



HAL
open science

**Erratum: "The Low-redshift Lyman Continuum Survey.
I. New, Diverse Local Lyman Continuum Emitters"
(2022, ApJS, 260, 1)**

Sophia R. Flury, Anne E. Jaskot, Harry C. Ferguson, Gabor Worseck, Kirill Makan, John Chisholm, Alberto Saldana-Lopez, Daniel Schaerer, Stephan R. Mccandliss, Bingjie Wang, et al.

► **To cite this version:**

Sophia R. Flury, Anne E. Jaskot, Harry C. Ferguson, Gabor Worseck, Kirill Makan, et al.. Erratum: "The Low-redshift Lyman Continuum Survey. I. New, Diverse Local Lyman Continuum Emitters" (2022, ApJS, 260, 1). 2024, 10.3847/1538-4365/ad7bb9 . insu-04858879

HAL Id: insu-04858879

<https://insu.hal.science/insu-04858879v1>

Submitted on 30 Dec 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.








L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License



Erratum: “The Low-redshift Lyman Continuum Survey. I. New, Diverse Local Lyman Continuum Emitters” (2022, ApJS, 260, 1)

Sophia R. Flury¹ , Anne E. Jaskot² , Harry C. Ferguson³ , Gabor Worseck⁴, Kirill Makan⁴, John Chisholm⁵, Alberto Saldana-Lopez⁶ , Daniel Schaerer⁶, Stephan R. McCandliss⁷ , Bingjie Wang⁷, N. M. Ford², Timothy Heckman⁷ , Zhiyuan Ji¹, Mauro Giavalisco¹, Ricardo Amorín⁸ , Hakim Atek⁹, Jeremy Blaizot¹⁰, Sanchayeeta Borthakur¹¹, Cody Carr¹², Marco Castellano¹³, Stefano Cristiani¹⁴, Stephane De Barros⁶, Mark Dickinson¹⁵, Steven L. Finkelstein⁵, Brian Fleming¹⁶, Fabio Fontanot¹⁴, Thibault Garel⁶, Andrea Grazian¹⁷, Matthew Hayes¹⁸, Alaina Henry³, Valentin Mauerhofer⁶, Genoveva Micheva¹⁹, M. S. Oey²⁰, Goran Ostlin¹⁸, Casey Papovich²¹, Laura Pentericci¹³, Swara Ravindranath³, Joakim Rosdahl¹⁰, Michael Rutkowski²², Paola Santini¹³, Claudia Scarlata¹², Harry Teplitz²³, Trinh Thuan²⁴, Maxime Trebitsch²⁵, Eros Vanzella²⁶, Anne Verhamme^{6,10}, and Xinfeng Xu⁷

¹ Department of Astronomy, University of Massachusetts Amherst, Amherst, MA 01002, USA; sflury@umass.edu

² Department of Astronomy, Williams College, Williamstown, MA 01267, USA

³ Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218, USA

⁴ Institut für Physik und Astronomie, Universität Potsdam, Karl-Liebknecht-Str. 24/25, D-14476 Potsdam, Germany

⁵ Department of Astronomy, University of Texas at Austin, Austin, TX 78712, USA

⁶ Observatoire de Genève, Université de Genève, 51 Ch. des Mailletes, 1290 Versoix, Switzerland

⁷ Department of Physics and Astronomy, Johns Hopkins University, Baltimore, MD 21218, USA

⁸ Departamento de Astronomía, Universidad de La Serena, Av. Juan Cisternas 1200 Norte, La Serena, Chile

⁹ Institut d’astrophysique de Paris, CNRS UMR7095, Sorbonne Université, 98bis Boulevard Arago, F-75014 Paris, France

¹⁰ Univ Lyon, Univ. Lyon 1, ENS de Lyon, CNRS, Centre de Recherche Astrophysique de Lyon UMR5574, F-69230, Saint-Genis-Laval, France

¹¹ School of Earth & Space Exploration, Arizona State University, Tempe, AZ 85287, USA

¹² Minnesota Institute for Astrophysics, School of Physics and Astronomy, University of Minnesota, 316 Church Street SE, Minneapolis, MN 55455, USA

¹³ INAF, Osservatorio Astronomico di Roma, via Frascati 33, I-00078 Monteporzio Catone, Italy

¹⁴ INAF-Osservatorio Astronomico di Trieste, via G. B. Tiepolo 11, I-34143, Trieste, Italy

¹⁵ National Optical-Infrared Astronomy Research Laboratory, Tucson, AZ, USA

¹⁶ Laboratory for Atmospheric and Space Physics, Boulder, CO, USA

¹⁷ INAF-Osservatorio Astronomico di Padova, Vicolo dell’Osservatorio 5, I-35122, Padova, Italy

¹⁸ The Oskar Klein Centre, Department of Astronomy, Stockholm University, AlbaNova, SE-10691 Stockholm, Sweden

