federica b. bianco

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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.

- **Urban Science:** working with the Urban Observatory at the Center for Urban Science and Progress 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.
- **Astrophysics**: I work on constraining the progenitor systems that give rise to stellar explosions by studying large samples of supernovae (SNe). Light curve and spectral studies of the elusive Stripped Envelope Core Collapse SNe lead to constraints on the progenitors: we seek evidence of a distinction among stripped SN subtypes in the explosion observables, indicative of different progenitor channels. With early phase photometry of Type Ia SNe, in 2011 I ruled out a fraction larger than 20% of single degenerate progenitor systems involving a Red Giant star donor, at a time when the single degenerate scenario was still the most widely accepted. This may have important cosmological implications since these are the SNe used to measure the expansion rate of the Universe.
  I worked extensively in Solar System science in blind and targeted occultation surveys, where time series sampled at sub-second rates enable the indirect detection and characterization of objects too small and distant for direct observation, leading to constraints on Solar System formation and evolution scenarios. I played key roles in the software development, data collection, and data analysis of several surveys, including the Taiwanese American Occultation Survey (TAOS, which collected > 100 Tb of photometry over 5 years of operation and which, because of the unusual nature of the high-speed photometric measurements, required customized software packages for data extraction and analysis) and of the Las Cumbres Global Telescope Network (LCOGT).
- **Science Facilitation:** I am the Large Synoptic Survey Telescope (LSST) Science Collaborations Coordinator, facilitating the work of the Science Collaborations (over 2000 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, 30Tb 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.

PROFESSIONAL APPOINTMENTS

2019-	Assistant Professor *Department of Physics & Astronomy* and *School of Public Policy and Administration* University of Delaware
2019-	Resident Faculty *Data Science Institute* University of Delaware
2017-present	LSST Science Collaborations Coordinator *Large Synoptic Survey Telescope Corporation*
2016-2018	Research Assistant Professor of Urban Science *Center for Urban Science and Progress, New York University*
2015-2018	Senior Research Scientist *Center for Urban Science and Progress, New York University*
2012-2015	James Arthur Fellow *Center for Cosmology and Particle Physics, New York University*
2009-2012	Postdoctoral Fellow *UCSB - Las Cumbres Observatory Global Telescope Network*
2005-2009	Smithsonian Predoctoral Fellow *Harvard-Smithsonian Center for Astrophysics*
2004-2005	Research Assistant *University of Pennsylvania Department of Physics and Astronomy*
2002-2003	Overseas Fellow Undergraduate Research *University of Pennsylvania Department of Physics and Astronomy*

GRANTS AND AWARDS

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 Astrofisica 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

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.

GRANTS and COMPETITIVE TELESCOPE TIME AWARDS

National Science Foundation Cyberinfrastructure for Emerging Science and Engineering Research (CESER) program **Conceptualization of a Scalable Cyberinfrastructure Institute for Multi-messenger Astrophysics**, Award 1841594, 2018, Co-Investigator.

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*, $\sim$ 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.

TEACHING

Fall 2015,2016,2017,2018	Instructor	NYU CUSP, *Principles of Informatics* (Master-level data science class) `https://serv.cusp.nyu.edu/~fbianco/PUI2018/`.
2015-present	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, *Advanced Topics in Urban Informatics*
Spring 2017	Guest Lecturer	NYU Phsyics, *Science communication.*
Spring 2017	Guest Lecturer	NYU CUSP-GX 7009, *Urban Sensing.*
Fall 2013	Instructor	NYU PHYS-UA 13, *Observational Astronomy* `http://cosmo.nyu.edu/~fb55/obsast_fall2013`.
2013, 2014, 2016	Guest Lecturer	NYU MAP-UA 209, *Quarks to Cosmos.*
Winter 2012	Guest Lecturer	UCSB Physics 133, *Galaxies/Cosmology.*
Winter 2012	Guest Lecturer	UCSB Astronomy 1.

Fall 2008	Teaching Assistant	Harvard University Science A-36 *Science of the Physical Universe.*
Spring 2008	Guest Lecturer	Harvard University Astronomy 1 *The Astronomical Universe.*
2003/2004	Teaching Assistant	University of Pennsylvania Physics Laboratories.

MENTORING

2018	Mentoring a team of 4 CUSP Urban Informatics Graduate students in the CUSP Capstone project "Detection of polluting plumes ejected from NYC buildings" - 1st prize in the CUSP capstone competition `https://www.authorea.com/298521/bGsQfHGi6cbBE_mycnv-Tw`
2018	Mentoring a team of 5 CUSP Urban Informatics Graduate students in the CUSP Capstone project "Automated Detection of Street-Level Tobacco Advertising Displays" in collaboration with NYU MHealth `https://www.authorea.com/298519/UZaG8SAQ90tIOBRta-n9JQ`
2018	Mentoring a team of 4 CUSP Urban Informatics Graduate students in the CUSP Capstone project "Public Sentiment Measures of Prosecutorial Justice from Social Media" in collaboration with the NYU Marron Institute and BetaGov `https://www.authorea.com/298530/8hgTVgzPCmu2vF5tAvltXA`
2018	Mentoring NYU Tandon Master of Science in Integrated Digital Media student Gabriella Cammarata on "Data-Driven scultptures: 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/U5TaweaIyu9lIm7sbS-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.
2018	Mentoring a team of 4 CUSP Urban Informatics Graduate students in the CUSP Capstone project "Detection of polluting plumes ejected from NYC buildings" - 1st prize in the CUSP capstone competition `https://www.authorea.com/298521/bGsQfHGi6cbBE_mycnv-Tw`
2018	Mentoring a team of 5 CUSP Urban Informatics Graduate students in the CUSP Capstone project "Automated Detection of Street-Level Tobacco Advertising Displays" in collaboration with NYU MHealth `https://www.authorea.com/298519/UZaG8SAQ90tIOBRta-n9JQ`
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2018	Mentoring NYU Tandon Master of Science in Integrated Digital Media student Gabriella Cammarata on "Data-Driven scultptures: 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/U5TaweaIyu9lIm7sbS-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.
2014	Mentoring Physics Undergraduate NYU student Ekta Patel through the *Huffington post Girls in STEM program* (now Graduate Student at University of Arizona Astronomy).
2011-2012	Mentoring Physics UCSB Undergraduate Scott Hillberry through the *LCOGT internship program.*
2010-2011	Mentoring Physics UCSB Undergraduate Daniel Kudrow through the *LCOGT internship program* (now Graduate Student at UCSB Computer Science).

