

# **Thomas J. Balonek**

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Department of Physics and Astronomy  
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## **RESEARCH WITH UNDERGRADUATE STUDENTS**

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### **RESEARCH STUDENTS - ACADEMIC YEAR:**

#### **JUNIOR (Physics 310, 391) / SENIOR (Physics 410, 491) RESEARCH COURSE**

##### **Fall 2018**

Lekshmi Rajagopal [2019] (Phys 410): *Variable Star Photometry*

##### **Fall 2017**

Sydni Bond [2018] (Phys 410): *Variable Stars and Their Light Curves in the BL Lacertae Field*

##### **Spring 2017**

Katie Karnes [2017] (Astr 491): *Optical Spectroscopy of the Moon, Jupiter and the Galilean Moons*

Zachary Weaver [2017] (Astr 491): *The June 2016 Optical and Gamma Ray Outburst of 3C 454.3*

##### **Fall 2016**

Katie Karnes [2017] (Phys 410): *Latitudinal and Compositional Variations in Lunar Optical Spectra*

Carolyn Morris [2017] (Phys 410): *A Technical Study of the Residual Bulk Image in the FLI PL1001 CCD*

Zachary Weaver [2017] [Phys 410]: *The 2016 Outburst of the Blazar 3C 454.3*

##### **Fall 2015**

Nicholas Didio [2016] (Phys 410): *Spectral Energy Indices of the Blazar 3C 454.3's 2014-2015 Optical Outburst*

Leah Jenks [2017] (Astr 391): *Microvariability of the Blazar 3C 454.3 During the 2014-2015 Optical Outburst*

Carolyn Morris [2017] (Astr 391): *A Time Series Analysis of Blazar 3C 454.3 During the 2014-2015 Outburst*

Zachary Weaver [2017] (Astr 391): *Exponential Flares of the Blazar 3C 454.3: The 2014-2015 Outburst*

#### **Fall 2014**

Claire Freehafer [2015] (Phys 410): *Using Consumer-Grade Digital Single-Lens Reflex Cameas for Astronomical Photometry*

Joshua Reding [2015] (Phys 410): *The Standard Candle: Distance Determination of the Type Ia Supernova SN 1991M in IC 1151*

#### **Fall 2012**

Jamis Bruening [2013] (Phys 410): *Analyzing and Interpreting Solar and Planetary Spectra and Atmospheric Absorption Influences*

Micahel Fusco [2013] (Phys 410): *Orbital Period Changes and  $\delta$ -Scuti Variability in RZ Cassiopeiae*

Katie Iadanza [2013] (Phys 410): *Photometric Analysis of the Transiting Exoplanet System TrES-1*

#### **Fall 2010**

Michael T. Lam [2011] (Phys 410): *Time Series Analysis of the Quasar PKS 1749+096*

#### **Fall 2007 - Spring 2008**

Peter C. Shively [2008] (Phys 410 and Astr 492): *Further Analysis of Zwicky 1400+0949 Using the ALFALFA Survey; and Analysis of the Galactic Environment Surrounding Zwicky 1400+0949 using the ALFALFA Survey*

#### **Fall 2005 - spring 2006**

Brian M. Walsh [2006] (Phys 410, also with advisor Martha P. Haynes, Cornell University): *Observations of Zwicky 1400+0949 from the ALFALFA Survey*

#### **Fall 2005**

Bryce R. Gadway [2007] (Astr 391): *Micro-Variability and Spectral Index Analysis of the Quasar 3C 454.3*

#### **Fall 2004 / Spring 2005**

Brian Walsh [2006] (Phys 309/310): *Observations of Exoplanet TrES-1 Transits*

#### **Spring 2004**

Joseph Martin [2004] (Phys 410): *Spectroscopy of Solar System Objects*

#### **Spring 2003**

Joseph Converse [2003] (Phys 410, also with advisor Rupali Chandar, Space Telescope Science Institute): *Observational Evidence of Dissolving Star Clusters in M 101*

