

CURRICULUM VITAE  
MARYAM MODJAZ

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## EMPLOYMENT

Since Sept. 2011	<b>New York University</b>
Since Sept. 2017	Associate Professor with Tenure in Physics/CCPP
Sept. 2011–Aug. 2017	Assistant Professor in Physics/CCPP
2010–2011	<b>Columbia University</b>
	Hubble Postdoctoral Fellow (100% independent research)
2007–2010	<b>University of California, Berkeley</b>
	Miller Postdoctoral Fellow (100% independent research)

## EDUCATION

2001–2007	<b>Harvard University</b>
	Ph.D., Astronomy ( <b>June 2007</b> )
	Ph.D. Thesis: <i>Varied Deaths of Massive Stars: Properties of Nearby Type IIb, Ib and Ic Supernovae</i>
	Advisor: Prof. Robert P. Kirshner
	A.M., Astronomy (2003)
1996–2000	<b>University of California, Berkeley</b>
	B.A., Astrophysics (2000) with High Honors
	Honors Thesis: <i>The Peculiar Type Ia Supernova 1998de in NGC 252</i>
	Advisor: Prof. Alexei V. Filippenko

## HONORS AND AWARDS

2018–2020	Humboldt Faculty Fellowship
2018–2019	Award for Sabbatical Visit at Flatiron Institute’s Center for Computational Astrophysics
2015–2017	Scialog Fellow (by the Research Cooperation for Science Advancement)
2014	NSF CAREER award for early-career faculty
2010	German Astronomical Society: Ludwig-Biermann (early-career) Award (equivalent to AAS’ Newton Lacy Pierce Prize)
2010	Postdoctoral Fellowships: Hubble, NOAO Leo Goldberg (declined), ESO (declined)
2007	Grand Prize at IAU Symposium 250: “Massive Stars as Cosmic Engines”
2007	UC Berkeley: Miller Institute Research Fellowship
2007	Harvard University: Fireman Doctoral Dissertation Prize in Astronomy
2002, 2003, 2005	Harvard University: 3 Certificates of Distinction in Teaching
2000	UC Berkeley: Commencement Speech, Physics & Astronomy Department
2000	UC Berkeley: Dorothea Klumpke Roberts Prize for Outstanding Scholarly Achievement in Astronomy & High Honors
1997–2000	Golden Key National Honor Society & UCB’s Dean’s Honor List for ’96 & ’99

## **PUBLICATION & PRESENTATION SUMMARY**

- SAO/NASA ADS 468 total abstracts with 7,600+ citations, 77 refereed papers (+1 under review), **H-Index = 46**
- 60+ Colloquia and invited seminars
- 30+ Invited and review talks at national and international conferences

## **RESEARCH INTERESTS & MEMBERSHIPS**

- Observations of massive star SNe, Gamma Ray Bursts (GRBs) & Explosive Exotica (e.g., Super-luminous SNe, Fast Transients)
- Stellar Forensics with SNe and Transients via their Environments & Host Galaxies
- Innovative & Wide-Field Transient Surveys & Machine Learning
- Member of Global SN Project with LCO & LSST Science collaboration on Time-Domain

## **TECHNICAL SKILLS**

- Optical & NIR Photometry
- Optical Spectroscopy with 10m Keck (+LRIS), 6.5m Magellan (+LDSS3), 6.5m MMT (+ Blue Channel and HectoSpec), and 8.4 Gemini North & South (+GMOS)
- IDL, IRAF, python

## **AWARDED GRANTS, INCL. FOR SPACE-BASED OBSERVING TIME**

- 2020 NASA TESS Cycle 2, \$50,000 (2020-2021, PI)
- 2020 NASA HST Cycle 28, (2020-2021, Co-I and NYU PI), for NYU: \$15,000
- 2020 NASA Swift Cycle 16, \$40,000 (2020-2021, PI)
- 2020 NYU-NYC & NYU-AD Collaboration grant, \$10,000 & teaching relief (2020-2021, PI)
- 2019 NYU Dean of Science, \$120,000 telescope access to Las Cumbres Observatory (2019-2022, PI)
- 2016 NYU Science Challenge Grant, Sole PI, \$105,500 (2016-2020)
- 2014 NSF, Sole PI, \$344,262 (2014-2019)
- 2014 NSF CAREER, Sole PI, \$500,000 (2014-2020)
- 2012 NASA Hubble Space Telescope Cycle 20 (15 orbits~\$90,000), Co-I
- 2011 NASA Hubble Space Telescope Cycle 19 (Co-I), \$92,540 (2011-2012)
- 2009 NASA Hubble Postdoctoral Fellowship (Sole PI), \$121,511, 2010-2013 (took it only for 2010-2011)

