

federica b. bianco

Department of Physics & Astronomy
Biden School for Public Policy & Administration
Data Science Institute
University of Delaware

EDUCATION

Ph.D. in Physics, 2010

University of Pennsylvania, Philadelphia, PA, USA.

Thesis: *Chasing Shadows in the Outer Solar System.*

Supervisor: Prof. Charles R. Alcock.

MS Physics, 2007

University of Pennsylvania, Philadelphia, PA, USA

Laurea degree in Astronomy, 2003

Università degli Studi di Bologna, Italy.

Graduated Summa cum Laude with Honors.

Thesis: *Densità di Nane Bianche nell'Alone di Materia Oscura Galattico: simulazione sulla base di osservazioni MACHO.*

Supervisor: Prof. Bruno Marano.

RESEARCH INTERESTS:

Data-driven and observational science, focusing on interdisciplinarity and inference from large data in the time domain.

- **Astrophysics:** I work on constraining astrophysical systems through the application of statistical methodologies to survey data. My work includes constraints on progenitors of rare and unusual stellar explosions and on the evolution of the Solar System with large surveys and innovative observing methodologies.
- **Urban Science:** working with the Urban Observatory I am pioneering the application of astronomical techniques and data-science methods to observations of cities, including broad-band, hypertemporal, and hyperspectral imaging, and records data integration to enable inference on the sociological, economical, and ecological level.
- **Science Facilitation:** I am the Large Synoptic Survey Telescope (LSST) Science Collaborations Coordinator, facilitating the work of the Science Collaborations (over 1500 members in 8 Science Collaborations) in preparing the scientific community for the advent of the LSST survey and providing data-driven input to the committees optimizing the LSST observing strategy. LSST is the foremost priority of the American astrophysical community for the current decade, and a project whose scale (producing 30Gb per minute, 20Tb per night) will require advanced preparation in both infrastructure and methodology in order to maximize the science return. I am the co-chair of the LSST Transients and Variable Stars Collaboration (180 members), preparing the community to maximally exploit the ground-breaking dataset that will be generated by LSST and assuring the survey design enables an unprecedented exploration of the transient sky.

OUTREACH AND EDUCATION INTERESTS:

Development and implementation of innovative educational and training frameworks.

- **Curriculum Development:** developing data-science curricula across disciplines including physical, natural, and social sciences, focusing on the common methodologies while developing approaches that are specifically suited to each audience.

- **Hackathons, data-drives, debug-a-thons:** developing immersive learning experiences to promote evidence-based inference

PROFESSIONAL APPOINTMENTS

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| 2016-present | Research Assistant Professor of Urban Science <i>Center for Urban Science and Progress, New York University</i> |
| 2015-present | Senior Research Scientist <i>Center for Urban Science and Progress, New York University</i> |
| 2017-present | LSST Science Collaborations Coordinator <i>Large Synoptic Survey Telescope Corporation</i> |
| 2012-2015 | James Arthur Fellow <i>Center for Cosmology and Particle Physics, New York University</i> |
| 2009-2012 | Postdoctoral Fellow <i>UCSB - Las Cumbres Observatory Global Telescope Network</i> |
| 2005-2009 | Smithsonian Predoctoral Fellow <i>Harvard-Smithsonian Center for Astrophysics</i> |
| 2004-2005 | Research Assistant <i>University of Pennsylvania Department of Physics and Astronomy</i> |
| 2002-2003 | Overseas Fellow Undergraduate Research <i>University of Pennsylvania Department of Physics and Astronomy</i> |

GRANTS AND AWARDS

2019 *TED* Fellow

Advanced Research Projects Agency – Energy (ARPA-E) **IDEAS GRANT DE-AR0000886: *Grind Dynamics and Energy Consumption Patterns Through Remote Observations of City Lights***, \$500,000, 2018, Principal Investigator.

NYU Nominee for the *Blavatnik Awards for Young Scientists* 2016.

James Arthur Postdoctoral Fellowship, September 2012-2015.

Smithsonian Predoctoral Fellowship, September 2005-2009.

XVI Canary Islands Winter School of Astrophysics Scholarship, Instituto de Astrofísica de Canarias Tenerife, Spain, November 2004.

Magna cum Laude Università degli Studi di Bologna, September 2004.

Overseas Grant, Università degli Studi di Bologna, September 2003.

AAS International Travel Grant, 2013, 2016.

