

Dr. Matthew Hayes – Vitae

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Personal

Position Universitetslektor [Associate Professor] in Astrophysics
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Birth / Citizen 1977 05 30, Great Malvern, United Kingdom / British

Career High Points

Wallenberg Academy Fellow
2 times lead-author articles in *Nature*
Grant total of \$ 2,000,000 (USD, rates on day of award)
2 ESO press releases. 2 ESA/Hubble press releases
7 times Principle Investigator with *Hubble Space Telescope*, totalling 125 orbits
16 times Principle Investigator with *ESO/VLT*, totalling ~30 nights.

Research Interests

Galaxy formation and evolution / starburst galaxies / circumgalactic medium

Education

Doctoral degree: University of Stockholm, Stockholm, Sweden. 2007
Doctor of Philosophy (Dr.Fil / PhD): Astronomy
Lyman-alpha imaging of starburst galaxies in the local universe and beyond.

Undergraduate degree: University of Leeds, Leeds, United Kingdom. 1999
Master of Physics (M.Phys): Physics and Astrophysics

Academic Appointments

2015 – : Stockholm University. Permanently employed as *universitetslektor* (Associate Professor)
2015 –: Wallenberg Academy Fellow, appointed by Royal Academy of Sciences.
2013 – 2015: Stockholm University, Stockholm, Sweden. *Senior Researcher / Assistant Professor*
2010 – 2012: IRAP, Toulouse, France. *Postdoctoral scholar*
2007 – 2010: Observatory of the University of Geneva, Geneva, Switzerland. *Postdoctoral research fellow*

Non-academic Appointments

2000 – 2001: Celoxica Ltd. Oxford, United Kingdom. *Design engineer.*
2001 – 2002: Atmel Plc. Stockholm, Sweden. *DSP & Software engineer*
1995 – 1998: QuinetiQ (then DRA/DERA). *Summer research student.*

Grants / Awards

- 2015 Wallenberg Academy Fellow, appointed by Royal Academy of Sciences. *Feeding Distant Galaxies*. **EUR 810,000**
- 2015 Swedish National Space Board (SNSB): Project grant: *Unveiling the Missing Baryons*. **EUR 230,000.**
- 2012 Swedish Science Council (Vetenskapsrådet, VR): Young Researcher award: *Ionizing Galaxies and their Cosmic History*. **EUR 420,000.**
- 2012 Swedish National Space Board (SNSB): Senior Researcher grant: *The Deep Ultraviolet Universe*. **EUR 150,000.**
- 2005 L. & E. Kinanders donation stipend
- 2005 SNSB travel donation
- 2004 L. Namowitzky donation stipend

