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Comparing properties of young and old LAEs

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ABSTRACT

This exploration compares the properties of 1294 Lyman-α Emitters (LAEs) as identified by the Subaru telescope, an expansion upon previous small-sample studies. Using photometric data from the COSMOS-Web catalog, we used CIGALE to obtain the age, stellar mass, star formation rate, specific star formation rate, E(B-V), and the UV beta slope for each galaxy. Dividing the sample into old LAEs (older than 100 Myr) and young LAEs (younger than 100 Myr), we found that old LAEs tend to be more massive, have a lower SFR, and are dustier than young LAEs. The relationship between young and old LAEs in the 5 examined redshifts remains the same, with a few exceptions, indicating that LAE evolution is consistent across redshifts.