

# Guillermo Barro

## Curriculum Vitae

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### Education

- 2011 **Ph.D. (Cum Laude) in Astronomy**, *Universidad Complutense de Madrid*  
Title: *Multi-wavelength analysis of the physical properties of distant galaxies*  
Advisers: Prof. P.G. Perez-Gonzalez and Prof. J. Gallego
- 2007 **M.Sc. in Astronomy**, *Universidad Complutense de Madrid*
- 2005 **B.S. in Astronomy & Theoretical Physics**, *Universidad Complutense de Madrid*

### Employment

- 2017-Present **Assistant Professor**, University of the Pacific
- 2015-2017 **Postdoctoral Research Associate**, University of California, Berkeley
- 2011-2015 **Postdoctoral Research Associate**, University of California, Santa Cruz
- 2005-2011 **Graduate Research Assistant**, Universidad Complutense de Madrid
- 2004-2005 **Undergraduate Research Assistant**, Universidad Complutense de Madrid

### Honors and Awards

- 2017 **Visiting Professor at University of California Berkeley.**
- 2007-2011 **Comunidad de Madrid Graduate Research Fellowship**  
Three annual awards in Math, Physics and Space Sciences by the Comunidad de Madrid Education Department
- 2004-2005 **Science Prize Fellowship for Undergraduate Students**  
Three annual awards in Math, Physics and Space Sciences by the Spanish Ministry of Education.
- 2004 **Outstanding Physics Grades Award**  
Annual awards to the top 5% Physics students at UCM

### Publications

**Refereed publications: 92** (citations: >4359; h-index: 31)

**Refereed publications in 2017: 13** (citations: 78)

**First author refereed publications: 11** (citations: >528)

## Research Grants

- 2016 **PI Hubble Space Telescope, Archival Program, \$123K.**  
“Spatially resolved UV-to-FIR SEDs of compact SFGs at  $z \sim 2$ : Witnessing the epoch of core building” (AR-14552)
- 2013 **PI Hubble Space Telescope, General Observing, \$250K.**  
“The progenitors of quiescent galaxies at  $z \sim 2$ : precision ages and star-formation histories from WFC3/IR spectroscopy” (GO-13420)
- 2016 **co-I Hubble Space Telescope, Theory program, \$114K, (PI J. Primack)**  
“Elongated Galaxies and the Emergence of Disks” (AR-14578)
- 2016 **co-I Google, Research Program, \$30K, (PI D. Koo)**  
“Deep Learning in galaxy classifications of HST images”
- 2014 **co-I Hubble Space Telescope, Archival Program, \$119K, (PI Y. Guo)**  
“Mining the Treasuries: Dwarf Galaxies at  $0.5 < z < 1$  as Lynchpins for Galaxy Formation and Feedback” (AR-13891)

## PI Observing Programs

- 2016-2017 **VLA:** 2017A, Conf C, Ka band 0.9cm
- 2012-2017 **Keck Observatory:** MOSFIRE (2013A/B, 2014A/B, 2015A/B, 2016A/B, 2017), OSIRIS (2016B), DEIMOS (2013A, co-I), NIRSPEC (2015B, observer)
- 2014-2017 **Atacama Large Millimeter/sub-millimeter Array (ALMA) :** Band-7 (Cycle 2), Band-7/CO (Cycle 3), Band-4/CO (Cycle 4), Band-4/CO (Cycle 5)
- 2016 **Hubble Space Telescope:** WFC3/G102 (G0-13179; 56 orbits in Cycle 21)
- 2010-2011 **Gran Telescopio Canarias:** OSIRIS (2010A)
- 2010 **IRAM:** MAMBO
- 2009 **Calar Alto 3.5m:** Omega 2000 (2009A)

## Research Projects

Member of **CANDELS** survey: 900 orbit Multi-Cycle Treasury HST, PI: Faber & Ferguson.

Member of **MOSDEF** survey: 48.5 night Keck/MOSFIRE, several co-PIs.

Member of **HALO7D** survey: 30 night Keck/DEIMOS spectroscopy, PI: Guhatakurta.

Member of **SHARDS** survey: 180h ESO large program GTC/OSIRIS, PI: Perez-Gonzalez.

Member of **SHARDS Frontier Fields** survey: 50h GTC/OSIRIS, PI: Perez-Gonzalez.