OUTREACH AND SERVICE

2018	AAAC GBS subcommittee on the near-term future of the Gemini, Blanco and Soar facilities.
2018	Chair of team revising the LSST for scientists web presence.
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 *NYC Science Train* 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 *Huffington Post* 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 *Astro-Coffee* 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)

SCIENTIFIC ORGANIZING COMMITTEES

Enabling Multi-Messenger Astrophysics in the Big Data Era April 25-26, Space Telescope Science Institute, Baltimore, USA `http://www.stsci.edu/institute/conference/emma`

Deep Learning For Mutimessenger Astrophysics: Real-Time Discovery at Scale
`http://www.ncsa.illinois.edu/Conferences/DeepLearningLSST/`
October 1719, 2018 NCSA/University of Illinois

LSST - Large Synoptic Survey Telescope - Special Programs Workshop
`https://indico.ict.inaf.it/event/716/`
October 8-10, 2018 Palermo, Italy

LSST Cadence Hackathon at the Flatiron Institute
`https://serv.cusp.nyu.edu/~fbianco/LSSTHackathonCCA/`
September 17-19, 2018 NYC

LSST Transient and Variable Stars Science Collaboration Survey Strategy Proposal Preparation Workshop
`https://lsst-tvssc.github.io/DDFMS_meeting_2018.html`
June 4-8, 2018 Lehigh University, Bethlehem, PA

Large Synoptic Survey Telescope Corporation Transients and Variable Stars workshop
`http://eventi.na.astro.it/en/lsst-tvs-2018/`
April 9-11, 2018, Naples, Italy

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. 233rd Meeting of the American Astronomical Society, Washington, DC January 6-10, 2019.
   LSST Town Hall: *LSST Science Collaborations and the LSST Corporation's Enabling Science Activities*

2. Symposium in occasion of the 30th anniversary of the bilateral agreement on science and techonology between Italy and the USA December 5, 2018, Italian Embassey, Washington DC
   INVITED TALK: *The Large Synoptic Survey Telescope*

3. Center for Computational Astrophysics at the Flat Iron Institute Colloquium, September 21, 2018.
   Detectable Changes in Astronomy

4. Workshop on WFIRST/LSST Deep Fields, Princeton University, August 30, 2018.
   INVITED TALK: *LSST deep drilling field program*

5. LSST TVS Program, Naples Italy, April 9, 2018.
   INVITED TALK: *The LSST Overview, TVS Task Force proposals and Roadmap*

6. European Week of Astronomy and Space Science - Supernova Diversity Symposium, April 3 - 4, 2018.
   INVITED TALK: *The LSST Supernova Survey*

7. European Week of Astronomy and Space Science - Software in Astronomy Symposium, April 4, 2018.
   INVITED TALK: *Measuring the Impact of Your Research Software*

8. University of Toronto Astronomy Colloquium, March 7th, 2018.
   Detectable Changes in Astronomy

9. UC Berkeley Theoretical Astrophysics Center Seminar, Berkeley, CA February 26th, 2018.
   Detectable Changes in Astronomy

10. Villanova University Astronomy Colloquium, February 16th, 2018.
    Detectable Changes in Astronomy

11. 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*

12. University of Wisconsin, Milwaukee, Physics Colloquium, Milwaukee, WI November 3, 2017.
    Detectable Changes in Astronomy

13. University of Stockholm/Oskar Klein Center, Sweden, September 8th, 2017.
    Talk as "opponent" in PhD defense: *Stripped Envelope Supernovae in Context*

14. PLAsTiCC transient challenge workshop, Center for Computational Astrophysics, New York (NY), July 2014 2017.
    INVITED TALK: *LSST transient challenge metrics beyond supernovae*

15. Supernovae: the LSST revolution, Northwestern University, Evanston (IL), June 1-2, 2017.
    INVITED TALK: *LSST Metrics for Supernovae*

16. 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.*

17. AMC BuildSys 2016, Stanford, CA, USA - November 16-17, 2016.
    ACCEPTED PAPER: *Hypertemporal Imaging of NYC Grid Dynamics*

18. Supernovae through the ages, Rapa Nui, Chile - August 8-13, 2015
    INVITED TALK: *A Roadmap to the LSST transient sky*

19. Rutgers University, Seminar, New Brunswick, NJ - April 7, 2016.
Explosions in my Data

20. University of Delaware, Seminar, Newark, DE - February 24 , 2016.
Explosions in my Data

21. Joint Steward Observatory/NOAO Colloquium, Tucson, AZ - November 5, 2015.
Explosions in my Data

22. Stony Brook, Seminar, New York, NY - October 21, 2015.
Explosions in my Data

23. University of Pittsburgh, Astro Seminar, Pittsburgh, PA – October 9, 2015.
Echoes from the Past.

24. 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).

25. MSU Colloquium (Job Talk), Mississippi State, MS – January 27, 2015.
Replay: Echoes of Light from Eta Carinae

26. University of Washington, Astro Seminar (Job Talk), Seattle WA – January 20, 2015.
Probing the progenitors channels of stripped SN with the CfA SN sample.

