

**Spectroscopic Determination of the UV Luminosity Functions from
 $z=1.4-3.5$**

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Abstract

We have amassed the largest sample of spectroscopically-confirmed star-forming galaxies at $z \sim 2$, selected by their rest-frame UV colors, with over 1000 spectroscopic redshifts and 8200 photometric candidates in 7 uncorrelated fields. Monte Carlo simulations are used to quantify the incompleteness of our sample, taking into account scattering due to (a) photometric errors and (b) the presence of absorption and emission lines; this latter systematic effect has not been accounted for in previous measurements of the UV luminosity function. We use our joint spectroscopic and photometric samples to constrain the reddening and UV luminosity function of $z \sim 2$ galaxies, and cross-check our extinction estimates using other deep $24 \mu\text{m}$ *Spitzer* MIPS data in the GOODS-N field. Our analysis takes into account a number of systematic effects that were previously neglected, and allows us to make the first completeness-corrected spectroscopic determination of the UV LF and SFR density at $z \sim 2$. I will discuss the implications of our results for the cosmic star formation history.