PROFESSIONAL ORGANIZATIONS AND SCIENCE TEAMS

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| 2015 to present | LSST Transients and Variable Stars Collaboration Chair |
| 2015 | POC Hot-wiring the Transient Universe |
| 2015 | Leading the FLICKER Science team. Flicker is a CubeSat mission proposed to NASA SIMPLEX. http://www.flicker.space/flicker-concept |
| 2010 to present | Member of the Whipple science team. |
| 2009-2012 | Member of the LCOGT science team. |
| 2007-2012 | Member of the Time Series Center, Harvard, IIC. |
| 2004 to present | Member of the TAOS collaboration. |

TEACHING

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| Spring 2020 | Instructor | University of Delaware, <i>Machine Learning for Time Series Analysis</i> https://github.com/fedhere/MLTSA_FBianco . |
| Fall 2019 | Instructor | University of Delaware, <i>Data Science for (Physical) Scientists</i> https://github.com/fedhere/dsps . |
| Spring 2018 | Instructor | NYU CUSP, <i>Advanced Topics in Urban Informatics</i> |
| Fall 2015-2018 | Instructor | NYU CUSP, <i>Principles of Informatics</i> (Master-level data science class) https://serv.cusp.nyu.edu/~fbianco/PUI2018/ . |
| 2015-2018 | CUSP Hackathon Program | Founder and director of the hackathon program for CUSP Master students, 3-6 events/year |
| Spring 2017 | Co-Instructor | NYU CUSP-GX 9002, <i>Advanced Topics in Urban Informatics</i> |
| Spring 2017 | Guest Lecturer | NYU Physics, <i>Science communication</i> . |
| Spring 2017 | Guest Lecturer | NYU CUSP-GX 7009, <i>Urban Sensing</i> . |
| Fall 2013 | Instructor | NYU PHYS-UA 13, <i>Observational Astronomy</i> http://cosmo.nyu.edu/~fb55/obsast_fall2013 . |
| 2013, 2014, 2016 | Guest Lecturer | NYU MAP-UA 209, <i>Quarks to Cosmos</i> . |
| Winter 2012 | Guest Lecturer | UCSB Physics 133, <i>Galaxies/Cosmology</i> . |
| Winter 2012 | Guest Lecturer | UCSB Astronomy 1. |
| Fall 2008 | Teaching Assistant | Harvard University Science A-36 <i>Science of the Physical Universe</i> . |
| Spring 2008 | Guest Lecturer | Harvard University Astronomy 1 <i>The Astronomical Universe</i> . |
| 2003/2004 | Teaching Assistant | University of Pennsylvania Physics Laboratories. |

MENTORING

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| 2019-present | Mentoring PhD Students in the University of Delaware Physics Department |
| 2019-present | Mentoring and co-Mentoring Undergraduate and Graduate Students in the Biden School of Public Policy and Administration at the University of Delaware |
| 2018 | Mentoring NYU Tandon Master of Science in Integrated Digital Media student Gabriella Cammarata on “Data-Driven sculptures: how to design beautiful and scientifically correct 3D printed data representation.” |
| 2017 | Mentoring a team of 4 CUSP Urban Informatics Graduate students in the CUSP Capstone project “A Data-Driven Evaluation of Bias in Pre-Trial Detention.” https://www.authorea.com/187222/U5TaweaIyu91Im7sbS-ZgA |
| 2017 | Mentoring a team of 2 CUSP Urban Informatics Graduate students in “Automatic detection of cigarette signs from street level images with Deep Learning” |
| 2017 | Mentoring OPT trainee Ilan Reinstein (Applied Physics Master). |
| 2015-2016 | Mentoring Physics Graduate NYU student Kieran Finn. |
| 2012-2017 | Co-Mentoring Physics Graduate NYU student Yuqian Liu. |
| 2014 | Co-Mentoring Physics Undergraduate NYU student Seung Man Oh. |

