



**STScI** | SPACE TELESCOPE  
SCIENCE INSTITUTE

## Andrew J. Fox

### Curriculum Vitae



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<b>EMPLOYMENT</b>	<p><b>ESA/AURA Astronomer, STScI</b> Baltimore, MD  <ul style="list-style-type: none"> <li>• Member, COS instrument branch and Science Mission Office 2011-present</li> </ul> <p><b>ESO (European Southern Observatory) Fellow</b> Santiago, Chile  <ul style="list-style-type: none"> <li>• 4th year spent at Institute of Astronomy, Cambridge, UK 2007–20011</li> </ul> <p><b>Marie Curie Fellow, Intra-European Fellowship</b> Paris, France  <ul style="list-style-type: none"> <li>• Host: Institut d’Astrophysique de Paris (IAP) 2006–2007</li> </ul> </p></p></p>
<b>EDUCATION</b>	<p><b>Ph.D. in Astronomy, U. of Wisconsin-Madison, 2005</b> Madison, Wisc.  <ul style="list-style-type: none"> <li>• “Origins of Highly Ionized Gas in High-Velocity Clouds” 2001–2005</li> <li>• Advisor: Prof. Blair D. Savage</li> </ul> <p><b>Master of Science (MS) in Astronomy, 2002</b> Madison, Wisc.  <p><b>Master in Science (MSci) in Astrophysics, 2000</b> London, UK  <ul style="list-style-type: none"> <li>• University College London (UCL) 1996–2000</li> <li>• 1<sup>st</sup> class honours, with Diploma in Communication Skills</li> </ul> </p></p></p>
<b>SERVICE</b>	<p>Referee: ApJ, ApJS, AJ, MNRAS, MNRAS Lett., PASP, A&amp;A 2004–present          Member, Hubble Ultraviolet Legacy Working Group 2018–          Member, Leadership Council, UV SIG of NASA COPAG 2018–          Reviewer, NASA Hubble Fellow Selection Committee 2018          Reviewer, NSF Astronomy &amp; Astrophysics Grants (AAG) 2015–present          Reviewer, NASA Postdoctoral Program (NPP) Fellowships 2014–present          Reviewer, NASA Astrophysics Theory Program (ATP) 2013–present          Reviewer, NASA Astrophysics Data Analysis Program (ADAP) 2013–present          Reviewer, Chambliss student poster awards, AAS meetings 2014–2015          Reviewer, German Science Foundation 2016          Member, STScI Giacconi Fellowship Selection Committee 2012–2013          Member, STScI Summer Student Selection Committee 2012–2014          Panelist, PhD Candidate Final-Year Interviews, Cambridge 2011          Member, ESO Chile Fellowship Selection Committee 2009–2010          Coordinator, Extragalactic Research Group, ESO–Chile 2009–2010          Member, AAS Henri Chrétien Award Prize Committee 2007–2009          Member, American Astronomical Society 2002–          Member, International Astronomical Union 2006–</p>

**RESEARCH  
INTERESTS**

- Interstellar, circumgalactic, intergalactic media
- Magellanic Clouds: feedback, interaction, Magellanic Stream
- High-velocity clouds (HVCs): structure, metallicity, origin, fate
- Galaxy inflows and outflows
- Photo- and collisional- ionization modeling of astrophysical plasmas
- Galaxy evolution and structure