27. University of Pennsylvania, Astro Seminar, Philadelphia, PA – April 9, 2014.
Echoes of Light from Eta Carinae and the fate of massive stars

28. Stony Brook, Seminar, New York, NY - November 13, 2013
Replay: Echoes of Light from Eta Carinae.

29. Columbia University, Seminar, New York, NY – May 2, 2013
Replay: Echoes of Light from Eta Carinae.

30. American Museum of Natural History, Seminar, New York, NY – March 26, 2013
Replay: Echoes of Light from Eta Carinae.

31. Carnegie Observatory Friday Lunch Seminar, Pasadena, CA – May 25, 2012
LCOGT: a booming global telescope network for time domain astronomy , and two explosive results.

32. PACC workshop: SNIa in the NIR, UPitt, Pittsburg, PA – March 28, 2012
INVITED TALK: Optical, NIR and bolometric early light curve of SN 2011fe.

33. Herzberg Institute of Astrophysics Colloquium, Victoria BC – February 7, 2012
LCOGT: a global telescope network for time domain astronomy (and how i use it).

34. Special Particle Astrophysics Seminar, Fermilab, Botavia, IL – February 5, 2009
Chasing Shadows: Occultation Surveys of the Outer Solar System

35. Physics Colloquium, University of Massachusetts Lowell, Lowell, MA – October 8, 2008
Chasing Shadows: Occultation Surveys of the Outer Solar System

36. 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

REFERENCES

Prof. Steve Koonin (CUSP Director)
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Lead or Main-Contributing Author Refereed Publications

[1] Y.-Q. Liu, M. Modjaz, and F. B. **Bianco**. "Analyzing the Largest Spectroscopic Data Set of Hydrogen-poor Super-luminous Supernovae". In: *ApJ* 845, 85 (Aug. 2017), p. 85. DOI: 10.3847/1538-4357/aa7f74. arXiv: 1612.07321 [astro-ph.HE].

[2] O. Graur, F. B. **Bianco**, M. Modjaz, I. Shivvers, A. V. Filippenko, W. Li, and N. Smith. "LOSS Revisited. II. The Relative Rates of Different Types of Supernovae Vary between Low- and High-mass Galaxies". In: *ApJ* 837, 121 (Mar. 2017), p. 121. DOI: 10.3847/1538-4357/aa5eb7. arXiv: 1609.02923 [astro-ph.HE].

[3] O. Graur, F. B. **Bianco**, S. Huang, M. Modjaz, I. Shivvers, A. V. Filippenko, W. Li, and J. J. Eldridge. "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, 120 (Mar. 2017), p. 120. DOI: 10.3847/1538-4357/aa5eb8. arXiv: 1609.02921 [astro-ph.HE].

[4] Y.-Q. Liu, M. Modjaz, F. B. **Bianco**, and O. Graur. "Analyzing the Largest Spectroscopic Data Set of Stripped Supernovae to Improve Their Identifications and Constrain Their Progenitors". In: *ApJ* 827, 90 (Aug. 2016), p. 90. DOI: 10.3847/0004-637X/827/2/90. arXiv: 1510.08049 [astro-ph.HE].

[5] M. Modjaz, Y. Q. Liu, F. B. **Bianco**, and O. Graur. "The Spectral SN-GRB Connection: Systematic Spectral Comparisons between Type Ic Supernovae and Broad-lined Type Ic Supernovae with and without Gamma-Ray Bursts". In: *ApJ* 832, 108 (Dec. 2016), p. 108. DOI: 10.3847/0004-637X/832/2/108. arXiv: 1509.07124 [astro-ph.HE].

[6] F. B. **Bianco**, S. Koonin, C. Mydlarz, and M. Sharma. "Hypertemporal Imaging of NYC Grid Dynamics". In: *BuildSys '16: Proceedings of the 3Rd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments, ACM* (2016).

[7] K. Finn, **Bianco, F. B.**, M. Modjaz, Y.-Q. Liu, and A. Rest. "Comparison of Diversity of Type IIb Supernovae with Asymmetry in Cassiopeia A Using Light Echoes". In: *ApJ* 830, 73 (Oct. 2016), p. 73. DOI: 10.3847/0004-637X/830/2/73. arXiv: 1605.03186 [astro-ph.HE].

[8] Y.-Q. Liu, M. Modjaz, F. B. **Bianco**, and O. Graur. "Analyzing the Largest Spectroscopic Dataset of Stripped Supernovae to Improve Their Identifications and Constrain Their Progenitors". In: *ApJ Accepted* (Oct. 2015). arXiv: 1510.08049 [astro-ph.HE].

[9] F. B. **Bianco**, M. Modjaz, S. M. Oh, D. Fierroz, Y. Q. Liu, L. Kewley, and O. Graur. "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].

[10] O. Graur, F. B. **Bianco**, and M. Modjaz. "A unified explanation for the supernova rate-galaxy mass dependency based on supernovae discovered in Sloan galaxy spectra". In: *MNRAS 450, 905* (Dec. 2014). arXiv: 1412.7991 [astro-ph.HE].

[11] F. B. **Bianco**, M. Modjaz, M. Hicken, A. Friedman, R. P. Kirshner, J. S. Bloom, P. Challis, G. H. Marion, W. M. Wood-Vasey, and A. Rest. "Multi-color Optical and Near-infrared Light Curves of 64 Stripped-envelope Core-Collapse Supernovae". In: *ApJS* 213, 19 (Aug. 2014), p. 19. DOI: 10.1088/0067-0049/213/2/19. arXiv: 1405.1428 [astro-ph.SR].