Emily Fryer [2003] (Phys 410): *The Nature of the Variable Star GSC 3206.00873*

Jeyhan Kartaltepe [2003] (Phys 410): *The Multiple Timescales of Optical Variability of the Blazar 3C 279 During the 2001-2002 Outburst*

#### **Spring 2002**

Emily Fryer [2003] (Phys 310): *Determining the Nature of a Variable Star*

Jeyhan Kartaltepe [2003] (Phys 310): *The Thirteen-Year History of Blazar 3C 279 and an Analysis of the 2002 Outburst*

Meredith Tanguay [200]2 (Phys 410): *Optical Variability of the Blazar BL Lac*

### **Spring 1999**

Kelli Corrado [1999] (Phys 410): *The Optical Variability of Quasar 1156+295*

Laurel Brown [1999] (Phys 410): *The Quasar 3C 279: Observations and Variability Analysis*

### **Spring 1998**

Jennifer Heldmann [1998] (Phys 410; also with advisor Dr. Jim Bell, Cornell University): *Mars Surface Mineralogy from Hubble Space Telescope Imaging*

### **Spring 1997**

David H. Berger [1997] (Phys 410): *Core Variability of the Seyfert I Galaxy NGC 5548*

Stacey M. Davis [1997] (Phys 410): *A Model for the Eclipsing Binary Star System RZ Cassiopeiae*

Jonathan Wong [1997] (Phys 410): *Microvariability of BL Lacertae*

### **Spring 1996**

Daniel Pierkowski [1996] (Phys 410): *Multi-Wavelength Observations of the Quasar 3C 454.3*

Stacey M. Davis [1997] (Phys 310): *The Eclipsing Binary Star RZ Cassiopeiae: An Examination of Its Light Curve and Period*

Scott Lacey [1996] (Phys 410): *Narrow Band Imaging of HII Regions in Interacting Spiral Galaxies*

### **Spring 1995**

Scott Lacey [1996] (Phys 310): *Narrow Band Imagery of the Orion Nebula*

David Helms [1995] (Phys 410): *A Study of the Seyfert Galaxy NGC 4151*

Jeff Kern [1995] (Phys 410): *Evidence for a Nearly Constant Component in the BL Lacertae Object 1418+546*

Daniel Pierkowski [1996] (Phys 310; also with advisor Dr. Debra Elmegreen, Vassar College): *Corrugation Effects in Edge-On Spiral Galaxies*

### **Spring 1994**

David Helms [1995] (Phys 310): *Variability of Seyfert Galaxies NGC 4051 and NGC 4151*

Christopher Strom [1994] (Phys 410; also with advisor Dr. Martha Haynes, Cornell University): *The Luminosity Function of the Cluster of Galaxies, A 2634*

Christy Tremonti [1994] (Phys 410): *A Piece of the Puzzle: The Optical Variability of Blazars OJ 287 and 3C 279*

### **Spring 1993**

Chris Strom [1994] (Phys 310; also advised by Physics 310/410 faculty): *Imaging Supernova SN 1993J and the Quasar OJ 287 with Colgate's CCD Electronic Camera*

### **Spring 1991**

Robert E. Curran [1991] (Phys 410): *The Calibration and Reduction of Supernova Images Using IRAF*

**Spring 1990**

Paul Abell [1990] (Phys 410): *CCD All Sky Photometry of the Star Cluster M 67*

Michael J. Brutvan [1990] (Phys 410): *The Development of a Reduction Scheme for Differential Photometry Data with the Colgate University CCD System*

Jennifer Christensen [1990] (Phys 410): *Photometry Using Charge-Coupled Devices: Detecting Continuum Variability of the Core of the Seyfert Galaxy NGC 5548*

**Spring 1989**

Stephan Martin [1989] (Phys 410): *The Calibration, Use and Application of a CCD System at the Colgate Observatory*

**Spring 1987**

Gregory S. Horner [1987] (Phys 410): *CCD Spectroscopy and Computer Control*

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**RESEARCH STUDENTS - SUMMER**