¹⁹ Leibniz-Institute for Astrophysics Potsdam, An der Sternwarte 16, 14482 Potsdam, Germany

²⁰ Department of Astronomy, University of Michigan, Ann Arbor, MI 48109, USA

²¹ George P. and Cynthia Woods Mitchell Institute for Fundamental Physics and Astronomy, Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA

²² Department of Physics and Astronomy, Minnesota State University, Mankato, MN 56001, USA

²³ Infrared Processing and Analysis Center, California Institute of Technology, Pasadena, CA 91125, USA

²⁴ Astronomy Department, University of Virginia, Charlottesville, VA 22904, USA

²⁵ Astronomy, Kapteyn Astronomical Institute, Landleven 12, 9747 AD Groningen, The Netherlands

²⁶ INAF, Osservatorio Astronomico di Bologna, via Gobetti 93/3 I-40129 Bologna, Italy

Received 2024 September 13; published 2024 December 6

Materials only available in the [online version of record](#): machine-readable tables

Formatting of the machine-readable tables accompanying the published article included an inadvertent transposition of some values to the right of the decimal place. The error occurred when the first decimal place is zero valued in various entries of Tables 3–7. This formatting error affects only a small subset of entries, 15% or less, is typically small relative to the measured value, and largely within the uncertainty of the reported values except in rare cases including some values reported as logarithms. This error does not occur in the published Lyman continuum fluxes, escape fractions $f_{\text{esc}}^{\text{LyC}}$, or related detection probabilities $P(>N|B)$.

Papers in the LzLCS collaborations are unaffected by this formatting error as they have relied on an internally formatted version rather than the machine-readable tables available through the publisher. The formatting error does not occur in the example tables provided in the published article. Previous publications using the uncorrected values will, by and large, remain consistent with the corrected tables.



Original content from this work may be used under the terms of the [Creative Commons Attribution 4.0 licence](#). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Table 3
Flux Ratios Measured from the SDSS Optical Spectra for the Combined LzLCS and Literature Samples

Object	EW(H β) (Å)	$\log_{10} R_{23}$	$\log_{10} O_{32}$	$\log_{10} O_{31}$	$\log_{10} [O\text{ I}]/H\beta$
J003601+003307	160.469 \pm 6.509	0.938 \pm 0.024	1.113 \pm 0.039	>2.621	<-1.836
J004743+015440	61.511 \pm 1.137	0.956 \pm 0.024	0.655 \pm 0.026	>2.870	<-2.124
J011309+000223	40.896 \pm 1.775	0.964 \pm 0.076	0.357 \pm 0.086	>2.349	<-1.668
J012217+052044	87.255 \pm 3.011	0.942 \pm 0.041	0.881 \pm 0.047	>2.553	<-1.790
J012910+145935	73.370 \pm 1.180	0.855 \pm 0.026	0.340 \pm 0.031	1.717 \pm 0.088	-1.150 \pm 0.088

(This table is available in its entirety in machine-readable form in the [online article](#).)

Table 4
Properties Derived from the SDSS Optical Spectra for the Combined LzLCS and Literature Samples

Object	$\log_{10} \text{SFR}_{H\beta}$	n_e (cm^{-3})	T_e (K)	$12 + \log_{10} \left(\frac{O}{H} \right)$
J003601+003307	1.184 \pm 0.024	100	15,770 \pm 970	7.781 \pm 0.037
J004743+015440	1.336 \pm 0.024	1610 \pm 150	13,820 \pm 850	8.029 \pm 0.037
J011309+000223	0.699 \pm 0.076	6590 \pm 180	11,640 \pm 1060	8.329 \pm 0.115
J012217+052044	0.971 \pm 0.041	100	16,220 \pm 1760	7.799 \pm 0.064
J012910+145935	1.125 \pm 0.026	2600 \pm 120	10,000 \pm 250	8.411 \pm 0.044

(This table is available in its entirety in machine-readable form in the [online article](#).)

Table 5
Properties Derived from the HST/COS G140L Spectra for the Combined LzLCS and Literature Samples

Object	M_{1500}	r_{50} (kpc)	β_{1200}	$f_{1100} \times 10^{17}$ ($\text{erg s}^{-1} \text{cm}^{-2} \text{Å}^{-1}$)	EW(Ly α) (Å)	$\log_{10} \text{SFR}_{f_{1100}}$ ($M_{\odot} \text{yr}^{-1}$)
J003601+003307	-18.058 \pm 0.103	0.445 \pm 0.148	-2.090 \pm 0.328	6.445 ^{+0.418} _{-0.381}	93.090 \pm 9.033	0.038 \pm 0.028
J004743+015440	-19.977 \pm 0.109	0.618 \pm 0.145	-2.380 \pm 0.298	38.611 ^{+2.787} _{-2.507}	41.526 \pm 4.427	1.363 \pm 0.031
J011309+000223	-19.825 \pm 0.104	0.627 \pm 0.133	-1.990 \pm 0.253	36.421 ^{+2.623} _{-3.649}	31.291 \pm 3.560	1.203 \pm 0.031
J012217+052044	-19.529 \pm 0.082	0.713 \pm 0.151	-1.609 \pm 0.274	23.193 ^{+1.427} _{-1.595}	70.616 \pm 6.793	0.915 \pm 0.027
J012910+145935	-19.868 \pm 0.055	0.636 \pm 0.127	-1.672 \pm 0.205	50.705 ^{+2.979} _{-3.600}	39.593 \pm 4.084	1.354 \pm 0.026

(This table is available in its entirety in machine-readable form in the [online article](#).)