**COMPETITIVELY OBTAINED GROUND-BASED OBSERVING TIME****As P.I.**

2011 Gemini-N and Gemini-S Observatories, 8-m Telescopes (32 hrs)  
 2008 Shane 3m-Telescope, Lick Observatory (2 nights)  
 2006–2008 Gemini-N Observatory, 8-m Telescope (23 hrs)  
 2007 Magellan Clay 6.5m-Telescope, LCO (1 night)  
 2007 MMT 6.5m-Telescope, Mt. Hopkins (2 nights)  
 2003 Greenbank 100m-Telescope (24 hrs)

**As Co-I.**

2019-2021 Co-I on Global SN Project proposals for LCO and Gemini  
 2015 Keck (1 night) & P200 (2 nights) - specifically for my CAREER funded project  
 2014 Keck (2 nights) & P200 (2 nights) - specifically for my CAREER funded project  
 2013 VLT-VIMOS (18.4 hours)  
 2011 VLT- VIMOS (25hrs)  
 2011 HST Cycle 19 (15 orbits)  
 2008–2010 Keck I Observatory, 10-m Telescope (**only other Co-I**, 5 nights)  
 and earlier ones (not listed)

**NYU TRAINING & ADVISING**

Advising postdocs: Tyler Pritchard (2018–now),  
 Wolfgang Kerzendorf (2018–2019, now faculty at MSU in Astro and Data Science )  
 Shan Huang (2015–2018, now at IBM as Senior Data Scientist),  
 Raffaella Margutti (2015–2016, now faculty at Northwestern),  
 Or Graur (2013–2016, NSF fellow at CfA, now faculty in Portsmouth)  
 Fed Bianco (2012–2016, now faculty at U of Delaware in Astro and Data Science)

Advising PhD students: Marc Williamson (2017-now), Yuqian Liu (2012–2017, now at Capital One),  
 Kieran Finn (2015–2016), Nitya Mandyam Doddamane (summer & fall 2012)

Advising undergraduates: Saranath Kannan (2019- present), S. Man Oh (2013–2015, NYU AD)

Research assistants: David Fierroz (2011 – 2015), Magdalena Siwek (2018, now grad student at Harvard)

NYU committee member: Rob Morris (05/12, PhD defense), Yin Zhang (02/14, Oral qualifier),  
 Xiaoyi Xie (10/14, Oral qualifier), Ben Roig (08/15 PhD defense),  
 Yiyang Wu (03/16, Oral qualifier), Yiyang Wu (05/18, PhD Defense),  
 Austin McDowell (09/20, Oral qualifier), Dou Liu (09/20, Oral qualifier),  
 Colleen Tirado (10/20, PhD Defense)

2016 Co-organizer and Co-leader of CCPP women weekly gatherings

2015 – 2016 Founder and sponsor of CCPP astro seminar speaker meetings with grad students

Spring 2014 2014 Annual Women in Science Lecturer at the Women in NYU Science (WINS)

Spring 2013 Initiator & Co-organizer of NYU Statistics Lecture Series  
 (drawing grad students, postdoc and faculty from wider NYC area)

