

Fifth Workshop on Millimetre Astronomy in Italy



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Andrea Ferrara - The Earliest Dusty Galaxies. Lessons from ALMA and JWST (Review Invited)

Wednesday, 14 June 2023 09:00 (30 minutes)

One of the major surprises provided by the first months of early Universe observations by JWST has been the detection of a stunning overabundance of luminous, and likely massive, galaxies at redshift $z > 10$. As the first spectroscopic confirmations are accumulating, it is crucial and timely to investigate these important and yet unknown aspects of early galaxy formation and evolution. At a time at which ALMA has laid the foundations of our understanding, Webb seems to hint at a possibly conflicting scenario. These (apparent?) contradictions need to be solved in the framework of studies that combine theory, cosmological simulations and the most advanced IR/sub-mm observations. I will analyze the possible new scenarios and propose some preliminary answers to the above questions.

Session Classification: Cosmology, high- z Universe, galaxy clusters