Successful Telescope Proposals

- 2016 – PI – HST – 4 orbits – *The Energetically Complete Picture of a Starburst Supervind*
- 2016 – CoI – HST – 13 orbits – *How Does Ionizing Radiation Escape From Galaxies?*
- 2016 – CoI – HST – 18 orbits – *SAFE: Star Clusters, Lyman Alpha and Feedback in ESO338-IG04*
- 2016 – CoI – VLA – 100 hours – *High Resolution HI imaging of Two LARS/eLARS galaxies*
- 2016 – CoI – ALMA – 2.4 hours – *Completing the sub-mm portrait of LAB1*
- 2016 – CoI – ALMA – 4.5 hours – *Dense Molecular Gas in a Giant Lyman alpha Blob*
- 2015 – PI – HST – 32 orbits – *Unveiling the Dark Baryons II: First sample of OVI Emission Imaging*
- 2015 – CoI – HST – 21 orbits – *Hi-PEEC, Hubble imaging Probe of Extreme Environments & Clusters*
- 2015 – CoI – HST – 5 orbits – *Lyman alpha halo in a confirmed Lyman continuum leaker*
- 2015 – CoI – HST – 18 orbits – *Origin of Double Peaks in Lyman alpha Spectra: Diffuse halos or LyC Leakage*
- 2015 – PI – VLT – 18 hours – *Dynamics of Filamentary Intergalactic Gas as a Driver for High Redshift Galaxy Assembly.*
- 2015 – PI – VLT – 14 hours – *Ly-alpha scattering in the ISM of galaxies: kinematics and ionization of local starburst labs*
- 2015 – CoI – GMRT – 68 hours – *Neutral Hydrogen in the LARS+eLARS Galaxies*
- 2015 – CoI – VLA – 10 hours – *Improving Understanding of Ly α Transport with Radio Recombination Lines*
- 2015 – CoI – IRAM 30m – 45 hours – *Detection of Molecular Gas in the Lyman alpha Reference Sample*
- 2015 – CoI – IRAM 30m – 37 hours – *Dust Content in Local Lyman alpha Emitters*
- 2014 – PI – HST – 22 orbits – *Unveiling the Dark Baryons: First imaging of Circumgalactic OVI.*
- 2014 – PI – HST – 20 orbits – *How Lyman alpha Beats/Bites the Dust*
- 2014 – PI – HST – 29 orbits – *Ultraviolet Spectroscopy of the Extended Lyman Alpha Reference Sample*
- 2014 – PI – VLA – 6 hours – *Where is the HI in the strongest low- z LyC Emitting Galaxy?*
- 2014 – PI – VLT – 8 hours – *New Excursions into the Circumgalactic and Intergalactic Media*
- 2014 – PI – SOFIA – 7 hours – *Far-Infrared Spectroscopy of Nearby Analogues of High- z Galaxies*
- 2014 – CoI – VLT – 8 hours – *The Ionized Halo of Lyman Break Analog Haro 11*
- 2014 – CoI – VLT – 16 hours – *Ultrafaint star forming galaxies behind Abell 1689*
- 2014 – CoI – VLA – 42 hours – *Neutral Hydrogen in LARS Galaxies - High-Resolution Imaging*
- 2014 – CoI – ALMA – 6.3 hours – *Deep Dust Continuum Observations of Giant Ly α Nebulae at $z=3.1$*
- 2014 – CoI – VLA – 30 hours – *Neutral Hydrogen in the LARS Galaxies - High-Resolution Follow-up*
- 2014 – CoI – VLA – 124 hours – *HI Morphologies and Kinematics of the Lyman Alpha Reference Sample*
- 2014 – CoI – GMRT – 80 hours – *Neutral Hydrogen in the LARS+eLARS Galaxies*
- 2014 – CoI – GMRT – 120 hours – *Neutral Hydrogen in the LARS+eLARS Galaxies*
- 2014 – CoI – IRAM 30m – 35 hours – *Detection of Molecular Gas in the Lyman alpha Reference Sample*
- 2013 – CoI – VLT – 37 hours – *Probing physical properties of $z=2$ Ly α and H α selected galaxies*
- 2013 – PI – HST – 8 orbits – *Coupling the emission of Ionizing Radiation and Lyman alpha*
- 2013 – CoI – HST – 54 orbits – *eLARS: extending the Lyman alpha Reference Sample*
- 2013 – PI – VLT – 5 hours – *Unveiling the nature of a redshift 2 Lyman continuum emitter*
- 2013 – PI – NOT – 7 nights – *Characterizing the most extreme emission line galaxies*
- 2013 – CoI – VLT – 3 nights – *The Ly α envelope of radio-quiet QSO J120+1455... from polarimetry*
- 2013 – CoI – Palomar Hale 200in – 3 nights – *spectroscopically confirming extreme high- z galaxies*
- 2013 – CoI – JVLA – 55 hours – *HI Morphologies and Kinematics of the Lyman Alpha Reference Sample*