Spring 2011 – present Open House talk at PhD Recruitment

Fall 2011 Initiator of CCPP Grad student & Postdoc seminar

**NYU TEACHING**

Spring 2021	Undergraduate Class "The Universe: Its Nature and History", 90 undergrads
Fall 2020	Teaching Relief as part of NYU-NYU-AD fellowship
Spring 2020	Graduate Class "Stars and Stellar Explosions", 5 PhD students
Fall 2019	Undergraduate Class, Core "Quarks to Cosmos", 112 undergrads
Spring 2018	Graduate Class "Stars and Stellar Explosions", 5 PhD students
Spring 2017	Graduate Class "Astrophysics Seminar", 5 PhD students
Fall 2016	Teaching Relief as Vice-Provost Fellow for Diversity
Spring 2016	Graduate Class "Stars and Stellar Explosions", 5 PhD students
Fall 2015	Teaching Relief
Spring 2015	Goddard Leave (no teaching)
Fall 2014	Undergraduate Class, Core "Quarks to Cosmos", 110 undergrads
Spring 2014	Undergraduate Class, Core "Quarks to Cosmos", 104 undergrads
Fall 2013	Graduate Class, "Stars", 7 PhD students
Spring 2013	Undergraduate Class, MAP "Quarks to Cosmos", 120 undergrads
	Undergraduate Class "Observational Astronomy", 30 undergrads
Spring 2012	Graduate Class "Stars and Stellar Explosions", 5 PhD students

**NYU SERVICE**

Chair of Ad hoc tenure committee	2020
Ad hoc Inclusion & Equity committee	2020
Ad hoc tenure committee	2019
James Arthur Postdoc committee	2019
Grad & grad admissions committee	2019 – 2020
Member of the FSI Steering Committee	2018 – present
NYU Diversity Faculty Mentoring Group	Spring 2014 – present
Dept. of Physics Colloquium Committee	Fall 2013 – Spring 2017
Co-organizer and Co-leader of CCPP women mentoring meetings	2016 – 2017
Dept. of Physics Executive Committee	Fall 2013 – Spring 2016
Alternate member on Dept. of Physics Executive Committee	Fall 2012 & Spring 2013
Ad hoc CCPP committee for Target of Opportunity in Astrophysics	Fall 2013 & Spring 2014
Talk as part of NYU Saturday Science Seminar Series	Dec 2012
CCPP Astrophysics Seminar organizer	Fall 2011 & Spring 2012, Fall 2013 & Spring 2014 (with Bianco)
Big Apple Astrophysics Colloquium organizer	Fall 2011
CCPP James Arthur Postdoc Hiring Committee	Fall 2011

**PROFESSIONAL SERVICE & MEMBERSHIPS**

2019, 2021	NASA review committee
2018	Advisory Expert Committee for a Faculty Position at Stockholm University
2017	Contributor to GMT's Science Book chapter on "Death of Stars"
2015–2016	SOC Member for workshop "MIAPP: The Physics of Supernovae" in Germany 2016
2014–2015	Reviewer for NASA Postdoctoral Program
2013–2014	SOC Member for conference "Supernovae in the Local Universe" in Australia 2014
2013	Lecture on SN and GRBs at "Caltech Gravitational Wave Summer School" 2013
2012	Panel Speaker on workshop "Paths to Professorship" at MIT
2011–2012	SOC Member for Aspen Summer Workshop 2012 "GRBs and their progenitors"
2010–present	Member of the Palomar Transient Factory (PTF)
2010–present	Member of the LSST SN Science Collaboration
2010–2012	SOC Member for IAU Symposium 2012 in Nikko, Japan "Death of Massive Stars: SNe and GRBs"
2008–present	Panel Reviewer for NSF (2008, 2012) and Telescopes (e.g., HST 2009, 2014)
2008–2010	Annual Miller Symposium Committee Member, UC Berkeley
2007–present	Member of the Swift SN Team
2007–present	Referee for international Scientific Journals (e.g., Nature, Astrophysical Journal, Monthly Notices of the Royal Society, Astronomy & Astrophysics) and Swedish National Space Board
2007–present	Member of German Astronomical Society ("Astronomische Gesellschaft")
2007–2010	Postdoc Representative & Women in Astronomy Advocate, UC Berkeley Astronomy
2003–2006	PhD Student Representative on Committee of Academic Studies, Harvard Astronomy
2001–present	Member of American Astronomical Society (AAS)

