

DR STACEY ALBERTS

salberts@arizona.edu \diamond staceyalberts.com \diamond 413-230-0634

Research Professor \diamond Steward Observatory, U. Arizona

933 N Cherry Ave, Tucson, AZ 85719, USA

RESEARCH INTERESTS

The lifecycles of galaxies up to cosmic noon and beyond

My research addresses the secular and environmental drivers of galaxy evolution from formation to quenching, with specific focus in the following areas: dusty, star-forming galaxies; cosmic dust and molecular gas; galaxy populations in clusters and proto-clusters; Active Galactic Nuclei; galaxy quenching and feedback; and stellar population modeling. My work is panchromatic, utilizing X-ray to radio observations (photometric and spectroscopic) from both ground- and space-based facilities, with heavy emphasis on the infrared. I am a member of the James Webb Space Telescope (JWST) Mid-Infrared Instrument (MIRI) instrument team and the MIRI and Near-Infrared Camera (NIRCam) Guaranteed Time Observation (GTO) teams.

ACADEMIC POSITIONS

Assistant Research Professor, University of Arizona	Jan 2020–present
Senior Research Associate, University of Arizona	Sept 2017–Jan 2020
Postdoctoral Research Associate, University of Arizona	Sept 2014–Sept 2017

EDUCATION

Ph.D., Astronomy, University of Massachusetts, Amherst	Received 2014
Thesis: <i>The Role of Environment in Dusty Star Formation</i> , Advisor: Dr. Alexandra Pope	
M.S., Astronomy, University of Illinois, Champaign-Urbana	Deferred for Ph.D. 2008
B.S., Astronomy and Physics, University of Illinois, Champaign-Urbana	Received 2007

AWARDED GRANTS AND CONTRACTS

JWST-GO-03432 A Unique Characterization of Early Quenching in a Young, Transitional Cluster at $z=1.84$ with NGDEEP and JEMS [Award Amount: \$333,000]

JWST-GO-03960 The Effect of Extreme ISM Conditions on Polycyclic Aromatic Hydrocarbons (PAH) Properties [Award Amount: \$190,000]

JWST-GO-04192 Revealing our past faux PAHS: unveiling the hidden drivers of ISM conditions at cosmic noon [Award Amount: \$291,000]

ACADEMIC AND PROFESSIONAL MEMBERSHIP AND SERVICE

JWST/MIRI Instrument Team and GTO Science Team	2014–present
JWST/NIRCam GTO Science Team	2014–present
JWST Advanced Deep Extragalactic Survey (JADES) Collaboration	2014–present
Infrared Science and Technology Integration Group (IRSTIG) Leadership Council	2020–present
Single Aperture Large Telescope for Universe Studies (SALTUS) Probe Concept – <i>Extragalactic Working Group</i>	2022–present
Panel member, JWST Cycle 3 Time Allocation Committee	Jan 2024
JWST/MIRI Ramps to Slopes Working Group	2014-2023

JWST/MIRI Science Operations Working Group	2014-2022
JWST Testing Campaigns and Commissioning – <i>MIRI test operator and data analyst</i>	
JWST Commissioning	Jan–Jun 2022
Launch Readiness Exercise (LRE-6)	Oct 2021
JWST/MIRI Flight Performance Spare Test Runs 4 – 9, Jet Propulsion Lab	2015–2019
JWST OTIS Cryogenic Vacuum Test, Johnson Space Center	Jun–Aug 2017
JWST Cryo-vac 3 Thermal Testing, Goddard Space Flight Center	Dec 2015, Jan 2016
SOC, Astro2020 and IR Astrophysics: Planning for the Next Decade	Mar 2022
External Reviewer, JCMT	May 2022
Faculty Liaison, Steward Observatory Diversity, Equity and Inclusion Initiative (SODEI)	2020–2021
SOC, University of Arizona JWST Proposal Planning Workshop	Mar–Apr 2021
Reviewer, Panel Chair, NASA ROSES grant review	2019–2020
Panel member, Steward Observatory Optical/IR Time Allocation Committee	2018–2020
Chair, Dusting the Universe Tucson, AZ	Mar 4-8, 2019
<i>Sponsored by the U. of Arizona, Steward Observatory; NOAO in association with AURA; NRAO in association with the NSF; and the Origins Space Telescope</i>	
Panel member, Large Millimeter Telescope Time Allocation Committee	2018–2020
Journal Referee: ApJ, MNRAS	

