

# AMY E. KIMBALL

---

## Office Address:

National Radio Astronomy Observatory  
1003 Lopezville Rd  
Socorro, NM 87801

## Contact Information:

E-mail: akimball@nrao.edu  
*Status: working from home*

## Employment History

NATIONAL RADIO ASTRONOMY OBSERVATORY *Mar 2016 – present*  
Associate Scientist (*promoted from Assistant Scientist, Mar 2020*)

- VLA Sky Survey Head of Operations: supervise team of Scientists and Data Analysts in day-to-day tasks to ensure appropriate production and timely delivery of survey data products
- User support: HelpDesk; visitor support; update documentation; develop and lead lectures/tutorials at Data Reduction Workshops, Community Day Events
- Other duties as assigned, e.g.: participate in CASA development testing and validation, commissioning high-frequency VLA observations in on-the-fly mode
- (former) VLA–CASA Subsystem Scientist: facilitated meetings of NRAO VLA–CASA users; collated user requests; represented VLA users within the CASA Stakeholders Committee (role held Sep 2017 – Dec 2019)

CSIRO ASTRONOMY AND SPACE SCIENCE *Jun 2013 – Feb 2016*

Office of the Chief Executive Postdoctoral Fellow

- Australia Telescope Compact Array (ATCA) user support, Duty Astronomer
- ASKAP commissioning: test ASKAP data reduction with ASKAPSoft
- Facilitator of science Journal Club

NATIONAL RADIO ASTRONOMY OBSERVATORY *Sep 2010 – May 2013*

North American ALMA Science Center (NAASC) Postdoctoral Fellow

- ALMA data reduction: science verification data, Early Science data (hands-on and testing data-reduction pipeline)
- Software testing: CASA algorithms (simulations of ALMA data), ALMA data reduction scripts/pipeline, ALMA Observing Tool
- User support: led tutorials on ALMA proposals and data reduction, maintained online CASAGuides documentation, staffed help-desk
- Organizer of weekly AGN Journal Club group

## Education

UNIVERSITY OF WASHINGTON

Ph.D. in Astronomy

*Aug 2010*

“Statistical Studies of Radio Sources with Multi-Wavelength Large Sky Surveys”

Dissertation Advisor: Dr. Željko Ivezić

UNIVERSITY OF WASHINGTON

M.S. in Astronomy

*Aug 2005*

UNIVERSITY OF MICHIGAN

B.S. in Mathematical Physics and Honors Physics

*May 2003*

<b>Honors</b>	National Science Foundation Graduate Research Fellowship	<i>2005 – 2010</i>
	Achievement Rewards for College Scientists (ARCS) Fellowship	<i>2003 – 2006</i>
	Wiley Book Award: Outstanding achievement by undergraduate physicist	<i>Apr 2003</i>
<b>Research Experience</b>	NRAO, SOCORRO, NM	<i>2016 – present</i>
	<ul style="list-style-type: none"> <li>◦ Origin of Radio Emission in Radio-Quiet Quasi-Stellar Objects (PI)</li> <li>◦ various multi-wavelength studies of quasars (co-I)</li> </ul>	
	CSIRO, MARSFIELD, NSW, AUSTRALIA	<i>2013 – 2016</i>
	<ul style="list-style-type: none"> <li>◦ WISE infrared properties of AT20G 20-GHz radio sources</li> <li>◦ ALMA submillimetre properties of luminous QSOs</li> <li>◦ Multi-wavelength studies of the most luminous QSOs</li> </ul>	
	NRAO, CHARLOTTESVILLE, VA	<i>2010 – 2013</i>
	<ul style="list-style-type: none"> <li>◦ Radio Luminosity Distribution of QSOs: Star Formation and AGNs</li> <li>◦ Radio-Intermediate Quasars in WISE and NVSS</li> <li>◦ Dependence of Quasar Spectra on Radio Morphology in FIRST and SDSS</li> </ul>	
	UNIVERSITY OF WASHINGTON, SEATTLE, WA	<i>2004 – 2010</i>
	Supervisor: Dr. Željko Ivezić	
	<ul style="list-style-type: none"> <li>◦ Unified Radio Catalog from NVSS, FIRST, WENSS, GB6, and SDSS</li> <li>◦ Radiative Transfer Modeling of IR Emission from Externally Heated Dust Clouds</li> <li>◦ A Search for Radio Stars in FIRST and SDSS</li> </ul>	
	NRAO, SOCORRO, NM	
Supervisor: Dr. Steven Myers	<i>Jul – Sep 2009</i>	
<ul style="list-style-type: none"> <li>◦ Developing an Automated clean Task for CASA</li> </ul>		
LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM	<i>Aug – Sep 2004</i>	
Supervisor: Dr. Przemyslaw Wozniak		
<ul style="list-style-type: none"> <li>◦ Simulating the Detection Efficiency of RR Lyrae Stars in the NSVS</li> </ul>		
UNIVERSITY OF WASHINGTON, SEATTLE, WA	<i>Oct – Dec 2004</i>	
Supervisor: Dr. Eric Agol		
<ul style="list-style-type: none"> <li>◦ Observing the Einstein Cross with SIRTf</li> </ul>		
UNIVERSITY OF MICHIGAN, ANN ARBOR, MI	<i>May 2001 – Aug 2003</i>	
Supervisor: Dr. Timothy McKay		
<ul style="list-style-type: none"> <li>◦ Statistical Studies of Small-Scale Galaxy Clustering in the SDSS</li> </ul>		
<b>Computer Skills</b>	Reducing/imaging astronomical data: <i>CASA, AIPS, ASKAPSoft, IRAF, PyRAF</i> Developing/maintaining software: <i>MacOS, Linux, Python, IDL, C, C++, Fortran</i> Familiarity with: <i>SQL, MySQL, SVN, XML, HTML, Perl, R, AWK</i>	

