

# Donald A. Smith

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**Education**                      **Massachusetts Institute of Technology**                      Cambridge, MA  
Ph.D. degree in Physics, September 1999.  
Thesis adviser: Prof. Hale V. Bradt  
Title of thesis: "Observations of X-ray Counterparts to Gamma-ray Bursts in RXTE's All-Sky Monitor."

**University of Chicago**                      Chicago, IL  
Bachelor of Arts degree in Physics, June 1992.

**Teaching Experience**                      **Guilford College, Dept. of Physics**                      Greensboro, NC

*Aug 2005 –*                      **Assistant Professor**  
Taught advanced and introductory physics classes in a liberal arts context. Courses taught include senior-level electrodynamics, junior-level thermodynamics, and sophomore-level Experimental Physics. Mentored students in self-directed laboratory work and senior thesis projects. Designed and developed new courses such as "Physics through Science Fiction" and "Magic, Science and Religion". Taught oral and written presentation skills.

*Jun/Jul 2008*                      **Civilian Research & Development Foundation**                      Arlington, VA  
**Consultant**  
Taught three-week immersion camp in scientific English for 64 Russian science students. Developed and implemented lesson plans and community-building activities. Supervised and evaluated final conference of student presentations.

*Jul 2006 – Aug 2006*                      **Duke University Marine Biology Laboratory**                      Beaufort, NC  
**Visiting Faculty**  
Taught introductory electrodynamics and optics to biology and pre-med majors at Duke University's marine biology lab. Developed five-week lesson plan to teach a full-semester course, including lecture, demonstrations, hands-on activities, and small group work.

*Aug 2001 – May 2005*                      **University of Michigan, Dept. of Physics**                      Ann Arbor, MI  
*Aug 2004 – May 2005*                      **Lecturer II**  
Taught introductory physics classes, including mechanics for engineers and electricity & magnetism for biology and pre-medical students. Fostered active learning by encouraging group problem-solving in small discussion sections.

*Aug 2001 – Sep 2004*                      **Post-doctoral Fellow**  
*NSF Post-doctoral Fellowship for Research and Education in Astronomy and Astrophysics*  
Taught cosmology for a general audience as well as the senior writing seminar for physics majors. Developed engaging and dynamic approach, applying Peer Instruction and web-based interaction techniques. Invited to consult for the planetarium at the Exhibit Museum and gave public talks.

*Fall 1998, Spr 2000*                      **M.I.T., Dept. of Physics**                      Cambridge, MA  
**Teaching Assistant**  
Twice led a hands-on weekly undergraduate astronomy seminar. Topics included orientation to the sky, telescope use, astrophotography and CCD imaging.

*Feb 1997 – May 1997*                      Taught two sections of a larger introductory course in electricity and magnetism. Wrote and graded weekly quizzes. Developed web-based computer tools and animations to help demonstrate physical principles.

**Research Experience**

*Aug 2005 –* **Guilford College, Dept. of Physics** Greensboro, NC  
**Assistant Professor**  
Continued to use ROTSE and the ASM for Gamma-Ray Burst and X-ray Binary transient studies. Worked with students on Astrophysics research projects.

*Summer 06/07* **U. of NC, Chapel Hill** Chapel Hill, NC  
**Research Consultant**  
Led a team of post-docs, graduate students, and programmers to develop a plan to automate the data reduction and GRB analysis pipeline for the PROMPT collaboration. Wrote software tools for data reduction and pipeline photometry.

*Aug 2000 – May 2005* **U. of Mich., Dept. of Physics** Ann Arbor, MI  
**Post-doctoral Fellow & Lecturer**

*Aug 2001 – Aug 2004* *NSF Post-doctoral Fellowship for Research and Education in Astronomy and Astrophysics*  
Installed ROTSE-III telescopes around the world. Carried out research on early optical behavior of GRBs, discovering a new class of light curve profile, perhaps indicative of local absorption. Studied variable stars and optical emission from X-ray Binaries (XRBs) with undergraduate assistant.

*Sep 2000 – Jul 2001* **Post-doctoral Associate**  
*ROTSE*  
Proposed and carried out research in the study of XRBs and GRBs. Developed software and hardware for a world-wide network of fast-response small automated optical telescopes.