2012 – PI – VLT – 6 hours – *Multi-component nebular physics in a high-redshift merging galaxy triplet*
 2012 – PI – CFHT – 25 hours – *NIR LARS: the Lyman alpha Reference Sample in the Near Infrared*
 2012 – PI – VLT – 2 nights – *Completing the first polarimetric census of high-redshift Ly α nebulae*
 2012 – CoI – VLT – 27 hours – *Clear sightlines to $z=4$: LyC leakage at the highest- z via QSO proximity*
 2012 – CoI – HST – 8 orbits – *The escape of Lyman photons from Tololo 1247-232*
 2012 – CoI – SOAR – 5 nights – *Escape of ionizing radiation for star-formation selected galaxies $z \sim 2.2$*
 2011 – PI – HST – 7 orbits – *Spectro-LARS: ISM kinematics of the Lyman alpha reference sample*
 2011 – PI – Herschel – 12.1 hours – *Pa-LARS: PACS spectroscopy of the Lyman alpha reference sample*
 2011 – CoI – HST – 8 orbits – *A novel approach to find Lyman continuum leaking galaxies with COS*
 2011 – PI – VLT – 2 nights – *Unveiling the nature of high- z Lyman- α structures with FORS polarimeter*
 2011 – PI – VLT – 6 hours – *Multi-component nebular physics in a high-redshift merging galaxy triplet*
 2011 – PI – CFHT – 2 nights filler – *New measures of ionizing galaxies in the CANDELS HST fields*
 2011 – PI – CFHT – 1 night – *New measures of ionizing galaxies*
 2011 – CoI – Spitzer – 79 hours – *SIMES: The Spitzer IRAC MIPS Extragalactic Survey*
 2011 – CoI – GBT – 56 hours – *A Search for Neutral Hydrogen in the LARS Galaxies*
 2010 – Co-PI – HST – 49 orbits – *LARS: The Lyman-Alpha Reference Survey*
 2010 – CoI – HST – 25 prime orbits + 25 parallel – *The escape of Ly α photons in star-forming galaxies*
 2010 – PI – CFHT – 2.5 nights – *A new view of Lyman-alpha and Lyman-C escape in high- z galaxies*
 2010 – PI – VLT – 2.5 nights – *Innovative diagnostics of Ly-alpha blobs by spectro-polarimetry*
 2010 – CoI – VLT – 4 nights – *Complete Census of Parameters Governing the Ly α Escape Process*
 2009 – PI – VLT – 2 nights – *Innovative polarimetric diagnostics of Ly-alpha blobs*
 2009 – CoI – Keck2 – 2 nights – *Understanding Lyman-alpha nebula with LRIS polarimetry*
 2008 – PI – VLT – 11 hours – *Lyman-alpha escape physics: neutral ISM kinematics*
 2007 – PI – VLT – 45 hours – *Lyman-alpha physics in cosmological populations*
 2007 – PI – VLT – 14 hours – *Lyman-alpha escape physics at superb resolution*
 2007 – PI – VLT – 18 hours – *Lyman photon escape physics at superb resolution*
 2007 – CoI – HST – 22 orbits – *Luminous Blue Compact Galaxies: A Window on Galaxy Formation*
 2006 – CoI – Spitzer – 12 hours – *Are the brightest Lyman Alpha Emitters at $z=5.7$ primeval galaxies?*
 2006 – PI – VLT – 14 hours – *Ly α production, dust, and stellar populations*
 2005 – CoI – Spitzer – 12 hours – *The Red Halos of Blue Compact Galaxies*
 2005 – CoI – HST – 11 orbits – *Lyman-alpha morphology of local starburst galaxies*
 2004 – CoI – HST – 30 orbits – *Deep Lyman alpha images of starburst galaxies*
 2002 – 2010 – Several tens of nights awarded to various programmes at NOT, ESO/NTT, NRO, Onsala 20m, etc.

