

UCLA Department of Physics & Astronomy

COLLOQUIUM

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Opening Pandora's Box: Revealing the Hidden Content of a Forming Super Star Cluster with JWST

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One of the most spectacular nebulae in the local universe is in the dwarf galaxy, NGC5253. Gas heated by a young cluster containing a million stars provides a spectacle 1000 times more powerful than the Great Nebula in Orion, the “supernebula”. How stars can continue to be born within this tiny cluster, only 10 light years in size, is a mystery. Until JWST, it has been nearly impossible to “see” into the central nebula and cluster. But this has changed. We discuss the power of massive stars, the diagnostic spectral lines that are now available in the mid-infrared, and how the spectroscopic capabilities of the MIRI-MRS instrument on JWST have changed our view of this super star cluster.