*Aug 1999 – Jul 2000* **M.I.T., Center for Space Research** Cambridge, MA  
**Post-doctoral Associate**  
*The Rossi X-Ray Timing Explorer*  
Carried out research programs in X-ray Astrophysics. Tracked the health and behavior of the All-Sky Monitor (ASM) and developed programs to improve its efficiency.

*Aug 1993 – Aug 1999* **M.I.T., Center for Space Research** Cambridge, MA  
**Research Assistant**  
*The Rossi X-Ray Timing Explorer*  
Performed pre-flight testing and calibration of the ASM. Performed in-flight calibration, monitored detector health, and developed data analysis software. Proposed and conducted investigations in high-energy astrophysics. Developed networking software to parse the real-time ASM observations and report new discoveries, enabling rapid multi-wavelength follow-up observations. Discovered two microquasars and an unusual nova-like event. Proposed and carried out observations of ASM-detected GRBs with the Very Large Array and the Australian Telescope Compact Array.

*Oct 1992 - Jun 1993* **Max Planck Institute for Extraterrestrial Physics** Garching, Germany  
**Research Assistant**  
Analyzed observations of the Galactic Center taken with the X-ray satellite *ROSAT*. Discovered X-ray emission from the synchrotron nebula “the Mouse,” confirming its nature as the bow shock from a runaway neutron star.

*Oct 1990 - Jul 1992* **Enrico Fermi Institute, Laboratory for Astrophysics and Space Research** Chicago, IL  
**Junior Research Assistant**  
*The Ulysses Satellite*  
Programmed systems and analyzed data for the High Energy Telescope, part of the Cosmic Ray and Solar Particle Investigation. Studied the propagation of electrons from Jupiter’s Magnetosphere through the interplanetary medium.

*Oct 1989 – Sep 1990* **Enrico Fermi Institute, High Energy Physics** Chicago, IL  
**Junior Technical Research Assistant**  
*The Chicago Air Shower Array*  
Built, tested, and assembled a large array of cosmic-ray scintillator detectors.

## Outreach

Saturday Morning Physics: held three public lectures on X-ray astronomy that drew more than 250 people each week. Ann Arbor, MI, October 2001

Metropolitan Methodist Church: two lectures on cosmology and Gamma-Ray Bursts to senior citizens' group. Detroit, MI, Summer 2001/2002.

Public Lecture: Raleigh Astronomy Club, Raleigh, NC, 24 September 2004.

Public Lecture: Greensboro Astronomy Club, Greensboro, NC, 18 November 2005.

Co-led workshop on science and spirituality. Michigan Friends Center, Chelsea, MI, 13 May 2006.

Public Lectures: Guilford College Observatory, Greensboro, NC, 27 March 2006, 12 November 2006, 10 February 2007, 15 April 2007, 15 September 2007, 18 November 2007, 24 February 2008, 20 April 2008, and 4 August 2008.

## Invited Presentations

"Advanced Laboratory and Undergraduate Research", panel presentation, AAPT Topical Conference on Advanced Laboratory Instruction, Ann Arbor, MI, July 2009

"Making the Transition from Postdoc to Faculty" and "Exploring Non-Traditional Forms of Outreach", panel presentations, NSF symposium, Long Beach, CA, January, 2009.

"Robots, Telescopes, and Exploding Stars", oral presentation, *Sigma Xi* Honors Dinner, Guilford College, Greensboro, NC, May 16, 2007.

"ROTSE-III Recent Results", oral presentation, UNCG *Sigma Xi* Chapter, Greensboro, NC, April 27, 2007.

"Robots Chasing Stars", oral presentation, *Tristar 2007*, Jamestown, NC, March 10, 2007.

"The World-Wide ROTSE Telescope", oral presentation, North Carolina Astronomers' Meeting, Jamestown, NC, October 2005.

"ROTSE-III and the AEOS Burst Camera: Rapid Follow-up to *Swift* Alerts", oral presentation, *Swift* Workshop, HEAD Meeting, New Orleans, LA, September 2004.

"Optical Precursors to Microquasar Outbursts", oral presentation, International ROTSE Collaboration Meeting, Ann Arbor, MI, August 2004.

"The AEOS Burst Camera", oral presentation to a National Academy of Sciences review panel, Kihei, Maui, May 2004.