**SUCCESSFUL  
PROPOSALS  
AS PI**

NASA ADAP proposal 17-ADAP17-0045, 2 years funding, \$334 464	2017
<i>Surveying the H I Content of the Galactic Halo via the Lyman Series</i>	
NRAO/GBT Semester 18A, 19.0 hours, proposal GBT18A-221	2017
<i>Properties of the Galactic Nuclear Wind at Low Latitudes</i>	
NRAO/GBT Semester 17B, 2.75 hours, DD proposal GBT18B-424	2017
<i>HI Spectra to Probe the Leading Arm of the Magellanic Stream</i>	
NASA/HST Cycle 25, 22 orbits COS, proposal GO 15339, \$170 915	2017
<i>Properties of the Galactic Nuclear Wind at Low Latitudes</i>	
NASA/HST Cycle 25, archival proposal AR 15020, \$288 436	2017
<i>The Mass Outflow Rate of the Milky Way</i>	
NASA/HST Cycle 24, 6 orbits COS, proposal GO 14687	2016
<i>The Origin of the Leading Arm of the Magellanic Stream</i>	
NRAO/GBT Semester 14B, 7.0 hours, Band A, proposal GBT/14B-299	2014
<i>The Closest Galactic Wind: Properties of the MW Nuclear Outflow</i>	
NASA/HST Cycle 22, 9 orbits COS, proposal GO 13840, \$66 394	2014
<i>The Smith Cloud: Galactic or Extragalactic</i>	
NRAO/GBT, 0.75 hours DD time, Band A, proposal GBT/14A-557	2014
<i>The Crater Satellite: Dwarf Galaxy or Globular Cluster?</i>	
NASA/HST Cycle 21, 49 orbits COS, proposal GO 13448, \$181 000	2013
<i>The Closest Galactic Wind: UV Properties of the MW Nuclear Outflow</i>	
NASA/HST Cycle 19, 20 orbits COS, proposal GO 12604, \$79 282	2011
<i>Ionization in the Magellanic Stream: A Study of Galactic Accretion</i>	
ESO Period 88, VLT/XSHOOTER, 10.0 hr, proposal 088.A-0852(A)	2011
<i>Probing the Transverse Length Scale of IGM Metals using QSO Pairs</i>	
Nuffield Foundation Undergraduate Research Bursary 39696, 1440 GBP	2011
<i>Chemical Abundances and the Origin of the Magellanic Stream</i>	
ESO Period 85, VLT/UVES spectrograph, 14.7 hr, proposal 085.C-0172	2009
<i>Ionization in the Magellanic Stream; A Study of Galactic Accretion</i>	
ESO Period 83, VLT/UVES spectrograph, 6 hr, proposal 383.A-0376	2008
<i>Highly ionized plasma in damped Lyman-<math>\alpha</math> systems: warm or hot?</i>	
NASA/FUSE Cycle 8, 100 ks awarded, proposal 06-FUSE8-0005	2007
<i>Far-UV spectra of the brightest X-ray sources</i>	
ESO Period 78, VLT/UVES spectrograph, 4 hr, proposal 078.A-0164	2006
<i>Highly ionized gas in damped Lyman-alpha systems</i>	
WIYN 3.5m Semester 2005a, HYDRA/MOS spectroscopy, 3 nights	2005
<i>A search for galaxies associated with intergalactic O VI absorbers</i>	

