

Svea Sarai Hernandez

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RESEARCH INTERESTS

Galaxy formation & evolution, star-forming galaxies, star formation rates, dust attenuation, UV-to-MIR observations, chemical evolution of galaxies, stellar abundances, spectral synthesis, nebular abundances, ISM, molecular gas

EDUCATION

Ph.D. in Astrophysics 2015 - 2018

Radboud Universiteit, Nijmegen, The Netherlands

Title: “Tales told by Galaxies: Clues to Chemical Enrichment and the Epoch of Reionization”

Supervisor: Søren Larsen

B.A. Degree in Astronomy 2007 - 2010

University of Texas, Austin, TX

Courses: Stellar Astronomy, Galaxies, Astrophysics, Instrumental Astronomy

APPOINTMENTS

ESA/AURA Astronomer I (STScI)	2020 - present
Postdoctoral Fellow (STScI)	2018 - 2020
Ph.D. in Astrophysics (Radboud Universiteit)	2015 - 2018
Research and Instrument Analyst II, <i>Science Support</i> (STScI)	2014
Research and Instrument Analyst II, <i>COS+STIS Team</i> (STScI)	2013 - 2014
Research and Instrument Analyst I, <i>COS+STIS Team</i> (STScI)	2012 - 2013
Science Intern, <i>GNIRS Team</i> (Gemini)	2010 - 2011

TECHNICAL & COMPUTER EXPERTISE

- **Observing:** PI of 1 JWST MIRI/MRS proposal. Co-I in 2 JWST proposals. PI of 4 HST proposals. Co-I in 9 successful HST proposal. PI of 18 HST Calibration proposals. PI of 1 Keck proposal. PI of 1 Gemini proposal. Queue mode observer at Gemini North (GNIRS, GMOS and NIRI).
- **Astronomical skills:** ATLAS9/MARCS, STARBURST99, and BPASS model atmospheres, SYNTHE/TURBOSPECTRUM spectral synthesis code, stellar population synthesis, modeling integrated-light observations, photoionization modeling with CLOUDY, Voigt profile fitting (VPFIT, VoigtFit)
- **Data Reduction - Advanced:** JWST calibration pipeline, CalCOS, CalSTIS, EsoRex, IRAF (Ground and Space spectroscopic observations)
- **Languages - Advanced:** Python, IDL, HTML
- **Languages - Basic:** Fortran, Unix scripting, SVN
- **Database :** SQL, TSQL
- **OS :** Unix (Solaris, DEC / OSF), Linux, Windows, Mac OS
- **Office tools:** LaTeX , Word, Excel, PowerPoint

AWARDED GRANTS

November 2023	\$89,167 Director's Discretionary Research Funding
August 2023	\$215,715 Principal Investigator on HST GO Proposal 17515 (<i>Pending</i>)
May 2023	\$39,000 Director's Discretionary Research Funding
November 2022	\$152,429 Principal Investigator on HST GO Proposal 17180
October 2021	\$5,500 Science Rescue Package – Director's Discretionary Research Funding
May 2021	\$145,164 Principal Investigator on JWST GO Proposal 02219
October 2020	\$168,135 Principal Investigator on HST Archival Proposal 16130
October 2019	\$109,220 Principal Investigator on HST Archival Proposal 15799
June 2019	\$13,600 Keck Principal Investigator Data Award (KPDA)
June 2018	€1,500 Encouraging Bonus for early completion of Doctoral Thesis, Radboud University
March 2018	€700 for International Collaboration visit to Space Telescope Science Institute Baltimore, USA Radboud Internationalisation Travel Grant
September 2017	€800 for the <i>231st American Astronomical Society Meeting</i> in Washington DC, USA LKBF
March 2016	€495 for the conference <i>The Role of Feedback in Stellar Cluster Formation, Evolution and Interaction with the Host Galaxy</i> in Sesto, Italy, LKBF

