

# KEVIN BUNDY

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## POSITIONS

<b>Assistant Professor</b> Astronomy Department, University of California, Santa Cruz	2020–
<b>Adjunct Assistant Professor</b> Astronomy Department, University of California, Santa Cruz	2017–2020
<b>Associate Researcher</b> UCO Lick, University of California, Santa Cruz	2016–2020
<b>Assistant Professor</b> Kavli Institute for the Physics and Mathematics of the Universe (Kavli IPMU) University of Tokyo	2011–2016
<b>Hubble Postdoctoral Fellowship</b> University of California, Berkeley	2008–2011
<b>Reinhardt Postdoctoral Fellowship</b> University of Toronto	2006–2008

## EDUCATION

<b>California Institute of Technology</b> Ph.D. Program in Astrophysics Advisor: Richard Ellis	Feb 2006
<b>University of California, Berkeley</b> A.B. <i>with honors</i> , Astrophysics and Physics	2000

## SUMMARY OF PUBLICATIONS

**Metrics:** [as of 2020-09-14]

Total number of (refereed) publications: **162**

H-index = **70**

### Five Top-Cited 1st-Author Papers:

- **Bundy, K.** et al. 2015, ApJ, 798, 7, “Overview of the SDSS-IV MaNGA Survey: Mapping Nearby Galaxies at Apache Point Observatory,” ApJ, 798, 7 [**691 Citations**]
- **Bundy, K.**, Ellis, Richard S., Conselice, Christopher J., Taylor, James E., Cooper, Michael C., Willmer, Christopher N. A., Weiner, Benjamin J., Coil, Alison L., Noeske, Kai G., & Eisenhardt, Peter R. M. 2006, ApJ, 651, 120. “The Mass Assembly History of Field Galaxies: Detection of an Evolving Mass Limit for Star-Forming Galaxies” [**551 Citations**]
- **Bundy, K.**, Ellis, Richard S., & Conselice, Christopher J. 2005, ApJ, 625, 621. “The Mass Assembly Histories of Galaxies of Various Morphologies in the GOODS Fields” [**302 Citations**]
- **Bundy, K.**, Fukugita, Masataka, Ellis, Richard S., Targett, Thomas A., Belli, Sirio, & Kodama, Tadayuki 2009, ApJ, 697, 1369. “The Greater Impact of Mergers on the Growth of Massive Galaxies: Implications for Mass Assembly and Evolution since  $z \sim 1$ ” [**196 Citations**]
- **Bundy, K.**, Scarlata, C., Carollo, C. M., Ellis, R. S., Drory, N., Hopkins, P., Salvato, M., Leauthaud, A., Koekemoer, A. M., Murray, N., Ilbert, O., Oesch, P., Ma, C. -P., Capak, P., Pozzetti, L., & Scoville, N. 2010, ApJ, 719, 1969 “The Rise and Fall of Passive Disk Galaxies: Morphological Evolution Along the Red Sequence Revealed by COSMOS.” [**145 Citations**]

## HONORS AND AWARDS

<b>Tinsley Visiting Scholar</b> , UT Austin	2014
<b>Robert J. Trumpler Award</b> for a recent PhD in North America considered unusually important to astronomy	2009
<b>Hubble Fellowship</b>	2008
<b>Spitzer Fellowship</b> , declined	2008
<b>Reinhardt Fellowship</b> , Department of Astronomy, University of Toronto	2006
<b>Dorothea Klumpkea Roberts Prize</b> , Department of Astronomy, UC Berkeley	2000

## RECENT INVITED TALKS

**Ensenada**, SDSS Collaboration Meeting, Jun 2019 “MaNGA In Its Prime”  
**Stanford**, Colloquium, Feb 2019 “Mapping the Lives and Deaths of 10,000 Nearby Galaxies”  
**Huazhong University, China**, Colloquium, Sep 2019 “Opportunities with Astronomical Spectrometers”  
**SJTU, China**, Colloquium, Sep 2019 “Science Opportunities with Fiber-Based Spectrometers”  
**Columbus, Ohio**, American Physical Society Meeting, Apr 2018 “MaNGA Mapping of Nearby Galaxies”  
**UC Davis**, Cosmo Seminar, Oct 2017 “Galaxy Death and Role of Red Geysers”  
**Cozumel**, Local and Global Processes in Galaxies, Apr 2016 “Mass Assembly Through Cosmic Time”  
**Caltech**, Colloquium, Mar 2016 “Galaxy Death and Role of Red Geysers”  
**UCLA**, Colloquium, Mar 2016 “Galaxy Death and Role of Red Geysers”  
**Carnegie**, Colloquium, Mar 2016 “Galaxy Death and Role of Red Geysers”  
**Pitt/CMU**, Joint Colloq., Feb 2016 “Mapping 10,000 Nearby Galaxies with MaNGA: Discovery of Red Geysers”  
**CEA Saclay**, Colloquium, Jul 2015 “Why do galaxies die?”  
**JHU**, Seminar, Mar 2015 “How do galaxies grow?”  
**UC Riverside**, Seminar, Mar 2015 “How do galaxies grow?”  
**Institute for Astronomy, U. Tokyo**, Colloquium, Feb 2015 “MaNGA: Mapping Nearby Galaxies at APO”  
**UCSB**, Colloquium, Jan 2015 “Why do galaxies die?”  
**KIAA Beijing**, Colloquium, Nov 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**Caltech**, Tea Talk, Sep 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**UC Irvine**, Astrophysics Seminar, Sep 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**Jet Propulsion Lab**, Colloquium, Sep 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**Oxford, IAU 311**, Invited Symposium talk, July 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**U. of Tokyo**, Seminar, May 2014 “MaNGA: Mapping Nearby Galaxies at APO”  
**UT Austin**, Colloquium, Apr 2014 “MaNGA: Mapping Nearby Galaxies at APO”