[12] J. L. Prieto, A. Rest, F. B. **Bianco**, T. Matheson, N. Smith, N. R. Walborn, E. Y. Hsiao, R. Chornock, L. Paredes Álvarez, A. Campillay, C. Contreras, C. González, D. James, G. R. Knapp, A. Kunder, S. Margheim, N. Morrell, M. M. Phillips, R. C. Smith, D. L. Welch, and A. Zenteno. "Light Echoes from η Carinae's Great Eruption: Spectrophotometric Evolution and the Rapid Formation of Nitrogen-rich Molecules". In: *ApJ* 787, L8 (May 2014), p. L8. DOI: 10.1088/2041-8205/787/1/L8. arXiv: 1403.7202 [astro-ph.SR].

[13] T. M. Brown, N. Baliber, F. B. **Bianco**, M. Bowman, B. Burleson, P. Conway, M. Crellin, É. Depagne, J. De Vera, B. Dilday, D. Dragomir, M. Dubberley, J. D. Eastman, M. Elphick, M. Falarski, S. Foale, M. Ford, B. J. Fulton, J. Garza, E. L. Gomez, M. Graham, R. Greene, B. Haldeman, E. Hawkins, B. Haworth, R. Haynes, M. Hidas, A. E. Hjelstrom, D. A. Howell, J. Hygelund, T. A. Lister, R. Lobdill, J. Martinez, D. S. Mullins, M. Norbury, J. Parrent, R. Paulson, D. L. Petry, A. Pickles, V. Posner, W. E. Rosing, R. Ross, D. J. Sand, E. S. Saunders, J. Shobbrook, A. Shporer, R. A. Street, D. Thomas, Y. Tsapras, J. R. Tufts, S. Valenti, K. Vander Horst, Z. Walker, G. White, and M. Willis. "Las Cumbres Observatory Global Telescope Network". In: *PASP* 125 (Sept. 2013), pp. 1031–1055. DOI: 10.1086/673168. arXiv: 1305.2437 [astro-ph.IM].

[14] A. Rest, J. L. Prieto, N. R. Walborn, N. Smith, F. B. **Bianco**, R. Chornock, D. L. Welch, D. A. Howell, M. E. Huber, R. J. Foley, W. Fong, B. Sinnott, H. E. Bond, R. C. Smith, I. Toledo, D. Minniti, and K. Mandel. "Light echoes reveal an unexpectedly cool η Carinae during its nineteenth-century Great Eruption". In: *Nature* 482 (Feb. 2012), pp. 375–378. DOI: 10.1038/nature10775. arXiv: 1112.2210.

[15] S. González-Gaitán, A. Conley, F. B. **Bianco**, D. A. Howell, M. Sullivan, K. Perrett, R. Carlberg, P. Astier, D. Balam, C. Balland, S. Basa, D. Fouchez, N. Fourmanoit, M. L. Graham, J. Guy, D. Hardin, I. M. Hook, C. Lidman, R. Pain, N. Palanque-Delabrouille, C. J. Pritchet, N. Regnault, J. Rich, and V. Ruhlmann-Kleider. "The Rise Time of Normal and Subluminous Type Ia Supernovae". In: *ApJ* 745, 44 (Jan. 2012), p. 44. DOI: 10.1088/0004-637X/745/1/44. arXiv: 1109.5757 [astro-ph.GA].

[16] F. B. **Bianco**, D. A. Howell, M. Sullivan, A. Conley, D. Kasen, S. González-Gaitán, J. Guy, P. Astier, C. Balland, R. G. Carlberg, D. Fouchez, N. Fourmanoit, D. Hardin, I. Hook, C. Lidman, R. Pain, N. Palanque-Delabrouille, S. Perlmutter, K. M. Perrett, C. J. Pritchet, N. Regnault, J. Rich, and V. Ruhlmann-Kleider. "Constraining Type Ia Supernovae Progenitors from Three Years of Supernova Legacy Survey Data". In: *ApJ* 741, 20 (Nov. 2011), p. 20. DOI: 10.1088/0004-637X/741/1/20. arXiv: 1106.4008 [astro-ph.CO].

[17] F. B. **Bianco**, Z.-W. Zhang, M. J. Lehner, S. Mondal, S.-K. King, J. Giammarco, M. J. Holman, N. K. Coehlo, J.-H. Wang, C. Alcock, T. Axelrod, Y.-I. Byun, W. P. Chen, K. H. Cook, R. Dave, I. de Pater, D.-W. Kim, T. Lee, H.-C. Lin, J. J. Lissauer, S. L. Marshall, P. Protopapas, J. A. Rice, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "The TAOS Project: Upper Bounds on the Population of Small Kuiper Belt Objects and Tests of Models of Formation and Evolution of the Outer Solar System". In: *AJ* 139 (Apr. 2010), pp. 1499–1514. DOI: 10.1088/0004-6256/139/4/1499. arXiv: 1001.2006 [astro-ph.EP].

[18] F. B. **Bianco**, P. Protopapas, B. A. McLeod, C. R. Alcock, M. J. Holman, and M. J. Lehner. "A Search for Occultations of Bright Stars by Small Kuiper Belt Objects Using Megacam on the MMT". In: *AJ* 138 (Aug. 2009), pp. 568–578. DOI: 10.1088/0004-6256/138/2/568. arXiv: 0903.3036 [astro-ph.EP].

[19] Z.-W. Zhang, F. B. **Bianco**, M. J. Lehner, N. K. Coehlo, J.-H. Wang, S. Mondal, C. Alcock, T. Axelrod, Y.-I. Byun, W. P. Chen, K. H. Cook, R. Dave, I. de Pater, R. Porrata, D.-W. Kim, S.-K. King, T. Lee, H.-C. Lin, J. J. Lissauer, S. L. Marshall, P. Protopapas, J. A. Rice, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "First Results from the Taiwanese-American Occultation Survey (TAOS)". In: *ApJ* 685 (Oct. 2008), pp. L157–L160. DOI: 10.1086/592741. arXiv: 0808.2051.

