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## Searching for high-redshift galaxies - Ultra-blue UV continuum slopes from COSMOS-Web

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The epoch of cosmic dawn, occurring in the first few hundred million years after the Big Bang, marks a critical period in the formation of the first galaxies and the reionization of the Universe. With the unprecedented capabilities of the James Webb Space Telescope (JWST), deep imaging surveys such as COSMOS-Web have opened a new window into this early era.

In this study, we employ the F150W dropout technique to identify high-redshift galaxy ( $z=12-22$ ). Our approach leverages the Lyman-break method in conjunction with NIRCам imaging, ensuring robust detection of galaxies that are undetected in F150W but clearly visible in F277W and F444W. Our photometric analysis, supplemented by visual inspection to remove spurious detections, yields a final sample of 48 candidates. SED modeling with CIGALE provides photometric redshifts reaching up to  $z\approx 22$ . Our analysis of the UV continuum slopes reveals extremely blue values ( $\beta \leq -3.0$ ), consistent with young, metal-poor, and largely dust-free stellar populations. These results offer important insights into the formation and evolution of galaxies during the early epochs of the Universe and their role in cosmic reionization. Future spectroscopic follow-up will be critical for confirming these findings and refining our understanding of the reionization era.

### Section

Galaxy/Extragalactic

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