"Chasing the Earliest Light from Gamma-Ray Bursts: The World-Wide ROTSE-III Network", NSF Post-doctoral Fellow Symposium, Atlanta, GA, January 2004

"Tracking Celestial Explosions: The World-Wide ROTSE-III Network", AAS Meeting, Albuquerque, NM, June 2002

"The ROTSE-III Telescope System: Chasing Celestial Explosions.", *Max-Planck-Institut für Kernphysik*: Heidelberg, May 2002

"Gamma-ray Bursts in the All-Sky Monitor on RXTE", AAS Meeting, San Diego, CA, June 1998

## Conference Presentations

"X-ray Bursts From 4U 0614+091", oral presentation, NC Astronomers' meeting, Jamestown, NC, October 2009

"The Process of Science", poster presentation, AAPT Topical Conference on Advanced Laboratory Instruction, Ann Arbor, MI, July 2009

"How to Get Them to Do the Reading", oral presentation, FAHE meeting, Greensboro, NC, June 2009

"Simulating Dust Effects on Optically-limited Quasar Catalogs", oral presentation, NC Astronomers' meeting, Jamestown, NC, October 2008

- “Magic, Science and Religion: Interdisciplinary Team-Teaching”, oral presentation, FAHE meeting, Birmingham, UK, June 2008
- “Physics Concepts Through Science Fiction”, poster presentation, AAPT meeting, Greensboro, NC, July 2007
- “ROTSE-III Well-sampled Optical Light Curve For The 2005 Outburst Of GRO J1655-40”, poster presentation, AAS Meeting, Honolulu, HI, May 2007
- “Recent Results and Future Prospects for the ROTSE-III Global Telescope Array”, poster presentation, AAS – High Energy Astrophysics Division Meeting, New Orleans, LA, September 2004
- “The Early Optical Afterglow of GRB 030418 and Progenitor Mass Loss”, oral presentation, AAS Meeting, Atlanta, GA, January 2004
- “The World-Wide Network of ROTSE-III Telescopes”, poster presentation, AAS Meeting, Nashville, TN, June 2003
- “ROTSE-III Observations of GRB 030329”, poster presentation with press conference, AAS Meeting, Nashville, TN, June 2003
- “The ROTSE-IIIa Telescope System”, poster presentation, “Gamma-Ray Burst and Afterglow Astronomy 2001: A Workshop Celebrating the First Year of the HETE Mission”, Woods Hole, MA, November 2001
- “Duration as a Function of Energy for Seven GRBs Observed with the RXTE All-Sky Monitor”, poster presentation, AAS – High Energy Astrophysics Division Meeting, Honolulu, HI, November, 2000
- “ASM Light Curves for Two Gamma-Ray Bursts”, oral presentation, Rossi2000 Meeting, Greenbelt, MD, March 2000.
- “Spectral and Intensity Evolution of the Rapidly Variable X-ray Nova V4641 Sgr”, poster presentation with press conference, American Astronomical Society Meeting, Atlanta, GA, January 2000
- “*RXTE* All-Sky Monitor Localization of SGR 1627–41”, poster presentation, AAS Meeting, Chicago, IL, June 1999
- “Localizations of Gamma-Ray Bursts by the All-Sky Monitor on *RXTE*”, poster presentation, AAS Meeting, Austin, TX, January 1999
- “*RXTE* ASM observations of BATSE Gamma-ray Bursts”, poster presentation, AAS - High Energy Astrophysics Division Meeting, Estes Park, CO, November, 1997
- “Gamma-ray Bursts in the All-Sky Monitor on *RXTE*”, oral presentation, 4th Huntsville Symposium on Gamma-Ray Bursts, Huntsville, AL, September 1997
- “*RXTE* ASM and IPN Precise Position of BATSE Burst 5428”, poster presentation, AAS Meeting, Winston-Salem, NC, June 1997
- “Detection of 1.91 ms Pulsations During a Burst from KS 1731-260”, poster presentation, AAS Meeting, Toronto, January 1997
- “X-Ray Light Curves from the *RXTE* All-Sky Monitor”, poster presentation, AAS - High Energy Astrophysics Division Meeting, San Diego, CA, May 1996

## Books

- Smith, D. A., “Seeking Meaning in Creation”, in *The Quaker Bible Reader*, eds. P. Buckley & S. Angell, Earlham School of Religion Press (Richmond, IN, 2006).