<b>SUCCESSFUL PROPOSALS AS CO-I</b>	HST Cycle 25 GO Proposal 15313, PI Lehner	2017
	<i>The AGN Impact on the Circumgalactic Medium of Cen A</i>	
	HST Cycle 25 GO Proposal 15193, PI Aloisi	2017
	<i>A Ionization and Depletion in the ISM of Nearby Star-Forming Galaxies</i>	
	HST Cycle 25 GO Proposal 15335, PI de Cia	2017
	<i>What is the metallicity of the cool ISM in our own Galaxy?</i>	
	HST Cycle 25, GO Proposal 15161, PI Barger	2017
	<i>The Fate of Infalling Gas during its Final Approach onto the Disk</i>	
	HST Cycle 24 GO Proposal 14602, PI Howk	2016
	<i>The Perseus Project: Probing Metals in the Perseus Arm</i>	
	HST Cycle 24 GO Proposal 14681, PI Aloisi	2016
	<i>Tracing Galactic Outflows to the Source: Resolved Feedback in M83</i>	
	HST Cycle 24 AR Proposal 14560, PI Earl	2016
	<i>Diagnosing the Multiphase Circumgalactic Medium</i>	
	HST Cycle 23 GO Proposal 14240, PI Wakker	2015
	<i>Mapping the circumgalactic medium of two large spiral galaxies</i>	
	HST Cycle 23 GO Proposal 14265, PI Kim	2015
	<i>Crossing the redshift desert: ionizing background radiation at <math>z \sim 1</math></i>	
	HST Cycle 22 AR Proposal 13919, PI Peebles	2014
	<i>MAST Interface to Synthetic Telescopes: Observing IGM Simulations</i>	
	HST Cycle 21 GO Proposal 13444, 21 orbits COS, PI Wakker	2013
	<i>Constraining the size of intergalactic clouds with QSO pairs</i>	
	ESO VLT Period 91, UVES, 9 hr, proposal 091.A-0442, PI Ledoux	2012
<i>Molecules, dust and metals in the ISM of GRB host galaxies</i>		
ESO VLT Period 90, UVES, 9 hr, proposal 090.A-0034, PI Ledoux	2012	
<i>Molecules, dust and metals in the ISM of GRB host galaxies</i>		
HST Cycle 20 GO Proposal 13004, 17 orbits, \$148 300, PI Meixner	2012	
<i>The Life Cycle of Dust in the Magellanic Clouds</i>		
HST Cycle 20 GO Proposal 13033, 14 orbits, \$77 000, PI Tumlinson	2012	
<i>COS-Halos: FUV Measurements of Baryons and Metals in the CGM</i>		
HST Cycle 20 AR Proposal 12842, \$104 667, PI Kim	2012	
<i>The Evolution of Intergalactic Neutral Hydrogen over Cosmic Time</i>		
SAAO/SALT Period 2011B, RSA_UW_OTH-001, 9 hr, PI Crawford	2011	
<i>Monitoring Activity in MS0451-03</i>		
ESO VLT Period 89, UVES, 3 hr, proposal 089.A-0438, PI Ledoux	2011	
<i>Molecules, dust and metals in the ISM of GRB host galaxies</i>		
HST Cycle 18 GO Proposal 12275, 49 orbits COS, PI Wakker	2010	
<i>Mass Flow Rates in High-Velocity Clouds</i>		
NASA ADP 2009, proposal 09-ADP09-0141, \$345 800, PI Lehner,	2009	
<i>Comprehensive Study of High-Ion Plasma in Galaxies at <math>1.5 &lt; z &lt; 4</math></i>		
ESO DGDF (Dir. General Discretionary Fund), 5800 EUR, PI Ledoux	2009	
<i>"Mining the rich data from the GRB afterglow UVES survey"</i>		
ESO VLT Period 83, UVES, 9 hr, proposal 083.A-0911, PI Vreeswijk	2008	
<i>GRB afterglow spectroscopy with UVES: ISM properties of the hosts</i>		
(CoI proposals before 2008 available on request)		