JWST OBSERVING PROGRAMS

‡Science and Observational Design Lead or Co-Lead (200+ prime hours)

- Co-I – PAHSPECS: An Unbiased Study of PAHs at Cosmic Noon; Cycle 3 GO, PID 5279, 52.4 hr
- ‡PI – **Revealing our past faux PAHs: unveiling the hidden drivers of ISM conditions at cosmic noon**; Cycle 2 GO, PID 4192, 24.8 hr
- ‡PI – **The Effect of Extreme ISM Conditions on Polycyclic Aromatic Hydrocarbon (PAH) Properties**; Cycle 2 GO, PID 3960, 14.1 hr
- ‡PI – **A Unique Characterization of Early Quenching in a Young, Transitional Cluster at $z=1.84$ with NGDEEP and JEMS**; Cycle 2 AR [Archival Research], PID 3432
- ‡PI – **A Census of Star Formation and Early Quenching in a High- z Galaxy Cluster**; Cycle 2 GTO, PID 2775, 3.5 hr
- ‡Co-I – **Deciphering the Extended Dust and Gas Environment of the Archetypal Type-1 AGN in NGC 4151 with JWST**; Cycle 2 GTO, PID 2773, 5.9 hr
- Co-I – The Environment of ULAS J1120+0641; Cycle 2 GTO, PID 2774, 8.1 hr
- Co-I – Complete NIRCcam Grism Redshift Survey (CONGRESS); Cycle 2 GO, PID 3577, 27.4 hr
- Co-I – Measuring Dust Evolution Over the Past 10 Billion Years With 3-12 micron Spectra for 60 High-Redshift Galaxies; Cycle 2 GO, PID 3224, 61.6 hr
- Co-I – JWST/NIRCcam Slitless Spectroscopy in the JWST/MIRI HUDF Region; Cycle 2 GTO, PID 4549, 19.6 hr
- Co-I – Deep NIRCcam grism observations in the 1210 parallel field; Cycle 2 GTO, PID 4540, 29.4 hr
- Co-I – What quenched the first massive quiescent galaxy? A comprehensive analysis from stellar kinematics to gas emission lines; Cycle 2 GO, PID 3659, 23.8 hr
- Co-I – Unveiling the Redshift Frontier with JWST; Cycle 2 GO, PID 3215, 135.5 hr
- ‡Co-I – **MIRI in the Hubble Ultra-Deep Field**; Cycle 1 GTO, PID 1207, 80 hr
- ‡Co-I – **Ram Pressure Stripping in ESO 137-001**; Cycle 1 GTO, PID 1178, 16 hr

‡**Co-I – Are There AGN Embedded in All Ultraluminous Infrared Galaxies (ULIRGs)?;**

Cycle 1 GTO, PID 1204, 19 hr

‡**Co-I – Formation Histories and Stellar Masses of Very High-z Quasars;** Cycle 1 GTO, PID 1205, 41 hr

Co-I – NIRSspec+MIRI IFU Observations of Arp220; Cycle 1 GTO, PID 1267, 8 hr

Co-I – Halfway to the Peak: A Bridge Program To Map Coeval Star Formation and Supermassive Black Hole Growth; Cycle 1 GO, PID 1762, 25 hr

Co-I – UDF Medium Band Survey: Using H-alpha Emission To Reconstruct Ly-alpha Escape during the Epoch of Reionization; Cycle 1 GO, PID 1963, 20 hr

OTHER SELECT OBSERVING AND ARCHIVAL PROGRAMS

‡Observing Experience

PI – TRACING MOLECULAR GAS ACROSS THE STAGES OF ACCRETION ONTO A GALAXY CLUSTER, ALMA (2021.1.00992.S), 9 hrs, 2021

PI – TRACING MOLECULAR GAS ACROSS THE STAGES OF ACCRETION ONTO A GALAXY CLUSTER, ALMA (2019.1.01010.S), 19 hrs, 2019

COLLABORATOR – THE RISE AND FALL OF DUSTY STAR FORMATION IN CLUSTERS AND PROTO-CLUSTERS MEASURED BY HERSCHEL AND WISE, NASA Astrophysics Data Analysis Program, 18-ADAP18-0111

