

ADRIA C. UPDIKE

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EDUCATION and PROFESSIONAL EXPERIENCE

- Ph.D., Physics**, Clemson University, Clemson, SC December 2010
Dissertation title: *Gamma Ray Bursts as Probes of Dust in the Evolving Universe*
Adviser: Professor Dieter H. Hartmann
- M.S., Physics**, Clemson University, Clemson, SC May 2007
Thesis title: *Gamma Ray Burst Afterglow Observations*
Adviser: Professor Dieter H. Hartmann
- B.A., Physics and Astronomy**, Smith College, Northampton, MA May 2003
Thesis title: *How Twisted is the Sun? Calculation of Magnetic Helicity in a Force-Free Field*
Adviser: Professor Suzan Edwards
Cum Laude, Highest Honors
- Assistant Professor of Physics**, Roger Williams University, Bristol, RI. Aug 2012 - present
Taught undergraduate physics classes.
- Visiting Assistant Professor**, Dickinson College, Carlisle, PA. Aug 2011 - Aug 2012
Taught introductory astronomy and physics for the life sciences.
- Research Associate**, NASA GSFC / CRESST / UMDCP, Greenbelt, MD. Nov 2010 { Aug 2011
Constructing models of chemical evolution and dust growth in molecular clouds with Dr. Eli Dwek.
- Graduate Student**, Clemson University, Clemson, SC. Jan 2006 { Dec 2010
Studies of gamma ray burst afterglows and utility as probes with Prof. Dieter Hartman.
- Adjunct Instructor of Physics**, Montana State University, Bozeman, MT. Sept 2005 { Dec 2005
Taught undergraduate astronomy and physics labs.
- Graduate Student**, Montana State University, Bozeman, MT. Sept 2003 { Aug 2005
Worked on models of solar flares and magnetic helicity in solar structures.
- REU Student**, National Solar Observatory, Sunspot, NM. June 2002 { Aug 2002
Studies of helical magnetic structure on the Sun with Dr. Alexei Pevstov.
- Research Assistant**, Columbia University Biosphere II, Oracle, AZ. Sept 2001 { Dec 2001
Determining the distance to open clusters using dust reddening with Prof. Katy Garmany.

REU Student, Harvard-Smithsonian Astrophysical Observatory, Cambridge, MA. June 2001 { Aug 2001
Investigating the energy output of explosive events on the solar surface with Dr. Amy Winebarger.

Research Intern, University of Massachusetts at Amherst, Amherst, MA. June 2000 { Aug 2000
Looking for galaxies in the Zone of Avoidance with 2MASS and Arecibo data with Prof. Steve Schneider.

Undergraduate Student

3. *Multi-color observations of short GRB afterglows: 20 events observed between 2007 and 2010.* Nicuesa Guelbenzu et al. 2012 A&A, 548, 101.
4. *A deep search for the host galaxies of gamma-ray bursts with no detected optical afterglow.* Rossi et al. 2012 A&A, 545, 77.
5. *The fast evolution of SN 2010bh associated with XRF 100316D.* Olivares E. F. et al. 2012 A&A, 539, 76.
6. *Supersolar metal abundances in two galaxies at $z = 3.57$ revealed by the GRB 090323 afterglow spectrum.* Savaglio, S. et al. 2012 MNRAS, 420, 627.
7. *The late-time afterglow of the extremely energetic short burst GRB 090510 revisited.* Nicuesa Guelbenzu et al. 2012 A&A, 538, 7.
8. *BL Lacertae objects beyond redshift 1.3 - UV-to-NIR photometry and photometric redshift for Fermi/LAT blazars.* Rau, A. et al. 2012 A&A, 538, 26.
9. *GROND view of "dark bursts" and the related bias in host galaxy properties.* Greiner, J. MSAIS, 21,121.
10. *GRB 091127: The cooling break race on magnetic fuel.* Filgas, R. 2011 A&A, 535, 57.
11. *The SEDs and host galaxies of the dustiest GRB afterglows.* Kruhler, T. et al. 2011 A&A, 534, 108.
12. *Spitzer 24 μ m Survey for Dust Disks around Hot White Dwarfs.* Chu et al. 2011 AJ, 142, 75.
13. *GRB 090426: Discovery of a Jet Break in a Short Burst Afterglow.* Nicuesa Guelbenzu et al. 2011 A&A, 531, 6.
14. *On the nature of the extremely fast optical rebrightening of the afterglow of GRB 081029.* Nardini et al. 2011 A&A, 531, 39.
15. *GRB 071028B, a burst behind large amounts of dust in an unabsorbed galaxy.* Clemens et al. 2011 A&A, 529, 110.
16. *Monster in the Dark: The Ultraluminous GRB 080607 and Its Dusty Environment.* Perley et al. 2011 AJ, 141, 36.
17. *Photometric Redshifts for Gamma-Ray Burst Afterglows from GROND and Swift/UVOT.* Kruhler et al. 2011 A&A, 526, 153.
18. *The two-component jet of GRB 080413B.* Filgas et al. 2011 A&A, 526, 113.
19. *The Nature of Dark Gamma Ray Bursts.* Greiner et al. 2011 A&A, 526, 30.
20. *The Swift/Fermi GRB 080928 from 1 eV to 150 keV.* Rossi et al. 2011 A&A, 529, 142.
21. *The Afterglows of Swift-era Gamma-Ray Bursts. I. Comparing pre-Swift and Swift era Long/Soft (Type II) GRB Optical Afterglows.* Kann et al. 2010 ApJ, 720, 1513.
22. *A Very Metal Poor Damped Lyman Alpha System Revealed Through The Most Energetic GRB 090926A.* Rau et al. 2010 ApJ, 720, 862.