<b>Invited Talks &amp; Colloquia</b>	<i>(entries marked with an asterisk include financial support)</i>	
	* University of Nevada, Reno, NV	28 Feb 2020
	URSI Asia Pacific Radio Science Conference, New Delhi, India	Mar 2019
	“The Very Large Array Sky Survey”	
	* Drexel University, Philadelphia, PA	28 Feb 2019
	* University of Wisconsin, Madison, WI	27 Sep 2018
	<i>The radio and X-ray connection in accreting objects</i> , Monopoli, Italy	May 2018
	“Radio emission from radio-quiet QSOs”	
	New Mexico Tech University, Socorro, NM	26 Apr 2018
	* Goddard Space Flight Center, Washington, D.C.	10 Oct 2017
	US Naval Observatory, Washington, D.C.	11 Oct 2017
	University of New Mexico, Albuquerque, NM	10 Nov 2016
	* National Radio Astronomy Observatory, Socorro, NM, USA	1 Dec 2015
	* Max-Planck-Institut für Radioastronomie, Bonn, Germany	26 Oct 2015
	Instituto di radioastronomia, Bologna, Italy	19 Oct 2015
	Curtin University, Bentley, WA, Australia	5 Nov 2014
	University of Western Australia, Crawley, WA, Australia	4 Nov 2014
	<i>Exploiting MWA surveys for extragalactic studies</i> , Perth, WA, Australia	Oct 2014
	“Multi-wavelength identifications for low-frequency radio surveys”	
	<i>Transformational Science in the ALMA Era</i> , Charlottesville, VA	Aug 2014
“Review of Quasars”		
Macquarie University, North Ryde, NSW, Australia	14 Feb 2014	
CSIRO Astronomy and Space Science, Marsfield, NSW, Australia	18 Sep 2013	
* Stanford University, Stanford, CA	20 Aug 2012	
* The Institute for Advanced Study, Princeton, NJ	12 Jan 2010	
* National Radio Astronomy Observatory, Socorro, NM	24 Apr 2009	
National Radio Astronomy Observatory, Charlottesville, VA	22 Sep 2008	
* The Johns Hopkins University, Baltimore, MD	19 Sep 2008	
<b>Accepted PI Proposals</b>	CONSTRAINING RADIO ORIGIN/MORPHOLOGY FROM RADIO-QUIET QSOs VLA: Fully allocated 44.95 hours at priority A in semester 2019A	Aug 2018
	CONSTRAINING AGN CONTRIBUTION TO RADIO EMISSION FROM RQQS VLBA: Fully allocated 19.65 hours at priority A in semester 2018B	Feb 2018
	SPECTRALLY RESOLVED CO (2-1) IN LUMINOUS QSO J1554+1937 VLA: Allocated 11 hours at priority B in semester 2016A	Nov 2015
	WEIGHING THE SUPER-MASSIVE BLACK HOLE IN QSO J1554+1937 <i>P.I. Mark Lacy, NRAO</i> [Australia-based PIs not allowed for FT mode] <i>Gemini</i> : Fully allocated, 1.4 hours Fast-Turnaround (FT) mode	Feb 2015
	OUTFLOWS/FEEDBACK IN MOST-LUMINOUS QSOs IN THE UNIVERSE <i>Gemini</i> : Fully allocated, 19.5 hours in semester 2014B	Mar 2014
	STAR FORMATION / JET ACTIVITY IN MOST-LUMINOUS QSOs IN UNIVERSE VLA: Allocated 8.5 hours at priority C in semester 2013B	Feb 2013