**MEDIA APPEARANCE**

2016	Featured as NYU Physics Prof in Apple's ad "Don't blink" (over 6.9 Mio. views on Youtube by Sept 2017 when it was taken down from YouTube due to copyright reasons)
2016	Interviewed and profiled for ScienceLine: <a href="http://scienceline.org/2016/02/reaching-for-the-stars/">http://scienceline.org/2016/02/reaching-for-the-stars/</a>
2015	Radio interview on Art & Astrophysics for Studio360.org
2015	Podcast interview with "Human, the Scientist"
2013	Video for "Scientific American" (over 8700 views on Youtube, as of Oct 2016)
2013	Guest on Talk show on Zvieri TV The Terror of Nothing
2008	Press Release, numerous newspaper and radio interviews ( <i>NPR</i> , <i>Physics Today</i> , <i>California Magazine</i> , <i>Daily Cal</i> ) on Shock-Breakout in SN 2008D

**EXTERNAL TEACHING, MENTORING & OUTREACH**

2020	Zoom Lecture for Amateur Astronomers, Inc.
2018	Astronomy Lecture Series Rockland Community College
2018	Lecture at "Girls Advancing in STEM event (GAINS)" in NYC
2017	Public lecture at AMNH's Rose Planetarium for the Amateur Astronomers Association of NY
2016–2017	Lead pilot-program on diversity between NYU and NYC's Spence school (all girls school)
2016	Public talk at NYU's "Ada Lovelace Day" & panel member
2015	Public talk for Science Happy Hour at the "Lower Eastside Girls Club"
2015	Public talk at the "Intrepid Museum" in the Space Shuttle Pavilion
2013	Lecture on SN and GRBs at "Caltech Gravitational Wave Summer School" 2013
2013	Guest speaker on Stand-up comedy show "Heart of Darkness"
2007–present	Public Talks (e.g., NYU Science Saturday, Columbia U, UC Berkeley)
2009	Co-organizer for UCB Astronomy's Outreach Activities for International Year of Astronomy (e.g., public talks attracting up to 200 people)
2007–2008	Mentor, UC Berkeley Society for Women in the Physical Sciences.
2002–2006	Mentor, Harvard College Science Mentors Program
2004, 2005	Lecturer & Session Leader, Harvard Teaching Fellows Conference, Bok Center for Teaching
2002–2005	Teaching Fellow, Harvard, Science A47 ("Cosmic Connections") & Science A35
2000B	Teaching Fellow, UC Berkeley AY10 – "General Astronomy"

**COLLOQUIA AND INVITED SEMINARS**

68. MPIA, Heidelberg, November 2020 (via zoom)
67. Wesleyan, April 2020 (postponed b/c of COVID19)
66. Las Cumbres Observatory, March 2020 (postponed b/c of COVID19)
65. Bonn University, January 2020
64. CCA, Flatiron institute, NYC, Oct 2019
63. CITA, Toronto, Oct 2019, postponed
62. U of Virginia, May 2019
61. Carnegie Observatories, March 2019
60. University of South Florida, February 2019
59. U Penn, September 2018
58. Koenigstuhl Colloquium, MPIA, July 2018
57. U of Amsterdam, June 2018
56. Caltech, March 2018
55. UCLA, March 2017
54. Heidelberg Institute for Theoretical Studies, Germany, Dec 2016
53. Florida State, Nov 2016
52. Cornell University, April 2016
51. Princeton University & Institute for Advanced Study, Nov 2015
50. Northwestern University, Nov 2015
49. UC Berkeley, Nov 2015
48. University of Wisconsin-Madison, Oct 2015