**Summer 2019**

Miguel de los Santos [2022]: *Optical Variability of Quasars*

Daniel Dougherty [2021]: *Optical Variability of Quasars*

Fairuz Ishraque [2022]: *Optical Variability of Quasars*

Joshn Liberman [2022]: *Optical Variability of Quasars*

John Slater [2022]: *Optical Variability of Quasars*

**Summer 2018**

Kaitlyn Eckart [2020]: *Optical Variability of Quasars and Stars at the Colgate Observatory*

Rishi Lohar [2021]: *Optical Variability of Quasars and Stars at the Colgate Observatory*

Justin Mailom [2020]: *Optical Variability of Quasars and Stars at the Colgate Observatory*

Lekshmi Rajagopal [2019]: *Optical Variability of Quasars and Stars at the Colgate Observatory*

Eric Roels [2021]: *Long Term Variability of Blazar OJ 287*

**Summer 2017**

Kaitlyn Eckart [2020]: *Optical Variability of the Blazar OJ 287 at the Colgate Observatory*

Jacob Pilawa [2020]: *The Multi-Decade Optical Light Curve of the Blazar OJ 287*

Ryan Stahlin [2018]: *Optical Variability of Quasars and Stars at the Colgate Observaory*

### **Summer 2016**

- Samantha Boni [Bridgewater State Univ 2018]: *The Multi-Decade Optical Light Curve and Microvariability of the Blazar OJ 287*
- Katie Chapman [2019]: *The Summer 2016 Outburst of the Blazar 1749+096*
- Nicholas Didio [2016]: *Optical Color Index Variability of Quasars*
- Alina Sabyr [2019]: *The Multi-Decade Optical Light Curve and Microvariability of the Blazar OJ 287*
- Ryan Stahlin [2018]: *The Summer 2016 Outburst of the Blazar 1749+096*
- Zachary Weaver [2017]: *The June 2016 Optical Flare of the Blazar 3C 454.3*
- Saitang Zhang [2019]: *The Multi-Decade Optical Light Curve and Microvariability of the Blazar OJ 287*

### **Summer 2015**

- Brian D'Auteuil [2016]: *Historic Light Curve of the Blazar 3C 454.3*
- Nicholas Didio [2016]: *The 2014-2015 Optical Outburst of the Blazar 3C 454.3*
- Leah Jenks [2017]: *Historic Light Curve of the Blazar 3C 454.3*
- Carolyn Morris [2017]: *The 2014-2015 Optical Outburst of the Blazar 3C 454.3*
- Caitlyn Rose [Vassar College 2017]: *Historic Light Curve of the Blazar 3C 454.3*
- Zachary Weaver [2017]: *The 2014-2015 Optical Outburst of the Blazar 3C 454.3*

### **Summer 2014**

- Katie Karnes [2017]: *Optical Variability of the Blazar BL Lacertae During Summer 2014*
- Joshua Reding [2015]: *An exploration of Supernova Light Curve Production Methods: Application to SN 1991M in IC 1151*
- Angeliese Rilinger [Williams College 2017]: *Optical Variability of the Blazar BL Lacertae During Summer 2014*
- Zachary Weaver [2017]: *The Optical and Radio Variability of the Blazar 3C 454.3*
- Jovana (Luna) Zagorac [2016]: *The Optical and Radio Variability of the Blazar 3C 454.3*

### **Summer 2013**

- Claire Freehafer [2015]: *Optical Variability of Quasars*
- Katie Iadanza [2013]: *Photometry of the Transiting Exoplanet TrES-1b*

### **Summer 2012**

- Sarah Byer [2015]: *Creating Astronomy Modules for the Ho Tung Visualization Laboratory*
- Katie Iadanza [2013]: *Photometric Analysis of the Transiting Exoplanet TrES-1b*
- Carolyn Thayer [Wellesley College 2014; Keck Northeast Astronomy Consortium visiting research student]: *Long and Short Term Optical Variability in the BL Lac Object BL Lacertae*
- Lily Zucker [Wesleyan University 2014; Keck Northeast Astronomy Consortium visiting research student]: *Long and Short Term Optical Variability in the BL Lac Object BL Lacertae*