PI – EXPLORING THE INFRARED-RADIO CORRELATION IN MASSIVE CLUSTERS AT $z = 1 - 2$, VLA (16B-292), 21 hrs, 2016

PI – FUELING STAR FORMATION IN EXTREME ENVIRONMENTS: DUST AND GAS IN CLUSTER GALAXIES AT $z = 1 - 2$, ALMA (2015.1.00813.S), 8 hrs, 2016

‡PI – EXPLORING THE ERA OF STAR FORMATION IN MASSIVE GALAXY CLUSTERS AT HIGH REDSHIFT, MMT/MMIRS, 2 nights, 2016

Co-I – A NEW FRONTIER FOR THE LMT: DUST OBSCURED ACTIVITY IN GALAXIES THAT DOMINATE THE COSMIC STAR FORMATION HISTORY, LMT Early Science 3, 46 hrs, 2014

‡Co-I – DUST OBSCURED ACTIVITY IN THE HIGHEST REDSHIFT MASSIVE GALAXY CLUSTER, JCMT, 2 nights, 2012

Co-I – TRACING THE EVOLUTION OF STAR FORMATION ACTIVITY IN HIGH REDSHIFTS CLUSTERS, Herschel Space Observatory, 55 hrs, 2012

‡PI – H α OBSERVATIONS OF STAR FORMING REGIONS IN XUV DISKS: BREAKING THE IMF-AGE DEGENERACY, KPNO Mayall 4 m, 2 nights, 2009

ADVISING, OUTREACH, AND TEACHING

Meredith Stone, University of Arizona, Graduate Student Jun 2022–present
Exploring Cosmic Dust with JWST/MIRI

Nattida Samanso, Universidad Andres Bello, Santiago, Chile, Graduate Student Oct 2022–present
The radio-infrared correlation in massive cluster environments to high redshift

Vivian Carvajal, University of Arizona, Graduate Student 2022–2023
The morphologies of heavily obscured AGN at Cosmic Noon with JWST

Steward Observatory Postdoc/Grad Mentoring Program 2015–2019

Starts With A Bang podcast [#82: JWST and infrared astronomy](#) June 2022

Speaker - Clark Planetarium Public Talk,
Unlocking Secrets of the Universe with JWST Nov 2021

Featured Speaker - Astrofest, University of Illinois	Apr 23, 2021
Speaker - Steward Public Lecture Series, <i>Into the Mid-Infrared with JWST</i>	Nov 2021
Organizer and Host - Astronomy on Tap - Tucson (SpaceDrafts)	2017–2019
Speaker - Steward Public Lecture Series, <i>Countdown to JWST</i>	Oct 2017
Speaker - Astronomy on Tap - Tucson, <i>To Boldly Look Where No One Has Looked Before: The Science of JWST</i>	July 2016
Instructor, Astron 103: Observational Astronomy, UMass-Amherst	Aug 2008–May 2009
Discussion Leader, Astron 121: The Solar System, UIUC	Aug 2007–May 2008

AWARDS AND MEDIA

Expert Interview, Nature - JWST spots the most distant 'smoke' molecules ever seen in space	Jun 5, 2023
Expert Interview, U.S. News Brandfuse - Wonder Makes Us Investigate the First Light of the Universe	Mar 7, 2023
Expert Interview, Arizona Daily Star - First Webb images dazzle even U of A astronomers who helped collect them	Jul 13, 2022
Press Release, NASA - A "Jellyfish" Galaxy Swims into View of NASA's Upcoming Webb Telescope	Jul 13, 2019
Press Release, JPL - The Rise and Fall of Galactic Cities	Dec 18, 2013
Rodger Doxsey Travel Prize, Runner-up, AAS (\$200)	2013
FGSA Travel Award for Excellence in Graduate Research, APS Physics (\$500)	2013
University Graduate School Fellowship, UMass-Amherst (\$17k)	2011–2012
Massachusetts Space Grant Consortium Fellowship, MSGC Fall Fellowship (\$5k)	2010
Massachusetts Space Grant Consortium Fellowship, MSGC Summer Fellowship (\$5k)	2009
Teachers Ranked as Excellent, University of Illinois, Champaign-Urbana (UIUC)	2008