## Articles

- Kuulkers, E., *et al.*, “What burns unstably on the neutron star of 4U 0614 + 091?”, *Astronomy & Astrophysics*, *in press*, 2009.
- Rykoff, E., *et al.*, “Looking Into the Fireball: ROTSE-III and Swift Observations of Early GRB Afterglows”, *Astrop. J.*, **702**, p. 489, 2009.

- Sudilovsky, V., Smith, D., and Savaglio, S., “Dusty MgII Absorbers: Implications for the GRB/Quasar Incidence Discrepancy”, *Astrop. J.*, **699**, p. 56, 2009.
- Smith, D. A., “Physics Concepts Through Science Fiction”, *The Physics Teacher*, **47**, 5, p. 302, 2009.
- Yost, S., *et al.*, “The Dark Side of ROTSE-III Prompt GRB Observations”, *Astrop. J.*, **669**, p. 1107, 2007.
- Yost, S. *et al.*, “Exploring Broadband GRB Behavior during  $\gamma$ -Ray Emission”, *Astrop. J.*, **657**, p. 925, 2007.
- Shaposhnikov, N., *et al.*, “GRO J1655–40: Early Stage of the 2005 Outburst”, *Astrop. J.*, **655**, p. 434, 2007.
- Yost, *et al.*, “Status of the ROTSE-III telescope network”, *Astronomische Nachrichten*, **327**, 803, 2006.
- Smith, D. A., “Mechanics in the Real World”, *The Physics Teacher*, **44**, 3, p. 144, 2006.
- Quimby *et al.*, “Early-Time Observations of the GRB 050319 Optical Transient”, *Astrop. J.*, **640**, p. 402, 2006.
- Rykoff, E., *et al.*, “The Anomalous Early Afterglow of GRB 050801”, *Astrop. J. Lett.*, **638**, p. L5, 2006.
- Yost, S., *et al.*, “Optical Light Curve & Cooling Break of GRB050502A”, *Astrop. J.*, **636**, p. 959, 2006.
- Pedersen, K., *et al.*, “Multi-wavelength Studies of the Optically Dark Gamma-Ray Burst 001025A”, *Astrop. J.*, **636**, p. 381, 2006.
- Rykoff, E., *et al.*, “Prompt Optical Detection of GRB 050401A with ROTSE-IIIa”, *Astrop. J. Lett.*, **631**, p. L121, 2005.
- Rykoff, E., *et al.*, “A Search for Untriggered GRB Afterglows with ROTSE-III”, *Astrop. J. Lett.*, **631**, p. 1032, 2005.
- Rykoff, E., *et al.*, “Discovery of CVs ROTSE3 J151453.6+020934.2 and ROTSE3 J221519.8-003257.2”, *IBVS*, No. 5559, 2004.
- Wozniak, P., *et al.*, “Northern Sky Variability Survey (NSVS): Public Data Release”, *Astronomical J.*, **127**, 2436, 2004.
- Rykoff, E., *et al.*, “The Early Optical Afterglow of GRB 030418 and Progenitor Mass Loss”, *Astrop. J.*, **601**, 1013, 2004.
- Smith, D., *et al.*, “ROTSE-III Observations of the Early Afterglow From GRB 030329”, *Astrop. J. Lett.*, **596**, p. L151, 2003.
- Woods, P., *et al.*, “The 2001 April Burst Activation of SGR 1900+14: Pulse Properties and Torque”, *Astrop. J.*, **596**, 464, 2003.
- Smith, D. A., *et al.*, “The ROTSE-IIIa Telescope System”, Proceedings of “Gamma-Ray Burst and Afterglow Astronomy 2001: A Workshop Celebrating the First Year of the HETE Mission”, American Institute of Physics Conference Series, **662**, 514, 2003.
- Levine, A. M., Bradt, H., Remillard, R., & Smith, D. A. “RXTE All-Sky Monitor Observations of GRB Light Curves”, Proceedings of “Gamma-Ray Burst and Afterglow Astronomy 2001: A Workshop Celebrating the First Year of the HETE Mission”, American Institute of Physics Conference Series, **662**, 276, 2003.
- Akerlof, C., *et al.*, “The ROTSE-III Robotic Telescope System”, *PASP*, **15**, 803, 132, 2003.
- Kuulkers, E., *et al.*, “A half-a-day long thermonuclear X-ray burst from KS 1731-260”, *Astron. & Astrop.*, 382, 503, 2002.