[20] T. C. Nihei, M. J. Lehner, F. B. **Bianco**, S.-K. King, J. M. Giammarco, and C. Alcock. "Detectability of Occultations of Stars by Objects in the Kuiper Belt and Oort Cloud". In: *AJ* 134 (Oct. 2007), pp. 1596–1612. DOI: 10.1086/521396. eprint: astro-ph/0703460.

Other Publications

[21] N. Smith, J. E. Andrews, A. Rest, F. B. **Bianco**, J. L. Prieto, T. Matheson, D. J. James, R. C. Smith, G. M. Strampelli, and A. Zenteno. "Light echoes from the plateau in Eta Carinae's

Great Eruption reveal a two-stage shock-powered event". In: *MNRAS* 480 (Oct. 2018), pp. 1466–1498. DOI: 10.1093/mnras/sty1500. arXiv: 1808.00992 [astro-ph.SR].

[22] N. Smith, A. Rest, J. E. Andrews, T. Matheson, F. B. **Bianco**, J. L. Prieto, D. J. James, R. C. Smith, G. M. Strampelli, and A. Zenteno. "Exceptionally fast ejecta seen in light echoes of Eta Carinae's Great Eruption". In: *MNRAS* 480 (Oct. 2018), pp. 1457–1465. DOI: 10.1093/mnras/sty1479. arXiv: 1808.00991 [astro-ph.SR].

[23] J. Barnes, P. C. Duffell, Y. Liu, M. Modjaz, F. B. **Bianco**, D. Kasen, and A. I. MacFadyen. "A GRB and Broad-lined Type Ic Supernova from a Single Central Engine". In: *ApJ* 860, 38 (June 2018), p. 38. DOI: 10.3847/1538-4357/aabf84. arXiv: 1708.02630 [astro-ph.HE].

[24] LSST Science Collaboration, P. Marshall, T. Anguita, F. B. **Bianco**, et al. "Science-Driven Optimization of the LSST Observing Strategy". In: *ArXiv e-prints* (Aug. 2017). arXiv: 1708.04058 [astro-ph.IM].

[25] J. T. Parrent, D. A. Howell, R. A. Fesen, S. Parker, F. B. **Bianco**, B. Dilday, D. Sand, S. Valenti, J. Vinkó, P. Berlind, P. Challis, D. Milisavljevic, N. Sanders, G. H. Marion, J. C. Wheeler, P. Brown, M. L. Calkins, B. Friesen, R. Kirshner, T. Pritchard, R. Quimby, and P. Roming. "secondary - Comparative analysis of SN 2012dn optical spectra: days -14 to +114". In: *MNRAS* 457 (Apr. 2016), pp. 3702–3723. DOI: 10.1093/mnras/stw239. arXiv: 1603.03868 [astro-ph.HE].

[26] Kimura M., Isogai K., Kato T., Ueda Y., Nakahira S., Shidatsu M., Enoto T., Hori T., Nogami D., Littlefield C., Ishioka R., Chen Y., King S., Wen C., Wang S., Lehner M. J., Schwamb M. E., Wang J., Zhang Z., Alcock C., Axelrod T., **Bianco** F. B., Byun Y., Chen W., Cook K. H., Kim D., Lee T., Marshall S. L., Pavlenko E. P., Antonyuk O. I., Antonyuk K. A., Pit N. V., Sosnovskij A. A., Babina . V., Baklanov A. V., Pozanenko A. S., Mazaeva E. D., Schmalz S. E., Reva I. V., Beland S. P., Inasaridze R. Ya., Tungalag N., Volnova A. A., Molotov I. E., Miguel E. de., Kasai K., Stein W., Dubovsky P. A., Kiyota S., Miller I., Richmond M., Goff W., Andreev M. V., Takahashi H., Kojiguchi ., Sugiura Y., Takeda N., Yamada E., Matsumoto K., James N., Pickard R. D., Tordai T., Maeda Y., Ruiz J., Miyashita A., Cook L. M., Imada A., and Uemura M. "Repetitive Patterns in Rapid Optical Variations in the Nearby Black-hole Binary V404 Cygni". In: *Nature* (Dec. 2015).

[27] M. J. Lehner, N. K. Coehlo, Z.-W. Zhang, F. B. **Bianco**, J.-H. Wang, J. A. Rice, P. Protopapas, C. Alcock, T. Axelrod, Y.-I. Byun, W. P. Chen, K. H. Cook, I. de Pater, D.-W. Kim, S.-K. King, T. Lee, S. L. Marshall, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "The TAOS Project: Statistical Analysis of Multi-Telescope Time Series Data". In: *PASP* 122 (Aug. 2010), pp. 959–975. DOI: 10.1086/655443. arXiv: 1002.3626 [astro-ph.EP].

[28] J. D. Ruprecht, A. S. Bosh, M. J. Person, F. B. **Bianco**, B. J. Fulton, A. A. S. Gulbis, S. J. Bus, and A. M. Zangari. "29 November 2011 stellar occultation by 2060 Chiron: Symmetric jet-like features". In: *Icarus* 252 (May 2015), pp. 271–276. DOI: 10.1016/j.icarus.2015.01.015.

[29] A. Rest, B. Sinnott, D. L. Welch, J. L. Prieto, F. B. **Bianco**, T. Matheson, R. C. Smith, and N. B. Suntzeff. "Light Echoes of Ancient Transients with the Blanco 4m Telescope". In: *Astronomical Society of the Pacific Conference Series*. Ed. by S. Points and A. Kunder. Vol. 491. Astronomical Society of the Pacific Conference Series. May 2015, p. 247. arXiv: 1502.03705.