### **Summer 2011**

- Erica Hopkins [Haverford College 2014; Keck Northeast Astronomy Consortium visiting

research student]: *Analysis of the Optical Variability of Quasar PKS 0754+10*  
Katie Iadanza [2013] (advisor: Thomas J. Balonek, summer 2011): *Analysis of the Optical Variability of Quasar S5 0716+714*

### **Summer 2010**

Michael T. Lam [2011]: *Time Series Analysis of the Quasar PKS 1749+096*  
Phil Patrick [2011]: *Exponential Functions as Models of Quasar Brightness*  
Justin Rupert [Vassar College 2012; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability and Exponential Outbursts of Quasar 3C 345*

### **Summer 2009**

Paul Hegel [Wesleyan University 2010; Keck Northeast Astronomy Consortium visiting research student]: *Analysis of Optical and Radio Outbursts of Blazar PKS 1749+096*  
Phil Patrick [2011]: *Analysis of Optical and Radio Outbursts of Blazar PKS 1749+096*  
Timothy Taber [Vassar College 2011; Keck Northeast Astronomy Consortium visiting research student]: *Analysis of Optical and Radio Outbursts of Blazar PKS 1749+096*

### **Summer 2008**

Emily Graber [University of Michigan 2011; visiting research student]: *Optical Variability of Quasars*  
Michael Lam [2011]: *Optical Variability of the Quasar 1749+096*  
Yung Hsien (Caroline) Ng Tam [Williams College 2011; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability of the Quasar 1749+096*  
Trevor Quirk [Siena College 2009; Keck Northeast Astronomy Consortium visiting research student]: *Using the ALFALFA Survey to Analyze the Poor Group WBL 251 (NRGs076)*  
Erin Scott [2009]: *The Universe in HI: The Rich Galaxy Group Zwicky 1400+09 as Seen from ALFALFA*

### **Summer 2007**

Kirsten Levandowski [Wellesley College 2010; Keck Northeast Astronomy Consortium visiting research student]: *Analysis of the Historic Light Curve and 2007 Optical Flare of Quasar 1749+096*  
Auralee Morin [RPI 2010; Keck Northeast Astronomy Consortium visiting research student]: *Analysis of the Historic Light Curve and 2007 Optical Flare of Quasar 1749+096*

### **Summer 2006**

Kathryn Fallows [2008]: *Optical Variability of Blazar 3C 279 and Comparison with X-Ray Variability*  
Alyssa Kaercher [2007]: *Observations of Optically Variable Quasars*  
Talia Sepersky [Wellesley College 2008; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability of the Blazar 1510-08 and Comparison to the X-Ray*  
Peter C. Shively [2008]: *Optical Monitoring of Quasar 3C 345 and Exponential Outbursts*

### **Summer 2005**

- Christine Forsyth [Bryn Mawr College 2007; Keck Northeast Astronomy Consortium visiting research student]: *Quasar Variability – The Unprecedented Outburst in 3C 454.3*
- Bryce Gadway [2007]: *Quasar Variability at the Colgate Foggy Bottom Observatory*
- Brendan Mullan [2007]: *Analyzing the Optical Variability of the Blazar 3C 454.3*
- Stephanie Wortel [2006]: *The 2005 Outburst of Quasar 3C 454.3 Compared with Prior Optical Variability*

### **Summer 2004**

- Patricia Hutchins [2005]: *Visual Spectroscopy of Jupiter and the Galilean Moons*
- Bradford Melius [2006]: *Visual Spectroscopy of Bright Stars and Nebulae*
- Rebecca Mickol [2007]: *Visual Spectroscopy and its Application to the Moon*
- Styephanie Wortel [2006]: *Looking into the Past: Extending the Known Variability of Quasars 3C 273 and 3C 279*