RESEARCH/FUNCTIONAL EXPERIENCE

ESA/AURA Astronomer I

2020 – present

Supervisor: Joleen Carlberg/Marc Rafelski
Space Telescope Science Institute

- **HST/STIS Team:**
As a member of the STIS team, Contact Scientist and User Support Deputy, I provide support to the development and implementation of GO programs serving as the primary point of contact between STScI and the astronomical community. I also led the ambitious STIS flux recalibration effort for both spectroscopic and imaging modes, for which I was awarded a 2023 STScI Bonus award. Lastly, during my tenure as STIS scientist, I led the monitoring of the time-dependent sensitivity (TDS) for all STIS modes.
- **ULLYSES Team Member:**
As a member of the Core Implementation Team (CIT) at STScI I provide support on the development and creation of the High-Level Science Products. I assist the ULLYSES team in testing the COS and STIS products included in the different ULLYSES Data Releases (DR1, DR2, DR3, DR4, DR5, DR6, DR7).
- **HST/COS Branch Deputy:**
In July 2023 I transitioned to the HST/COS team as branch deputy. In this role I provide support to the branch lead in the management of the personnel, work planning, prioritization and monitoring of the different COS projects.
- **Independent Research:**
Performed the first systematic metallicity study in M83, combining observations taken with Hubble Space Telescope, Very Large Telescope, and Large Binocular Telescope to study the chemical composition of the ionized gas, neutral gas, and stellar populations in this nearby spiral

(*Hernandez et al. 2021*). Became the PI of a JWST Cycle 1 proposal and published our first manuscript on these incredible observations (*Hernandez et al. 2023*). Began supervising a Post-doctoral Fellow working on the development of a new tool for estimating stellar metallicities, masses and ages of YMCs in a sample of nearby (<50 Mpc) star-forming galaxies (*Jones, Hernandez et al. 2023*). Continued working (and leading a group of scientists) on a tailored COS Background correction pipeline to perform an accurate 2D correction, particularly relevant for faint targets (*Hernandez et al. in prep.*).

Postdoctoral Fellow

2018 - 2020

Supervisor: Alessandra Aloisi
Space Telescope Science Institute

- **Mentored NAC summer student:**
Became a mentor in the National Astronomy Consortium (NAC) program. During the summer of 2020, I supervised the research work of Autumn Winch, where using VLT/X-Shooter observations she measured the detailed abundances of young massive clusters in NGC 1313 (*Hernandez, Winch, et al. 2022*).
- **HST/COS observations of young stellar populations:**
Through the analysis of spectroscopic observations, I performed the very first metallicity study in M83 using the integrated UV light of young star clusters (*Hernandez et al. 2019*) allowing me to identify two breaks in the metallicity gradient of this spiral galaxy, hinting at a scenario where enriched material expelled from the nucleus, falls back onto the disk of M83.
- **ISM studies of nearby star-forming galaxies:**
Studied the chemical composition of the interstellar medium in a sample of nearby star-forming galaxies. To accurately measure the metal contents of these galaxies I estimate ionization correction factors (ICFs) tailored for the individual targets in my sample, as well as provide the community with ICF values estimated for a wide variety of galactic environments (*Hernandez et al. 2020*).

Ph.D. in Astrophysics

2015 - 2018

Supervisor: Søren S. Larsen

Title: Tales told by Galaxies: Clues to Chemical Enrichment and the Epoch of Reionization
Radboud Universiteit

- **X-Shooter Observations of Star Clusters:**
Studied and investigated the chemical composition of stellar populations beyond the Local Group. I analyzed X-Shooter observations of Young Massive Clusters (YMCs) in nearby galaxies (*Hernandez et al. 2017, 2018a*). I also studied the abundances of globular clusters (GCs) and intermediate-age star clusters in NGC 5128 (*Hernandez et al. 2018b*). I aimed to study abundance patterns for elements tracing several nucleosynthetic processes which allow us to constrain the enrichment history of the clusters themselves and their host galaxy.
- **Lyman Continuum Escape Fractions with HST/COS:**
Probed star-formation properties of local starburst galaxies. I measured and provided upper limits to the escape fraction of Lyman continuum photons of low-redshift galaxies through the study of HST/COS observations (*Leitherer, Hernandez, Lee, & Oey 2016, Hernandez et al. 2018c*).