[30] C. B. Olkin, L. A. Young, D. Borncamp, A. Pickles, B. Sicardy, M. Assafin, F. B. **Bianco**, M. W. Buie, A. D. de Oliveira, M. Gillon, R. G. French, A. Ramos Gomes, E. Jehin, N. Morales, C. Opitom, J. L. Ortiz, A. Maury, M. Norbury, F. Braga-Ribas, R. Smith, L. H. Wasserman, E. F. Young, M. Zacharias, and N. Zacharias. "Evidence that Pluto's atmosphere does not collapse from occultations including the 2013 May 04 event". In: *Icarus* 246 (Jan. 2015), pp. 220–225. DOI: 10.1016/j.icarus.2014.03.026.

[31] M. L. Graham, D. J. Sand, S. Valenti, D. A. Howell, J. Parrent, M. Halford, D. Zaritsky, F. **Bianco**, A. Rest, and B. Dilday. "Clues to the Nature of SN 2009ip from Photometric and Spectroscopic Evolution to Late Times". In: *ApJ* 787, 163 (June 2014), p. 163. DOI: 10.1088/0004-637X/787/2/163. arXiv: 1402.1765 [astro-ph.HE].

[32] M. Modjaz, S. Blondin, R. P. Kirshner, T. Matheson, P. Berlind, F. B. **Bianco**, M. L. Calkins, P. Challis, P. Garnavich, M. Hicken, S. Jha, Y. Q. Liu, and G. H. Marion. "Optical Spectra of 73 Stripped-envelope Core-collapse Supernovae". In: *AJ* 147, 99 (May 2014), p. 99. DOI: 10.1088/0004-6256/147/5/99. arXiv: 1405.1910 [astro-ph.HE].

[33] R. Ishioka, S.-Y. Wang, Z.-W. Zhang, M. J. Lehner, C. Alcock, T. Axelrod, F. B. **Bianco**, Y.-I. Byun, W. P. Chen, K. H. Cook, D.-W. Kim, S.-K. King, T. Lee, S. L. Marshall, P. Protopapas, J. A. Rice, M. E. Schwamb, J.-H. Wang, C.-Y. Wen, and C.-C. Ngeow. "The Taiwanese-American Occultation Survey Project Stellar Variability. III. Detection of 58 New Variable Stars". In: *AJ* 147, 70 (Apr. 2014), p. 70. DOI: 10.1088/0004-6256/147/4/70.

[34] R. Margutti, D. Milisavljevic, A. M. Soderberg, R. Chornock, B. A. Zauderer, K. Murase, C. Guidorzi, N. E. Sanders, P. Kuin, C. Fransson, E. M. Levesque, P. Chandra, E. Berger, F. B. **Bianco**, P. J. Brown, P. Challis, E. Chatzopoulos, C. C. Cheung, C. Choi, L. Chomiuk, N. Chugai, C. Contreras, M. R. Drout, R. Fesen, R. J. Foley, W. Fong, A. S. Friedman, C. Gall, N. Gehrels, J. Hjorth, E. Hsiao, R. Kirshner, M. Im, G. Leloudas, R. Lunnan, G. H. Marion, J. Martin, N. Morrell, K. F. Neugent, N. Omodei, M. M. Phillips, A. Rest, J. M. Silverman, J. Strader, M. D. Stritzinger, T. Szalai, N. B. Utterback, J. Vinko, J. C. Wheeler, D. Arnett, S. Campana, R. Chevalier, A. Ginsburg, A. Kamble, P. W. A. Roming, T. Pritchard, and G. Stringfellow. "A Panchromatic View of the Restless SN 2009ip Reveals the Explosive Ejection of a Massive Star Envelope". In: *ApJ* 780, 21 (Jan. 2014), p. 21. DOI: 10.1088/0004-637X/780/1/21. arXiv: 1306.0038 [astro-ph.HE].

[35] W. C. Fraser, S. Gwyn, C. Trujillo, A. W. Stephens, J. J. Kavelaars, M. E. Brown, F. B. **Bianco**, R. P. Boyle, M. J. Brucker, N. Hetherington, M. Joner, W. C. Keel, P. P. Langill, T. Lister, R. J. McMillan, and L. Young. "Kuiper Belt Occultation Predictions". In: *PASP* 125 (Aug. 2013), pp. 1000–1014. DOI: 10.1086/672001. arXiv: 1306.6626 [astro-ph.EP].

[36] Z.-W. Zhang, M. J. Lehner, J.-H. Wang, C.-Y. Wen, S.-Y. Wang, S.-K. King, Á. P. Granados, C. Alcock, T. Axelrod, F. B. **Bianco**, Y.-I. Byun, W. P. Chen, N. K. Coehlo, K. H. Cook, I. de Pater, D.-W. Kim, T. Lee, J. J. Lissauer, S. L. Marshall, P. Protopapas, J. A. Rice, and M. E. Schwamb. "The TAOS Project: Results from Seven Years of Survey Data". In: *AJ* 146, 14 (July 2013), p. 14. DOI: 10.1088/0004-6256/146/1/14. arXiv: 1301.6182 [astro-ph.EP].

[37] K. Maguire, M. Sullivan, R. S. Ellis, P. E. Nugent, D. A. Howell, A. Gal-Yam, J. Cooke, P. Mazzali, Y.-C. Pan, B. Dilday, R. C. Thomas, I. Arcavi, S. Ben-Ami, D. Bersier, F. B. **Bianco**, B. J. Fulton, I. Hook, A. Horesh, E. Hsiao, P. A. James, P. Podsiadlowski, E. S. Walker, O. Yaron, M. M. Kasliwal, R. R. Laher, N. M. Law, E. O. Ofek, D. Poznanski, and J. Surace. "Hubble Space Telescope studies of low-redshift Type Ia supernovae: evolution with redshift and ultraviolet spectral trends". In: *MNRAS* 426 (Nov. 2012), pp. 2359–2379. DOI: 10.1111/j.1365-2966.2012.21909.x. arXiv: 1205.7040 [astro-ph.CO].

