

Alberto SALDANA-LOPEZ, PhD – Curriculum Vitae

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🌐 WEBSITE: <https://asalda.github.io/>
📖 PUBLICATIONS: as first author... 5 papers (258 citations) – in total... 45 papers
📡 TELESCOPE TIME: HST (40 orbits), VLT (32 hours)

My research focuses on understanding the physical conditions that lead to the Reionization of the Universe a billion years after the Big Bang. In particular, I use space-based observatories to study the interplay between the stars, gas and dust within nearby, starburst galaxies, to decipher how the (elusive) ionizing radiation escaped from their high-redshift counterparts during the Dawn of cosmic star formation.

Education

2023 - present	Postdoctoral Fellow Department of Astronomy, Stockholm University (SU, Sweden)
2019 – 2023	Astrophysics PhD , University of Geneva (UniGE, Switzerland) Thesis: <i>Properties of star-forming galaxies contributing to reionization</i> 📄 https://doi.org/10.13097/archive-ouverte/unige:174485 Advisor: Prof. D. Schaerer
2018 – 2019	Astrophysics MSc , Complutense University of Madrid (UCM, Spain)
2014 – 2018	Physics BSc , Complutense University of Madrid (UCM, Spain)

Research and teaching experience

2023 – present	PhD thesis advisor for Alice R. Young, Stockholm University (SU) Thesis: <i>Observational constraints on SMBHs seeding mechanisms</i>
2024 – 2025	PhD thesis committee for Olof Nebrin, Stockholm University (SU) Thesis: <i>Lyα feedback prevails at Cosmic Dawn</i>
2024 – 2025	BSc thesis co-advisor for Pontus Strand, Stockholm University (SU) Thesis: <i>An unbiased sample of strong UV emitters at Cosmic Noon</i>
2023 – 2026	Guest lecture , Stockholm University (SU) Course: <i>Observational Astrophysics I</i> (AS7003, graduate)
2023 – 2024	Guest lecture , Stockholm University (SU) Course: <i>Physics of the Interstellar Medium</i> (AS7001, graduate)
2019 – 2021	Teaching Assistant , University of Geneva (UniGE) Course: <i>Astrophysics Lab</i> (13P950, undergraduate)
2018 – 2019	Research Assistant , High Energy Group (UCM)
2017 – 2018	Research Assistant , International Nanotechnology Laboratory (INL)
2016 – 2017	Research Assistant , Dark Energy Survey Group (CIEMAT)
2015 – 2016	Research Assistant , LASER Processing Group (CSIC)

Invited talks and seminars

October 3rd, 2025	Astronomy Seminar, University of Minnesota (UMN, USA) <i>A low-redshift look to reionization with star-forming galaxies</i>
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October 29th, 2024	STScI/JHU Galaxies Journal Club (STScI, USA) <i>The average UV emission line spectra of high-redshift galaxies</i>
November 17th, 2023	Astronomy Seminar, Stockholm University (SU, Sweden) <i>The properties of star-forming galaxies contributing to reionization</i>
May 16th, 2023	Colloquium, Herzberg Astronomy Research Centre (HAA-NRC, Canada) <i>A low-redshift look to reionization with star-forming galaxies</i>
November 7th, 2022	Lunch Seminar, University of Texas at Austin (UT, USA) <i>Ionizing properties of galaxies through the eyes of absorption spectroscopy</i>
March 3rd, 2021	AstroSeminar, California Institute of Technology (Caltech/IPAC, online) <i>An observational determination of the Extragalactic Background Light</i>
February 2nd, 2021	Astronomy Seminar, University of Geneva (UniGE, online) <i>An observational determination of the Extragalactic Background Light</i>
January 27th, 2021	Astronomy Seminar, University of California Riverside (UCR, online) <i>An observational determination of the Extragalactic Background Light</i>
January 25th, 2021	Cosmo Club seminar, University of California Santa Cruz (UCSC, online) <i>An observational determination of the Extragalactic Background Light</i>
January 22nd, 2021	Astronomy Seminar, University of Minnesota (UMN, online) <i>An observational determination of the Extragalactic Background Light</i>

Contributed talks (relevant in bold)

May 27th, 2025	Cosmic Frontier Center 2025 conference (Austin, USA) <i>Feedback and dynamical masses in high-z galaxies</i>
May 12th, 2025	2025 STScI Spring Symposium (Baltimore, USA) <i>Lyα feedback prevails at Cosmic Dawn</i>
April 7th, 2025	First galaxies meeting (Oxford, UK) <i>Feedback and dynamical masses in high-z galaxies</i>
July 1st, 2024	Cosmic Dawn at High Latitudes Workshop (Stockholm, Sweden) <i>A low-redshift look to reionization with star-forming galaxies</i>
May 20th, 2024	First Stars VII conference (New York City, USA) <i>The Lyman-alpha and Continuum Origins Survey</i>
January 21st, 2024	Linking galaxy physics from ISM to IGM scales (Sexten, Italy) <i>Ionizing properties of galaxies through the eyes of absorption spectroscopy</i>
January 11th, 2024	DLOCKS-24 Workshop on Galaxy Evolution (Copenhagen, Denmark) <i>Constraining galactic feedback at Cosmic Dawn</i>
April 18th, 2023	Escape of Lyman radiation from galactic labyrinths (Crete, Greece) <i>Ionizing properties of galaxies through the eyes of absorption spectroscopy</i>
September 14th, 2022	CRPropa Workshop on Astroparticle propagation (Madrid, Spain) <i>An observational determination of the Extragalactic Background Light</i>