- Kehoe, R., *et al.*, “An Untriggered Search for Brief Optical Bursts”, *Astrop. J.*, **577**, 845, 2002.
- Smith, D. A., *et al.*, “X-Ray Light Curves of Gamma-ray Bursts Detected with the All-Sky Monitor on *RXTE*”, *Astrop. J. Supp.*, **141**, 415, 2002.
- Smith, D. A., *et al.*, “Discovery of the CV ROTSE3 J015118.59-022300.1”, *IBVS* No. 2556, 2002.
- Bradt, H., Levine, A., Marshall, F., Remillard, R., Smith, D., & Takeshima, T., “Observations of Gamma-ray Bursts with the Rossi X-ray Timing Explorer”, Proceedings Of The Joint CNR/ESO Meeting, “Gamma-Ray Bursts in the Afterglow Era: 2nd Workshop”, F. Frontera, E. Costa, & J. Hjorth (eds.), Springer Verlag (astro-ph/0108004).
- Wren, J., *et al.*, “Observations of the Optical Counterpart to XTE J1118+480 during Outburst by the Robotic Optical Transient Search Experiment I Telescope”, *Astrop. J. Lett.*, **557**, L97, 2001.
- Kehoe, R., *et al.*, “A Search for Early Optical Emission from Short and Long Duration Gamma-ray Bursts”, *Astrop. J. Lett.*, **554**, L159, 2001.
- Woods, P., *et al.*, “Evidence for a Sudden Magnetic Field Reconfiguration in SGR 1900+14”, *Astrop. J.*, **552**, 748, 2001.
- Smette, A., *et al.*, “HST/STIS observations of GRB000301C: CCD imaging and NUV MAMA spectroscopy”, *Astrop. J.*, **555**, 2001.
- Hjellming, R., *et al.*, “Light Curves and Radio Structure of the 1999 September Transient Event in V4641 Sagittarii (=XTE J1819–254=SAX J1819.3–2525)”, *Astrop. J.*, **544**, 977, 2000.
- Bradt, H., Levine, A., Remillard, R., & Smith, D., “X-ray Transients Monitored by the All-Sky Monitor on *RXTE*: A Tabulation”, in “X-ray Astronomy ’99: Stellar Endpoints, AGN and the Diffuse Background”, G. Malaguti, G. Palumbo, & N. White (eds.), pub. Gordon and Breach, 2000 (astro-ph/0003438).
- Bradt, H., Levine, A., Remillard, R., & Smith, D., “Transient X-Ray Sources Observed with the *RXTE* All-Sky Monitor after 3.5 Years”, Proceedings of the Vulcano May 1999 Workshop, F. Giovannelli and Lola Sabau-Graziati (eds.), Mem SAI, Vol 71, 2000 (astro-ph/0001460).
- Smith, D. A., *et al.*, “Localizations of Twelve Gamma-ray Bursts by the All-Sky Monitor on *RXTE*”, *Astrop. J.*, **526**, 683, 1999.
- Schaefer, B., *et al.*, “Discovery of the Optical Transient of GRB 990308”, *Astrop. J.*, **524**, L103, 1999.
- Bradt, H. V., & Smith, D. A., “Gamma-ray Burst Positions from the ASM on *RXTE*”, *Astron. & Astrop. Supp. Ser.*, **138**, 423, 1999.
- Smith, D. A., Bradt, H. V., & Levine, A. M., “*RXTE* All-Sky Monitor Localization of SGR 1627–41”, *Astrop. J.*, **519**, L147, 1999.
- Vreeswijk, V. M., *et al.*, “The X-ray, Optical and Infrared Counterpart to GRB 980703”, *Astrop. J.*, **523**, 171, 1999.
- Smith, D. A., *et al.*, “Gamma-Ray Bursts in the All-Sky Monitor on *RXTE*”, in *Gamma-Ray Bursts: 4th Huntsville Symposium*, eds. Meegan, C., Preece, R., & Kosshut, T., p. 430, 1998.
- Smith, D. A., Morgan, E. H., & Bradt, H. V., “*RXTE* Discovery of Coherent Millisecond Pulsations during an X-ray Burst from KS 1731–260”, *Astrop. J.*, **479**, L137, 1997.
- Levine, A. M., *et al.*, “First Results from the All-Sky Monitor on the *Rossi X-Ray Timing Explorer*”, *Astrop. J.*, **469**, L33, 1996.