Recent Teaching, Supervision, Pedagogical Training

Classroom teaching and Schools

2016 : Lecturer at Saas-Fee winter school, Switzerland (PhD student + postdoc level)

2016 : Contributor to *Star Formation in Galaxies* (PhD level)

2014 – 2016: Course Lead and Lecturer: *Observational Astrophysics II* (SU, MSc level)

2013 : Course Lead and Lecturer : *Galaxies* (SU, MSc level)

2011-2012 : Lecture contributor for M2R ASEP seminars at IRAP

Pedagogical Training

2014 : Completed course on *Supervision of Research* (SU)

2007 : Completed course on *University Pedagogics 1* (SU, UP1)

Postdocs supervised

Emily [Freeland](#) (2015 – 2016)

Edmund Christian Herenz (2016 –)

Michael Rutkowski (2016 –)

PhD supervision

Principle: Johannes [Puschnig](#) (2013 – 2017, expected), Sinéad [Hales](#) (2016 – 2019, expected)

Assistant: Andreas Sandberg (2010 - 2016, graduated), Thøger Emil Rivera-Thorsen (2011 - 2016, expected), Sambit Giri (2019, expected)

Undergraduate Thesis Supervision

Principle: Gustav Mannerström Jansson (SU, 2015, MSc); Kota Inooka (SU, 2015, BSc)

Assistant: Staffan Linné (Uppsala, 2010, MSc)

Selected Recent Talks

I=Invited; C=Contributed; R=Review / C=Conf.; W=Workshop; S=Seminar; P=Public /
*=future

C/C	Aug 2016	<i>How Galaxies form Stars</i> , Stockholm, SE
C/C	Jul 2016	<i>The Role of Feedback in the Formation of Galaxy Clusters</i> , Sexten, IT
C/C	Jun 2016	<i>Cosmic Dawn of Galaxy Formation</i> , IAP Colloquium, Paris, FR
C/C	Apr 2016	<i>Escape of Lyman Radiation from Galactic Labyrinths</i> , Crete, GR
I/S	Mar 2016	Invited Lecture Series as Saas Fee Advanced School
I/S	Jan 2016	Colloquium Series / Potsdam, DE
I/C	Apr 2015	Swedish Space Researchers Collaboration / Gothenburg, SE
I/C	Jun 2014	<i>EWASS</i> Symposium / Geneva, CH
I/S	Nov 2013	Colloquium series, Onsala Space Observatory/Chalmers, SE
C/C	Sept 2013	Various contributions to Lyman-alpha workshop and programme
I/S	Aug 2013	Colloquium series, Stockholm University, SE
I/S	May 2013	Colloquium series, Observatoire de Paris, FR
I/W	May 2013	Mid-z science drivers for the ultraviolet channel of MESSIER
I/C	Jan 2013	AAS winter meeting. <i>High resolution UV imaging with HST</i> . USA
I/S	Sep 2012	Colloquium series – ESO Vitacura headquarters, CL
I/S	Sep 2012	Colloquium series – Gemini La Serena offices, CL
I/C	Jul 2012	<i>EWASS Special Session on Ly-alpha galaxies</i> , Rome, IT
C/C	Jun 2012	<i>UV Astronomy: HST and Beyond</i> , Hawaii, USA
I/C	Jun 2012	<i>An Odyssey in the Galaxy Archipelago</i> , SE
I/S	Feb 2012	Cosmology Colloquium, University of Minnesota, USA
C/C	Nov 2011	<i>Polarimetry with Extremely Large Telescopes</i> , Utrecht, NL
I/S	Nov 2011	<i>Oskar Klein Seminar</i> , Stockholm, SE
I/W	Oct 2011	<i>Community Outreach for Science with MUSE</i> , Lyon, FR
C/C	Sep 2011	<i>Young and Bright: Understanding high redshift structures</i> , Potsdam, DE
C/C	Jul 2011	<i>New Horizons for High Redshifts</i> . Cambridge, UK.
C/C	Jun 2011	<i>Large Extra-Galactic and Cosmological Surveys</i> . Paris, FR.
I/S	Mar 2010	Uppsala Observatory, SE
I/W	Mar 2010	Stockholm Observatory, SE
I/S	Feb 2010	Oxford University, UK
I/S	Sep 2009	Observatory of Geneva, CH
C/C	Jun 2009	<i>The Lyman alpha Universe</i> , Paris, FR
C/C	Jun 2009	<i>Harvesting the redshift desert</i> . Marseille, FR
I/S	Feb 2009	Observatory of Lyon, FR
C/C	Nov 2008	<i>When the universe formed stars</i> , Martinique, FR
IR/C	Oct 2008	<i>Lyman-alpha emitters</i> . MPIA, Heidelberg, DE

