

# Wide-Field Narrow-Band Imaging of Emission-Line Galaxies: Probing Extended and Low Surface Brightness Structures.

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The Javalambre Photometric Local Universe Survey (J-PLUS) and the Javalambre Physics of the Accelerated Universe Astrophysical Survey (J-PAS) are two northern sky surveys conducted with the 80 cm and 250 cm telescopes at the Javalambre Astrophysical Observatory. Using these surveys, We present wide-field narrow-band imaging studies of emission-line galaxies to study their extended features.

We investigate H $\alpha$  emission in nearby galaxies at  $z < 0.016$  utilizing the 12-filter system of J-PLUS. The H $\alpha$  maps are generated with the J-PLUS Spatially Resolved H $\alpha$  Emission (J-SHE) pipeline (Rahna et al. 2025a). This study reveal the distribution of ionized gas and ongoing star formation using J-PLUS DR3 observations, offering insights into how feedback and environment regulate galactic ecosystems. In addition, using J-PAS data, we study the emission-line properties of a newly discovered Ly $\alpha$  nebula, RaJav, identified in the early J-PAS data release (Rahna et al. 2025b). RaJav hosts a pair of quasars a bright SDSS quasar and a newly identified fainter companion separated by approximately 60 kpc. The current observation of the nebula indicate that quasar photoionization is the primary excitation mechanism, with possible contributions from star formation and quasar outflows. This discovery highlights the potential of wide-field surveys such as J-PAS to uncover extreme Ly $\alpha$  nebulae, offering new insights into the interaction between quasars, the circumgalactic medium, and the cosmic web.

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