<b>TALKS</b>	<b>Invited colloquium</b> , University of Colorado-Boulder	October 2018
	<b>Invited speaker</b> , Circumgalactic Medium Workshop, Evanston IL	July 2018
	<b>Invited speaker</b> , Bubbles Big and Small, Bangalore, India	June 2018
	<b>Invited colloquium</b> , Texas Christian University	March 2018
	<b>Invited colloquium</b> , Univeristy of Maryland College Park	March 2018
	<b>Invited speaker</b> , The role of Gas in Galaxy Dynamics, Malta	October 2017
	Contributed talk, The Galaxy Ecosystem, Garching, Germany	July 2017
	<b>Invited speaker</b> , Circumgalactic Matters conference, Durham	June 2017
	<b>Invited speaker</b> , Probing Baryons in the Universe, Sèvres, France	November 2016
	<b>Invited speaker</b> , Molecular Outflows Conference, Sesto, Italy	February 2016
	Contributed talk, 227th AAS Meeting, Kissimmee, FL	January 2016
	<b>Invited speaker</b> , Gas Accretion Workshop, NRAO, VA	October 2015
	Contributed talk, IGM@50, Spineto, Italy	June 2015
	Contributed talk, 225th AAS Meeting, Seattle	January 2015
	<b>Invited colloquium</b> , NRAO Green Bank, WV	October 2014
	Contributed talk, Galaxies in Absorption workshop, Paris	Sep 2014
	Astronomy Seminar, Institute of Astronomy, Cambridge	Sep 2014
	Contributed talk, Circumgalactic Medium Workshop, Notre Dame	Feb 2014
	<b>Invited colloquium</b> , West Virginia University, Morgantown	Nov 2013
	Astrophysics seminar, University of Maryland, College Park	Sep 2013
	<b>Invited speaker</b> , CGM-Galaxy Interface workshop, Leiden	June 2013
	Hot Sci Seminar, STScI, Baltimore	June 2013
	Contributed talk, The Galactic Gas Supply, Green Bank WV	May 2013
	<b>Invited speaker</b> , KIPAC Stanford Workshop, Fermi Bubbles	Apr 2013
	Astrophysics seminar, Columbia University, New York City	Mar 2013
	<b>Invited colloquium</b> , Penn State University	Jan 2013
	<b>Invited colloquium</b> , University of Wisconsin-Madison	Oct 2012
	<b>Discussion Leader</b> , The Dynamic Nature of Halo Baryons, Leiden	Aug 2012
	Contributed talk, Future of UV Astronomy, Kauai, HI	June 2012
	Contributed talk, The Baryon Cycle, Irvine, CA	June 2012
	<b>Invited talk</b> , Galaxies in Absorption Workshop, Boulder, CO	Sep 2011
	<b>Invited talk</b> , A Quarter Century of DLAs, Ringberg, Germany	July 2011
	Contributed talk, The Cosmic Odyssey of Baryons, Marseille	June 2011
	Astronomy Seminar, Univ. of Leicester, UK	June 2011
	Astronomy Seminar, Univ. Central Lancashire, Preston, UK	Mar 2011
	Astronomy Seminar, STScI, Baltimore	Mar 2011
	Astronomy Seminar, University of Durham, UK	Feb 2011
	Astronomy Seminar, University College London, UK	Jan 2011
	Astronomy Seminar, IoA, Cambridge	Jan 2011
	Thirty-Minute Talk (TMT), ESO-Chile, Santiago	Aug 2010
	Seminar, University of North Carolina-Chapel Hill	Aug 2010
	Contributed talk, Diffuse Gas around the Milky Way, Sydney	Dec 2009