Research and Instrument Analyst II, *Science Support*

2014

Principal Investigator: Andrew Fox

Title: The Closest Galactic Wind: UV Properties of the Milky Way's Nuclear Outflow

Space Telescope Science Institute

- **Software Development/Data Reduction and Analysis:**

Developed a routine to extract STIS echelle orders and combine into a single 1-D spectrum, ensuring that the data, error and data quality flags are properly estimated. Measured column densities using VPFIT. In addition, I identified archival E140M STIS data of stars in the Galactic Center region and reduced their science data (*Fox et al. 2015, Bordoloi et al. 2017, Savage et al. 2017*).

Research and Instrument Analyst II, COS+STIS Team

2013 - 2014

Supervisor: Cristina Oliveira

Space Telescope Science Institute

- **Instrument Monitor Supervisor/Coordinator:**

Supervised the execution and performance of the COS and STIS Monitors, coordinating any changes with the analysts and ensuring effective communication between monitors and block leads.

- **Software/Calibration Pipeline:**

Organized and supervised calibration pipeline efforts as pipeline lead. Coordinated testing, changes and development pertaining to COS and STIS software which improved the science products.

Research and Instrument Analyst I, COS+STIS Team

2012 - 2013

Supervisor: Alessandra Aloisi

Space Telescope Science Institute

- **Instrument Monitoring:**

Developed and maintained Space Telescope Imaging Spectrograph (STIS) CCD Detector monitors. The monitoring of the STIS detector included readnoise, anneals, dark current, biases and charge transfer efficiency (CTE).

- **Calibration:**

PI of STIS calibration programs. Prepared HST proposals and submitted them as part of Phase II. Collected and analyzed the data in order to detect any possible anomalies.

- **Software/Calibration Pipeline:**

Periodically tested software changes to the instruments' calibration pipeline, CalCOS, CalSTIS and OPUS. Provided support to the Pipeline Lead as Pipeline Deputy.

Research and Instrument Analyst I, NIRCcam Team

2012

Supervisor: David Golimowski

Space Telescope Science Institute

- Supported the Near Infrared Camera (NIRCcam) Cryogenic testing in Palo Alto, CA. Contributions to this project included real-time logging, archiving and analyzing of testing data.
- I was awarded the 2012 STScI Bonus as recognition for my outstanding effort in the NIRCcam Cryogenic testing.

Science Intern, GNIRS Team

2010 - 2011

Supervisor: Thomas R. Geballe

Gemini Observatory North Hawaii

- Supported different Research Projects: determined and studied the right wavelength coverage needed to detect nebular emission lines in high-redshift galaxies (Dr. Marie Lemoine-Busserolle). Reduced spectroscopic data taken with GNIRS Long Slit mode high resolution at 3-5 microns, in search for CH₄ emission in the stratosphere of Uranus (Dr. Thomas R. Geballe). Analyzed and reduced spectra taken with the Near Infrared Imager and Spectrometer (NIRI) to study extragalactic polycyclic aromatic hydrocarbons (PAHs) as tracers of SF (Dr. Rachel Mason).
- Queue mode observer at Gemini North. Conducted observations with: GNIRS, GMOS and NIRI.
- Contributed to the monitoring of the performance of the Gemini Near-Infrared Spectrograph (GNIRS), this included preparing observations and taking data with the instrument.
- Reduced and analyzed the spectra taken using different spectroscopic modes utilizing different cameras, gratings and slits.
- Was part of the GNIRS Commissioning team and learned to work and interact successfully in a group of scientists and engineers.