47. University of Maryland, July, 2015
46. NASA Goddard, July, 2015
45. University of Colorado, March 2015
44. University of Virginia, Feb 2015
43. Stony Brook, Feb 2015
42. University of Stockholm/Oskar Klein Center, Sweden, Dec 2014
41. Texas A & M, Apr 2014
40. Pittsburgh University, Oct 2013
39. Athens National Observatory, June 2013
38. Yale University, April 2013
37. Columbia University, May 2013
36. Max-Planck Institute for Astronomy, Heidelberg, December 2012
35. Institute for Advanced Study, Princeton, Astrophysics Seminar, December 2012
34. Pittsburgh University, Fall 2012
33. University of Arizona, October 2012
32. Boston University, December 2011
31. UT Austin, Texas, November 2011
30. Penn State, October 2011
29. Rutgers University, September 2011
28. Stanford University, June 2011
27. American Museum of Natural History, November 2010
26. Yale University, November 2010
25. NYU, April 2010 (Tenure-Track Faculty Job Talk)
24. STScI, March 2010 (Tenure-Track Astronomy Job Talk)
23. MIT, February 2010 (Tenure-Track Faculty Job Talk)
22. Chicago University, February 2010 (Tenure-Track Faculty Job Talk)
21. UC Berkeley, December 2009
20. Columbia University, November 2009
19. European Southern Observatory (ESO), Garching/Germany, September 2009
18. University of Toronto, November 2008
17. Carnegie Institute, October 2008
16. UC Irvine, October 2008
15. San Francisco State University, October 2008
14. FLASH Seminar Talk, UC Santa Cruz, May 2008
13. Seminar Talk, Carnegie DTM, May 2008
12. Astrophysics and Relativity Seminar, NYU, April 2008
11. Space Telescope Science Institute, April 2008
10. Heidelberg University, Germany, March 2008
9. University of Hawaii, IfA, Hawaii, February 2008
8. Sonoma State University, November 2007
7. Berkeley Space Sciences Lab, November 2007
6. Astrophysics Seminar, Basel University, August 2007
5. ITC Talk, CfA 2007

4. MPA Seminar Talk, Max-Planck Institute for Astrophysics, Garching, Germany, December 2006
3. KIPAC Tea Talk, Standford/KIPAC SLAC, October 2006
2. Theoretical Astrophysics Center Talk, UC Berkeley, October 2006
1. Optical & IR Lunch Talk, Harvard-Smithsonian CfA, January 2001

### INVITED AND REVIEW CONFERENCE TALKS

31. **Invited Talk**, *"Supernova Remnants: An Odyssey in Space - after Stellar Death II"*, Crete, Greece, June 2019
30. **Invited Talk**, *"The Deaths and Afterlives of Stars"*, 2019 Spring Symposium at Space Telescope Science Institute, April 2019
29. **Invited Talk**, *"EWASS: Special Session on GRBs and SLSNe "*, Liverpool, UK, April 2018
28. **Review Talk**, *"Supernovae - From Simulations to Observations and Nucleosynthetic Fingerprints"*, Bad Honnef, Germany, Jan 2018
27. *"The Transient Universe with JWST"*, Harvard/CfA, January 2017
26. **Review Talk**, *KITP: "Phenomena, physics, and puzzles of massive stars and their explosive outcomes"*, KITP conference, Santa Barbara, March 2017
25. **Review Talk**, *"MIAPP: The Physics of Supernovae"*, Munich, Germany, September 2016
24. **Review Talk**, *Royal Society meeting: "Bridging the gap: from massive stars to supernovae"*, Kavli Royal Society International Centre, Chicheley Hall, UK, June 2016
23. **Review Talk**, *Harvard's 9th Sackler Conference in Theoretical Astrophysics*, Harvard-Smithsonian Center for Astrophysics, May 2016
22. **Review Talk**, *Mysterious Connection Between Superluminous Supernovae and Gamma-Ray Burst*, STScI, Baltimore, May 2016
21. *Research Cooperation for the Advancement of Science: Scilog Time Domain Astrophysics: Stars and Explosions*, Biosphere 2, AZ, October 2015
20. **Review Talk**, *McCray Symposium: A celebration of supernovae, superbubbles, gamma-ray bursts and other cosmic explosions*, Bern, Switzerland, June 2015
19. **Review Talk**, *GMT Community Science Meeting on Transients*, Washington DC, Oct 2014
18. **Review Talk**, *GRB-Magnetar Thinkshop*, Bormio, Italy, Jan 2014
17. **Review Talk**, *Galaxies meet GRBs at Cabo de Gata*, Cabo de Gata, Spain, Sept 2013
16. **Review Talk**, *Massive Stars: From  $\alpha$  to  $\omega$* , Rhodes, Greece, June 2013
15. **Review Talk**, *Transient and Time-variable Phenomena*, at Meeting of Astronomical Society of New York, October, 2012
14. **Review Talk**, *Supernovae Illuminating the Universe: from Individuals to Population*, Garching, Germany, Sept 2012
13. **Review Talk**, *"The SN-GRB Connection"*, *Marcel Grossman 13 GRB3 Session*, Stockholm, Sweden, July 2012
12. **Review Talk**, *"Environments of SNe Ib/c"*, *Aspen Workshop: Massive Stars as GRB Progenitors*, Aspen, June 2012
11. **Review Talk**, *Mass return from GRBs and related Supernovae*, STScI, Baltimore, March 2012