OUTREACH AND SERVICE

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| 2017-present | Large Synoptic Survey Telescope (LSST) Science Collaborations Coordinator. https://project.lsst.org/science-collaborations-0 |
| 2017 | Member of LCSC Working Group documenting and prioritize the goals, requirements, and aspirations of the community for science with LSST data. |
| 2017 April 24th | NYU Women in Science (WINS) panel. |
| 2017 March 25 | Organizer of Women in In Machine Learning and Data Science (WIMLDS) Smart Cities Hackathon http://www.wimldsdatadive.com/hackathons/2 |
| 2016-present | Serving on NOAO TAC. |
| 2016 | Organizer of LSST Transients working group workshop https://indico.hep.anl.gov/indico/conferenceDisplay.py?confId=968 |
| 2015-2016 | Founder and organizer of NYU Center for Urban Science and Progress Hackathon Series. |
| 2015-present | Co-chair of the Transients and Variable stars LSST Science Collaboration. https://tvs.science.lsst.org/ |
| 2015 November 3 | Organizer and Moderator of the First CUSP Hack Day: coordinating over 50 participants hacking 12 data driven projects. http://cusp.nyu.edu/information-sessions/ |
| 2015-present | Member of the Project Organizing Committee of Hot-wiring the Transient Universe http://hotwireduniverse.org/ |
| 2015 | Founder and organizer of Pints and Equality: a diversity focus group at NYU physics. http://cosmo.nyu.edu/~fb55/PintsAndEquality/ |
| 2015 | Astronomy Expert on Supermoon Night for rooftop event organized by PrayTell |
| 2015 October 15 | Presenting topics on Diversity and Equality in Academic Astronomy at Astronomy on Tap NYC. |
| 2015 | Featured in Nature/NatureJobs article about scientist's hobbies. http://www.nature.com/naturejobs/science/articles/10.1038/nj7558-117a |
| 2015 | Served on NSF review panel. |
| 2015 | Organizing the <i>NYC Science Train</i> Outreach Program. |
| 2014 | Designing a demo on HST's Cassegrain telescope design for a NOVA documentary. |
| 2014 | Served in NASA mission review panel |
| 2014 | Live blogging for the <i>Huffington Post</i> in occasion of the Partial Solar Eclipse. |
| 2014 | Co-founder, organizer, and NYU-coordinator of AstroML NYC-wide reading group (NYU, Columbia, AMNH, and CUNY) |
| 2013-2014 | Organizer of CCPP 2013 Fall Astro-Seminar series CCPP-NYU |
| 2012-2015 | Leading and coordinating bi-weekly <i>Astro-Coffee</i> CCPP-NYU |
| 2010, 2012 | LCOGT support scientist in the annual KITP teachers conference |
| 2011 | Head of the LCOGT committee organizing and producing the first LCOGT AAS booth for the 219th AAS meeting, January 2010 |
| 2011-2012 | Coordinate amateur astronomer observations at Faulkes Telescope North, HW, facilitate collaboration between amateur and professional astronomers |
| 2011-2012 | Founder and Chair of the monthly LCOGT Science Seminar Series |
| 2010-2012 | Founder and organizer of LCOGT journal club (biweekly astronomy discussion group for scientists and non-scientists) |

- 2010 Organizer of *Santa Barbara Astro day* at UCSB
- 2010 Local organizing committee for the triennial Trans Neptunian Science conference *TNO 2010*
- 2006 Founder and organizer of the Weekly Predocs Coffee (weekly gathering to foster connections among Smithsonian Predoctoral fellows at the CfA)
- 2005 Creator and co-founder of the annual *CfA Predoctoral Symposium* (Harvard Smithsonian CfA)

GRANTS and COMPETITIVE TELESCOPE TIME AWARDS _____

- PI of Advanced Research Projects Agency – Energy (ARPA-E) **IDEAS GRANT DE-AR0000886: *Grind Dynamics and Energy Consumption Patterns Through Remote Observations of City Lights*, \$500k, 2018**
- PI of LCOGT long term program *A synergistic observational approach at a crucial time for Outer Solar System studies*, ~ 551 hours over six observing cycles on the LCOGT 2m and 1m robotic networks (2013).
- Co-I of NSF grant: *Collaborative Research: Using Spectroscopy of Light Echoes to Observe the 19th Century Great Eruption of Eta Carinae* (PI Nathan Smith)
- SOAR 3.0 m telescope, 2 half-nights to monitor light echoes of Eta Carinae, 2013 (PI).
- KPNO Mayall 4.0 m telescope, 5 nights to discovery light echoes of historical events, 2012.
- SOAR 3.0 m telescope, 4 half-nights to monitor light echoes of Eta Carinae, 2012 (PI)
- Faulkes Telescope North (2.0 m), 3 hours to observe Lucky Imaging of Comet ISON (PI) 2013B DDT
- Faulkes Telescope North High speed observations of Nova Delphini (PI) 2013B DDT
- Faulkes Telescope North/South (2.0 m), 127 hours queued scheduled time to follow-up light echo candidates with traditional imaging and detect new echoes of historical explosions (PI) since 2010.
- Faulkes Telescope North/South (2.0 m), 50 hours to observe occultations of stars by Outer Solar System objects (PI) since 2010
- MMT 6.5 meter telescope, 10 nights observing with Megacam optical images in continuous readout mode between January 2007 and July 2008. (PI)
- Several nights of commissioning observations were awarded over the years at both Faulkes telescopes for lucky imaging and high speed photometry and at the TAOS 50cm robotic telescopes for software development.