MENTORING & SUPERVISING

- 2021 - present** *Logan Jones*, STScI Postdoc: Characterizing the ages and metallicities from the integrated-light observations of the individual star clusters in star-forming galaxies, and performing a comparative study between the stellar, neutral-gas, and ionized-gas metallicities.
- 2020 - present** *Jo Taylor*, Staff Scientist at STScI: Developing a dedicated HST/COS pipeline to perform an optimal background correction based on statistical methods using the XDL MAMA dark rate characterization.
- 2020 - 2021** *Shannon Osborne*, Staff Scientist at STScI: Reduction and analysis of the UV spectroscopic observations taken as part of the CLUES (CLuster in the Uv as EngineS) GO program.
- Summer 2020** *Autumn Winch*, NAC Student: Analysis of X-Shooter observations to obtain detailed abundances in NGC 1313.

TEACHING

- Sterrenstelsels (Galaxies), 2nd year undergraduate course, Radboud Universiteit, 2015
⇒ Award from the Study Committee of Physics and Astronomy for outstanding teaching
- Space Astronomy, 2nd year undergraduate course, Radboud Universiteit, 2015
⇒ Award from the Study Committee of Physics and Astronomy for outstanding teaching
- Observational Astronomy, 1st year undergraduate course, Radboud Universiteit, 2015
- Sterrenstelsels (Galaxies), 2nd year undergraduate course, Radboud Universiteit, 2016
⇒ Award from the Study Committee of Physics and Astronomy for outstanding teaching
- Space Astronomy, 2nd year undergraduate course, Radboud Universiteit, 2016
⇒ Award from the Study Committee of Physics and Astronomy for outstanding teaching
- Observational Astronomy, 1st year undergraduate course, Radboud Universiteit, 2016 (TA Coordinator)
- Sterrenstelsels (Galaxies), 2nd year undergraduate course, Radboud Universiteit, 2017
- Space Astronomy, 2nd year undergraduate course, Radboud Universiteit, 2017

PROFESSIONAL AFFILIATIONS

International Astronomical Union (IAU)

American Astronomical Society (AAS)
Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
Nederlandse Astronomenclub (NAC)

INVITED COLLOQUIA & GUEST LECTURER

April 2024 Goddard Space Flight Center, MD
Mar 2022 University of Alabama, Tuscaloosa, AL
October 2021 University of California, Santa Cruz, Friday Lunchtime Astrophysics seminar (FLASH)
April 2021 American University of Sharjah, Sharjah, UAE
January 2020 Gemini North Observatory, Hawaii, USA
October 2019 Carnegie Observatories, California, USA
May 2019 Kapteyn Astronomical Institute, Groningen, The Netherlands
May 2019 Institut d'astrophysique de Paris, Paris, France
May 2019 CEA, CNRS, Université Paris-Saclay, Gif-sur-Yvette, France
March 2019 American University of Sharjah, Sharjah, UAE

CONFERENCE/WORKSHOP PARTICIPATION

European Space Agency SCI Science Workshop 16 – Spain, January 2024 (Talk)
243th American Astronomical Society - USA, January 2024 (Talk)
Olympian Symposium – Greece, June 2023 (Talk)
Science with the HST and JWST, VI Conference – Stockholm, July 2022 (Talk)
JWST Cycle 1 Science Sampler – USA, Virtual, November 2021 (Invited Talk)
STScI & JHU Pre-Launch Science Symposium – USA, November 2021 (Invited Talk)
3rd Workshop: Chemical Abundances in Gaseous Nebulae: From the Milky Way to the Early Universe - Virtual, May 2021 (Talk)
5th NUVA Workshop - Virtual, October 2020 (Talk)
235th American Astronomical Society - USA, January 2020 (Talk)
Metals in Galaxies, Near and Far: Looking Ahead - Leiden, The Netherlands, May 2019 (Invited Talk)
231st American Astronomical Society - USA, January 2018 (Talk)
Globular cluster systems and their host galaxies - Italy, July 2017 (Invited Talk)
The role of Feedback in the Formation and Evolution of Star Clusters - Italy, July 2016 (Poster)
71th Netherlands Astronomy Conference - The Netherlands, May 2016 (Talk)
Workshop on Multiple Populations in Globular Clusters Meeting - United Kingdom, March 2016 (Talk)

