Pre-Blue-Nugget-Stage

Blue-Nugget-Stage

Post-Blue-Nugget-Stage







High-resolution images from a computer simulation of a young galaxy going through the 3 phases of evolution







Same images from the computer simulation of a young galaxy going through the 3 phases of evolution, as it would be observed by Hubble Space Telescope



Hubble Space Telescope images of distant young galaxies classified into the 3 phases with a deep learning algorithm

Examples of simulated galaxy evolution through the 3 stages: Pre-Blue Nugget (often elongated, i.e. pickle shaped), Blue Nugget (compaction phenomenon: gas infall leads to central starburst), and Post-Blue Nugget (often with star-forming disk), with similar galaxies observed by Hubble Space Telescope. The width of each image is approximately 100,000 light years. Credits: simulations Daniel Ceverino and Joel Primack, simulated images Greg Snyder and Marc Huertas-Company, HST observations CANDELS.