

Lisbeth Jensen

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RESEARCH INTERESTS

Cosmology and Cosmic Microwave Background, Active galaxies and their Active Galactic Nuclei, large samples and large scale structure data analysis.

EDUCATION

M.S., Physics - 2008

California State University, Northridge

Advisors: Prof. Edward L. Wright (UCLA), Prof. Miroslav Peric (CSUN)

Thesis Topic: "Investigating a Temperature Fluctuation on the Spacecraft WMAP."

B.S., Astrophysics - 2004

University of California, Los Angeles

Advisor: Prof. Mathew M. Malkan

Research Topic: "Emission flux ratios and luminosity functions of Seyfert Galaxies."

RESEARCH EXPERIENCE

- 2010 - 2015 **Visiting Research Scholar** - Dep. of Physics and Astronomy, UCLA.
Cosmology and Spacecraft: Modeled of an excess emissivity emitted by the primary mirrors on the space telescope WMAP. Computed optical characteristics of the coatings on the primary mirrors affected by the temperature offsets between pre-launch and on-orbit data in the V and W bands (64-100 GHz range).
- Active Galaxies:* Compiled data of Seyfert I and II galaxies of the 12 μm sample, at low redshift ($z < 0.19$). Compared the result against $> 200,000$ AGN galaxies in the Sloan Digital Sky Survey data base. Constructed and analyzed Luminosity Functions, Flux Ratios, and Reddening Diagrams at multiple wavelengths (Infrared to X-ray).
- 2006 - 2008 **Graduate Student Researcher, Thesis** - CSUN/UCLA
Investigated the effect of a ~ 200 μK spin-synchronous temperature variation (SST) detected on the primary optics on the space telescope WMAP. Simulated WMAP's attitude dynamics and constructed full-sky maps in HEALPix format of the SST, and determined its maximum amplitude at the spherical harmonic index $\ell=2$ in the Angular Power Spectrum.
- 2006 **Graduate Student Researcher** - CSUN
Measured Gamma-Ray radiation in terms of the high-energy particles Pions, as they travel through Earth's atmosphere, and verified their relativistic behavior seen in a Pion's velocity and decay rate.
- 2005 **Research Assistant** - UCLA
Performed data reduction of ~ 500 images at optical wavelengths of an M dwarf eclipsing binary star system using IRAF data reduction package.
- 2003 - 2004 **Undergraduate Student Researcher** - UCLA
Conducted a research study of ~ 200 active galaxies (Seyfert I and II galaxies), at low redshift ($z < 0.19$) by compiling statistical data of uncorrected emission-line fluxes. Constructed and analyzed Luminosity Functions and Flux Ratios at Optical and Ultraviolet wavelengths.

TEACHING EXPERIENCE

- 2009 - **Academics Tutor** - Tutoring in Los Angeles (TutoringinLA.com)
- 2010
- Tutored high-school and college students in mathematics and statistics.
- Spring 2006 **Instructor, Undergraduate Astronomy Course 152** - CSUN
- Taught a lecture based introductory astronomy course about stellar evolution, galaxies and cosmology. Responsible for preparing and delivering all lectures, homework and exams.
- 2005 - **Teaching Associate, Undergraduate Astronomy Course 154L** - CSUN
- 2007
- Prepared and taught three general education laboratory classes on a weekly basis that used computer-based simulations of real astronomical data.
 - Personally developed and wrote a laboratory exercise where the students verify the precession of Earth's axis by simulating the movement of the star Polaris over a 14,000 year period.
- 2001 - **Science Tutor, Astronomy** - Santa Monica College
- 2002
- Tutored both science and non-science students in two introductory astronomy courses: *Astron 3* with focus on stars, star formation, galaxies and cosmology, *Astron 4* with focus on planetary-science applied to our solar system.

AWARDS

- 2007
- American Association for Physics Teachers National Award for Outstanding Teaching Assistant, CSU Northridge.
- 2006
- Thesis Support Program, CSU Northridge.
- 2005
- Excellence in Science Foundation Award, CSU Northridge.
- 2001
- Maria Fernandez-Heartjeans Scholarship Award, Santa Monica College, CA.

FORTHCOMING PUBLICATIONS

Malkan, M. M.; **Jensen, L D.**; Rodriguez, D.R. ; Spinoglio, L.;_Rush, B.; "*Emission Line Properties of Seyfert Galaxies In the 12 Micron Sample*". Submitted to The Astrophysical Journal.

Jensen, L.D.; Wright, E. L.; "*Investigating a Spin-Synchronous Temperature Variation on the Wilkinson Microwave Anisotropy Probe (WMAP)*". In preparation.

PUBLIC OUTREACH AND OTHER EXPERIENCES

- 2016
- UCLA Planetarium and Astronomy Live! Outreach Program Presenter**, UCLA 's Planetarium and Mobile Planetarium shows for school groups and the public.
- 2001 - **President**, Santa Monica College Astronomy Club
- 2002
- Focused on making the college club as educational as possible by inviting researchers from outside institutions to give public talks for the club's members.

COMPUTER EXPERIENCE

FORTRAN, HTML, CSS, UBUNTU, Mac OS X, Windows OS, LATEX (Texshop), GNUplot, Libre and MS Office Suites. *Familiar with:* PASCAL, C, C++, UNIX, JavaScript, Php, RUBY.

PERSONAL INTERESTS

Web-Development (front & backend), Music (mostly jazz - voice & piano), Art, Physical activities (yoga, aerobics/fitness, hiking, dancing).