## OBSERVING EXPERIENCE

**Keck Observatory**, NIRC IR, NIRC2 LGS AO imaging, LRIS, ESI, KCWI, and DEIMOS spectroscopy, 26 nights  
**Magellan Telescopes, Las Campanas**, IMACS and LDSS3 spectroscopy, 6 nights  
**Palomar Observatory 200-inch**, WIRC IR imaging, Double Spectrograph, LFC, 67 nights  
Developed automated pipeline for WIRC processing, using IDL  
**Subaru Observatory**, CISCO and MOIRCS IR imaging and spectroscopy, 6 nights  
**VLT**, FORS2 mutli-slit spectroscopy, 4 nights

## APPROVED COMPETITIVE PROGRAMS

### Observing Programs, as PI or project lead (since February 2006)

Keck KCWI: Ionized gas in early-type galaxies, 2018B, co-PI: Bundy.  
Keck ESI followup of Red Geyser winds, 2017A, PI: Bundy.  
MaNGA: Mapping Nearby Galaxies at APO. Resolved spectroscopy for 10,000 local galaxies.

An SDSS-IV survey running from 2014-2020, PI: Bundy

Project Overview given in Bundy et al. 2015, ApJ, 798, 7 - also see [www.sdss.org](http://www.sdss.org)

LRIS on Keck I, 1 night, 2011A, PI: Quataert

FORS2 on VLT 8m, 4 nights, 2009B, PI: Mei

IMACS on Magellan 6.5m, 4 nights, 2007A, PI: Bundy

LDSS3 on Magellan 6.5m, 2 nights, 2006B, PI: Bundy

#### **Observing Programs, as Co-I (since February 2010)**

HSC Strategic Survey Proposal on Subaru, 300 nights, 2014A-2019B, PI: Miyazaki

LRIS on Keck I, 14 nights, 2009A-2012A, PI: Ellis

NIRC2-LGS on Keck II, 3 nights, 2011A, PI: Ellis

BOSS Ancillary Proposal, 2010, PI: Leauthaud

BOSS Ancillary Proposal, 2010, PI: Tremonti

HST Theory Proposal, 2010, PI: Ma

#### **Funding Proposals (total funding obtained as grant PI: \$3M)**

WMKO Phase-A Funding for Keck-FOBOS (PI: Bundy), Jul 2020: \$170k

UCO Mini-grant participation in the AMASE Spectrograph (PI: Bundy), Jan 2020: \$64k

WMKO Phase-A Funding for Keck-FOBOS (PI: Bundy), Jul 2019: \$190k

UCO Mini-grant for Keck fiber coupling (PI: Bundy), Jan 2019: \$120k

Wide-Field Optical Spectrograph Trade Studies for TMT (PI: Bundy), Oct 2018: \$365k

HST *Galactic fireworks: detecting young stars formed in galactic outflows* 2018: \$38k

NSF AST *Red Geysers and the Suppression of Star Formation* 2018: \$279k

Keck Observatory FOBOS feasibility studies (PI: Bundy), Mar 2018: \$40k

UCO Mini-grant for Keck fiber instrument studies (PI: Bundy), Jan 2018: \$55k

Wide-Field Optical Spectrograph Trade Studies for TMT (PI: Bundy), Dec 2017: \$552k

Wide-Field Optical Spectrograph Optomechanical Design for TMT (PI: Bundy), Sep 2017: \$150k

UC MEXUS-CONACYT collaborative grant (co-PI: Bundy), Aug 2017: \$25k

Wide-Field Optical Spectrograph Optomechanical Design for TMT (PI: Bundy), Dec 2016: \$943k

French ANR *Hosting High-Level Researchers* Grant (PI: Bundy), Jan 2016 (declined): €550k (\$630k)

JSPS Kaken-*hi* Grant-in-Aid (PI: Bundy), Mar 2015: ¥3M (\$30k)

CREST JST Program, Nov 2014 (PI: Yoshida): ¥400M (\$3.3M)

JSPS Kaken-*hi* Grant-in-Aid (PI: Bundy), Mar 2012: ¥4M (\$51k)