SELECT PRESENTATIONS

‡Invited Talk

Contributed - <i>The Physics and Impact of Astrophysical Dust: from Star Formation Through Cosmology</i>, Aspen, CO, USA	Mar 5-8, 2024
‡Invited Review - <i>Astrophysics: the James Webb Space Telescope</i>, Pontifical Academy of Sciences, Vatican	Feb 27-29, 2024
‡Invited Review - <i>A Journey Through Galactic Environments</i>, Porto Ercole, Italy	Sept 25-29, 2023
‡Invited - <i>First Structures in the Universe</i>, Paris, France	Sept 4-8, 2023
‡Special Session - <i>First Results from the JWST Advanced Deep Extragalactic Survey</i>, AAS 242	Jun 4-8, 2023
‡Invited Review - <i>A new era in extragalactic astronomy: early results from JWST</i>, Cambridge, UK	Mar 20-24, 2023
‡Colloquium - University of Hertfordshire	Jan 12, 2022
‡Colloquium - University of Illinois	Apr 20, 2021
‡Colloquium - Czech Academy of the Sciences	Mar 4, 2021
‡Invited - Infrared Science Interest Group Webinar, <i>Measuring the Total Infrared Light in High Redshift Galaxy Clusters</i>	Oct 6, 2020
Contributed - Steward Observatory Early Career Scientist Series, <i>Measuring the Total Infrared Light in High Redshift Galaxy Clusters</i>	Oct 2, 2020

Contributed - Steward Observatory Early Career Scientist Series, *Completing the Census of AGN in GOODS-S/HUDF: New Ultra-Deep Radio Imaging and Predictions for JWST* Jun 4, 2020

Contributed - IAU Symposium 352 - Uncovering early galaxy evolution in the ALMA and JWST era, Viana do Castelo, Portugal Jun 3-7, 2019

‡**Invited** CANDELS/TolTEC Meeting - Past, Current and Future Galaxy Surveys, Amherst, MA Oct 22–27, 2018

‡**Seminar** - Yale Center for Astronomy and Astrophysics, Yale University Dec 12, 2017

TECHNICAL EXPERIENCE

PROGRAMMING: Python (incl `astropy`, `photutils`, Jupyter Notebooks), \LaTeX , IDL

SOFTWARE: JWST Science Calibration Pipeline, Astronomers Proposal Tool (APT), JWST Exposure Time Calculator (ETC), MAST Portal, SAOImage DS9, BAGPIPES (SED modeling), Herschel HIPE and UniMap

1ST AUTHOR AND SELECT REFEREED AND SUBMITTED PUBLICATIONS

Total Refereed Publications: 50 [2557 citations, H-index: 24] [Complete List of Publications](#)

I. Shivaeei, **S. Alberts**, et al., 2024, *A new census of dust and PAHs at $z=0.7-2$ with JWST MIRI*, ApJ, submitted, arXiv:2402.07989

S. Alberts, C. C. Williams, et al., 2023, *To high redshift and low mass: exploring the emergence of quenched galaxies and their environments at $3 < z < 6$ in the ultra-deep JADES MIRI F770W parallel*, ApJ, submitted, arXiv:2312.12207

C. C. Williams, **S. Alberts** et al., 2023, *The galaxies missed by Hubble and ALMA: the contribution of extremely red galaxies to the cosmic census at $3 < z < 8$* , ApJ, submitted, arXiv:2311.07483

J. Lyu, **S. Alberts** et al., 2023, *AGN Selection and Demographics: A New Age with JWST/MIRI*, ApJ, accepted, arXiv:2310.12330

M. A. Stone, J. Lyu, G. H. Rieke, and **S. Alberts**, 2023, *Detection of the Low-stellar-mass Host Galaxy of a $z \approx 6.25$ Quasar with JWST*, ApJ, 953, 180