Globular Clusters and Galaxy Halos - The Netherlands, February 2016 (Poster)

Netherlands Research School for Astronomy Network 1 - The Netherlands, November 2015 (Talk)

Netherlands Research School for Astronomy Autumn School - The Netherlands, October 2015 (Talk)

The impact of Massive Binaries Throughout the Universe- The Netherlands, June 2015 (Talk)

Workshop on Multiple Populations in Globular Clusters Meeting - United Kingdom, March 2015 (Talk)

SERVICE & OUTREACH

Research Advisor in Astro Scholars, January 2024

Public Speaker for Science event at Pikesville Middle School, MD, October 2023

Speaker at JHU's First-Year Seminar program to present JWST project, STScI, December 2022

Research Advisor in Astro Scholars, August 2022

Executive Committee of the Science Staff: Elected member, STScI, 2022-2025

Public Outreach program "Siguiendo la sombra de los científicos" in coordination with University of California, Santa Cruz and Lick Observatories, Coahuila, Mexico, December 2021 (virtual)

Career Seminar "Un camino poco convencional en la Astronomía" at Instituto Tecnológico superior de Múzquiz, Coahuila, Mexico, November 2021

Public Outreach talk "Viaje Astronómico" at Primaria Manuel Acuña, Coahuila, Mexico, October 2021

Public Outreach talk "Viaje Astronómico" at Colegio América Salesianas, Coahuila, Mexico, June 2021

Guest speaker at "Domingos Culturales" Radio show to promote STEM, Coahuila, Mexico, October 2020

Active member of the Women in Astronomy Forum (WiAF) at STScI 2018 - present

Chair of the Galaxy Evolution Session at the AAS 235th

HST TAC Cycle 27 panel support

Co-leader of the Women Empowering Women (WeW) cross disciplinary program 2019 - present

Referee for MNRAS, A&A 2018 - present

Organized First National Dutch Star Cluster Meeting 2016

Radboud Honour Students trip to Observatories in La Palma, Spain 2016

Optical Telescope guardian at Radboud Universiteit since 2016 - 2018

Olympiade organized by Radboud 2015

Public Observation Nights at Radboud Universiteit

GROUND-BASED TELESCOPE PROPOSALS

Gemini - GS-2023B-Q-330, Stellar vs ISM: What are the True Abundances of Star-Forming Galaxies?

PI: **Svea Hernandez**, Linda Smith, Logan Jones

ALMA - 2023.1.01671.S, Direct calibration of atomic carbon as a molecular gas tracer in M83

PI: Logan Jones, Co-I: **Svea Hernandez**, Alessandra Aloisi, Linda Smith, Alec Hirschauer, Matilde Mingozi, Valentina Abril Melagarejo

Keck - 98/2021B_N192, Mapping the Global Interplay between Massive Stars and Gas via UV+Optical with KCWI+COS

PI: Matilde Mingozi, Co-I: Bethan James, Nimisha Kumari, **Svea Hernandez** Alessandra Aloisi, Karla Arellano Cordova, Danielle Berg, John Chisholm, Peter Senchyna, Matt Hayes

Keck - 70, 2019B_N056, Uncovering the True Abundances of Star-Forming Galaxies: Ionized Gas with Keck-CWI vs Neutral Gas with HST-COS

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Bethan James, Nimisha Kumari

JWST PROPOSALS

02219, Cycle 1, GO, Shining light on the CO-dark H₂ gas in the heart of M83

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Bethan James, Nimisha Kumari, Alec Hirschauer, Leslie Hunt, Vianney Lebouteiller, Matilde Mingozi

HST PROPOSALS

17515, Cycle 31, GO, Chasing Lyman Continuum Leakers in the Local Universe

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Timothy Heckman, Linda Smith, Matilde Mingozi, Bethan James, Alec Hirschauer, Logan Jones

17180, Cycle 30, GO, What's hiding in the neutral gas? Dissecting the different metallicity components in NGC 1313