### **Summer 2003**

- Cynthia Castellon [2005]: *Optical Variability fo the Quasar CTA 102*
- Joseph Gangestad [Williams College 2006; Keck Northeast Astronomy Consortium visiting research student]: *Bright Quasar 3C 273 at Optical and X-ray Wavelengths*
- Mehul Malik [2006]: *Quasar 0736+017: Variability in the R Filter*
- Manette Sandor [Vassar College 2004; Keck Northeast Astronomy Consortium visiting research student]: *The Optical Variability of BL Lacertae and Select Nearby Stars*

### **Summer 2002**

- Peter Forshay [Haverford College 2005; Keck Northeast Astronomy Consortium visiting research student]: *A Study of the Quasar 1510-08 and the Colgate Data Reduction Method*
- Jeyhan Kartaltepe [2003]: *The Optical Variability of the Quasar 3C 279 During the 2001-2002 Outburst*
- Terry-Ann Suer [Williams College 2005; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability of the Quasar 3C 273*

### **Summer 2001**

- Joseph Converse [2003]: *Preparing Observational Tools for Future Use*
- Emily Fryer [2003]: *Study of Variable Stars in the BL Lacertae Field*
- Jeyhan Kartaltepe [2003]: *Optical Variability of the Quasar 3C 279*
- Joseph Martin [2004]: *Optical Variability of the Blazar 1510-08*
- Miriam Parnes [Barnard College 2003; New York Science Education Program visiting research student]: *Understanding Observational Astronomy*
- Claudine Reith [Middlebury College 2003; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability of the Blazar 1156+295*

### **Summer 2000**

- Michelle Caler [2002]: *Variable Stars in the BL Lacertae Field*
- Francesca D'Arcangelo [Wellesley College 2003; Keck Northeast Astronomy Consortium visiting research student]: *Optical and Radio History of the Quasar CTA 102*

Kathleen Gibbons [Williams College 2003; Keck Northeast Astronomy Consortium visiting research student]: *Optical Monitoring and Analysis of the Optically Violent Variable Quasar 3C 345*

Jeyhan Kartaltepe [2003]: *1989-2000 Optical Light Curve for 3C 279 and a Possible X-ray Correlation*

### **Summer 1999**

Theresa J. Brandt [Vassar College 2002; Keck Northeast Astronomy Consortium visiting research student]: *AO 0235+164: Optical Fluctuations and Radio Correlations*

Mariah Lyndaker [2001]: *Optical Variability of the Quasar 3C 279*

Jeremy Smith [Hamilton College 2001; New York Science Education Program visiting research student]: *Optical Variability of the Quasar 1156+295*

### **Summer 1998**

Stacey Benson [St. Lawrence University 2001; New York State Pew Consortium visiting research student]: *Optical Variations in the Quasar CTA 102*

Sandra Black [2001]: *Observations of Fluctuating Quasars*

Andrew N. Hock [2000]: *Optical Variability of the Quasar 1156+295*

Elizabeth J. McGrath [Vassar College 2001; Keck Northeast Astronomy Consortium visiting research student]: *The Blazar 0235+164: A Study of the Correlation between Optical and Radio Variations*

Carlos Montoya [2001] [Colgate Science / Mathematics Initiative summer research program]: *Observations and Analysis of Quasar Optical Variability*

### **Summer 1997**

Eli Beckerman [Wesleyan University 1999; Keck Northeast Astronomy Consortium visiting research student]: *Colgate University's Optical Monitoring of Quasars: CTA 102*

Stacey M. Davis [1997]: *Peculiar Fluctuations in the Light Curve of the Eclipsing Binary Star RZ Cassiopeiae*

Carol Finn [1999]: *Optical Variability of the Quasar 3C 454.3 and Calibration of the Quasar CTA 102 Field*

Kathryn Whitman [Cornell University 1900; New York State Pew Consortium visiting research student]: *The Microvariability of BL Lacertae*