STAR-FORMATION ACTIVITY IN HOST GALAXIES OF THE MOST  
LUMINOUS QSOs IN THE UNIVERSE  
ALMA: Fully allocated, 4.6 hours in Cycle 1

*Nov 2012*

DOUBLE-LOBED RADIO QUASARS IN BOSS  
SDSS III BOSS: Fully allocated, 2300 spectroscopic ancillary fibers

*Jun 2010*

## Professional Memberships

- American Astronomical Society (AAS)
- International Union for Radio Science (URSI) Senior Member
- (formerly) Astronomical Society of Australia (ASA)  
*Early Career Research Chapter, Women in Astronomy Chapter*
- International Astronomical Union (IAU)  
*Division B (Facilities, Technologies and Data Science)*  
*Division J (Galaxies and Cosmology)*

## Committees

- Jansky Fellowship Committee, NRAO *2017–2020*
- Various internal hiring committees at NRAO
- CASS Diversity Committee (inaugural member) *Aug 2014 – Feb 2016*
  - Developed guidelines for inclusive policies for staff-organized events (e.g., workshops and conferences)
  - Assisted in CASS application for bronze-level ASA Pleiades Award for commitment to advancing women in astronomy [successful]
- SOC and vice-chair of LOC, Southern Cross Conference Series VII  
*Powerful AGN and Their Host Galaxies Across Cosmic Time* *16–20 Jun 2014*
- SOC and LOC  
*Radio Astronomy in the LSST Era*, NRAO, Charlottesville, VA *6–8 May 2013*
- Hiring committee for NRAO/NAASC post-doctoral fellow *Jan–Mar 2011*

## Referee

- Technical reviewer, NRAO-VLA proposals (biannual since Mar 2016)
- External referee for 2 GMRT observing proposals (cycles 36 and 37)
- External referee for 1 JCMT observing proposal (semester 19A)
- I have refereed papers for the following journals:
  - Monthly Notices of the Astronomical Society (*MNRAS*)
  - The Astrophysical Journal (*ApJ*)
  - Publications of the Astronomical Society of Australia (*PASA*)
  - Journal of Astrophysics and Astronomy (*JOAA*)
- I reviewed a grant proposal for the National Science Centre of Poland (*NCN*), for which I received a small remuneration.
- One NSF grant review panel. (Timing and topic confidential.)

## Working Groups

- VLASS Survey Science Group / co-chair of Science Communication working group
- VLASS Survey Science Group / co-chair of Extra-galactic working group (former)
- ASKAP Evolutionary Map of the Universe (EMU) collaboration project with VLASS
- ASKAP Commissioning and Early Science Team (ACES) (former)
- ASKAP EMU(Genius Group (“EGG”)) (former)
- US Radio Futures, Galaxy Assembly Through Cosmic Time working group (former)
- Radio-Galaxies subgroup of Galaxies and Cosmology working group for Australian Astronomy Decadal Plan (2015–2025) (former)

## Mentoring/ Teaching

### RESEARCH ADVISOR/MENTOR (GRADUATE STUDENT)

- Marialis Rosario-Franco, Univ of Texas, Arlington / *from Sep 2018*  
NRAO Reber Fellow (joint NRAO co-advisor with Bryan Butler)  
*Orbital evolution studies and radio searches for extra-solar moons*
- Jesse Swan, University of Tasmania / CASS student *Apr 2015 – Feb 2016*  
*Evolution of star formation and black hole activity across cosmic time*

