New Scientific Capabilities of the HST WFC3

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Abstract.

I will describe some of the new scientific capabilities enabled by the extended wavelength coverage (0.2-1.7μm), large suite of specialized filters, and improved "discovery efficiency" of HST’s Wide Field Camera 3. Some examples from Cycle 17 programs include the star formation histories of nearby disk and early-type galaxies (from both resolved sources and integrated light), discovery of multi-age pre-main-sequence populations in massive Local Group star clusters, the evolutionary state of galaxies at intermediate redshifts (z ~ 1-4), and identification of candidates for the highest redshift galaxies at z ~ 8-9 in the Hubble Ultra Deep Field.