[38] J. T. Parrent, D. A. Howell, B. Friesen, R. C. Thomas, R. A. Fesen, D. Milisavljevic, F. B. **Bianco**, B. Dilday, P. Nugent, E. Baron, I. Arcavi, S. Ben-Ami, D. Bersier, L. Bildsten, J. Bloom, Y. Cao, S. B. Cenko, A. V. Filippenko, A. Gal-Yam, M. M. Kasliwal, N. Konidaris, S. R. Kulkarni, N. M. Law, D. Levitan, K. Maguire, P. A. Mazzali, E. O. Ofek, Y. Pan, D. Polishook, D. Poznanski, R. M. Quimby, J. M. Silverman, A. Sternberg, M. Sullivan, E. S. Walker, D. Xu, C. Buton, and R. Pereira. "Analysis of the Early-time Optical Spectra of SN 2011fe in M101". In: *ApJ* 752, L26 (June 2012), p. L26. DOI: 10.1088/2041-8205/752/2/L26. arXiv: 1205.6011 [astro-ph.CO].

[39] Nathan Smith, Armin Rest, E. Andrews Jennifer, Tom Matheson, Federica B. **Bianco**, and L. Prieto Jose. "Absurdly fast ejecta seen in light echoes of Eta Carinae's Great Eruption". In: *MNRAS submitted* (Jan. 2018).

[40] J. Barnes, P. C. Duffell, Y. Liu, M. Modjaz, F. B. **Bianco**, D. Kasen, and A. I. MacFadyen. "A GRB and Broad-lined Type Ic Supernova from a Single Central Engine". In: *ArXiv e-prints* (Aug. 2017). arXiv: 1708.02630 [astro-ph.HE].

[41] R. M. Genet, B. J. Fulton, F. B. **Bianco**, J. Martinez, J. Baxter, M. Brewer, J. Carro, S. Collins, C. Estrada, J. Johnson, A. Salam, V. Wallen, N. Warren, T. C. Smith, J. D. Armstrong, S. McGaughey, J. Pye, K. Mohanan, and R. Church. "Observing Double Stars". In: *Society for Astronomical Sciences Annual Symposium* 31 (May 2012), pp. 147–157.

[42] K. Y. Huang, Y. Urata, Y. H. Tung, H. M. Lin, L. P. Xin, M. Yoshida, W. Zheng, C. Akerlof, S. Y. Wang, W. H. Ip, M. J. Lehner, F. B. **Bianco**, N. Kawai, D. Kuroda, S. L. Marshall, M. E. Schwamb, Y. Qiu, J. H. Wang, C. Y. Wen, J. Wei, K. Yanagisawa, and Z. W. Zhang. "GRB 071112C: A Case Study of Different Mechanisms in X-Ray and Optical Temporal Evolution". In: *ApJ* 748, 44 (Mar. 2012), p. 44. DOI: 10.1088/0004-637X/748/1/44. arXiv: 1202.1356 [astro-ph.HE].

[43] P. E. Nugent, M. Sullivan, S. B. Cenko, R. C. Thomas, D. Kasen, D. A. Howell, D. Bersier, J. S. Bloom, S. R. Kulkarni, M. T. Kandrashoff, A. V. Filippenko, J. M. Silverman, G. W. Marcy, A. W. Howard, H. T. Isaacson, K. Maguire, N. Suzuki, J. E. Tarlton, Y.-C. Pan, L. Bildsten, B. J. Fulton, J. T. Parrent, D. Sand, P. Podsiadlowski, F. B. **Bianco**, B. Dilday, M. L. Graham, J. Lyman, P. James, M. M. Kasliwal, N. M. Law, R. M. Quimby, I. M. Hook, E. S. Walker, P. Mazzali, E. Pian, E. O. Ofek, A. Gal-Yam, and D. Poznanski. "Supernova SN 2011fe from an exploding carbon-oxygen white dwarf star". In: *Nature* 480 (Dec. 2011), pp. 344–347. DOI: 10.1038/nature10644. arXiv: 1110.6201 [astro-ph.CO].

[44] S. Mondal, C. C. Lin, W. P. Chen, Z.-W. Zhang, C. Alcock, T. Axelrod, F. B. **Bianco**, Y.-I. Byun, N. K. Coehlo, K. H. Cook, R. Dave, D.-W. Kim, S.-K. King, T. Lee, M. J. Lehner, H.-C. Lin, S. L. Marshall, P. Protopapas, J. A. Rice, M. E. Schwamb, J.-H. Wang, S.-Y. Wang, and C.-Y. Wen. "The Taiwanese-American Occultation Survey Project Stellar Variability. II. Detection of 15 Variable Stars". In: *AJ* 139 (May 2010), pp. 2026–2033. DOI: 10.1088/0004-6256/139/5/2026. arXiv: 1003.2526 [astro-ph.SR].

[45] D.-W. Kim, P. Protopapas, C. Alcock, Y.-I. Byun, J. Kyeong, B.-C. Lee, N. J. Wright, T. Axelrod, F. B. **Bianco**, W.-P. Chen, N. K. Coehlo, K. H. Cook, R. Dave, S.-K. King, T. Lee, M. J. Lehner, H.-C. Lin, S. L. Marshall, R. Porrata, J. A. Rice, M. E. Schwamb, J.-H. Wang, S.-Y. Wang, C.-Y. Wen, and Z.-W. Zhang. "The Taiwan-American Occultation Survey Project Stellar Variability. I. Detection of Low-Amplitude δ Scuti Stars". In: *AJ* 139 (Feb. 2010), pp. 757–764. DOI: 10.1088/0004-6256/139/2/757. arXiv: 0912.1791 [astro-ph.SR].

