

Manasvita Joshi

CONTACT INFORMATION

Ohio University
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EDUCATION

Ohio University, Athens, Ohio, USA

Ph.D. Candidate, Astrophysics, 2002 (expected graduation date: July 2008)

- Dissertation Topic: "Spectral Variability Studies and Acceleration Scenarios in Jets of Blazars"
- Advisor: Markus Böttcher

Indian Institute of Technology, Delhi, Delhi, India

M.Sc., Physics, 2000–2002

Delhi University, Delhi, Delhi, India

B.Sc., Physics, 1997–2000

EMPLOYMENT

Research Assistant

Department of Physics and Astronomy, Ohio University, Athens, OH

September 2003–present

Teaching Assistant

Department of Physics and Astronomy, Ohio University, Athens, OH

September 2002–July 2007

RESEARCH EXPERIENCE

- Theoretical investigations of particle acceleration and time-dependent radiation transfer in relativistic jets using an internal shock model. This included taking into account the inhomogeneity in the photon density throughout the accelerated (emission) region, the analytical evaluation of the average photon escape timescale for a cylindrical emission region and numerically obtaining a simplified expression for the synchrotron power from a power-law distribution of electrons.
- In-depth theoretical analysis of the BL Lac object 3C 66A on the basis of the data obtained from an international multiwavelength campaign in 2003/2004.
- Contributed to the initial data collection and analysis of the preliminary results of 3C 66A.
- Participated in 5 1-week observing runs at the Kitt Peak MDM observatory and contributed to the primary reduction of data from those runs.
- Designed and completed a short-term project to study the optical warp of a spiral galaxy NGC 5529 in the *I* band using the 0.25 meter Great Ohio Telescope (GOT) of Ohio University.

TEACHING EXPERIENCE

- Significant effort in the supervision of two undergraduate students for their research project in astrophysics Ohio University
- Lab instructor and recitation sessions for various undergraduate classes Ohio University
 - Physics 250 Series: General Physics, calculus based (Classical mechanics, Thermodynamics, and Electricity & Magnetism)

- Physics 200 Series: Introductory Physics, algebra based
(Classical mechanics, Thermodynamics and Electricity & Magnetism)
- Astro 100: General Introduction to Astronomy (sun, stars and galaxies,
interstellar matter, blackholes, “Big Bang” theory, evolution of the universe)

- Conducted undergraduate student help sessions and graded physics and astronomy undergraduate courses for Physics 250 & 200 series and Astro 100. Ohio University
- Substitute lecturing for a Physics 251 (Classical mechanics) and Astro 100 (sun) class Ohio University
- Grading of graduate level Quantum mechanics for a class of 10 students Ohio University

COMPUTER SKILLS

- Expert knowledge of C/C++, familiar with Fortran90
- Experienced with Unix/Linux operating systems
- Advanced knowledge of IRAF, familiar with Mathematica
- Proficient in Windows XP and its related applications
- Well-versed in using Microsoft Power Point, Excel, and Word
- Experienced with L^AT_EX and HTML

LANGUAGE SKILLS

- Native language: Hindi
- Fluent in English

AWARDS AND GRANTS

- Ohio University Travel Grant (financial support to attend the International School of Cosmic Ray Astrophysics, Erice, Sicily, June 2006) Spring 2006
- Second Place Honors for an Outstanding Presentation at the Student and Creative Activity Fair, Ohio University Spring 2006
- Outstanding Teaching Assistant Award, College of Arts and Sciences, Ohio University Spring 2003

ACADEMIC, PROFESSIONAL SERVICE

- refereed a paper on a BL Lac object for Astronomy and Astrophysics (A&A) in 2007.
- assisted in Teacher Professional Development Program, through the Building Exemplary Elementary Foundation in Science Program at Ohio University in 2007.
- judge for various district and state science fairs in 2003, 2004 and 2006.
- active participation in the public outreach programs organized by the Astrophysical Institute (ApI), Ohio University, from 2003 until present.
- assisted with the Ohio University Physics and Astronomy Open House in 2005 and 2007.
- webmaster of Women in Physics and Astronomy (WIPHA), Ohio University, from 2005 till present.

PROFESSIONAL
MEMBERSHIP

- American Astronomical Society (AAS)
- AAS High-Energy Astronomy Division
- The Ohio Academy of Sciences

COMMUNITY
INVOLVEMENT

- actively involved in the ongoing efforts to increase the pedestrian safety in the city of Athens, Ohio 2007
- helped raising funds for digging wells in drought affected areas of India and buying chair lifts for the physically handicapped people of Athens, Ohio 2005
- helped raising 25,000 USD for “Athens Public Library Expansion Project” at Athens, Ohio 2004
- helped, as a voice-over artist, in the production of a documentary about girls in a rural village of India and their growing awareness of literacy due to a radio program called Taru, Ohio University 2004
- cultural participation in the annual Indian Student Association (ISA) program, Ohio University 2005

PRESENTATIONS,
WORKSHOPS

Colloquia & Seminars

- Indian Institute of Technology, Delhi, Department of Applied Physics, Colloquium February 2006
- Ohio University, Athens, OH, Astrophysics Seminar (quarterly) January 2003 – present

Conferences

- “The First GLAST Symposium”, Stanford University, contributed poster February 2007
- “Blazar Variability Workshop II: Entering the GLAST Era”, Florida International University, contributed talk April 2005
- “Extragalactic Astrophysics and the New Era of High-Energy Astronomy”, Ohio Section of APS, Spring Meeting, Athens, OH, contributed poster April 2004

Summer School

- “15th Course of International School of Cosmic Ray Astrophysics - Astrophysics at Ultra-High Energies, Erice, Italy, contributed talk June 2006

PROFESSIONAL
REFERENCES

1. Markus Böttcher, Associate Professor (PhD Thesis advisor)
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2. Joseph C. Shields, Professor & Chair (Teaching & Research)
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3. Thomas S. Statler, Professor (Teaching & Research)
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