Peer Reviewing and Panels

2012-: Referee for *Nature*

2009-: Referee for *Astrophysical Journal (Main and Letters)*

2007-: Referee for *Monthly Notices of the Royal Astronomical Society*

2007-: Referee for *Astronomy & Astrophysics*

- 2016: *Hubble Space Telescope* Mid-cycle Reviewer
2016: CFHT Large Proposal Reviewer
2016: OPTICON Proposal Reviewer
2015: *Gemini* Fast Turnaround reviewer
2013: NASA/ADAP grant committee member in *Large Scale Structure*
2011-2012: Proposal review panel member: *Subaru Open Use Proposals*

Science Development and Missions

- 2015-: SKA HI Galaxy Science working group member.
2015-: SPICA extragalactic science team member
2014-: Committee member: *SIG2: Ultraviolet-Visible Cosmic Origins Space-Based Science and Technology Development*. Both subcommittees for : *Definition of the spectrum of possible UV-visible mission implementations* ; and *Science category definition and portfolio assembly*
2013-: Ultraviolet science case development for CNES microsatellite *MESSIER*
2011-2013: GTO Science Exploitation team for *VLT/MUSE*
2011-2013: ESF/CoST network member *Polarization as a tool to study the Solar System & beyond*
2010-2012: Extragalactic Science Case development for *FRESNEL*

Conference Organization

- 2017: SOC member: *SnowPAC meeting*, Snowbird Utah.
2016: SOC member: *How Galaxies Form Stars*, Stockholm, Sweden
2016: SOC member: *Escape of Lyman radiation from galactic labyrinths*, Crete, Greece
2015: LOC member: SKA Science Meeting, Stockholm
2013: Organizer, and SOC co-chair: NORDITA Programme & Workshop: *Ly-alpha as an astrophysical tool*
2012: Co-organizer; SOC co-chair: at EWASS 2012, Special Session

Membership of Societies and Professional Bodies

- 2012-: Member of *International Astronomical Union*
2009-: International Affiliate Member of *American Astronomical Society*

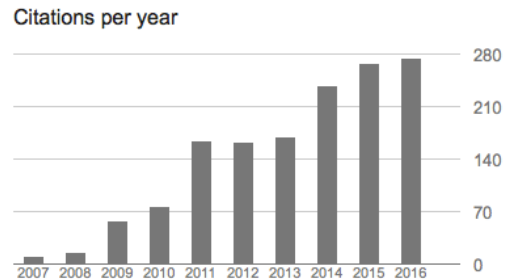
Dr Matthew Hayes – Publications

Updated : Aug 2016

Full list of publications: <http://www.xayes.org/pub/pubs.html>

Bibliometrics

- 51 refereed publications.
- 1450 citations
- 12 refereed publications as lead author; 600 citations
- Hirsch's h -index = 22; $i10$ -index = 34.