[47] Z.-W. Zhang, D.-W. Kim, J.-H. Wang, M. J. Lehner, W. P. Chen, Y.-I. Byun, C. Alcock, T. Axelrod, F. B. **Bianco**, N. K. Coehlo, K. H. Cook, R. Dave, I. de Pater, J. Giammarco, S.-K. King, T. Lee, H.-C. Lin, S. L. Marshall, R. Porrata, P. Protopapas, J. A. Rice, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "The TAOS Project: High-Speed Crowded Field Aperture Photometry". In: *PASP* 121 (Dec. 2009), pp. 1429–1439. DOI: 10.1086/649507.

[48] J.-H. Wang, M. J. Lehner, Z.-W. Zhang, F. B. **Bianco**, C. Alcock, W.-P. Chen, T. Axelrod, Y.-I. Byun, N. K. Coehlo, K. H. Cook, R. Dave, I. de Pater, R. Porrata, D.-W. Kim, S.-K. King, T. Lee, H.-C. Lin, J. J. Lissauer, S. L. Marshall, P. Protopapas, J. A. Rice, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "Upper Limits on the Number of Small Bodies in Sedna-Like Orbits by the TAOS Project". In: *AJ* 138 (Dec. 2009), pp. 1893–1901. DOI: 10.1088/0004-6256/138/6/1893. arXiv: 0910.5282 [astro-ph.EP].

[49] D.-W. Kim, P. Protopapas, C. Alcock, Y.-I. Byun, and F. B. **Bianco**. "Detrending time series for astronomical variability surveys". In: *MNRAS* 397 (July 2009), pp. 558–568. DOI: 10.1111/j.1365-2966.2009.14967.x. arXiv: 0812.1010.

[50] C.-L. Lin, Z.-W. Zhang, W. P. Chen, S.-K. King, H.-C. Lin, J.-H. Wang, S. Mondal, C. Alcock, T. Axelrod, F. B. **Bianco**, Y.-I. Byun, N. K. Coehlo, K. H. Cook, R. Dave, I. de Pater, P. Descamps, M. J. Lehner, D.-W. Kim, T. Lee, J. J. Lissauer, S. L. Marshall, R. Porrata, P. Protopapas, J. A. Rice, M. E. Schwamb, S.-Y. Wang, and C.-Y. Wen. "A Close Binary Star Resolved from Occultation by 87 Sylvia". In: *PASP* 121 (Apr. 2009), pp. 359–364. DOI: 10.1086/598968. arXiv: 0901.2318 [astro-ph.SR].

[51] M. J. Lehner, C.-Y. Wen, J.-H. Wang, S. L. Marshall, M. E. Schwamb, Z.-W. Zhang, F. B. **Bianco**, J. Giammarco, R. Porrata, C. Alcock, T. Axelrod, Y.-I. Byun, W. P. Chen, K. H. Cook, R. Dave, S.-K. King, T. Lee, H.-C. Lin, S.-Y. Wang, J. A. Rice, and I. de Pater. "The Taiwanese-American Occultation Survey: The Multi-Telescope Robotic Observatory". In: *PASP* 121 (Feb. 2009), pp. 138–152. DOI: 10.1086/597516. arXiv: 0802.0303.

[52] Ž. Ivezić, S. M. Kahn, J. A. Tyson, B. Abel, E. Acosta, R. Allsman, D. Alonso, Y. AlSayyad, S. F. Anderson, J. Andrew, and et al. "LSST: from Science Drivers to Reference Design and Anticipated Data Products". In: *ArXiv e-prints* (May 2008). arXiv: 0805.2366.

[53] J. H. Wang, M. E. Schwamb, K. Y. Huang, C. Y. Wen, Z. W. Zhang, S. Y. Wang, W. P. Chen, F. B. **Bianco**, R. Dave, M. J. Lehner, S. L. Marshall, R. Porrata, C. Alcock, Y. I. Byun, K. H. Cook, S. K. King, T. Lee, and Y. Urata. "Early Optical Brightening in GRB 071010B". In: *ApJ* 679 (May 2008), pp. L5–L8. DOI: 10.1086/588814.

[54] M. J. Lehner, C. Alcock, T. Axelrod, F. **Bianco**, Y.-I. Byun, W.-P. Chen, K. H. Cook, R. Dave, I. de Pater, J. Giammarco, S.-K. King, T. Lee, J. Lissauer, S. L. Marshall, S. Mondal, T. Nihei, J. Rice, M. Schwamb, A. Wang, S.-Y. Wang, C.-Y. Wen, and Z.-W. Zhang. "TAOS - The Taiwanese-American Occultation Survey". In: *Astronomische Nachrichten* 327 (Sept. 2006), p. 814. DOI: 10.1002/asna.200610688.

[55] S.-K. King, C. Alcock, T. Axelrod, F. B. **Bianco**, Y.-I. Byun, W.-P. Chen, K. H. Cook, Y.-H. Chang, R. Dave, J. Giammarco, T. Lee, M. Lehner, J. Lissauer, S. Marshall, S. Mondal, I. de Pater, R. Porrata, J. Rice, M. E. Schwamb, A. Wang, S.-Y. Wang, C.-Y. Wen, and Z.-W. Zhang. "Status of the TAOS Project and a Simulator for TNO Occultation". In: *Advances in Geosciences, Volume 3: Planetary Science (PS)* 3 (2006), p. 345.