INVITED WORKSHOPS _____

- PLAsTiCC transient challenge workshop*, Flat Iron Center for Computational Astrophysics, New York (NY), July 2014 2017.
- A Definitive Investigation of the Core-Collapse Supernova Cassiopeia A* - Princeton Center for Theoretical Science (PCTS), April 2017
- LSST Observing Strategy white paper workshop* - Tucson, November 2015
- Aspen Center for Physics - The Dynamic Universe: Understanding ExaScale Astronomical Synoptic Surveys*, June 2015
- Institute for Advanced Studies*, Princeton, NJ - Type Ia Workshop, September 2014.
- Lorentz Center*, Leiden, NL - Observational Signatures of Type Ia Supernova Progenitors, September 2010.

INVITED TALKS

1. Astronomical Data Science Workshop, Texas AMU, College Station, TX, February 17-18, 2020.
INVITED TALK: How Studying the Ever-Changing Sky has Changed.
2. Kavli-IAU Workshop International co-ordination of multi-messenger transient observations in the 2020s and beyond. Cape Town, February 3-7, 2020.
INVITED TALK: Transient/Multi-messenger Science with Rubin Observatory (LSST)
INVITED TALK: ToOs with Rubin Observatory
3. 235rd Meeting of the American Astronomical Society, Honolulu, HI January 4-9, 2019.
INVITED TALK: Rubin Observatory Open House: *The Rubin Observatory LSST Science Collaborations: activities and goals.*
4. An Evening of Conversations Connections, Annual UD Alumni event, New York, NY, November 13 2019.
KEYNOTE ADDRESS
5. Equinox Lecture, Central Michigan University, Mt. Pleasant, MI, September 23, 2019.
INVITED LECTURE: LSST: chasing changes all over the sky
6. Conveying Science Through Art: A Public Engagement Workshop organized by Guerilla Science & Pratt Institute, NYC Academy of Sciences, September 8-9, 2019
INVITED LECTURE: What is the job of a scientist?
7. LSST Project Community Workshop 2019, Tucson, AZ, August 12, 2019
INVITED TALK: LSST science 101
8. LSST Project Community Workshop 2019, Tucson, AZ, August 12, 2019
INVITED TALK: LSST Transients and Variable Stars Science Collaboration
9. European Week of Astronomy and Space Science, TIME DOMAIN S1: Exploring the time-domain phase space from current surveys to LSST, Lyon, France, June 26, 2019.
INVITED TALK: The LSST survey and the transient sky
10. Open digital infrastructure in astrophysics, Kavli Institute for Theoretical Physics, University of California, Santa Barbara. June 2, 2019.
INVITED TALK: LSST (TVS) for software developers.
11. Inference for Multi-messenger Astrophysics Workshop , University of California, Berkeley, May 30, 2019
INVITED TALK: Machine and deep learning applications in LSST user generated data products
12. University of Delaware Italian Honors Day, Newark, DE, May 2, 2019.
KEYNOTE ADDRESS: Italian Renaissance Woman
13. TED 2019 - Bigger than us, Vancouver, Canada. April 15, 2019.
TED talk: How we use astrophysics to study earthbound problems
14. National Academy of Science, Space Science Week Committee on Astronomy and Astrophysics, Washington, DC, March 27, 2019
INVITED TALKS: The status of the LSST Science Collaborations
15. IV Workshop LSST Chile, La Serena, Chile, March 6, 2019.
INVITED TALK: LSST Science Collaborations
16. 233rd Meeting of the American Astronomical Society, Seattle, WA January 6-10, 2019.
LSST Town Hall: *LSST Science Collaborations and the LSST Corporation's Enabling Science Activities*