### RESEARCH ADVISOR/MENTOR (UNDERGRADUATE STUDENTS)

- Trevor McCaffrey, NRAO Co-op student *May – Sep 2020*  
*High-resolution VLA observations of Radio-Quiet QSOs*
- Montana Williams, NSF-REU student NRAO *Jun – Aug 2018*  
*Developing a VLBA proposal to observe radio stars*
- Tiffany Christian, NSF-REU student NRAO *Jun – Aug 2017*  
*Identifying candidate radio stars by cross-matching data from FIRST, SDSS, WISE, PanSTARRS, Gaia*
- Ivan Sadovoy and Arvind Hughes, Macquarie University *Aug – Oct 2015*  
*Reducing ATCA data with CASA*
- Gabriel Murphy, CASS summer student, CSIRO *Nov 2013 – Feb 2014*  
*Searching for luminous, obscured radio quasars*
- Valerie Marchenko, NSF-REU student NRAO *Jun – Aug 2011*  
*Testing Evolutionary Models of Giant Radio Sources*
- Rosalie McGurk, University of Washington *2008 – 2009*  
*Principal Component Analysis of SDSS Stellar Spectra*

### VOLUNTEER, PRE-MAJOR IN ASTRONOMY PROGRAM (PRE-MAP) *2005 – 2007*

- <http://www.astro.washington.edu/users/premap/>
- Mentored students in preparation of final poster/presentation
- Supervised students on weekend field trip to LIGO

### TEACHING ASSISTANT, U. WASHINGTON *2003 – 2008*

- Introduction to Astronomy (four courses)
- The Planets (two courses)

### TUTOR, KELLER PHYSICS PROGRAM, U. MICHIGAN *Winter 2002*

- Introduction to Electricity and Magnetism

<b>Outreach</b>	Guest speaker for St Louis Astronomical Society	<i>17 Jul 2020</i>
	NRAO FaceBook Live interview with Nan Janney (NRAO)	<i>15 May 2020</i>
	Judge/Referee for FIRST Lego League and FIRST Tech Challenge, NM	<i>(numerous)</i>
	Astronomy on Tap speaker, Marble Brewery, Albuquerque, NM	<i>26 Mar 2018</i>
	<i>Quasars: Black Holes, Bright Lights!</i>	
	Guest speaker for St Louis Astronomical Society	<i>15 Dec 2017</i>
	Guest speaker for AAUW summer Tech Trek program	<i>2016 and 2017</i>
	Guest speaker for Atlassian, Sydney, NSW	<i>27 Nov 2015</i>
	Science fair judge at Gosford Public School, Gosford, NSW	<i>17 Jun 2015</i>
	Guest speaker for Northern Sydney Astronomical Society	<i>16 Sep 2014</i>
	Guest speaker for Central West Astronomical Society of Australia	<i>15 May 2014</i>
	Parkes Teacher Workshop for science teachers	<i>2–4 May 2014</i>
	AAS Congressional Visits Day, Washington, DC	<i>12–13 Mar 2013</i>
	NRAO–Charlottesville Astronomy Festival	<i>5 Nov 2011</i>
	Planetarium shows for school groups	<i>2003 – 2010</i>
	University of Washington Astronomy Open House (annual event)	<i>2004 – 2008</i>
Workshop presenter, U. Washington Making Connections Program	<i>Spring 2004</i>	
<a href="http://depts.washington.edu/womenctr/programs/making-connections">http://depts.washington.edu/womenctr/programs/making-connections</a>		
Workshop presenter, Seattle Expanding Your Horizons	<i>Mar 2004</i>	
<a href="http://www.seattleu.edu/scieng/outreach/seyh/">http://www.seattleu.edu/scieng/outreach/seyh/</a>		
U. Michigan Society of Physics Students Inreach Program	<i>2001 – 2003</i>	
<b>Workshops Attended</b>	Next-Generation VLA Technical Workshop, Socorro, NM	<i>8–9 Dec 2015</i>
	.Astronomy 7 (Dot-Astronomy), Sydney, NSW	<i>3–6 Nov 2015</i>
	Women in Astronomy Workshop 2015 (CAASTRO)	<i>22–23 Jul 2015</i>
	Writing Winning Scientific Proposals (CSIRO)	<i>26 Feb 2015</i>
	Looking Up, Looking Down: Interdisciplinary Approaches to Remote Sensing, Image Analysis, and Data Visualization (AAO)	<i>17–18 Sep 2014</i>
	ASA Early Career Researcher Mentoring Workshop	<i>2–3 Jun 2014</i>
	Project Management Fundamentals (CSIRO)	<i>5–6 Nov 2013</i>
	Innovations in Data-Intensive Astronomy (NRAO)	<i>3–5 May 2011</i>
	National Virtual Observatory Summer School	<i>6–14 Sep 2006</i>
	NRAO Summer Synthesis Imaging Workshop	<i>13–20 Jun 2006</i>
Summer School in Statistics for Astronomers & Physicists	<i>6–10 Jun 2006</i>	