J. Lyu, **S. Alberts**, G. H. Rieke, W. Rujopakarn, 2022, *AGN Selection and Demographics in GOODS-S/HUDF from X-ray to Radio*, ApJ, 941, 191

[**Invited Review - Universe Special Issue: Recent Advances in Infrared Galaxies**] **S. Alberts**, A. Noble, 2022. *From Clusters to Proto-Clusters: The Infrared Perspective on Environmental Galaxy Evolution*, Universe 8, 554

S. Alberts, J. Adams, B. Gregg, et al., 2022, *Significant Molecular Gas Deficiencies in Star-forming Cluster Galaxies at $z \sim 1.4$* , ApJ, 927, 235

C. C. Williams, **S. Alberts**, J. Spilker, et al., 2022, *ALMA Measures Molecular Gas Reservoirs Comparable to Field Galaxies in a Low-mass Galaxy Cluster at $z = 1.3$* , ApJ, 929, 35

S. Alberts, K.-S. Lee, A. Pope, et al., 2021, *Measuring the total infrared light from galaxy clusters at $z = 0.5-1.6$: connecting stellar populations to dusty star formation*, MNRAS, 501, 1970

S. Alberts, W. Rujopakarn, G. H. Rieke, P. Jagannathan, K. Nyland, 2020, *Completing the Census of AGN in GOODS-S/HUDF: New Ultradeep Radio Imaging and Predictions for JWST*, ApJ, 901, 168

A. Kirkpatrick, **S. Alberts**, A. Pope, et al. 2017, *The AGN-Star Formation Connection: Future Prospects with JWST*, ApJ, 849, 111

- S. Alberts**, A. Pope, M. Brodwin, et al., 2016, *Star Formation and AGN Activity in Galaxy Clusters from $z=1-2$: a Multi-Wavelength Analysis Featuring Herschel/PACS*, ApJ, 825, 72
- J. Lyu, G. H. Rieke, **S. Alberts**, 2016, *The Contribution of Host Galaxies to the Infrared Energy Output of $z>5$ Quasars*, ApJ, 816, 85
- S. Alberts**, A. Pope, M. Brodwin, et al., 2014, *The Evolution of Dust-Obscured Star Formation Activity in Galaxy Clusters Relative to the Field Over the Last 9 Billion Years*, MNRAS, 437, 437
- C.-T. Chen, R. C. Hickox, **S. Alberts**, et al., 2013, *A Correlation between Star Formation Rate and Average Black Hole Accretion in Star-forming Galaxies*, ApJ, 773, 3
- S. Alberts**, G. Wilson, Y. Lu, et al., 2013, *Submm/mm Galaxy Counterpart Identification Using a Characteristic Density Distribution*, MNRAS, 431, 194
- K.-S. Lee, **S. Alberts**, D. Atlee, et al., 2012, *Herschel Detection of Dust Emission from UV-luminous Star-forming Galaxies at $3.3 < z < 4.3$* , ApJ, 758, 31
- J. Wagg, A. Pope, **S. Alberts**, et al., 2012, *CO $J=2-1$ Line Emission in Cluster Galaxies at $z\sim 1$: Fueling Star Formation in Dense Environments*, ApJ, 752, 91
- S. Alberts**, D. Calzetti, H. Dong, et al., 2011, *The Evolution of Stellar Populations in the Outer Disks of Spiral Galaxies*, ApJ, 731, 28