10. Tri-State Astronomy Meeting, October 2011
9. **Review Talk**, *Explosive Ideas about Massive Stars - from Observations to Modeling*, Workshop, Stockholm, August 10-13, 2011
8. Invited Conference Talk, *Supernovae and Their Host Galaxies*, Sydney, July 2011
7. Invited Solicited Talk, *GRBs as Probes: From the Progenitor's Environments to the High-z Universe*, Como, Italy, May 2011
6. **Biermann Prize Talk**, Annual Meeting of the German Astronomical Society, Bonn, September 2010
5. **Review Talk**, *Bash Symposium*, U of Texas, Austin, October 2009
4. **Review Talk**, *Stellar Deaths and Supernovae*, KITP Santa Barbara, August 2009
3. **Review Talk**, 1st California Postdoc Symposium, UC Santa Cruz, August 2008
2. **Prize talk**, *IAU 250: Massive Stars as Cosmic Engines*, Hawaii, December 2007
1. Invited talk, *20 Years of SN1987A and GRBs*, Aspen, February 2007

### Contributed Conference Talks

12. "Stripped SNe: CfA Data and Statistical Trends, "10,000 Days of SN 1987A", August 2014, Coff's Harbour, Australia
11. "SNe Ibc with and without GRBs: SN Properties and Locally Measured Metallicities", IAU Symposium, March 2012, Nikko Japan
10. "First Large Spectroscopic Dataset of Stripped Envelope Core-Collapse Supernovae ", AAS, Austin, January 2012
9. "Diagnostics for Stripped SN Progenitors: Directly Measured Metallicities at SN sites", IAP Workshop on *SN Environments and Progenitors*, Paris 2010
8. "Stellar Forensics with Stripped SN: Measured Metallicities at the Explosion Sites of SN Iib, Ib and Ic", AAS Meeting January 2010, DC
7. "The SN Ib/c Zoo and Their Habitats", *Fireworks 2009*, Workshop, Bonn, July 2009
6. "SN2008D/XRT080109: Death of a Stripped Massive Star", *Hot and Cool Stars*, Pasadena, November 2008
5. "Environments of SN with and without GRBs", *Probing Stellar Populations Out to the Distant Universe*, Cefalu, Italy, September 2008
4. "Diverse Deaths of Massive Stars: Properties of Nearby SN Iib, Ib, and Ic SN", American Astronomical Society Meeting, Seattle, January 2007
3. "CfA Optical Observations of Type Ib/c Supernovae", *Compact Objects and Their Explosive Origins*, Cefalu, Italy, June 2006
2. "Spectra of Type Ia, Ib/c Supernovae", American Astronomical Society Meeting, Minneapolis, June 2005
1. "Probing the Magnetic Field at Sub-Parsec Radii in the Accretion Disk of NGC 4258", *Growing Black Holes: Accretion in a Cosmological Context*, Garching, Germany, July 2004

## PUBLICATIONS & PRODUCTS

# MARYAM MODJAZ

*As of 01/2021: total of 78 refereed papers and 5 code/data product releases, 6,800+ citations; 7,900 citations for all 472 bibliographic sources, including IAUC's and GCN's, h-index= 46*

### Major Contribution to Articles or Articles by my NYU group - in Refereed Journals

( \* = student or postdoc supervised by Modjaz)

