



PHYSICS AND ASTRONOMY COLLOQUIUM

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“How to Build a Big Galaxy”

Abstract

The most massive galaxies in the universe are rare, but because of this, their formation history imposes some of the strongest constraints on our models of galaxy formation. In the local universe, massive galaxies like M87 appear relatively dull, with elliptical morphologies, old stars, and little ongoing star formation. For decades, archeological studies predicted that most of the action during these galaxies' formation must have occurred at much higher redshift ($z > 2$). With the first deep and wide field surveys of the near infrared sky coming online, we can now directly observe the progenitors of local massive galaxies as they are forming. I will show that galaxy formation are in fact extremely dynamic, with huge bursts of dust-obscured star formation,