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Angela Adamo, Matilde Mingozi, Bethan James, Alec Hirschauer, Claude-Andre Faucher-Giguere, Linda Smith, Logan Jones

17125, Cycle 30, GO, Sharpening our High-z Toolset: Spatially Resolving UV Emission Line Diagnostics Throughout Pristine Gas

PI: Bethan James, Co-I: Danielle, Berg, Alessandra Aloisi, Swara Ravindranath, **Svea Hernandez**, Francesca Annibali, Elena Sacchi, Nimisha Kumari, Valentina Abril Melgarejo, Alec S. Hirschauer

16763, Cycle 29, GO, Tracking down the origin of UV photons in local high-z analogues with FUV emission line imaging

PI: Matilde Mingozi, Co-I: Alessandra Aloisi, Ricardo Amorin, Karla Ziboney Arellano Cordova, Danielle Berg, Jarle Brinchmann, John Chisholm, Dawn K. Erb, Simon Gazagnes, Matthew James Hayes, Alaina L. Henry, **Svea Hernandez**, Nimisha Kumari, Bethan James, Alec S. Hirschauer, Crystal Linn Martin, Michael Maseda, Matilde Mingozi, Themiya Nanayakkara, Aida Wofford

16692, Cycle 29, GO, [CII], a High-z Diagnostic Diamond in the Rough

PI: Bethan James, Co-I: Alessandra Aloisi, Ricardo Amorin, Karla Ziboney Arellano Cordova, Danielle Berg, Rongmon Bordoloi, Jarle Brinchmann, Dawn K. Erb, **Svea Hernandez**, Nimisha Kumari, Alec S. Hirschauer, Crystal Linn Martin, Michael Maseda, Matilde Mingozi, Themiya Nanayakkara, Xinfeng Xu

16240, Cycle 28, GO, Pinning down multi-phase mixing of metals within star-forming galaxies

PI: Bethan James, Co-I: Alessandra Aloisi, **Svea Hernandez**, Nimisha Kumari, Andrew Emerick

16260, Cycle 28, GO, Tied up in Knots: The Spatially Resolved LyC Escape from Haro 11

PI: Salley Oey, Co-I: Angela Adamo, Arjan Bik, Matthew James Hayes, **Svea Hernandez**, Anne Jaskot, Daniel Kunth, Peter Laursen, Claus Leitherer, Miguel Mas-Hesse, Goeran Oestlin, T. Emil Rivera-Thorsen

16130, Cycle 28, AR, Adding the Final Piece to the Metallicity Puzzle of Star-Forming Galaxies: Stellar Abundances from Integrated Light

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Bethan James, Søren S. Larsen

15799, Cycle 27, AR, Pushing the limits of COS: Working towards an optimized background correction

PI: **Svea Hernandez**, Co-I: Alessandra Aloisi, Andrei Igoshev, David J. Sahnou

15842, Cycle 27, GO, The COS Legacy Archive Spectroscopic SurveY (CLASSY): A UV Treasury of Star-Forming Galaxies

PI: Danielle Berg, Co-I: Alessandra Aloisi, Ricardo Amorin, Matthew Bayliss, Rongmon Bordoloi, Jarle Brinchmann, Nell Byler, Stephane Charlot, Jacopo Chevallard, John Chisholm, Dawn K. Erb, Anna Feltre, Matthew James Hayes, Timothy M. Heckman, Alaina L. Henry, **Svea Hernandez**, Bethan Lesley James, Anne Jaskot, Lisa Kewley, Claus Leitherer, et al.

15627, Cycle 26, GO, CLUES to galaxy evolution: young star clusters as engines of galactic feedback

PI: Angela Adamo, Co-I: Daniela Calzetti, Linda Smith, Elena Sabbi, Andrew Fox, Arjan Bik, Alessandra Aloisi, **Svea Hernandez**, John Chisholm, Michele Fumagalli, David Cook, et al.