July 4th, 2022	From galaxies to cosmology with spectroscopic surveys (Marseille, France) <i>The ionizing properties of star-forming galaxies at $3 \leq z \leq 5$</i>
June 27th, 2022	European Astronomical Society EAS Meeting (Valencia, Spain) <i>The ISM properties of low-z Lyman Continuum emitters</i>
March 14th, 2022	The growth of galaxies in the Early Universe VII (Sexten, Italy) <i>The ISM properties of low-z Lyman Continuum emitters</i>
January 14th, 2022	Production and escape of Lyman photons through time and space (UK, online) <i>Unveiling the ISM properties of low-z Lyman Continuum emitters</i>
November 29th, 2021	SAZERAC-SIP Early Galaxy Formation Near and Far (online) <i>Unveiling the ISM properties of low-z Lyman Continuum emitters</i>
May 17th, 2021	STScI Workshop – MOS for Measures of Galaxy Evolution (USA, online) <i>Unveiling the ISM properties of low-z Lyman Continuum emitters</i>
April 12th, 2021	Ninth International Fermi Symposium (South Africa, online) <i>An observational determination of the Extragalactic Background Light</i>
April 12th, 2021	Extragalactic Spectroscopic Surveys: Past, Present and Future (Chile, online) <i>Using LIS UV-lines to select Lyman continuum leaking candidates</i>
September 9th, 2019	VII Meeting on Fundamental Cosmology (Madrid, Spain) <i>An observational determination of the Extragalactic Background Light</i>

Summer and winter schools

May 2022	Severo Ochoa Advanced School on Galaxy Evolution IAA-CSIC, Granada (Spain)
July 2021	International Summer School on the ISM of Galaxies CNRS, France (online)
June 2021	Summer School in Statistics for Astronomers XVI Penn State University, USA (online)

Funding and grants

TBD	HST GO Cycle 33 (ID 18034) awarded funding
\$1,500	STScI 2025 Spring Symposium travel grant
\$1,500	Swedish Academy of Sciences (KVA) mobility grant
\$1,800	Simons Foundation (Flatiron Institute, CfA) travel grant
\$1,500	Swiss Society for Astronomy and Astrophysics (SSAA) mobility grant

Awards and outreach

Awards	Ramón Corbalán Prize 2021 , ‘... for the popularization and education in Nonlinear and Quantum Optics’ - article: <i>Two-photon polymerization</i> , Saldana-Lopez et al. (2020), The Spanish Journal of Physics, Vol.34, No.2
Articles	<i>Fueling or Starving? The Role of Gas Flows in Early Galaxy Evolution</i> , AstroBites (L. Rowland) - adapted from Saldana-Lopez et al. 2025a (submitted to MNRAS)
Blogs	<i>El blog de Laniakea</i> , https://elblogdelaniakea.wordpress.com/

Telescope Observing Proposals (as Principal Investigator, PI)

- HST / GO33** *Spatially resolving the conditions for ionizing radiation escape in galaxies*
PI: Saldana-Lopez (ID 18034)
Instrument: **HST/WFC**. Awarded time: 40 orbits
- ESO / P112** *The nature of UV emission line galaxies: a study of CIV emitters at Cosmic Noon*
PI: Saldana-Lopez (ID 112.2639)
Instrument: **VLT/XShooter**. Awarded time: 32 hours

Telescope Observing Proposals (as co-Investigator, co-I)