17. Symposium in occasion of the 30th anniversary of the bilateral agreement on science and technology between Italy and the USA December 5, 2018, Italian Embassy, Washington DC
INVITED TALK: *The Large Synoptic Survey Telescope*
18. Center for Computational Astrophysics at the Flat Iron Institute Colloquium, September 21, 2018.
Detectable Changes in Astronomy
19. Workshop on WFIRST/LSST Deep Fields, Princeton University, August 30, 2018.
INVITED TALK: *LSST deep drilling field program*
20. LSST TVS Program, Naples Italy, April 9, 2018.
INVITED TALK: *The LSST Overview, TVS Task Force proposals and Roadmap*
21. European Week of Astronomy and Space Science - Supernova Diversity Symposium, April 3 - 4, 2018.
INVITED TALK: *The LSST Supernova Survey*
22. European Week of Astronomy and Space Science - Software in Astronomy Symposium, April 4, 2018.
INVITED TALK: *Measuring the Impact of Your Research Software*
23. University of Toronto Astronomy Colloquium, March 7th, 2018.
Detectable Changes in Astronomy
24. UC Berkeley Theoretical Astrophysics Center Seminar, Berkeley, CA February 26th, 2018.
Detectable Changes in Astronomy
25. Villanova University Astronomy Colloquium, February 16th, 2018.
Detectable Changes in Astronomy
26. 231st Meeting of the American Astronomical Society, Washington, DC January 8-12, 2018.
LSST Town Hall: *Science Collaborations and the LSST Corporation's Enabling Science Activities*
27. University of Wisconsin, Milwaukee, Physics Colloquium, Milwaukee, WI November 3, 2017.
Detectable Changes in Astronomy
28. University of Stockholm/Oskar Klein Center, Sweden, September 8th, 2017.
Talk as "opponent" in PhD defense: *Stripped Envelope Supernovae in Context*
29. PLAsTiCC transient challenge workshop, Center for Computational Astrophysics, New York (NY), July 2014 2017.
INVITED TALK: *LSST transient challenge metrics beyond supernovae*
30. Supernovae: the LSST revolution, Northwestern University, Evanston (IL), June 1-2, 2017.
INVITED TALK: *LSST Metrics for Supernovae*
31. IAUS 329: The Lives and Death-Throes of Massive Stars, Auckland, New Zealand - November 28-December 2, 2016.
INVITED TALK: *Moving beyond SNIbc: the diversity of stripped envelope SNe.*
32. AMC BuildSys 2016, Stanford, CA, USA - November 16-17, 2016.
ACCEPTED PAPER: *Hypertemporal Imaging of NYC Grid Dynamics*
33. Supernovae through the ages, Rapa Nui, Chile - August 8-13, 2015
INVITED TALK: *A Roadmap to the LSST transient sky*
34. Rutgers University, Seminar, New Brunswick, NJ - April 7, 2016.
Explosions in my Data
35. University of Delaware, Seminar, Newark, DE - February 24 , 2016.
Explosions in my Data

36. Joint Steward Observatory/NOAO Colloquium, Tucson, AZ - November 5, 2015.
Explosions in my Data
37. Stony Brook, Seminar, New York, NY - October 21, 2015.
Explosions in my Data
38. University of Pittsburgh, Astro Seminar, Pittsburgh, PA – October 9, 2015.
Echoes from the Past.
39. University of California, Santa Cruz, FLASH (Job Talk). Santa Cruz, CA – February 20, 2015.
Forensic studies of massive stars (and other adventures in time domain astronomy).
40. MSU Colloquium (Job Talk), Mississippi State, MS – January 27, 2015.
Replay: Echoes of Light from Eta Carinae
41. University of Washington, Astro Seminar (Job Talk), Seattle WA – January 20, 2015.
Probing the progenitors channels of stripped SN with the CfA SN sample.
42. University of Pennsylvania, Astro Seminar, Philadelphia, PA – April 9, 2014.
Echoes of Light from Eta Carinae and the fate of massive stars
43. Stony Brook, Seminar, New York, NY - November 13, 2013
Replay: Echoes of Light from Eta Carinae.
44. Columbia University, Seminar, New York, NY – May 2, 2013
Replay: Echoes of Light from Eta Carinae.
45. American Museum of Natural History, Seminar, New York, NY – March 26, 2013
Replay: Echoes of Light from Eta Carinae.
46. Carnegie Observatory Friday Lunch Seminar, Pasadena, CA – May 25, 2012
LCOGT: a booming global telescope network for time domain astronomy , and two explosive results.
47. PACC workshop: SNIa in the NIR, UPitt, Pittsburg, PA – March 28, 2012
INVITED TALK: Optical, NIR and bolometric early light curve of SN 2011fe.
48. Herzberg Institute of Astrophysics Colloquium, Victoria BC – February 7, 2012
LCOGT: a global telescope network for time domain astronomy (and how i use it).
49. Special Particle Astrophysics Seminar, Fermilab, Botavia, IL – February 5, 2009
Chasing Shadows: Occultation Surveys of the Outer Solar System
50. Physics Colloquium, University of Massachusetts Lowell, Lowell, MA – October 8, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System
51. Special Seminar, Herzberg Institute for Astrophysics, Victoria, BC, CA – September 30, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System