Simpson, J.A., Smith, D.A., & Zhang, M., "Jovian Electron Propagation in Three Dimensions of the Heliosphere: The Ulysses Investigations", *J. of Geoph. Res.*, Vol. 98, No. A12, pp. 21,129-21,144, 1993.

## Circulars and Telegrams

- Levine, A., *et al.*, IAUC 6390. First results from the ASM.
- Corbet, R., Peele, A., & Smith, D. A., IAUC 6632  
The detection of a 37 d period from X2127+119.
- Smith, D. A., *et al.*, IAUC 6718. The ASM localization of GRB 970815.
- Smith, D. A., *et al.*, IAUC 6728. A refined position of GRB 970828.
- Kippen, R. M., *et al.*, IAUC 6789. Observations of GRB 971214.
- Smith, D. A., *et al.*, IAUC 6855. The ASM discovery of XTE J0412+560.
- Smith, D. A., Levine, A., & Wood, A., IAUC 6932  
The ASM discovery of XTE J1748-288.
- Smith, D. A., Levine, A., & Munro, M., GCN Circ 126  
The ASM localization of GRB 980703.
- Fox, D., *et al.*, ATEL 32. The ASM detects a new Rapid Burster outburst.
- Remillard, R., Smith, D. A. & Levine, A., IAUC 7002  
The ASM detects an X-ray flare most likely from SGR1900+14.
- Smith, D. A., IAUC 7008  
The ASM discovers new black hole candidate transient XTE J1550-564.
- Smith, D. A. & Takeshima, T., IAUC 7014  
The ASM discovers reemergence of 3A 1942+274, revealed to be a 16-s pulsar.
- Rutledge, R., Fox, D., & Smith, D. A., ATEL 37  
The ASM reveals that XTE J1550-564 flared up to 6.8 Crab.
- Smith, D. A., GCN Circ 159. The ASM localization of GRB 981220
- Hurley, K., *et al.*, GCN Circ 160  
The IPN Annulus intersects the ASM error box for GRB 981220.
- Smith, D. A., *et al.*, GCN Circ 275  
ASM/IPN error box for GRB 990308 (BATSE No. 7457).
- Smith, D. A., Levine, A., & Morgan, E., IAUC 7253  
Discovery of X-ray Flare from V4641 Sgr.
- Wood, A., Smith, D. A., Marshall, F., & Swank, J., IAUC 7274  
Discovery of New X-ray Transient XTE J1859+226.
- Corbet, R. & Smith, D. A., GCN Circ 506  
ASM Detection of Early Afterglow from GRB 991216.
- Smith, D. A., Hurley, K., & Cline, T., GCN Circ. 568  
GRB000301C: RXTE/ASM and IPN localizations.
- Remillard, R., Morgan, E., Smith, D. A., & Smith, E., IAUC 7389  
Discovery of X-ray Nova XTE J1118+480.
- Smith, D. A., Levine, A., Hurley, K., & Barthelmy, S., GCN Circ. 665  
ASM/IPN localizations of GRB000508B.
- Smith, D. A., Levine, A., Remillard, R., Hurley, K., & Cline, T., GCN Circ. 861  
ASM/IPN localizations of GRB001025.
- Hurley, K., & Smith, D. A., GCN Circ. 921  
ASM/IPN localizations of GRB010126.
- Akerlof, C., McKay, T., Rykoff, E., & Smith, D., GCN Circ. 1115  
GRB011019: ROTSE-III optical observations.
- Woods, P., *et al.*, GCN Circ. 1256  
RXTE observations of Sgr 1900+14.
- Smith, D. & Levine, A., GCN Circ. 1332  
GRB020406: RXTE/ASM detection.
- Smith, D. & Remillard, R., GCN Circ. 1341  
GRB020406: RXTE/ASM refined position.
- Remillard, R. & Smith, D., IAUC 7880  
Discovery of fast X-ray transient XTE J1901+014