26. M. Williamson\*, W. Kerzendorf, & **M. Modjaz 2020**, "Modelling Type Ic Supernovae with TARDIS: Hidden Helium in SN1994I?", *ApJ*, in press (arXiv:2010.10528)
25. T. Pritchard\*, K. Bensch, **M. Modjaz**, et al (2020), "The Exotic Broad-Lined Type Ic Supernova 2018gep: Blurring the Line Between Supernovae and Fast Optical Transients", *Astrophysical Journal*, submitted (ArXiv:2008.04321)
24. **M. Modjaz**, F. B. Bianco, M. Siwek\*, S. Huang\*, D. A. Perley, D. Fierroz, Y.-Q. Liu\*, I. Arcavi, A. Gal-Yam, N. Blagorodnova, B. S. Cenko, A. V. Filippenko, M. M. Kasliwal, S. R. Kulkarni, S. Schulze, K. Taggart, W. Zhen, (2020), "Host Galaxies of Type Ic and Broad-lined Type Ic Supernovae from the Palomar Transient Factory: Implication for Jet Production", *Astrophysical Journal*, 892, 153
23. **M. Modjaz**, C. P. Gutiérrez, & I. Arcavi (2019), "New Regimes in the Observation of Core-Collapse Supernova", Invited review, *Nature Astronomy*, 3, 717
22. M. Williamson\*, **M. Modjaz**, F. B. Bianco, (2019), "Optimal Classification and Outlier Detection for Stripped-Envelope Core-Collapse Supernovae", *Astrophysical Journal Letters*, 880, 22
21. Y.-Q. Liu\*, **M. Modjaz** & F. B. Bianco (2017), "Analyzing the Largest Spectroscopic Dataset of Hydrogen-Poor Super-Luminous Supernovae", 2017, *Astrophysical Journal*, 845, 1
20. I. Shivvers, **M. Modjaz**, et al. (2017), "Revisiting the Lick Observatory Supernova Search Volume-Limited Sample: Updated Classifications and Revised Stripped-envelope Supernova Fractions", 2017, *PASP*, 129, 054201
19. O. Graur\*, F. Bianco, **M. Modjaz**, I. Shivvers, A. Filippenko, W. Li, & N. Smith (2017b), "LOSS Revisited - II: The Relative Rates of Different Supernovae vary between Low- and High-Mass Galaxies", *Astrophysical Journal*, 837, 2
18. O. Graur\*, F. Bianco, S. Huang\*, **M. Modjaz**, I. Shivvers, A. Filippenko, & W. Li (2017a), "LOSS Revisited - I: Unraveling Correlations between Supernova Rates and Galaxy Properties, as measured in a Re-Analysis of the Lick Observatory Supernova Search", *Astrophysical Journal*, 837, 2
17. K. Finn\*, F. B. Bianco\*, **M. Modjaz**, Y.-Q. Liu\*, A. Rest (2016), "Comparison of Diversity of Type IIb Supernovae with Asymmetry in Cassiopeia A Using Light Echoes", *Astrophysical Journal*, 830, 73,