TECHNICAL AND NON-REFEREED PUBLICATIONS

- J. E. Morrison, D. Dicken, I. Argyriou, M. E. Ressler, K. D. Gordon, M. W. Regan, M. Cracraft, G. H. Rieke, M. Engesser, **S. Alberts**, et al., 2023, *JWST MIRI Flight Performance: Detector Effects and Data Reduction Algorithms*, PASP, 135, 075004
- J. P. Gardner, J. C. Mather, R. Abbott, J. S. Abell, M. Abernathy, F. E. Abney, J. G. Abraham, R. Abraham, Y. M. Abul-Huda, S. Acton, C. K. Adams, E. Adams, D. S. Adler, M. Adriaensen, J. A. Aguilar, M. Ahmed, N. S. Ahmed, T. Ahmed, R. Albat, L. Albert, **S. Alberts**, et al., 2023, *The James Webb Space Telescope Mission*, PASP, 135, 068001
- G. S. Wright, G. H. Rieke, A. Glasse, M. Ressler, M. García Marín, J. Aguilar, **S. Alberts**, et al., 2023, *The Mid-infrared Instrument for JWST and Its In-flight Performance*, PASP, 135, 048003
- J. Rigby, M. Perrin, M. McElwain, R. Kimble, S. Friedman, M. Lallo, R. Doyon, L. Feinberg, P. Ferruit, A. Glasse, M. Rieke, G. Rieke, G. Wright, C. Willott, K. Colon, S. Milam, S. Neff, C. Stark, J. Valenti, J. Abell, F. Abney, Y. Abul-Huda, D. S. Acton, E. Adams, D. Adler, J. Aguilar, N. Ahmed, L. Albert, **S. Alberts**, et al., 2023, *The Science Performance of JWST as Characterized in Commissioning*, PASP, 135, 048001
- A. Gaspar, G. H. Rieke, P. Guillard, D. Dicken, R. Gastaud, **S. Alberts**, et al., 2021, *The Quantum Efficiency and Diffractive Image Artifacts of Si:As IBC mid-IR Detector Arrays at 5-10 μm : Implications for the JWST/MIRI Detectors*, PASP, 133, 4504
- G. Rieke, **S. Alberts**, I. Shivaiei, et al., 2019, *JWST/MIRI Surveys in GOODS-S*, 2019, BAAS, 51, 11 ([link](#))
- M. García Marín, G. H. Rieke, M. Ressler, D. Dicken, T. Greene, J. Morrison, S. Kendrew, **S. Alberts**, et al., 2018, *Observing recommendations for JWST MIRI users*, SPIE, 1-704, 1
- M. García Marín, C. N. A. Willmer, A. Labiano-Ortega, **S. Alberts**, et al., 2016, *Optimizing Parallel Observations for the JWST/MIRI Instrument*, SPIE, 9910, 1

S. N. Bright, M. E. Ressler, **S. Alberts**, et al., 2016, *MIRI/JWST detector characterization*, SPIE, 9904, 41

N^{TH} AUTHOR PUBLICATIONS

J. M. Helton, F. Sun, C. Woodrum, K. N. Hainline, C. N. A. Willmer, G. H. Rieke, M. J. Rieke, S. Tacchella, B. Robertson, B. D. Johnson, **S. Alberts** et al., 2024, *The JWST Advanced Deep Extragalactic Survey: Discovery of an Extreme Galaxy Overdensity at $z = 5.4$ with JWST/NIRCam in GOODS-S*, ApJ, 962, 124

F. Sun, J. M. Helton, E. Egami, K. N. Hainline, G. H. Rieke, C. N. A. Willmer, D. J. Eisenstein, B. D. Johnson, M. J. Rieke, B. Robertson, S. Tacchella, **S. Alberts** et al., 2024, *JADES: Resolving the Stellar Component and Filamentary Overdense Environment of Hubble Space Telescope (HST)-dark Submillimeter Galaxy HDF850.1 at $z = 5.18$* , ApJ, 961, 69

M. J. Rieke, B. Robertson, S. Tacchella, K. Hainline, B. D. Johnson, R. Hausen, Z. Ji, C. N. A. Willmer, D. J. Eisenstein, D. Puskás, **S. Alberts** et al., 2023, *JADES Initial Data Release for the Hubble Ultra Deep Field: Revealing the Faint Infrared Sky with Deep JWST NIRCam Imaging*, ApJs, 269, 16

J. Young, A. Pope, A. Sajina, L. Yan, T. S. Goncalves, M. Eleazer, **S. Alberts**, et al., 2023, *Halfway to the peak: Spatially resolved star formation and kinematics in a $z=0.54$ dusty galaxy with JWST/MIRI*, ApJL, 958, L5