Rykoff, E., & Smith, D., GCN Circ. 1480  
   Early Time Limits for GRB020813  
 Smith, D. A., & Remillard, R., ATEL 129 & 130  
   X-ray Detection of Solar Flare Reflected off of the Moon  
 Smith, D., & Rykoff, E., GCN Circ. 1952  
   GRB 030323, ROTSE-III detection of possible optical counterpart  
 Rykoff, E., & Smith, D., GCN Circ. 1958  
   GRB 030324, Optical Observations  
 Rykoff, E., & Smith, D., GCN Circ. 1995  
   GRB 030329: Optical Afterglow Observations  
 Smith, D., GCN Circ. 2019  
   GRB 030329: ROTSE network observes steepening of decay curve  
 Smith, D., Rykoff, E., & McKay, T., GCN Circ. 2153  
   ROTSE-III prompt optical detections of GRB 030418  
 Smith, D., GCN Circ. 2178  
   GRB 030429: ROTSE-III observations  
 Smith, D., & Quimby, R., GCN Circ. 2318  
   XRF 030723, ROTSE-III Early Observations  
 Smith, D., Akerlof, C., & Quimby, R., GCN Circ. 2338  
   XRF 030723: Re-analysis of ROTSE-III early images  
 Rykoff, E., & Smith, D., GCN Circ. 2395  
   GRB 030913: ROTSE-3c Optical Observations  
 Remillard, R., Levine, A., Lin, D. & Smith, D., ATEL 204  
   New X-ray Transient XTE J1748-361  
 Smith, D. A., GCN Circ. 2595  
   GRB 040511: ROTSE-III Rapid Optical Upper Limits  
 Smith, D. A., Yost, S. A., & Rykoff, E. S., GCN Circ. 2692  
   ROTSE-III Rapid Response to possible GRB 040903  
 Yost, S. A., Smith, D. A., Rykoff, E. S., & Swan, H., GCN Circ. 2776  
   ROTSE-IIIa Observations of GRB 041006  
 Smith, D., ATEL 445  
   The RXTE/ASM reveals rebrightening of GROJ1655-40  
 Smith, D., ATEL 486  
   Multiwavelength evolution of GROJ1655-40  
 Smith, D. A., Rykoff, E. S., & Yost, S. A., GCN Circ. 3021  
   GRB 050215A: ROTSE-III Optical Observations  
 Yost, S. A., Smith, D. A., & Rykoff, E. S., GCN Circ. 3022  
   GRB 050215B: ROTSE-III optical observations  
 Smith, D., GCN Circ. 3056  
   GRB 050223: ROTSE-III Optical Observations  
 Quimby, R. *et al.*, GCN Circ. 3107  
   GRB 050306: ROTSE-III early limits  
 Rykoff, E. S., Yost, S. A., & Smith, D. A., GCN Circ. 3165  
   GRB 050401: ROTSE-III Detection of Prompt Optical Counterpart  
 Smith, D. A., Yost, S. A., & Rykoff, E. S., GCN Circ. 3190  
   GRB 050408: ROTSE-III Optical Limits  
 Yost, S., Rykoff, E., Schaefer, B., Smith, D. A., & Guver, T., GCN Circ. 3978  
   GRB 050915: ROTSE-III optical limits  
 Rykoff, E., Yost, S., Rujopakarn, W., Quimby, R., Smith, D. & Yuan, F., GCN Circ. 4012  
   GRB 050922C: ROTSE-III Refined Analysis  
 Swan, H., et al., GCN Circ. 4121  
   GRB 051021: ROTSE-III Confirmation of Optical Counterpart.  
 Rujopakarn, W., et al., GCN Circ. 4472  
   GRB 060110: ROTSE-III confirmation of optical counterpart.  
 Quimby, R., Swan, H., Rujopakarn, W. & Smith, D. A., GCN Circ. 5366  
   GRB 060729: ROTSE-III Detection of Optical Counterpart

Yuan, F., Schaefer, B., Guver, T. & Smith, D. A., GCN Circ. 5919  
 GRB 061214(?): ROTSE-III Optical Limits  
 Rujopakarn, W., Guver, T. & Smith, D. A., GCN Circ. 7792  
 GRB 080603B: ROTSE-III Detection of Optical Counterpart

## Service

*Aug 06-Apr 09*

### Guilford College

Served as Recording Clerk for Faculty Business Meetings. Recorded minutes for corporate approval and archiving. Required careful listening and realtime summarizing of complex issues and arguments.