Table 6
Properties Derived Jointly from HST/COS and SDSS Data for the Combined LzLCS and Literature Samples

Object	$f_{\text{esc}}^{\text{Ly}\alpha}$	$\log_{10} \Sigma_{\text{SFR}, H\beta}$	$\log_{10} \Sigma_{\text{SFR}, f_{1100}}$	$\log_{10} M_*$
J003601+003307	0.116 \pm 0.011	1.088 \pm 0.146	-0.058 \pm 0.147	8.754 ^{+0.444} _{-0.425}
J004743+015440	0.194 \pm 0.019	0.956 \pm 0.105	0.983 \pm 0.107	9.203 ^{+0.439} _{-0.430}
J011309+000223	0.398 \pm 0.075	0.307 \pm 0.119	0.811 \pm 0.098	9.111 ^{+0.438} _{-0.430}
J012217+052044	0.594 \pm 0.069	0.467 \pm 0.100	0.410 \pm 0.096	8.762 ^{+0.448} _{-0.423}
J012910+145935	0.193 \pm 0.017	0.719 \pm 0.091	0.948 \pm 0.091	9.154 ^{+0.583} _{-0.305}

(This table is available in its entirety in machine-readable form in the [online article](#).)

Table 7
Measurements of the LyC

Object	$\lambda_{\text{LyC}}^{\text{a}}$ (Å)	Dark (counts)	Sky (counts)	Source (counts)	$P(>N B)$	$f_{\text{LyC}} \times 10^{17\text{b}}$ ($\text{erg s}^{-1} \text{cm}^{-2} \text{Å}^{-1}$)
J003601+003307	860	62.388	19.298	13.314	0.066	<0.114
J004743+015440	860	12.438	6.664	25.898	1.305×10^{-7}	$1.557_{-0.407}^{+0.457}$
J011309+000223	890	8.970	6.471	20.559	2.282×10^{-6}	$1.445_{-0.428}^{+0.490}$
J012217+052044	850	34.209	5.945	34.845	3.045×10^{-7}	$1.118_{-0.266}^{+0.292}$
J012910+145935	890	11.029	9.734	2.237	0.266	<0.556

Notes.

^a Rest-frame central wavelength of 20 Å LyC spectral window.

^b LyC flux density corrected for MW extinction.

(This table is available in its entirety in machine-readable form in the [online article](#).)

Acknowledgments

S.R.F. acknowledges support from NASA/FINESST (grant No. 80NSSC23K1433).

Support for this work was provided by NASA through grant No. HST-GO-15626 from the Space Telescope Science Institute. Additional work was based on observations made with the NASA/ESA Hubble Space Telescope, obtained from the data archive at the Space Telescope Science Institute from HST proposals 13744, 14635, 15341, and 15639. STScI is operated by the Association of Universities for Research in Astronomy, Inc. under NASA contract NAS 5-26555.

Funding for the Sloan Digital Sky Survey IV has been provided by the Alfred P. Sloan Foundation, the U.S. Department of Energy Office of Science, and the Participating Institutions. SDSS-IV acknowledges support and resources from the Center for High Performance Computing at the University of Utah. The SDSS website is www.sdss.org. SDSS-IV is managed by the Astrophysical Research Consortium for the Participating Institutions of the SDSS Collaboration.

Facility: HST

Software: `numpy` (S. van der Walt et al. 2011), `pandas` (pandas development team 2020).

ORCID iDs

Sophia R. Flury  <https://orcid.org/0000-0002-0159-2613>

Anne E. Jaskot  <https://orcid.org/0000-0002-6790-5125>

Harry C. Ferguson  <https://orcid.org/0000-0001-7113-2738>

Alberto Saldana-Lopez  <https://orcid.org/0000-0001-8419-3062>

Stephan R. McCandliss  <https://orcid.org/0000-0003-0503-4667>

Timothy Heckman  <https://orcid.org/0000-0001-6670-6370>

Ricardo Amorín  <https://orcid.org/0000-0001-5758-1000>

References

pandas development team 2020, pandas-dev/pandas: Pandas, latest, Zenodo, doi:10.5281/zenodo.3509134

van der Walt, S., Colbert, S. C., & Varoquaux, G. 2011, *CSE*, 13, 22