15078, Cycle 25, GO, Initial conditions of multiple populations in the dynamically most pristine globular cluster, NGC 2415

PI: Søren S. Larsen, Co-I: Nate Bastian, Holger Baumgardt, Jean P. Brodie, **Svea Hernandez**

20 HST Calibration proposals as PI

SCIENTIFIC REFEREED PUBLICATIONS (1st Author):

- 1) *Dissecting the Mid-Infrared Heart of M83 with JWST*
Hernandez, S., Jones, L., Smith, L., Togi, A., Aloisi, A., Blair, W., et al., ApJ, 948, 124
- 2) *Detailed Abundance Study of Young Massive Clusters in NGC 1313*
Hernandez, S., Winch, A., Larsen, S., James, B.L., Jones, L. 2022, AJ, 164, 89H
- 3) *First Co-spatial Comparison of Stellar, Neutral-, and Ionized-gas Metallicities in a metal-rich galaxy: M83*
Hernandez, S., Aloisi, A., James, B.L., Kumari, N., Berg, D., et al., 2021, ApJ, 908, 226
- 4) *Newly Improved Ionization Corrections for the Neutral Interstellar Medium: Enabling Accurate Abundance Determinations in Star-forming Galaxies throughout the Universe*
Hernandez, S., Aloisi, A., James, B. L., Fox, A. J., Heckman, T. M., Tosi, M., Tumlinson, J., 2020a, ApJ, 892, 19H
- 5) *The First Metallicity Study of M83 Using the Integrated UV Light of Star Clusters*
Hernandez, S., Larsen, S., Aloisi, A., Berg, D. A., Blair, W. P., Fox, A. J., Heckman, T. M., James, B. L., Long, K. S., Skillman, E.D., Whitmore, B.C., 2019, ApJ, 872, 116H
- 6) *Chemical Abundances of Globular Clusters in NGC 5128 (Centaurus A)*
Hernandez, S., Larsen, S., Trager, S., Kaper, L., Groot, P., 2018c, MNRAS, 476, 5189
- 7) *Investigating the Lyman photon escape in Local Starburst Galaxies with the Cosmic Origins Spectrograph*
Hernandez, S., Leitherer, C., Boquien, M., Buat, V., Burgarella, D., Calzetti, D., and Noll, S., 2018b, MNRAS, 478, 1292

- 8) *Metallicities of Young Massive Clusters in NGC 5236 (M83)*
Hernandez, S., Larsen, S., Trager, S., Kaper, L., Groot, P., 2018a, MNRAS, 473, 826
- 9) *Chemical Abundances of Two Extragalactic Young Massive Clusters*
Hernandez, S., Larsen, S., Groot, P., Kaper, L., 2017, A&A, 603, A119

NON-REFEREED PUBLICATIONS:

