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The role of group environment in quenching star formation: Results from the J-NEP field

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Abstract

In this presentation, we report the results derived from analyzing the J-NEP field observed using the Pathfinder camera. We characterize the properties of stellar populations by fitting the J-PAS data with the parametric code BaySeAGal, focusing on galaxy members of groups detected by AMICO, as well as a sample of galaxies situated in filaments from the entire J-NEP sample down to an apparent magnitude limit of r ¡ 22.75 (AB). We identify blue, red, quiescent, and transition (blue quiescent or green valley) galaxy populations based on their intrinsic colors and specific star formation rates. Furthermore, we estimate the fraction of red galaxies within groups, the excess fraction of quenched galaxies, and the evolution of the quenching rate within groups. These findings are compared with those from other fields, allowing us to assess the efficiency of group galaxy quenching as a function of the group or cluster mass

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