Alison F. Schirmer [Swarthmore College 1998]: *Optical Variability of the BL Lacertae Object 1418+546*

### **Summer 1996**

Laura Brenneman [Williams College 1999; Keck Northeast Astronomy Consortium visiting research student program]: *Determining Orbital Data and Parallax Through Asteroid Astrometry*

Kiana Cole [1999] [Colgate Science / Mathematics Initiative summer research program]: *Finding an Asteroid's Orbit*

Stacey M. Davis [1997]: *RZ Cassiopeiae: Evidence for Hot Spots on the Surface of a Star*

Alison F. Schirmer [1998] [Swarthmore College; Keck Northeast Astronomy Consortium visiting research student]: *Optical Variability of the BL Lac Object 1418+546*



### **Summer 1995**

- Baquera Haidri [Cornell University 1998; New York State Pew Consortium visiting research student]: *Asteroid Astrometry*
- Christina Reynolds [Williams College 1998; Keck Northeast Astronomy Consortium visiting research student]: *Astrometry of Newly Discovered Asteroids*
- Christy Tremonti [1994]: *Scripts for Automated Calibration and Reduction of Colgate Observatory CCD Images*

### **Summer 1994**

- Lai Man Lee [1997] [Colgate Science / Mathematics Initiative summer research program]: *The Laughing Rock: Asteroid 1991 HA*
- Makiko Sakai [Bryn Mawr College; Keck Northeast Astronomy Consortium visiting research student]: *Out from Under the Dust*
- Nicole Silvestri [Union College 1995; American Astronomical Society - Research Experiences for Undergraduates program]: *Optical Variability of the Extragalactic Supernova SN 1993J in the Spiral Galaxy M 81*
- Christy Tremonti [1994]: *Life in the Fast Lane: The Microvariability of Blazar OJ 287*

### **Summer 1993**

- Richard Bell [1996] [Colgate Science / Mathematics Initiative summer research program]: *Astronomical Imaging and Image Processing*
- Jason de Luce [Williams College 1996; Keck Northeast Astronomy Consortium visiting research student]: *Observations of Optical Emission Surrounding NGC 3169 [Burrell Schmidt images]*
- Nicole Silvestri [Union College 1995; New York State Pew Consortium visiting research student]: *Optical Light Curves of the Extragalactic Supernova SN 1993J in the Spiral Galaxy M 81*
- Jennifer Koch [St. Lawrence University 1995; New York State Pew Consortium visiting research student]: *Optical Light Curves of the Extragalactic Supernova SN 1993J in the Spiral Galaxy M 81*

### **Summer 1992**

- Sherri Godlin [Vassar College 1994; Keck Northeast Astronomy Consortium visiting research student]: *Calibration and Photometric Study of Quasar 3C 279 CCD Images*
- Jennifer Huergo [1993]: *Classroom Applications of CCD Spectroscopy*
- Manuel Gonzales [1995] [Colgate Science / Mathematics Initiative summer research program]: *Image Processing: A Career to Look At - A Tool for the Future*
- Robin Pramanand [1995] [Colgate Science / Mathematics Initiative summer research program]: *Learning How to Image Process in Nine Weeks*
- Robin Tripoli [Cornell University 1994; New York State Pew Consortium visiting research student]: *Superscripts for the Calibration of Colgate CCD Images*

### **Summer 1991**

- David Bergeron [Middlebury College 1993; Keck Northeast Astronomy Consortium visiting research student]: *Optical Photometry of the BL Lacertae Type Object BL Lacertae*

Mohammad Ahsan Jameel [Hamilton College 1993; New York State Pew Consortium visiting research student]: *VRI Observations of Supernova SN 1991T in NGC 4527*  
Ritu Verma [Middlebury College 1993; Keck Northeast Astronomy Consortium visiting research student]: *Determining Parallax for Nearby Asteroids*

**Summer 1990**

Jennifer Christensen [1990]: *Continuum Variations in the Core of the Seyfert Galaxy NGC 5548*