<b>TALKS (CONT.)</b>	Contributed talk, Missing Baryons Conference, Sydney	Nov 2009	
	Speaker, ISM Lunch, UW-Madison, Wisconsin	Jul 2009	
	Contributed talk, ESO Fellow Symposium, Garching, Germany	Jun 2009	
	<b>Invited review</b> , IGM Chemical Enrichment, Leiden, Holland	May 2009	
	Contributed talk, Reionization at Ringberg, Ringberg, Germany	Mar 2009	
	Colloquium, Universidad de Chile, Santiago, Chile	Mar 2009	
	Contributed talk, Inflow vs Outflow, Espinho, Portugal	Aug 2008	
	<b>Invited talk</b> , ISM/IGM Interactions, COSPAR, Montreal	Jul 2008	
	Contributed talk, ESO Fellows Symposium, Santiago, Chile	Nov 2007	
	Seminar, Institute of Astronomy, Cambridge, England	Aug 2007	
	Seminar, Laboratoire d'Astrophysique de Marseille, France	Jul 2007	
	Contributed talk, HI Survival over Cosmic Time, Spineto, Italy	Jun 2007	
	Contributed talk, UV Space Astronomy, El Escorial, Spain	May 2007	
	High Energy Journal Club, Institut d'Astrophysique de Paris	May 2007	
	Astronomy Seminar, University of Wisconsin-Madison	May 2007	
	Astronomy Seminar, University of Colorado at Boulder	May 2007	
	Astronomy Colloquium, University of California-San Diego	May 2007	
	Computational Physics Seminar, University of Georgia	May 2007	
	Astronomy Seminar, University of South Carolina	May 2007	
	Colloquium, SAAO, Cape Town, South Africa	Feb 2007	
	Seminar, Institut d'Astrophysique de Paris, France	Nov 2006	
	<b>Invited talk</b> , Neutral Gas in Galaxies, Groningen, Holland	Oct 2006	
	<b>Invited talk</b> , Warm/Hot Gas Special Session, AAS Meeting, Calgary	Jun 2006	
	Contributed talk, Precision Spectroscopy, Aveiro, Portugal	Sep 2006	
	Galaxies Journal Club, Institut d'Astrophysique de Paris	Apr 2006	
	Thesis defense, University of Wisconsin-Madison	Oct 2005	
	Contributed talk, The Galaxy/IGM Ecosystem, STScI, Baltimore	Mar 2005	
	Astronomy Seminar, University of California-San Diego	Nov 2004	
	Contributed talk, Five Years of <i>FUSE</i> , Victoria, BC	Aug 2004	
	<b>MENTORING</b>	Supervisor, postdoctoral fellow David French, STScI	2018–
		Supervisor, postdoctoral fellow Trisha Ashley, STScI	2018–
		Supervisor, research analyst Elaine Frazer, STScI	2018–
Mentor, postdoctoral fellow Giovanni Bruno, STScI		2017–2018	
Supervisor, summer student Tanveer Karim, Maria Mitchell Obs.		2016	
Supervisor, research analyst Svea Hernandez, STScI		2014	
Supervisor, summer student Nimisha Kumari, STScI		2013	
Supervisor, summer student Corbin Taylor, STScI		2012	
Supervisor, summer student Stephen Lucas, Cambridge		2011	
Co-supervisor, visiting Ph.D. student Annalisa de Cia, ESO		2009	

<b>TEACHING</b>	Guest lecturer, <i>Cosmic Origins</i> Astro 101 class, TCU	2018
	Guest lecturer, Science Journalism class, Johns Hopkins University	2015–2017
	Teacher, Introduction to IDL Seminar for PhD students, ESO	2010
	Trainer, 10 Paranal Science Operations staff members, ESO VLT	2009–2010
	TA, Astronomy 113, “Hands on the Universe”, UW-Madison	2003
	TA, Astronomy 100, “Survey of Astronomy”, UW-Madison	2002
<b>AWARDS</b>	AURA Science Award, 2016, for Galactic Center research	STScI
	Early Excellence in Teaching Award, 2003	Wisconsin
	Herschel Prize 2000, Best in class, Year 4 Astronomy	UCL
	Dean’s List 2000, Mathematical/Physical Sciences	UCL
	Huggins Prize 1998, Best in class, Year 2 Astronomy	UCL
	Halley Prize 1997, Best in class, Year 1 Astronomy	UCL
<b>PRESS</b>	NASA press release on my Leading Arm research coverage in <i>Nature Astronomy</i> , <i>Forbes</i> , <i>Astronomy</i> magazine	March 2018
	NASA press release on my Smith Cloud research coverage in <i>New Scientist</i> , <i>Huffington Post</i> , <i>Time</i>	Jan 2016
	NASA press release on my Galactic Center research coverage in <i>Science News</i> , <i>Astronomy</i> , <i>Huffington Post</i>	Jan 2015
	NASA press releases on my Magellanic Stream research coverage in <i>Nature News</i> , <i>Huffington Post</i> , <i>phys.org</i>	Aug 2013
<b>CONFERENCE ORGANIZATION</b>	Session Chair, <i>Bubble Big and Small</i> conference, Bangalore	June 2018
	Session Chair, <i>Intergalactic Medium</i> session, National Harbor AAS	Jan 2018
	SOC Co-Chair, <i>Lifecycle of Metals in the Universe</i> STScI	April 2017
	Session Chair, <i>Probing Baryons in the Universe</i> , Sèvres, France	Nov 2016
	Session Chair, <i>Intergalactic Medium</i> , Kissimmee AAS	Jan 2016
	SOC Chair, <i>Feedback in the Magellanic Clouds</i> Workshop, STScI	Oct 2015
	Session Chair, <i>Galaxy Simulations and Techniques</i> , Seattle AAS	Jan 2015
	Session Chair, <i>Galaxies in Absorption</i> workshop, IAP Paris	Sep 2014
	Session Chair, Hubble Fellow Symposium, STScI	Mar 2014
	Session Chair, <i>Circumgalactic Medium</i> workshop, Notre Dame	Feb 2014
	Organizer & Chair, AAS Special Session, Washington DC	Jan 2014
	Panel Member, <i>Galactic Gas Supply</i> workshop, Green Bank WV	May 2013
	SOC Co-Chair, <i>Gas Flows in Galaxies</i> Symposium, STScI	May 2012
	Session Chair, <i>Galaxies in Absorption</i> workshop, Boulder CO	Sep 2011