Thesis

1. **Hayes M.** (2007). University of Stockholm Doctoral Thesis. ISBN: 978-91-7155-462-8. *Lyman-alpha imaging of starburst galaxies in the local universe and beyond*

Invited Review Articles

1. **Hayes M.** (2015) *PASA*, **32**, 27. *Lyman-alpha Emitting Galaxies in the Local Universe*

Refereed Articles in Research Journals (incl. accepted / in press)

50. Geach J., Narayanan D., Matsuda Y., **Hayes M.**, Mas-Ribas LL., Dijkstra M., Steidel C., Chapman S., Feldmann R., Avison A., Agertz O., Ao Y., Birkinshaw M., Bremer M., Clements D., Dannerbauer H., Farrah D., Harrison C., Kubo M., Michalowski M., Scott D., Spaans M., Simpson J., Swinbank A., Taniguchi Y., van der Werf P., Verma A., Yamada T. (2016) *ApJ*, **XXX**, XXX. *ALMA Observations of Lyman-a Blob 1: Halo Sub-Structure Illuminated from Within.*
49. **Hayes M.**, Melinder J., Östlin G., Scarlata C., Lehnert M., and Mannerström-Jansson G. (2016) *ApJ*, **XXX**, XXX. *O VI imaging of a Galaxy with the Hubble Space Telescope: a Warm Gas Halo Surrounding the Intense Starburst SDSS J115630.63+500822.1*
48. Baronchelli I., Scarlata C., Rodighiero G., Franceschini A., Capak P. L., Mei S., Vaccari M., Marchetti L., Hiben P., Sedgwick C., Pearson C., Serjeant S., Menéndez-Delmestre K., Salvato M., Malkan M., Teplitz H. I., **Hayes M.**, Colbert J., Papovich C., Devlin M., Kovacs A., Scott K. S., Surace J., Kirkpatrick J. D., Atek H., Urrutia T., Scoville N. Z., and Takeuchi T. T. (2016) *ApJS*, **223**, 1. *The Spitzer-IRAC/MIPS Extragalactic survey (SIMES) in the South Ecliptic Pole field.*
47. Beck M., Scarlata C., **Hayes M.**, Dijkstra M., and Jones T.J. (2016) *ApJ*, **818**, 138. *Spectropolarimetry confirms central powering of a L_{α} nebula at $z=3.09$.*
46. Herenz E.C., Gruyters P., Orlitová I., **Hayes M.**, Östlin G., Cannon J.M., Roth M.M., Bik A., Pardy S., Oti-Floranes H., Mas-Hesse J.M., Adamo A., Atek H., Duval F., Guaita L., Kunth D., Laursen P., Melinder J., Puschign J., Rivera-Thorsen T.E., Schaerer D., and

