQUIUM

Friday, March 20 | 3:30-4:30 p.m. | Planetary Hall Rm 122

Uncovering Representative Growth of Early Massive Black Holes

The Paradigm-Shifting Mysteries Unearthed by JWST

With the launch of JWST, we are uncovering a supposed extreme over-abundance and over-massiveness of z>4 supermassive black holes, that are calling into question many pre-JWST assumptions and models. We are potentially on the brink of a paradigm shift in early BH evolution -- but to robustly test and potentially break accepted paradigms, we need deeper observations, with greater resolution, and multi-wavelength perspectives.

In this talk, I will discuss the physical nature of the early accreting massive black hole candidates. While these new sources are exciting, they may only represent the tip of the iceberg of the total massive black hole demography at early times, with a larger population of heavily obscured sources, invisible to JWST, still to be explored. I will discuss our novel selection algorithm of these sources, and the implications these results have in the context of feedback and the high-z AGN candidates solely identified with JWST.

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