**Summer 1989**

Paul Abell [1990]: *Quasar CCD Photometry*

Neil Klepeis [1990]: *Introductory Astronomy Laboratory Development*

Harri Latvakoski [1990]: *Quasar CCD Photometry*

Stephan Martin [1989]: *CCD Observations of Supernovae SN 1989A and SN 1989B*

**Summer 1988**

Paul Abell [1990]: *Quasar Variability*

Michael Brutvan [1990]: *Data Processing with the CCD Electronic Camera*

Jennifer Christensen [1990]: *Radio (and Optical) Photometry of Quasars*

Stephan Martin [1989]: *The Development of a CCD Imaging System as a Teaching Tool for Introductory-Level Astronomy*

Jennifer Pearson [Agnes Scott College 1991]: *Optical CCD Observations of Quasars*

**Summer 1987**

Kelli Spiess [1989]: *Photometric Observations with the Colgate Observatory 16-inch Telescope*

David Grimley [1988]: *Photometric Observations with the Colgate Observatory 16-inch Telescope*

**Summer 1986**

Gregory S. Horner [1987]: *Quasar Variability - Radio and Optical Variability*

**HIGH SCHOOL STUDENT RESEARCH PARTICIPATION**  
**(BOCES REGIONAL PROGRAM OF EXCELLENCE)**

Danielle Schaff [Oriskany Central School] (1994-95 academic year): *Color Imaging in Astronomy*

Louis Silvestri [Whitesboro High School] (summer 1994): *Asteroid Astrometry and Photometry*

Shannon Leonard [Dolgeville Central School] (1993-94 academic year): *Asteroid Astrometry*

Heather Sadlon [Mohawk Central School] (1991-92 academic year): *Displaying Astronomical Images*

Scott Wolak [New York Mills High School] (1990-91 academic year): *CCD Observations of Variable Quasars*

Jill Maloney [Vernon-Verona-Sherrill City School] (summer 1990): *CCD Observations of Variable Quasars*

Michael Malstrom [Canastota Central School] (1987-88 academic year): *A Pascal Program to Calculate Local Sidereal Time*