R. Popescu, A. Pope, K.-S. Lee, **S. Alberts**, et al., 2023, *Tracing the Total Stellar Mass and Star Formation of High-Redshift Protoclusters*, ApJ, 958, 12

C. C. Williams, S. Tacchella, M. V. Maseda, B. E. Robertson, B. D. Johnson, C. J. Willott, D. J. Eisenstein, C. N. A. Willmer, Z. Ji, K. N. Hainline, J. M. Helton, **S. Alberts**, et al., 2023, *JEMS: A Deep Medium-band Imaging Survey in the Hubble Ultra Deep Field with JWST NIRCam and NIRISS*, ApJs, 268, 64

K. A. Suess, C. C. Williams, B. Robertson, Z. Ji, B. D. Johnson, E. Nelson, **S. Alberts**, et al., 2023, *Minor Merger Growth in Action: JWST Detects Faint Blue Companions around Massive Quiescent Galaxies at $0.5 \leq z \leq 3.0$* , ApJL, 956, L42

J. Witstok, I. Shivaie, R. Smit, R. Maiolino, S. Carniani, E. Curtis-Lake, P. Ferruit, S. Arribas, A. J. Bunker, A. J. Cameron, S. Charlot, J. Chevallard, M. Curti, A. de Graaff, F. D'Eugenio, G. Giardino, T. J. Looser, T. Rawle, B. Rodríguez del Pino, C. Willott, **S. Alberts**, et al., 2023, *Carbonaceous dust grains seen in the first billion years of cosmic time*, Nature, 621, 267

A. J. Bunker, A. Saxena, A. J. Cameron, C. J. Willott, E. Curtis-Lake, P. Jakobsen, S. Carniani, R. Smit, R. Maiolino, J. Witstok, M. Curti, F. D'Eugenio, G. C. Jones, P. Ferruit, S. Arribas, S. Charlot, J. Chevallard, G. Giardino, A. de Graaff, T. J. Looser, N. Lützgendorf, M. V. Maseda, T. Rawle, H.-W. Rix, B. R. Del Pino, **S. Alberts**, et al., 2023, *JADES NIRSpec Spectroscopy of GN-z11: Lyman- α emission and possible enhanced nitrogen abundance in a $z = 10.60$ luminous galaxy*, A&A, 677, A88

S. Tacchella, B. D. Johnson, B. E. Robertson, S. Carniani, F. D'Eugenio, N. Kumari, R. Maiolino, E. J. Nelson, K. A. Suess, H. Übler, C. C. Williams, A. Adebisola, **S. Alberts**, et al., 2023, *JWST NIRCam + NIRSpec: interstellar medium and stellar populations of young galaxies with rising star formation and evolving gas reservoirs*, MNRAS, 522, 6236

S. Tacchella, D. J. Eisenstein, K. Hainline, B. D. Johnson, W. M. Baker, J. M. Helton, B. Robertson, K. A. Suess, Z. Chen, E. Nelson, D. Puskás, F. Sun, **S. Alberts**, et al., 2023, *JADES Imaging of GN-z11: Revealing the Morphology and Environment of a Luminous Galaxy 430 Myr after the Big Bang*, ApJ, 952, 74