**LETTERS OF  
REFERENCE**

- Prof. Blair Savage**, University of Wisconsin–Madison  
• savage[at]astro.wisc.edu; phone: 608 265 8786
- Prof. Philipp Richter**, University of Potsdam  
• prichter[at]astro.physik.uni-potsdam.de; phone +49 331 977 1841
- Dr. Claus Leitherer**, Space Telescope Science Institute  
• leitherer[at]stsci.edu; phone 410 338 4425
- Dr. Cristina Oliveira**, Space Telescope Science Institute  
• oliveira[at]stsci.edu; phone 410 338 4328
- Dr. Edward Jenkins**, University of Princeton  
• ebj[at]astro.princeton.edu; phone 609 258 3826
- Prof. Joss Bland-Hawthorn**, University of Sydney  
• jbh[at]physics.usyd.edu.au; phone +61 2 9351 2621

**OUTREACH**

- |   |            |
|---|------------|
| Radio Interview on Hubble Leading Arm research, Fort Worth TX   | March 2018 |
| Presenter, Public Talk on 25 years of Hubble, Nantucket Island  | June 2016  |
| Presenter, Hubble Hangout online chat show, STScI   | Jan 2015   |
| Speaker, Hubble Public Lecture Series, STScI  | Jun 2014   |
| Project ASTRO, taught middle-school astronomy classes   | 2012–2013  |
| Presenter, Hubble Science Briefing (webcast), STScI   | Apr 2012   |
| Speaker, Hubble Public Lecture Series, STScI  | Oct 2011   |
| Speaker, Cambridge Astronomical Association Meeting   | Jun 2011   |
| Guest Speaker, Year 11 Science, Stewards School, Harlow, UK   | Mar 2011   |
| Speaker, Public Observing Night, IoA, Cambridge   | Jan 2011   |
| Speaker, Scout Meeting, Nido de Aguilas School, Santiago  | Jun 2010   |
| Speaker, International Professional Womens Group, Santiago  | Aug 2009   |
| Instructor, Colegio Hellen Keller, Santiago, Chile<br>(led astronomy classes for blind high-school students)            | May 2009   |
| Participant, Media Training Workshop, ESO, Santiago, Chile  | Oct 2008   |
| Facilitator, <i>Nuits des Planètes</i> event, Observatoire de Paris   | 2007       |
| Presenter, planetarium show for preschool children, Madison   | 2005       |
| Guest Speaker, Space Place (UW outreach facility, Madison)  | 2003, 2005 |
| Presenter, <i>Universe in the Park</i> program, Wisconsin<br>(gave 70 public lectures & telescope shows in State Parks) | 2001–2005  |