CONTRIBUTED TALKS

1. Special Webinar LSST Brazil - October 19, 2016.
The Transient Sky and LSST
2. Hot-Wiring the Transient Universe. Santa Barbara, CA – May 13, 2015.
Learning about stripped envelope SN explosions.
3. Black Board Talk, NYU Center for Cosmology and Particle Physics, New York, NY – March 30, 2015.
Forensic studies of massive stars.
4. AAS, Seattle, WA – January 5, 2015.
The fist homogeneous, multi-color photometric and spectroscopic sample of Stripped Envelope Super Novae and what it can tell us about their progenitors

5. CAASTRO Annual Scientific Conference Supernovae in the Local Universe: Celebrating 10,000 days of Supernova 1987A Coffs Harbour, NSW, Australia – August 12, 2014.
Replay: Echoes of Light from Eta Carinae.
6. Black Board Talk, NYU Center for Cosmology and Particle Physics, New York, NY – March 11, 2013.
Chasing shadows in the solar system.
7. Santa Barbara Astronomical Unit Monthly Meeting, Santa Barbara Museum of Natural History, Santa Barbara, CA – April 6, 2012
Replay: Light Echoes of Eta Carinae.
8. Santa Barbara Astronomy Day, Kavli Institute for Theoretical Physics, Santa Barbara, CA – March 9, 2012
Replay: Light Echoes of Eta Carinae.
9. SN 2011fe Splinter Meeting, AAS, Austin, TX – January 9, 2012
Optical, NIR and bolometric early light curve of SN 2011fe.
10. Digging deeper and faster: algorithms for computationally limited problems in time-domain astronomy, Caltech, Pasadena CA – December 13, 2012
LCOGT/LIHSP: A Robotic system for Lucky Imaging.
11. Santa Barbara Astro Day, UCSB, Santa Barbara, CA – October 1, 2010
Constraints from SNLS and SDSS data on SN Ia progenitors from shocks by the secondary star.
12. Observational Signature of Type Ia Supernova Progenitors Workshop, Lorentz Center, Leiden, Netherlands – September 20th 2010
Constraints from SNLS and SDSS data on SN Ia progenitors from shocks by the secondary star.
13. TNO 2010: Dynamical and Physical properties of Trans-Neptunian Objects, Philadelphia, PA – June 27, 2010
The TAOS Project: 3.75 year results for the Kuiper Belt and Sedna region
14. Friday Astrophysics Lunch, UCSB, Santa Barbara, CA – February 19, 2010
Occultations Surveys of the Outer Solar System: Beyond the Kuiper Belt
15. Santa Barbara Astro Day, UCSB, Santa Barbara, CA – June 5, 2009
First Constraints on Outer Solar System Formation and Evolution Models from TAOS: a Fast Photometric Occultation Survey
16. Astronomy Journal Club, UPenn, PA – March 17, 2009
A Search for Occultations of Bright Stars by Small Kuiper Belt Objects Using Megacam on the MMT
17. Friday Astrophysics Lunch , UCSB, Santa Barbara, CA – February 20, 2009
Chasing Shadows: Occultation Surveys of the Outer Solar System
18. Astro Lunch Seminar, UPITT/CMU, Pittsburg, PA – February 13, 2009
Chasing Shadows: Occultation Surveys of the Outer Solar System
19. TIARA Workshop on Dim KBOs - Nat'l Tsing Hua University, Hsinchu, Taiwan, December 10, 2008 (talk given by proxy)
The MMT/Megacam occultation survey
20. Monthly Meeting, Skyscrapers Amateur Astronomical Society of Rhode Island – September 5, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System
21. Brown Bag Lunch Talk, LPL, University of Arizona, AZ – July 2, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System