- B. E. Robertson, S. Tacchella, B. D. Johnson, K. Hainline, L. Whitler, D. J. Eisenstein, R. Endsley, M. Rieke, D. P. Stark, **S. Alberts**, et al. 2023, *JWST NIRCam + NIRSpec: interstellar medium and stellar populations of young galaxies with rising star formation and evolving gas reservoirs*, *Nature Astronomy*, 7, 611
- W. Rujopakarn, C. C. Williams, E. Daddi, M. Schramm, F. Sun, **S. Alberts** et al, 2023, *JWST and ALMA Imaging of Dust-obscured, Massive Substructures in a Typical $z \sim 3$ Star-forming Disk Galaxy*, *ApJL*, 948, L8
- J. Álvarez-Márquez, A. Labiano, P. Guillard, D. Dicken, I. Argyriou, P. Patapis, D. R. Law, P. J. Kavanagh, K. L. Larson, D. Gasman, M. Mueller, **S. Alberts**, et al., 2023, *Nuclear high-ionisation outflow in the Compton-thick AGN NGC 6552 as seen by the JWST mid-infrared instrument*, *A&A*, 672, A108.
- J. McKinney, V. Ramakrishnan, K.-S. Lee, A. Pope, **S. Alberts**, et al., 2022, *Measuring the Total Ultraviolet Light from Galaxy Clusters at $z = 0.5-1.6$: The Balance of Obscured and Unobscured Star Formation*, *ApJ*, 928, 88
- E. Moravec, A. H. Gonzalez, S. Dicker, **S. Alberts**, et al., 2020, *The Massive and Distant Clusters of WISE Survey. IX. High Radio Activity in a Merging Cluster*, *ApJ*, 898, 145
- K. N. Hainline, R. E. Hviding, M. Rieke, I. Shivaeei, R. Endsley, E. Curtis-Lake, R. Smit, C. C. Williams, **S. Alberts**, et al., 2020, *Simulating JWST/NIRCam Color Selection of High-redshift Galaxies*, *ApJ*, 892, 125
- W. Rujopakarn, E. Daddi, G. H. Rieke, A., Puglisi, M. Schramm, P. G. Pérez-González, G. E. Magdis, **S. Alberts**, et al., 2019, *ALMA 200 pc Resolution Imaging of Smooth Cold Dusty Disks in Typical $z \sim 3$ Star-forming Galaxies*, *ApJ*, 882, 107
- C. C. Williams, E. Curtis-Lake, K. Hainline, J. Chevallard, B. E. Robertson, S. Charlot, R. Endsley, D. P. Stark, C. N. A. Willmer, **S. Alberts**, et al., 2018, *The JWST Extragalactic Mock Catalog: Modeling Galaxy Populations from the UV through the Near-IR over 13 Billion Years of History*, *ApJS*, 236, 33
- A. Pope, A. Montana, A. Battisti, M. Limousin, D. Marchesini, G. W. Wilson, **S. Alberts**, et al., 2016, *Early Science with the Large Millimeter Telescope: Detection of Dust Emission in Multiple Images of a Normal Galaxy at $z \sim 4$ Lensed by a Frontier Fields Cluster*, *ApJ*, 838, 137
- C.-T. Chen, R. C. Hickox, K. N. Hainline, **S. Alberts**, et al., 2016, *The X-ray and Mid-Infrared Luminosities in Luminous Type 1 Quasars*, *ApJ*, 837, 145
- C. R. Wagner, M. Brodwin, G. F. Snyder, A. H. Gonzalez, S. A. Stanford, **S. Alberts**, et al., 2015, *Star Formation in High-Redshift Cluster Ellipticals*, *ApJ*, 800, 107
- M. Brodwin, S. A. Stanford, A. Gonzalez, G. R. Zeimann, G. F. Snyder, C. L. Mancone, A. Pope, P. R. M. Eisenhardt, D. Stern, **S. Alberts**, et al., 2013, *The Era of Star Formation in Galaxy Clusters*, *ApJ*, 779, 138
- J. Melbourne, B. T. Soifer, V. Desai, A. Pope, L. Armus, A. Dey, R. S. Bussman, B. T. Jannuzi, **S. Alberts**, 2012, *AJ*, 143, 125
- I. Aretxaga, G. Wilson, E. Aguilar, **S. Alberts**, et al., 2011, *AzTEC Millimeter Survey of the COSMOS field - III. Source catalogue over 0.72 deg^2 and Plausible Boosting by Large Scale Structure*, *MNRAS*, 415, 3831
- N. M. Ball, R. J. Brunner, A. D. Myers, N. E. Strand, **S. L. Alberts**, D. Tchong, 2008, *Robust Machine Learning Applied to Astronomical Datasets III: Probabilistic Photometric Redshifts for Galaxies and Quasars in the SDSS and GALEX*, *ApJ*, 683, 12

N. M. Ball, R. J. Brunner, A. D. Myers, N. E. Strand, **S. L. Alberts**, et al., 2007, *Robust Machine Learning Applied to Astronomical Datasets III Quantifying Photometric Redshifts for Quasars Using Instance-Based Learning*, ApJ, 663, 774