

Dirk Pandel

E-mail: dpandel@umail.ucsb.edu
Website: <http://uweb.ucsb.edu/~dpandel/>

EDUCATION

Ph.D. in Physics, University of California, Santa Barbara, December 2004
Area of specialization: High-Energy Astrophysics
Dissertation: “X-ray Observations of Cataclysmic Variable Stars with the XMM-Newton Space Observatory”

M.S. in Physics, University of California, Irvine, June 1998

Diplom Physiker (Graduate physicist), Humboldt-Universität zu Berlin, July 1996
Area of specialization: High-Energy Physics and Particle Astrophysics
Thesis: “Determination of Water and Detector Parameters and Reconstruction of Muons up to 100 TeV with the Baikal Neutrino Telescope NT-72”

RESEARCH EXPERIENCE

Research Assistant, Department of Physics, UC Santa Barbara, 1998–2005

- Analyzed and interpreted extensive astrophysical data obtained with the XMM-Newton X-ray space telescope
- Studied in detail the physical processes giving rise to X-ray and ultraviolet radiation in magnetic and nonmagnetic Cataclysmic Variable Stars
- Contributed significantly to the in-flight calibration of the Optical/UV Monitor telescope on-board XMM-Newton and participated in instrument testing, performance verification, and observation planning

Research Assistant, DESY Institute for High Energy Physics, Germany, 1994–1996

- Developed methods for calibration and event reconstruction, determined detector parameters, and carried out performance studies, detector simulations, and software development for an underwater cosmic neutrino detector

TEACHING EXPERIENCE

Teaching Assistant, Department of Physics, UC Santa Barbara, 2003–2004

- Taught college-level physics theory and laboratory classes

Teaching Assistant, Department of Physics, UC Irvine, 1996–1998

- Taught college-level physics theory and laboratory classes

ADDITIONAL SKILLS

Extensive computer skills including Unix/Linux, Windows, C, C++, Fortran, Perl, IDL, XSPEC, Latex, HTML

Fluent in German

Participated in the Graduate Program in Management Practice at UC Santa Barbara

RESEARCH GRANTS

XMM-Newton guest observer grant (NASA), “The Structure of the Accretion Region in AM Her Type Binaries”, \$42,000, awarded March 2003

REFEREED PUBLICATIONS

D. Pandel, F. Córdova, K. Mason, W. Priedhorsky, 2005, “X-ray Observations of the Boundary Layer in Dwarf Novae at Low Accretion Rates,” *Astrophysical Journal*, 626, 396–410

D. Pandel, F. Córdova, 2005, “Irregular Mass Transfer in the Polars VV Pup and V393 Pav during the Low State,” *Astrophysical Journal*, 620, 416–421

D. Pandel, F. Córdova, S. Howell, 2003, “X-ray and Ultraviolet Observations of the Dwarf Nova VW Hyi in Quiescence,” *Monthly Notices of the Royal Astronomical Society*, 346, 1231–1241

D. Pandel, F. Córdova, 2002, “XMM-Newton Observes Flaring in the Polar UZ For during a Low State,” *Monthly Notices of the Royal Astronomical Society*, 336, 1049–1055

D. Pandel, F. Córdova, R. Shirey, G. Ramsay, M. Cropper, K. Mason, R. Much, D. Kilkenny, 2002, “First XMM-Newton Observations of Strongly Magnetic Cataclysmic Variables – II. Timing Studies of DP Leo and WW Hor,” *Monthly Notices of the Royal Astronomical Society*, 332, 116–126

G. Ramsay, M. Cropper, F. Córdova, K. Mason, R. Much, D. Pandel, R. Shirey, 2001, “First XMM-Newton Observations of Strongly Magnetic Cataclysmic Variables – I. Spectral Studies of DP Leo and WW Hor,” *Monthly Notices of the Royal Astronomical Society*, 326, L27-L32

G. Ramsay, et al. (includes D. Pandel), 2001, “First XMM-Newton Observations of a Cataclysmic Variable II: The X-ray Spectrum of OY Car,” *Astronomy and Astrophysics*, 365, L294–L297

G. Ramsay, et al. (includes D. Pandel), 2001, “First XMM-Newton Observations of a Cataclysmic Variable I: Timing Studies of OY Car,” *Astronomy and Astrophysics*, 365, L288–L293

K. Mason, et al. (includes D. Pandel), 2001, “The XMM-Newton Optical/UV Monitor Telescope,” *Astronomy and Astrophysics*, 365, L36–L44

V. Balkanov, et al. (includes D. Pandel), 1999, “In-situ Measurements of Optical Parameters in Lake Baikal with the Help of a Neutrino telescope,” *Applied Optics*, 38, 6818–6825

OTHER PUBLICATIONS

M. Cropper, G. Ramsay, C. Hellier, K. Mukai, C. Mauche, D. Pandel, 2004, "X-ray Observations of Accreting White-Dwarf Systems," in *Frontiers of X-ray astronomy*, eds. A. Fabian, K. Pounds, R. Blandford, Cambridge University Press, 71–88

F. Córdova, D. Pandel, 2003, "Three Polars and a Dwarf Nova: Multiwavelength Studies of Eclipsing Cataclysmic Variable Stars with XMM-Newton," in *From X-ray Binaries to Gamma-Ray Bursts: Jan van Paradijs Memorial Symposium*, eds. E. van den Heuvel, L. Kaper, E. Rol, R. Wifers, ASP Conf. Proc. 308

M. Cropper, G. Ramsay, C. Hellier, K. Mukai, C. Mauche, D. Pandel, 2002, "X-ray Observations of Accreting White-Dwarf Systems," in *X-ray astronomy in the new millennium*, eds. R. Blandford, A. Fabian, K. Pounds, Royal Society of London Phil. Trans. A, 360, 1798, 1951-1956

R. Shirey, F. Córdova, J. Kennea, D. Pandel, T. Sasseen, J. West, 2001, "Faint-Source Contributions to the Extragalactic X-ray Background in an XMM-Newton Deep Field," in *X-ray Astronomy: Stellar Endpoints, AGN, and the Diffuse X-ray Background*, eds. N. White, G. Malaguti, G. Palumbo, AIP Conf. Proc. 599, 927–930

PRESENTATIONS

D. Pandel, F. Córdova, S. Howell, "XMM-Newton Observations of the Dwarf Nova VW Hyi," American Astronomical Society, High Energy Astrophysics Division, Mt. Tremblant, Canada, March 2003

D. Pandel, F. Córdova, "X-ray Emission from the Boundary Layer in Disk-accreting Cataclysmic Variables," American Physical Society and American Astronomical Society, High Energy Astrophysics Division, Albuquerque, New Mexico, April 2002

D. Pandel, F. Córdova, R. Shirey, G. Ramsay, M. Cropper, K. Mason, D. Kilkeny, "XMM-Newton Observations of the Strongly Magnetic Cataclysmic Variables DP Leo and WW Hor," American Astronomical Society, Pasadena, California, June 2001

F. Córdova, D. Pandel, "XMM-Newton Observations of Compact Stars," American Astronomical Society, San Diego, California, January 2001

D. Pandel, F. Córdova, K. Mason, T. Sasseen, R. Shirey, J. West, "Discovery of a Possible Dwarf Nova with the XMM-Newton Optical Monitor," American Astronomical Society, High Energy Astrophysics Division, Honolulu, Hawaii, November 2000

F. Córdova, D. Pandel, et al., "XMM-Newton Observations of the Eclipsing Dwarf Nova OY Carinae," American Astronomical Society, High Energy Astrophysics Division, Honolulu, Hawaii, November 2000