- HST / GO33** *The HyperDeep Ultraviolet Field*
PI: Hayes (ID 18004), co-I: Saldana-Lopez
Instrument: **HST/WFC3**. Awarded time: 124 orbits
- HST / GO33** *Unlocking the full potential of JWST spectroscopic fields with SHIP3: Snapshot HST Imaging of Pure-Parallel Programs*
PI: Nedkova (ID 18022), co-I: Saldana-Lopez
Instrument: **HST/WFC3**. Awarded time: 123 orbits
- HST / GO33** *The High Redshift Lyman Continuum Survey*
PI: Scarlata (ID 18080), co-I: Saldana-Lopez
Instrument: **HST/WFC3**. Awarded time: 53 orbits
- HST / Brigde** *To the Frontiers of Time Domain: Supermassive Black Holes and Exotic Stellar Transients in the Early Universe*
PI: Hayes (ID 17908), co-I: Saldana-Lopez
Instrument: **HST/WFC3**. Awarded time: 20 orbits
- JWST / DDT** *Let there be Light: Directly Witnessing the Birth of Metal-Free, Pop III Stars in an Ultra-Faint Galaxy at $z = 6.5$*
PI: Fujimoto and Naidu (ID 9223), co-I: Saldana-Lopez
Instrument: **JWST/NIRSpec**. Awarded time: 39 hours
- JWST / GO4** *Formation and nature of the UV-brightest starbursts in the distant Universe*
PI: Marques-Chaves (ID 8258), co-I: Saldana-Lopez
Instrument: **JWST/NIRSpec**. Awarded time: 38 hours
- HST / GO32** *MgII maps to reveal how ionizing photons escape local LyC emitting galaxies*
PI: Leclercq (ID 17761), co-I: Saldana-Lopez
Instrument: **HST/ACS**. Awarded time: 31 orbits
- HST / GO32** *Lyman alpha imaging of galaxies with the lowest mass and metallicity*
PI: Ostlin (ID 17826), co-I: Saldana-Lopez
Instrument: **HST/ACS/WFC3**. Awarded time: 48 orbits
- JWST / GO3** *Ionization and Obscuration in LyC Emitters: A MIR Look at Lyman Continuum Escape*
PI: Flury (ID 5554), co-I: Saldana-Lopez
Instrument: **JWST/MIRI**. Awarded time: 31 hours
- JWST / GO2** *JWST's GLIMPSE: gravitational lensing & NIRCам imaging to probe early galaxy formation and sources of reionization*
PI: Atek (ID 3293), co-I: Saldana-Lopez
Instrument: **JWST/NIRCam**. Awarded time: 155 hours

JWST / GO1	<p><i>The First Observations of the Ionizing Luminosity of Galaxies within the Epoch of Reionization</i></p> <p>PI: Chisholm (ID 1871), co-I: Saldana-Lopez</p> <p>Instrument: JWST/NIRSpec. Awarded time: 22 hours</p>
JWST / GO1	<p><i>LyC22 - Deep spectroscopic insights on star-forming galaxies 2.2Gyr after the Big Bang</i></p> <p>PI: Schaerer (ID 1869), co-I: Saldana-Lopez</p> <p>Instrument: JWST/NIRSpec. Awarded time: 73 hours</p>
HST / GO31	<p><i>Establishing the Geometry of Lyman Continuum Escape</i></p> <p>PI: Carr (ID 17443), co-I: Saldana-Lopez</p> <p>Instrument: HST/COS. Awarded time: 23 orbits</p>
HST / GO31	<p><i>High-resolution imaging of the ionizing and non-ionizing radiation of extreme starbursts at $z \sim 2.4$</i></p> <p>PI: Marques-Chaves (ID 17424), co-I: Saldana-Lopez</p> <p>Instrument: HST/UVIS. Awarded time: 23 orbits</p>
HST / GO30	<p><i>Far-Ultraviolet Legacy Survey of the GOODS and COSMOS Fields: Completing the Census of the UV Sky</i></p> <p>PI: Siana (ID 17032), co-I: Saldana-Lopez</p> <p>Instrument: HST/SBC. Awarded time: (archival proposal)</p>
HST / GO30	<p><i>The Lyman-alpha and Continuum Origins Survey (LaCOS)</i></p> <p>PI: Hayes (ID 17069), co-I: Saldana-Lopez</p> <p>Instrument: HST/ACS, HST/WFC3. Awarded time: 119 orbits</p>
HST / GO30	<p><i>Resolving Lyman Alpha emission in a complete sample of Lyman Continuum leakers and non-leakers</i></p> <p>PI: Leclercq (ID 17153), co-I: Saldana-Lopez</p> <p>Instrument: HST/COS. Awarded time: 49 orbits</p>
HST / GO30	<p><i>Revealing the link between strong LyC emitters and enigmatic CIV emitters</i></p> <p>PI: Schaerer (ID 17169), co-I: Saldana-Lopez</p> <p>Instrument: HST/STIS. Awarded time: 34 orbits</p>
GMRT	<p><i>Radio-SED Study of low-z Lyman Continuum Emitters</i></p> <p>PI: Bait (ID 17032), co-I: Saldana-Lopez</p> <p>Instrument: GMRT/B3/B4/B5. Awarded time: 24 hours</p>
ESO / P109	<p><i>Observations of the ionizing spectra in the Lyman continuum of distant starbursts</i></p> <p>PI: Marques-Chaves (ID 109.23G1), co-I: Saldana-Lopez</p> <p>Instrument: VLT/FORS2. Awarded time: 15 hours</p>
ESO / P108	<p><i>XShooter Survey of Extremely UV and Lya Luminous Star-forming Galaxies at $z = 2 - 3.6$</i></p> <p>PI: Marques-Chaves (ID 108.228N), co-I: Saldana-Lopez</p> <p>Instrument: VLT/XShooter. Awarded time: 18 hours</p>
ESO / P106	<p><i>Deep spectroscopy of low-z HST Lyman continuum emitters: revealing their ISM and ionizing radiation field properties</i></p> <p>PI: Schaerer (ID 106.215K), co-I: Saldana-Lopez</p> <p>Instrument: VLT/XShooter. Awarded time: 15 hours</p>