22. Optical Infrared Division Lunch Talk, CfA, Cambridge, MA – April 24, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System
23. Third Annual Smithsonian Predoctoral Symposium, CfA, Cambridge, MA – March 7, 2008
TAOS and the fast photometry occultation surveys: state of the art and preliminary results
24. Second Annual Smithsonian Predoctoral Symposium, CfA, Cambridge, MA – March 2, 2007
So many pixels, so little time... and such tiny features too!
25. Trans Neptunian Objects: Dynamical and Physical properties - Catania, Italy – July 4, 2006
Taiwanese-American Occultation Survey: status of the project
26. First Annual Smithsonian Predoctoral Symposium, CfA, Cambridge, MA – February 28, 2006
Chasing shadows with TAOS

Lead or Main-Contributing Author Refereed Publications

- [1] Igor Andreoni, Shreya Anand, Federica B. **Bianco**, S. Bradley Cenko, Philip S. Cowperthwaite, et al. “A Strategy for LSST to Unveil a Population of Kilonovae without Gravitational-wave Triggers”. In: *PASP* 131.1000 (June 2019), p. 068004. DOI: 10.1088/1538-3873/ab1531. arXiv: 1812.03161 [astro-ph.IM].
- [2] Federica B. **Bianco**, Maria R. Drout, Melissa L. Graham, Tyler A. Pritchard, Rahul Biswas, et al. “Presto-Color: A Photometric Survey Cadence for Explosive Physics and Fast Transients”. In: *PASP* 131.1000 (June 2019), p. 068002. DOI: 10.1088/1538-3873/ab121a. arXiv: 1812.03146 [astro-ph.IM].
- [3] Maryam Modjaz, Federica B. **Bianco**, Magdalena Siwek, Shan Huang, Daniel A. Perley, et al. “Host Galaxies of Type Ic and Broad-lined Type Ic Supernovae from the Palomar Transient Factory: Implication for Jet Production”. In: *AJ* 1.10 (Jan. 2019), pp. 600–608. DOI: 10.1038/s42254-019-0097-4.
- [4] Marc Williamson, Maryam Modjaz, and Federica B. **Bianco**. “Optimal Classification and Outlier Detection for Stripped-envelope Core-collapse Supernovae”. In: *ApJ* 880.2, L22 (Aug. 2019), p. L22. DOI: 10.3847/2041-8213/ab2edb. arXiv: 1903.06815 [astro-ph.SR].
- [5] Or Graur, Federica B. **Bianco**, Shan Huang, Maryam Modjaz, Isaac Shivvers, et al. “LOSS Revisited. I. Unraveling Correlations Between Supernova Rates and Galaxy Properties, as Measured in a Reanalysis of the Lick Observatory Supernova Search”. In: *ApJ* 837.2, 120 (Mar. 2017), p. 120. DOI: 10.3847/1538-4357/aa5eb8. arXiv: 1609.02921 [astro-ph.HE].
- [6] Or Graur, Federica B. **Bianco**, Maryam Modjaz, Isaac Shivvers, Alexei V. Filippenko, et al. “LOSS Revisited. II. The Relative Rates of Different Types of Supernovae Vary between Low- and High-mass Galaxies”. In: *ApJ* 837.2, 121 (Mar. 2017), p. 121. DOI: 10.3847/1538-4357/aa5eb7. arXiv: 1609.02923 [astro-ph.HE].
- [7] Yu-Qian Liu, Maryam Modjaz, and Federica B. **Bianco**. “Analyzing the Largest Spectroscopic Data Set of Hydrogen-poor Super-luminous Supernovae”. In: *ApJ* 845.1, 85 (Aug. 2017), p. 85. DOI: 10.3847/1538-4357/aa7f74. arXiv: 1612.07321 [astro-ph.HE].
- [8] F. B. **Bianco**, M. Modjaz, S. M. Oh, D. Fierroz, Y. Q. Liu, et al. “Monte Carlo method for calculating oxygen abundances and their uncertainties from strong-line flux measurements”. In: *Astronomy and Computing* 16 (July 2016), pp. 54–66. DOI: 10.1016/j.ascom.2016.03.002. arXiv: 1505.06213 [astro-ph.IM].
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