*Aug 09*

Served on Curriculum Subcommittee of Educational Policy Committee.

## Courses Taught

### Guilford College

*Fall 09*

PHYS 121: Classical and Modern Physics I  
 PHYS 231: Experimental Physics I  
 PHYS 331: Experimental Physics III  
 PHYS 422: Electromagnetism  
 PHYS 443: Astrophysics  
 PHYS 461: Research Seminar  
 PHYS 480: Department Seminar

*Spring 09*

PHYS 122: Classical and Modern Physics II  
 PHYS 232: Experimental Physics II  
 PHYS 320: Mathematical Physics

*Fall 08*

PHYS 121: Classical and Modern Physics I  
 PHYS 231: Experimental Physics I  
 PHYS 421: Mechanics

*Spring 08*

PHYS 122: Classical and Modern Physics II  
 PHYS 232: Experimental Physics II  
 PHYS 260: Observatory Practice II  
 PHYS 320: Mathematical Physics  
 IDS 477: Magic, Science and Religion

*Fall 07*

PHYS 121: Classical and Modern Physics I  
 PHYS 231: Experimental Physics I  
 PHYS 443: Astrophysics  
 FYE 101: Science Through Science Fiction

*Spring 07*

PHYS 122: Classical and Modern Physics II  
 PHYS 210: Observatory Practice

*Fall 06*

PHYS 101: Physics Through Science Fiction  
 PHYS 121: Classical and Modern Physics I

*Spring 06*

PHYS 122: Classical and Modern Physics II  
 PHYS 232: Experimental Physics II  
 PHYS 324: Thermophysics

*Fall 05*

PHYS 121: Classical and Modern Physics I  
 PHYS 231: Experimental Physics I  
 PHYS 422: Electromagnetism

### Duke University

*Summer 06*

PHYS 54: General Physics II

	<b>University of Michigan</b>
<i>Spring 05</i>	PHYS 126: General Physics: Electricity and Light
<i>Fall 04</i>	PHYS 140: General Physics I
<i>Winter 04</i>	PHYS 105: Origin and Fate of the Universe PHYS 465: Senior Writing Seminar
<i>Winter 03</i>	PHYS 105: Origin and Fate of the Universe
	<b>Massachusetts Institute of Technology</b>
<i>Fall 99</i>	12s23: Observing Stars and Planets
<i>Fall 98</i>	12s23: Observing Stars and Planets
<i>Spring 97</i>	8.02: Physics II
<b>Computer Skills</b>	Proficient with UNIX/X11, Linux, Windows, and Macintosh operating systems. Proficient with LaTeX, PERL, C, HTML, JavaScript and CGI programming. Proficient with packages FTOOLS, IDL, MatLab, and others. Experienced with BASIC, FORTRAN, and PASCAL. Familiar with C++, LabView, and Java.
<b>Languages</b>	Fluent in German
<b>Honors and Awards</b>	1986-7 Congress-Bundestag Exchange Scholarship for one year of study in Germany. 1992-4 Beinicke Memorial Scholarship. \$32,000 for two years at any graduate institution. 1992 Student Marshals, Maroon Key Society. 2001-4 NSF Fellowship: 3 years at \$55,000/yr. 2009 Bruce B. Stewart Award for Excellence in Teaching
<b>Memberships</b>	Phi Beta Kappa, 1992 American Astronomical Society, 1997 Sigma Xi, 2000 American Association of Physics Teachers, 2004 Advanced Laboratory Experiments in Physics (ALPha), 2008
<b>Community Activities</b>	2002-4 Volunteer Co-coordinator for Friends' General Conference High School Program. Organized week-long retreat for 150 teenagers. Managed 15-person staff. 2001-5 Volunteered as technician at The Ark, a non-profit music venue. 1989- Theatrical technical work, amateur and (non-profit) professional. Positions included master electrician, lighting designer, and director. Winner "Best Lighting Design", Ann Arbor Civic Theater three successive seasons. Served on AACT Play Selection Committee for 2004-2005 season. 1994-2002 New England Yearly Meeting Youth Education volunteer. Organized, with a team, retreats for high school students. Planned programs, managed small groups, and led discussions.