- Verhamme A. (2016) *A&A*, **587**, 38. *The Lyman alpha reference sample. VII. Spatially resolved H α kinematics.*
45. Duval F., Östlin G., **Hayes M.**, Zackrisson E., Verhamme A., Orlitova I., Adamo A., Guaita L., Melinder J., Cannon J. M., Laursen P., Rivera-Thorsen T., Herenz E.C., Gruyters P., Mas-Hesse J.M., Kunth D., Sandberg A., Schaerer D., and Mansson T. (2016) *A&A*, **587**, 37. *The Lyman alpha Reference Sample VI: Lyman alpha escape from the edge-on disk galaxy Mrk1486.*
44. Rutkowski M.J., Scarlata C., Haardt F., Siana B., Henry A., Rafelski M., **Hayes M.**, Salvato M., Pahl A.J., Mehta V., Beck M., Malkan M., and Teplitz H.I. (2016) *ApJ*, **819**, 81. *The Lyman Continuum Escape Fraction of Low-Mass Star-Forming Galaxies at $z \sim 1$.*
43. Östlin G., Marquart T., Cumming R. J., Fathi K., Bergvall N., Adamo A., Amram P., and **Hayes M.** (2015) *A&A*, **583**, 55. *Kinematics of Haro 11: The miniature Antennae.*
42. Rivera-Thorsen T., **Hayes M.**, Östlin G., Duval F., Orlitová I., Verhamme A., Mas-Hesse J. M., Schaerer D., Cannon J. M., Oti-Floranes H., Sandberg A., Guaita L., Adamo A., Atek H., Herenz E. C., Kunth D., Laursen P., Melinder J. (2015) *ApJ*, **805**, 14. *The Lyman Alpha Reference Sample: V. The impact of neutral ISM kinematics and geometry on Lyman Alpha escape*
41. Sandberg A., Guaita L., Östlin G., **Hayes M.**, Kiaerød F. (2015) *A&A*, **580**, 91. *Trident: A three-pronged galaxy survey. I. Lyman alpha emitting galaxies at $z \sim 2$ in GOODS North*
40. Garel T., Blaizot J., Guiderdoni B., Michel-Dansac L., **Hayes M.**, Verhamme A. (2015) *MNRAS*, **450**, 1279, *The UV, Lyman alpha, and dark matter halo properties of high-redshift galaxies*
39. Bik A., Östlin G., **Hayes M.**, Adamo A., Melinder J., Amram P. (2015) *A&A*, **576**, 13. *VLT/MUSE view of the highly ionized outflow cones in the nearby starburst ESO338-IG04*
38. Guaita L., Melinder J., **Hayes M.**, Östlin G., Gonzalez J. E., Micheva G., Adamo A., Mas-Hesse J. M., Sandberg A., Oti-Floranes H., Schaerer D., Verhamme A., Freeland E., Orlitová I., Laursen P., Cannon J. M., Duval F., Rivera-Thorsen T., Herenz E. C., Kunth D., Atek H., Puschnig J., Gruyters P., Pardy S. A. (2015), *A&A*, **576**, 51. *The Lyman alpha reference sample. IV. Morphology at low and high redshift*
37. Verhamme A., Orlitová I., Schaerer D., & **Hayes M.** (2015) *A&A*, **578**, 14. *On the Use of Lyman alpha to Detect Lyman Continuum Leaking Galaxies.*
36. Östlin G., **Hayes M.**, Duval F., Sandberg A., Rivera-Thorsen T., Marquart T., Orlitová I., Adamo A., Melinder J., Guaita L., Atek H., Cannon J., Gruyters P., Herenz E.C., Kunth D., Laursen P., Mas-Hesse J.-M., Micheva G., Oti-Floranes H., Pardy S., Roth M, Schaerer D., and Verhamme A. (2014) *ApJ*, **794**, 101. *The Lyman alpha Reference Sample: I. Survey Outline and First Results for Markarian 259.*
35. Pardy S., Cannon J., Östlin G., **Hayes M.**, Rivera-Thorsen T., Sandberg A., Adamo A., Freeland E., Herenz E.C., Guaita L., Kunth D., Laursen P., Mas-Hesse J.-M., Melinder J., Orlitová I., Oti-Floranes H., Puschnig J., Schaerer D., and Verhamme A. (2014) *ApJ*, **794**, 101. *The Lyman alpha Reference Sample: III. Properties of the Neutral ISM from GBT and VLA observations.*