MaNGA Project Funding, Nov 2011: ~\$10M

## **PROFESSIONAL SERVICE AND OTHER WORK EXPERIENCE**

### **Project Leadership:**

Principal Investigator, Fiber Optic Broadband Optical Spectrograph (FOBOS) for Keck (2017–)

Principal Investigator, Wide Field Optical Spectrograph for the Thirty Meter Telescope (2016–2020)

Principal Investigator, MaNGA (Mapping Nearby Galaxies at APO) (2010–)

Chair, Galaxy Evolution Working Group, Hyper Suprime-Cam Survey (2011–2015)

Member, Galaxy Evolution Working Group, Prime Focus Spectrograph Survey

### **Professional Service:**

Science Organizing Committee, *MaNGA Team Meeting*, Oxford, Apr 2019

Science Organizing Committee, *The Changing Face of Galaxies*, Tasmania, Sep 2016

Science Organizing Committee, *Galaxy Masses as Constraints of Formation Models*, Oxford, Jul 2014

SDSS-IV Collaboration Council Representative for Kavli-IPMU, (2014–2015)

Science Organizing Committee, *Galaxy Surveys using Integral Field Spectroscopy*, Potsdam, Sep 2012

Referee for *ApJ*, *ApJL*, *MNRAS*, *A&A*

Full Member, AAS

### **Press Releases:**

MaNGA Major Data Release, UCSC Tuesday Newsday, Jan 2019, “MaNGA data release includes de-

tailed maps of thousands of nearby galaxies”

e.g., <https://news.ucsc.edu/2019/01/manga-data-release.html/>

MaNGA Red Geysers discovery, *Nature*, May 2016, “Supermassive Black Holes Cause Galactic Warming”

e.g., <http://www.pbs.org/newshour/rundown/supermassive-black-holes-spawn-galactic-deserts-without-new-stars/>

Start of MaNGA, issued by IPMU, Aug 2014. “New survey begins mapping nearby galaxies”

[www.eurekalert.org/pub\\_releases/2014-08/uot-nsb081814.php](http://www.eurekalert.org/pub_releases/2014-08/uot-nsb081814.php)

Start of SDSS-IV, Jul 2014. “The Sloan Digital Sky Survey Expands Its Reach”

[www.sdss.org/press/the-sdss-expands-its-reach/](http://www.sdss.org/press/the-sdss-expands-its-reach/)

AAS Press Release, Jan 2016. “Proof That Some Galaxies are LIERs”

[www.sdss.org/releases/proof-that-some-galaxies-are-liers/](http://www.sdss.org/releases/proof-that-some-galaxies-are-liers/)

### Advising of Graduate Research:

Matthew DeMartino (UCSC), <i>Astronomical spectrometers with nano-photonics</i>	2019–
Viraj Pandya (UCSC), <i>Informing galaxy models with resolved observations and simulations</i>	2018–
Brian DiGiorgio (UCSC), <i>Dynamical constraints on the mass assembly of disk galaxies</i>	2017–
Namrata Roy (UCSC), <i>Star formation suppression and feedback in quiescent galaxies</i>	2017–
Grecco Oyarzun (UCSC), <i>Measuring late-time mass assembly in galaxy outskirts</i>	2016–
Matt George (UCB), <i>A Redshift Survey of COSMOS Groups</i>	2010–2011

### Postdoc Mentorship:

Francesco Belfiore, <i>Ionization and baryonic cycling over cosmic time</i>	2017–2019
David Stark, <i>Gas fueling and accretion with MaNGA</i>	2015–2017
Edmond Cheung, <i>MaNGA’s Red Geysers: Galaxy scale winds on the red sequence</i>	2014–2017
Song Huang, <i>Multicomponent formation histories of early type galaxies</i>	2014–2016
Benedetta Vulcani, <i>Dynamical Scaling Relations of COSMOS Brightest Group Centrals</i>	2012–2015

### Advising of Undergraduate Research:

Gerome Algodon (UCSC), <i>Searching for Auroral Lines in MaNGA Early-Type Galaxies</i>	2018–
Marina Huang (UCSC), <i>An automated algorithm to identify MaNGA Red Geysers</i>	2017–
Melody Wolk (ENS, Paris), <i>Brightest Central Galaxies in COSMOS Groups</i>	2009
Vivian U (Caltech), <i>DEIMOS Spectroscopy of High-z Disk Galaxies</i>	2005
Neil Miller (Caltech), <i>Analysis of Disk Rotation Curves at <math>z \sim 1</math></i>	2005

### Teaching:

ASTR-2 Overview of the Universe	Fall 2020
ASTR-233 Graduate Cosmology and Galaxies	Winter 2020
Team Leader, Astro 9 <i>Introduction to Research in Physics and Astrophysics</i> , UCSC	2017
Teaching Assistant, Introduction to Astronomy (undergraduate course)	2003
Teaching Assistant, High Energy Astrophysics (graduate course)	2003
Head Teaching Assistant, Introduction to Astronomy (undergraduate course)	2002
Teaching Assistant, Radiative Processes in Astrophysics (graduate course)	2002
Teaching Assistant, Basic Astronomy (undergraduate course)	2001