

Cosmic Cartography 2022: Exploring the Cosmic Web and Large-Scale Structure



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Study environment and mass quenching through statistical analysis of RQGs

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In this work, we try to understand the environmental and mass effects of quenching. Recently-quenched galaxies (RQGs) can deliver information about the quenching scenario. A statistical sample of RQGs is necessary for studying mass and environment dependence of quenching. However, the rarity of RQGs hampers statistical spectroscopic analysis. As a pilot work, we conduct a statistical photometric study of RQGs. Using the rest-frame UVJ diagram, we select ~250 RQGs from the centre to the outskirts of clusters and separate them by quenching timescale. This method is consistent with current DEIMOS galaxy spectra. Now, PFS' large FOV can significantly improve the efficiency of the RQG spectroscopic survey. With statistical RQG spectroscopic data, we will interpret the quenching scenario better.

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