34. Jensen H., **Hayes M.**, Iliev I., Laursen P., Mellema G., & Zackrisson E., (2014) *MNRAS*, **444**, 2114. *Studying Reionization with the Next Generation of Ly-alpha Emitter Surveys.*
33. Otí-Floranes H., Mas-Hesse J.M, Jiménez-Bailón E., Schaerer D., **Hayes M.**, Östlin G., Atek H., & Kunth D. (2014) *A&A*, **566**, 38. *Physical Properties and the Evolutionary State of Lyman alpha Emitting Starburst IRAS 08339+6517*
32. **Hayes M.**, Östlin G., Duval F., Sandberg A., Guaita L., Melinder J., Adamo A., Schaerer D., Verhamme A., Orlitová I., Mas-Hesse J.-M., Cannon J., Atek H., Kunth K., Laursen P., Otí-Floranes H., Pardy S., Rivera-Thorsen T., Herenz E.C. (2014). *ApJ*, **782**, 9. *The Lyman-alpha Reference Sample: II. HST imaging results, integrated properties and trends.*
31. Atek H., Kunth D., Schaerer D., Mas-Hesse J.M., **Hayes M.**, Östlin G., Kneib J.-P. (2014). *A&A*, **561**, 89. *On the influence of physical galaxy properties on Lyman-alpha escape in star-forming galaxies.*
30. **Hayes M.**, Östlin G., Schaerer D., Verhamme A., Mas-Hesse J.-M., Adamo A., Atek H., Cannon J., Duval F., Guaita L., Herenz E.C., Kunth D., Laursen P., Melinder J., Orlitová I., Otí-Floranes H., Sandberg A. (2013) *ApJL*, **765**, 27. *The Lyman-alpha Reference Sample (LARS) – Lyman alpha halos produced at low dust content.*
29. Leitet E., Bergvall N., **Hayes M.**, Linné S., Zackrisson E. (2013). *A&A*, **553**, 106 *Escape of Lyman continuum radiation from local galaxies: Detection of leakage from the young starburst Tol 1247-232*
28. Sandberg A., Östlin G., **Hayes M.**, Fathi K., Schaerer D., Mas-Hesse J.M., & Rivera-Thorsen T. (2013). *A&A*, **552**, 95. *Neutral gas in Lyman-alpha emitting galaxies Haro 11 and ESO 338-IG04 measured through sodium absorption*
27. Guaita L., Francke H., Gawiser E., Bauer F., **Hayes M.**, Östlin G., & Padilla N. (2013) *A&A*, **551**, 93. *Magellan/MMIRS Near Infrared Spectroscopy of Nebular Emission from Star-Forming Galaxies at $2 < z < 3$.*
26. Otí-Floranes H., Mas-Hesse J.M, Jiménez-Bailón E., Schaerer D., **Hayes M.**, Östlin G., Atek H., & Kunth D. (2012) *A&A*, 546, 65. *Multiwavelength analysis of the Lyman alpha emitting galaxy Haro 2: relation between the diffuse Lyman alpha and soft X-ray emissions*
25. Melinder J., Dahlnén T., Mencia-Trinchant L., Östlin G., Mattila S., Sollerman J., Fransson C., **Hayes M.** Kankare E., & Nasoudi-Shoar S. (2012) *A&A*, **545**, 96. *The Rate of Supernovae at Redshift 0.1-1.0 - the Stockholm VIMOS Supernova Survey IV*
24. **Hayes M.**, Laporte N., Pelló R., Schaerer D., & Le-Borgne J.-F. (2012) *MNRAS*, **425**, 19. *A peculiar galaxy appears at redshift 11: properties of a moderate redshift interloper.*
23. Laporte N, Pelló R, **Hayes M.**, Schaerer D., Boone F, Richard J., Le Borgne J-F., Kneib J-P, & Combes F. (2012) *A&A*, **542**, 31. *The bright end of the luminosity function at $z=9$*
22. Garel T., Blaizot J., Guiderdoni B., Schaerer D., Verhamme A., & **Hayes M.**, (2012) *MNRAS*, **422**, 310. *Modelling High-redshift Lyman-alpha emitters.*

21. Lidman C., **Hayes M.**, Jones H., Schaerer D., Westra E., Tapken C., Meisenheimer K., & Verhamme A. (2011). *MNRAS*, **420**, 1946. *Properties of the brightest Lyman-alpha emitters at $z \sim 5.7$.*
20. **Hayes M.**, Scarlata C., & Siana B. (2011). *Nature*, **476**, 304. *Central Powering of the Largest Lyman-alpha Nebula is Revealed by Polarized Radiation*
19. Melinder J., Dahlén T., Mencia-Trinchant L., Östlin G., Mattila S., Sollerman J., Fransson C., **Hayes M.**, & Nasouli-Shoar S. (2011) *A&A*, **532**, 29. *The discovery and classification of 16 supernovae at high redshifts in ELAIS-S1 – the Stockholm VIMOS Supernova Survey II*
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