18. Y. Liu\*, **M. Modjaz**, F. Bianco\* & O. Graur\* (**2016**), "Analyzing the Largest Spectroscopic Dataset of Stripped Supernovae to Improve Their Identifications and Constrain Their Progenitors", 2016, *Astrophysical Journal*, 827, 90
17. **M. Modjaz**, Y. Liu\*, F. Bianco\* & O. Graur\* (**2016**), "The Spectral SN-GRB Connection: Systematic Spectral Comparisons between Type Ic Supernovae, and broad-lined Type Ic Supernovae with and without Gamma-Ray Bursts ", 2016, *Astrophysical Journal*, 832, 108
16. F. Bianco\*, & **M. Modjaz**, S.M. Oh\*, D. Fierroz\*, Y. Q. Liu\*, L. Kewley, L., & O. Graur\* (**2016**), "Monte Carlo Method for Calculating Oxygen Abundances and Their Uncertainties from Strong-Line Flux Measurements", 2016, *Astronomy & Computing*, 16, 54
15. O. Graur\*, F. Bianco\*, & **M. Modjaz** (**2015**), "A unified explanation for the supernova rate-galaxy mass dependency based on supernovae discovered in Sloan galaxy spectra", 2015, *MNRAS*, 450, 905
14. Kelly, P. L.; Filippenko, A. V.; **Modjaz, M.**; Kocevski, D. 2014, "The Host Galaxies of Fast-Ejecta Core-Collapse Supernovae", *ApJ*, 789, 23
13. F. Bianco\*, **M. Modjaz** et al. (**2014**), "Multi-color Optical and NIR Light Curves of 64 Stripped-Envelope Core-Collapse Supernovae", 2014, *ApJS*, 213, 19
12. **M. Modjaz, et al.** (**2014**), "Optical Spectra of 74 Stripped Envelope Supernovae", 2014, *Astronomical Journal*, 147, 99 (**with NYU grad student Yuqian Liu and NYU postdoc Federica Bianco**)
11. D. Perley, **M. Modjaz, et al.** (**2012**), "The Luminous Infrared Host Galaxy of Short-Duration GRB 100206A ", *Astrophysical Journal*, 2012, 758, 122
10. **M. Modjaz** (**2011**), "Stellar Forensics with the Supernova-GRB Connection", 2011, *AN*, 332, 434
9. **M. Modjaz et al.** (**2011**), "Progenitor Diagnostics for Stripped Core-Collapse Supernovae: Measured Metallicities at Explosion Sites", 2011, *ApJ*, 731, L4
8. **M. Modjaz et al.** (**2009**), "From Shock Breakout to Peak and Beyond: Extensive Panchromatic Observations of the Type Ib Supernova 2008D associated with Swift X-ray Transient 080109", 2009, *ApJ*, 702, 226
7. **M. Modjaz**, R. P. Kirshner, S. Blondin, P. Challis, T. Matheson, "Double-peaked Oxygen Lines Are not Rare in Nebular Spectra of Core-Collapse Supernovae", **2008b**, *ApJL*, 687, L9
6. **M. Modjaz et al.** (**2008a**), "Measured Metallicities at the Sites of Local Broad-Lined Type Ic Supernovae and Implications for the SN-GRB Connection", *AJ*, 135 1136
5. S. Immler, **M. Modjaz**, et al. (**2007**), "Swift and Chandra Detections of Supernova 2006jc: Evidence for Interaction of the Supernova Shock with a Circumstellar Shell", *ApJ*, 674, L85

4. D. Kocevski, **M. Modjaz**, J. S. Bloom, R. Foley, D. Starr, C. H. Blake, E. E. Falco, N. R. Butler, M. Skrutskie, & A. Szentgyorgyi, “Multicolor Infrared Observations of SN 2006aj, the Supernova Associated with XRF 060218 - Paper I”, **2007**, ApJ, 663, 1180
3. **M. Modjaz et al. (2006)**, “Early-Time Photometry and Spectroscopy of the Fast Evolving SN 2006aj Associated with GRB 060218”, 2006, ApJ, 645, L21
2. **M. Modjaz**, J. M. Moran, P. T. Kondratko, & L. J. Greenhill (2005), “Probing the Magnetic Field at Subparsec Radii in the Accretion Disk of NGC 4258”, **2005**, ApJ, 626, 104
1. **M. Modjaz**, W. Li, A. V. Filippenko, J. Y. King, D. C. Leonard, T. Matheson, R. R. Treffers, Richard R. & A. G. Riess, “The Subluminous Type Ia Supernova 1998de in NGC 252”, **2001**, PASP, 113, 308

### Code & Data Product Releases by my NYU group

( \* = student or postdoc supervised by Modjaz)

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4. Y. Liu\*, F. Bianco\*, & **M. Modjaz (2016)**, ”SESNspectraLib”, released under DOI:10.5281/zenodo.58767 on <https://github.com/nyusngroup/SESNspectraLib>
3. Y. Liu\*, F. Bianco\*, & **M. Modjaz (2016 & 2017)**, ”SESNtemple”, released under DOI:10.5281/zenodo.58766 and DOI:10.5281/zenodo.826368 on <https://github.com/nyusngroup/SESNtemple>
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40. Cucchiara, A. et al. (incl. **M. Modjaz**), "Happy Birthday Swift: Ultra-long GRB 141121A and Its Broadband Afterglow", 2015, ApJ, 812, 122
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38. Friedman, A., et al. (incl. **M. Modjaz**), "CfAIR2: Near Infrared Light Curves of 94 Type Ia Supernovae", 2015, ApJS, 220, 9
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