PAiP-2025 conference "Particle Astrophysics in Poland"



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Quenching routes and dust attenuation in distant quiescent galaxies observed with JWST

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Unveiling the routes galaxies take to quiescence is one of the most open challenges in galaxy evolution. While the most of the studies focused on characterizing quiescent galaxies (QG) across cosmic time through their stellar properties using optical/near-infrared (NIR) data, the mid-infrared regime was only recently examined thanks to the advent of JWST. The need to understand the MIR emission in QGs has been emphasized due to recent discoveries of a peculiar population of quiescent, but dust-rich galaxies at high-redshifts (z < 3).

In this talk, I will present the preliminary results of a first study that investigated the quenching routes and the physical properties of MIRI-bright, dust-attenuated QGs in the distant universe. We selected a sample of quenched galaxies from the CEERS survey with NIRCam and MIRI detection and studied the influence of the star formation histories on their estimated dust-related parameters.

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Track Classification: Multiwavelength Surveys & CMB