Gary Meadows [Rome Free Academy] (summer 1987): *Variable Star Photometry*

## PUBLICATIONS - Refereed Journals – with Student Co-authors

1. Zachary R. Weaver [Colgate 2017], **Thomas J. Balonek**, Svetlana G. Jorstad, Alan P. Marscher, Valeri M. Larionov, Paul S. Smith, Samantha J. Boni [Bridgewater State Univ 2018], George A. Borman, K. J. Chapman [Colgate 2019], Leah G. Jenks [Colgate 2017], Evgenia N. Kopatskaya, Daria A. Morozova, Anna A. Nikiforova, Alina Sabyr [Colgate 2019], Sergey S. Savchenko, Ryan W. Stahlin [Colgate 2018], Yulia V. Troitskaya, Ivan S. Troitsky, Saiyang Zhang [Colgate 2019], “*The June 2016 Optical and Gamma-Ray Outburst and Optical Micro-Variability of the Blazar 3C454.3*,” The Astrophysical Journal, 875, Issue 1, Article id. 15, 15 pp (2019 April 10)
2. Jeyhan S. Kartaltepe [Colgate 2003], **Thomas J. Balonek**, “*The multiple timescales of optical variability of the Blazar 3C 279 during the 2001-2002 outburst*,” The Astronomical Journal, 133, 2866-2882 (2007 June).
3. Riccardo Giovanelli, Martha P. Haynes, Brian R. Kent, Amélie Saintonge, Sabrina Stierwalt, Adeel Altaf, **Thomas Balonek**, Noah Brosch, Shea Brown, Barbara Catinella, Amy Furniss, Josh Goldstein, G. Lyle Hoffman, Rebecca A. Koopmann, David A. Kornreich, Bilal Mahmood, Ann M. Martin, Karen L. Masters, Arik Mitschang, Emmanuel Momjian, Prasanth H. Nair, Jessica L. Rosenberg, Brian Walsh [Colgate 2006], “*The Arecibo Legacy Fast ALFA Survey. III. HI Source Catalog of the Northern Virgo Cluster Region*,” The Astronomical Journal, 133, 2569-2583 (2007 June).
4. M. Villata, C.M. Raiteri, **T. J. Balonek**, M.F. Aller, S.G. Jorstad, O.M. Kurtanidze, F. Nicastro, K. Nilsson, H.D. Aller, A. Arai, A. Arkharov, U. Bach, E. Benitez, A. Berdyugin, C.S. Buemi, M. Bottcher, D. Carosati, R. Casas, A. Caulet, W.P. Chen, P.-S. Chiang, Y. Chou, S. Ciprini, J.M. Coloma, G. di Rico, C. Diaz, N. V. Efimova, C. Forsyth [Bryn Mawr 2007], A. Frasca, L. Fuhrmann, B. Gadway [Colgate 2007], S. Gupta, V.A. Hagen-Thorn, J. Harvey, J. Heidt, H. Hernandez-Toledo, F. Hroch, C.-P. Hu, R. Hudec, M.A. Ibrahimov, A. Imada, M. Kamata, T. Kato, M. Katsuura, T. Konstantinova, E. Kopatskaya, D. Kotaka, Y.Y. Kovalev, Yu. A. Kovalev, T.P. Krichbaum, K. Kubota, M. Kurosaki, L. Lanteri, V. M. Larionov, L. Larionova, E. Laurikainen, C.-U. Lee, P. Leto, A. Lanteenmaki, O. Lopez-Cruz, E. Marilli, A.P. Marscher, I.M. McHardy, S. Mondal, B. Mullan [Colgate Univ. 2007], N. Napoleone, M.G. Nikolashvili, J.M. Ohlert, S. Postnikov, T. Pursimo, M. Ragni, J.A. Ros, K. Sadakane, K.; A.C. Sadun, T. Savolainen, E.A. Sergeeva, L. A. Sigua, A. Sillanpää, L. Sixtova, N. Sumitomo, L.O. Takalo, H. Terasranta, M. Tornikoski, C. Trigilio, G. Umana, A. Volvach, B. Voss, S. Wortell [Colgate 2006], “*The unprecedented optical outburst of the quasar 3C 454.3. The WEBT campaign of 2004-2005*,” Astronomy and Astrophysics, 453, 817-822 (2006 July).
5. C.M. Raiteri, M. Villata, H.D. Aller, M.F. Aller, J. Heidt, O.M. Kurtanidze, L. Lanteri, M. Maesano, E. Massaro, F. Montagni, R. Nesci, K. Nilsson, M.G. Nikolashvili, P. Nurmi, L. Ostorero, T. Pursimo, R. Rekola, A. Sillanpää, L.O. Takalo, H. Teräsanta, G. Tosti, **T.J. Balonek**, M. Feldt, A. Heines, C. Heisler, J. Hu, M. Kidger, J.R. Mattox, E.J. McGrath [Vassar 2001], A. Pati, R. Robb, A. Sadun, P. Shastri, S.J. Wagner, J. Wei, X.

- Wu, “*Optical and radio variability of the BL Lacertae object AO 0235+16: A possible 5-6 year periodicity*,” *Astronomy & Astrophysics*, 377, 396-412, (2001 October).
6. J. R. Webb, E. Howard, E. Benitez, **T. Balonek**, E. McGrath [Vassar 2001], C. Shrader, I. Robson, P. Jenkins, “*The 1997 outburst of AO 0235+164: Evidence for a microlensing event?*” *Astronomical Journal*, 120, 41-46 (2000 July).
  7. D.A. Lubowich, J.M. Pasachoff, **T.J. Balonek**, T.J. Millar, C. Tremonti [Colgate 1994], H. Roberts, R.P. Galloway, “*Deuterium in the Galactic Centre as a result of recent infall of low-metallicity gas*,” *Nature*, 405, Issue 6790, 1025-1027 (2000 June).
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