Member of **AEGIS/DEEP** Multi-wavelength Galaxy Evolution Survey

## Professional Services

- 2010-present Administrator and co-creator of the **Rainbow database**  
<http://arcoiris.ucsc.edu/Rainbow>

- 2012-present Administrator of CANDELS, AEGIS and DEEP surveys webpages
- 2012-2016 Leader of the CANDELS multi-wavelength working group
- 2016 Member, Hubble Space Telescope review panel, Cycle 24
- 2012-present Referee/Reviewer for ApJ, A&A and MNRAS
- 2014-2015 Organizer, Astronomy Department lunch (seminars), *UC Santa Cruz*

## Teaching

- 2017-2018 **Thermal Physics** - PHYS160 - Upper division at University of the Pacific
- 2010-2011 **Fundamentos de Fisica II** - Lower division physics at UCM
- 2009-2010 **Fundamentos de Fisica I** - Lower division physics at UCM
- 2004-2005 **Laboratorio de Astrofisica** - Upper division astronomy laboratory at UCM
- 2005-2011 **Lecturer**, Astronomy Department Open House at UCM

## Advising and Mentoring

### Graduate Students

- 2014-present **Belen Alcalde**, *Universidad Complutense de Madrid*, **advisor** w/ P. Perez-Gonzalez  
*"PhD Thesis: A complete census of massive galaxies at  $z = 4 - 6$ "*
- 2015-Present **Sedona Price**, *UC Berkeley*, **mentor**, PhD advisor: M. Kriek  
*"Kinematic and structures of  $z \sim 2$  galaxies in the MOSDEF survey"*
- 2015-Present **Wren Suess**, *UC Berkeley*, **mentor**, PhD advisor: M. Kriek  
*"Resolved stellar population maps of distant post-starburst galaxies"*
- 2012-2016 **Hassen Yesuf**, *UC Santa Cruz*, **mentor**, PhD advisors: S. Faber & D. Koo  
*"Winds in active galactic nucleus of host galaxies at  $z \sim 1$ "*
- 2012-2015 **Jerome Fang**, *UC Santa Cruz*, **mentor**, PhD advisors: S. Faber & D. Koo  
*"Demographics of star-forming galaxies since  $z \sim 2.5$ "*
- 2012-2014 **Edmond Cheung**, *UC Santa Cruz*, **mentor**, PhD advisors: S. Faber & D. Koo  
*"The Dependence of Quenching upon the Inner Structure of Galaxies"*

### High School Students

- 2017 **Andrew Shao**, **Isaac Carter** and **Atmika Sarukkai**  
*"Searching for compact globular clusters in Pandora's cluster"*
- 2016 **Ogni Gosgawmi** and **Sruti Vutukury**  
*"An interactive tool to explore the Keck Online Archive Database"*
- 2015 **Ellis Miranda** and **Maggie Wang**  
*"Big Data meets the Big Bang"*
- 2014 **Robert Eng** and **Connie Li**  
*"A google maps interface to explore galaxy surveys"*

2013 **Leah Hays**  
“How do galaxies grow in their old age”

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## Conferences

### Invited Conference Talks

06/2017 Advances in Galaxy Evolution, Ringberg, Germany  
08/2016 Deconstructing Galaxies at Cosmic Noon, *Leiden, Netherlands*  
12/2015 Census, Evolution and Physics of Galaxies, New Haven, USA

### Conferences & Workshops

2015 The Most Massive Galaxies and their Precursors, *Sydney, Australia*  
2015 HIPACC Galaxy Workshop, *Santa Cruz, USA*  
2015 CANDELS Team Meeting, *Baltimore, USA*  
2014 Unveiling the Formation of Massive Galaxies, *Aspen, USA*  
2013 AAS 223st meeting, *Washington DC, USA*  
2013 Galaxies within the Cosmic Web - KICP, *Chicago, USA*

### Seminars

2017 University of California Santa Cruz, *Santa Cruz*  
2016 University of California Berkeley, *Berkeley*  
2016 Universidad Complutense de Madrid, *Madrid*  
2015 University of California Santa Cruz, *Santa Cruz*  
2015 IPAC, *Pasadena*  
2014 Caltech, *Pasadena*

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## References

**Sandra M. Faber** ([faber@ucolick.org](mailto:faber@ucolick.org))  
University of California Santa Cruz, UCO/Lick  
1156 High Street, 95064, Santa Cruz, California

**Mariska Kriek** ([mkriek@berkeley.edu](mailto:mkriek@berkeley.edu))  
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501 Campbell Hall, 94720, Berkeley, California

**Avishai Dekel** ([avishai.dekel@mail.huji.ac.il](mailto:avishai.dekel@mail.huji.ac.il))  
The Racah Institute of Physics  
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**Pablo Perez-Gonzalez** ([pgperez@fis.ucm.es](mailto:pgperez@fis.ucm.es))  
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