- 1) *The Women in Astronomy Forum at STScI: Affecting Change in the Local and Global Astronomical Communities*
Nota, Antonella, Aloisi, Alessandra, **Hernandez, Svea**, Watkins, Laura, Momcheva, Ivelina, and the WiAF, 2020, STScI Newsletter Articles, Volume 37, Issue 02
- 2) *Spectroscopic Observations of the Fermi Bubbles*
Fox, Andrew, Ashley, Trisha, Benjamin, Robert A., Bland-Hawthorn, Joss, Bordoloi, Rongmon, Cazzoli, Sara, **Hernandez, Svea S.**, Karim, Tanveer, Jenkins, Edward B., Lockman, Felix J., Kim, Tae-Sun, Wakker, Bart P., 2019, BAAS, 51, 21
- 3) *Enhancing Conference Participation to Bridge the Diversity Gap*
Prichard, Laura, Oliveira, Cristina, Aloisi, Alessandra, Roman-Duval, Julia, **Hernandez, Svea**, Pacifici, Camilla, Momcheva, Ivelina, Women in Astronomy Forum, STScI, BAAS, 2019, arXiv:1909.10996
- 4) *Increasing Gender Diversity and Inclusion in Scientific Committees and Related Activities at STScI*
De Rosa, Gisella, Oliveira, Cristina, Pacifici, Camilla, Aloisi, Alessandra, Alatalo, Katey, Ashley, Trisha, Beck, Tracy, Boyer, Martha, Calamida, Annalisa, Carlberg, Joleen, Christian, Carol, Chen, Christine, Deustua, Susana, Gilbert, Karoline, Hagen, Lea, Henry, Alaina, **Hernandez, Svea**, James, Bethan, Kassin, Susan, La Massa, Stephanie, Meixner, Margaret, Momcheva, Ivelina, Moro-Martin, Amaya, Prichard, Laura, Ravindranath, Swara, Roman-Duval, Julia, Sabbi, Elena, Sacchi, Elena, Wakeford, Hannah, Temin, Tea, 2019, BAAS, 51, 25
- 5) *Exploiting the Power of Metallicity Studies in the UV: Dissecting the Nearby Spiral Galaxy M83*
Hernandez, S., 2019b, STScI Newsletter Articles, Volume 36, Issue 01
- 6) *Enhancing Conference Participation to Bridge the Diversity Gap*
Hernandez, S., Prichard, Laura, Oliveira, Cristina, Aloisi, Alessandra, Roman-Duval, Julia, Pacifici, Camilla, Momcheva, Ivelina, Women in Astronomy Forum, 2019d, STScI Newsletter Articles, Volume 36, Issue 03

TECHNICAL DOCUMENTS:

- 1) *Updating the Sensitivity Curves of the STIS Echelles (Post-SM4)*
Hernandez, S., Monroe, T-W., Carlberg, J., STIS ISR 2023 *in prep.*
- 2) *Time Dependent Sensitivity Analysis with "New" White Dwarf Standards*
Stapleton, D., **Hernandez, S.**, STIS ISR 2023 *under review*
- 3) *Recalibration of the STIS E140M Sensitivity Curve*
Carlberg, J., Monroe, T., Riley, A., **Hernandez, S.**, STIS ISR 2022-04

- 4) *Testing the STISTOOLS Defringing Tool Suite on the Time Dependent Sensitivity Data*
Hernandez, S., STIS ISR 2021-01
- 5) *WFIRST Wavelength Calibration: A strategy with M67*
Ryan, R.E. Jr., Casertano, S., **Hernandez, S.**, Bellini, A., Pirzkal, N., WFIRST-STScI-TR1802
- 6) *The COS/FUV Focus Sweep Program at Lifetime Position 3 (LENA2/13635)*
Fox, Andrew, Oliveira, Cristina, Penton, Steven, Sana, Hugues, **Hernandez, Svea**, Osterman, Steve, Debes, John, Ely, Justin, Massa, Derck, Roman-Duval, Julia, Sahnou, David, Sonnentrucker, Paule, COS ISR 2015-01
- 7) *Changes to the COS Extraction Algorithm for Lifetime Position 3*
Proffitt, Charles R., Bostroem, K. Azalee, Ely, Justin, Foster, Deatrick, **Hernandez, Svea**, Hodge, Philip, Jedrzejewski, Robert I., Lockwood, Sean A., Massa, Derck, Peebles, Molly S., Oliveira, Cristina M., Penton, Steven V., Plesha, Rachel, Roman-Duval, Julia, Sana, Hugues, Sahnou, David J., Sonnentrucker, Paule, Taylor, Joanna M., COS ISR 2015-03
- 8) *Summary of the STIS Cycle 21 Calibration Program*
Sana, Hugues, Fox, Andrew, Roman-Duval, Julia, Ely, Justin, Cox, Colin, DiFelice, Audrey, **Hernandez, Svea**, Lockwood, Sean, Oliveira, Cristina, Penton, Steve, Proffitt, Charles, Sahnou, David, Sonnentrucker, Paule, Taylor, Jo, Welty, Alan D., Wheeler, Thomas, STIS ISR 2015-09
- 9) *Summary of the STIS Cycle 20 Calibration Program*
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