23. *Evidence for Supernova-Synthesised Dust from the Rising Afterglow of GRB 071025 at $z = 5$* . Perley et al. 2010 MNRAS, 406, 2473.
24. *Optical and near-infrared follow-up observations of four Fermi/LAT GRBs: redshifts, afterglows, energetics, and host galaxies*. McBreen et al. 2010 A&A, 516, 71.
25. *The Bright Optical/NIR Afterglow of the Faint GRB 080710 - Evidence For a Jet Viewed O₃ Axis*. Kruhler et al. 2009 A&A, 508, 593.
26. *Multiwavelength Analysis of the Intriguing GRB 061126: The Reverse Shock Scenario and Magnetization*. Gomboc et al. 2008 ApJ, 687, 443.
27. *A Photometric Redshift of $z = 1.8^{+0.4}_{-0.3}$ for the AGILE GRB 080514B*. Rossi et al. 2008 A&A, 491L, 29.
28. *The Rapidly Flaring Afterglow of the Very Bright and Energetic GRB 070125*. Updike et al. 2008 ApJ, 685, 361.
29. *Correlating Transition Region Explosive Events with Extreme-Ultraviolet Brightenings*. Winebarger, Updike, & Reeves. 2002 ApJL, 570, 105.

Presentations

Simulating Extinction in Gamma Ray Burst Host Galaxies. Updike & Hartmann. 2013 AAS 22115207U.

Exploring the Origin of Dust Ex7- Tf 9.157-I- Tf 9.1Soari-3(Ex7Negh)28(t)-28(o)rocccd

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Probing the Universe with Gamma-Ray Bursts. Hartmann & Updike. 2007, AIPC 937, 542.

Probing the Early Universe with GRBs. Updike, Hartmann, King, & Brittain. 2006, AAS, 20921206U.

Cosmic Chemical Evolution and Gamma-ray Bursts. Hartmann, Updike, Brittain, & King. Paper presentation, 2006 AAS/HEAD meeting.

Gamma Ray Bursts and the High Redshift Universe. FLASH talk, National Optical Astronomy Organization, University of Arizona. 2008

Journey to the Beginning of the Universe. Museum of the Rockies, Montana State University, July 2005.

Calculation of Magnetic Helicity. Montana State University, April 2003, Smith College Research Exhibition, April 2003, Smith College Thesis Defense, April 2003, Amherst College, September 2002.

Solar Explosive Events. Smith College Research Exhibition, April 2002, Smith College Astronomy Colloquium, October 2001.

MEMBERSHIPS

American Astronomical Society, Full Member (since 2001)
Sigma Pi Sigma (physics honor society, elected 2012)
Sigma Xi (scientific honor society, elected Junior year, 2002)
National Center for Science Education (since 2005)

HONORS

Clemson Graduate School Professional Enrichment Grants, 2008, 2009, 2010.

Sigma Xi Grant-In-Aid of Research, 2008.

Mary Dailey Irvine Prize, Five College Astronomy Department, Best Astronomy Thesis 2003 (Smith College, Amherst College, Mount Holyoke College, Hampshire College, University of Massachusetts at Amherst).

Highest Honors, Senior Thesis 2003.

Honorable Mention, National Science Foundation Graduate Research Program, 2003.

First Place in Physics, Sigma Xi Undergraduate Research Conference, Galveston, TX, 2002.

SERVICE

Referee for the *Astrophysical Journal* (2008 - 2013).

OUTREACH

Volunteered at the Goddard Open Day, 2011. Frequent planetarium shows, trained students in use of the planetarium, and developed new shows (Clemson University, 2006 - 2010). Judged science fairs at local elementary and junior high schools in Bozeman, MT and Clemson, SC at the local and state level. Led and participated in outreach events including public telescope observing (Clemson University, 2006 - 2010, Smith College, 1999 - 2003).

OBSERVATIONAL EXPERIENCE

I have extensive experience running optical and near-infrared imaging instrumentation on small and mid-sized telescopes as well as in data reduction (IRAF, IDL) and interpretation. I have written successful NOAO proposals for time on the 4m Mayall telescope, the 2.1m telescope, and the 3.5m WIYN telescope. In addition, I have operated the 1.2m MDM telescope at KPNO, the 2.3m Bok telescope, the 0.6 and 0.9m SARA telescopes (KPNO and CTIO), the 2.2m ESO/MPE telescope at La Silla Observatory in Chile, the 1.3m Skinakas telescope in Crete, the 0.6m Super-LOTIS telescope at KPNO, and the 0.5m UVI telescope

