

John W. Hewitt

- CONTACT INFORMATION Dept. of Physics & Astronomy *Phone:* (847) 491-4661
Northwestern University *Fax:* (847) 491-3135
2145 Sheridan Road *E-mail:* j-hewitt@northwestern.edu
Evanston, IL 60208-3112 USA *Website:* www.astro.northwestern.edu/~jhewitt
- RESEARCH INTERESTS Supernova Remnants; the Interstellar Medium; Astrophysical Masers; Shock Waves; Interstellar Chemistry; Molecular Clouds; Magnetic Fields; Cosmic Ray origin and propagation; the Galactic Center; Nearby Galaxies; Radio/sub-mm interferometry and polarization.
- EDUCATION **Northwestern University**, Evanston, Illinois USA
Ph.D. Candidate, Physics & Astronomy, expected graduation: Summer 2009
 - Dissertation Title: "Interacting Supernova Remnants"
 - Advisor: Farhad Yusef-ZadehM.S., Physics, May, 2007
B.A., Physics and Math, May, 2004
- AWARDS AND FELLOWSHIPS Spitzer Visiting Graduate Student Fellowship, 2007-2008
Huang Fellowship for Graduate Research, 2005
Outstanding Senior Thesis, Dept. of Physics & Astronomy, 2004
Graduated with Honors, Northwestern University, 2004
- REFEREED PUBLICATIONS "Spitzer Observations of Molecular Hydrogen in Interacting Supernova Remnants," Hewitt, J.W., Rho, J., Andersen, M. and Reach, W.T. accepted to ApJ 12/29/2008.
"A Catalog of 24 micron Sources Toward the Galactic Center," Hinz, J.L., Rieke, G.H., Yusef-Zadeh, F., Hewitt, J.W., Balog, Z. & Block, M. 2008, ApJS, accepted 11/6/2008
"A Survey of Hydroxyl toward Supernova Remnants: Evidence for Extended 1720 MHz Maser Emission," Hewitt, J.W., Yusef-Zadeh, F. & Wardle, M. 2008, ApJ, 683, 189
"Green Bank Telescope Observations of IC 443: The Nature of OH (1720 MHz) Masers and OH Absorption," Hewitt, J.W., Yusef-Zadeh, F., Wardle, M., Roberts, D.A. & Kassim, N.E. 2006, ApJ, 652, 1288
"A 20 Centimeter Survey of the Galactic Center Region I. Detection of Numerous Linear Filaments," Yusef-Zadeh, F., Hewitt, J.W. & Cotton, W. 2004, ApJS, 155, 421
- SUBMITTED PAPERS "Discovery of New Interacting Supernova Remnants in the Inner Galaxy," Hewitt, J.W. and Yusef-Zadeh, F. submitted to ApJ Letters.
- CONFERENCE PRESENTATIONS "The Nature of Shocks in Supernova Remnants 3C 396, Kes 69 and G346.6-0.2 revealed by Spitzer," Hewitt, J.W. Rho, J., Andersen, M., and Reach, W.T. 2007, 211th AAS Meeting, Talk 115.01
"Extended OH(1720 MHz) Maser Emission from Supernova Remnants," Hewitt, J.W., Yusef-Zadeh, F., Wardle, M. and Roberts, D.A. 2007, IAU 242: Astrophysical Masers, Talk and Proceedings

"GBT Observations of Radio Recombination Line Emission Associated with Supernova Remnants W28 and W44," Hewitt, J.W. and Yusef-Zadeh, F. 2006, 208th AAS Meeting, Poster 47.05

"The Sites of Massive Star Formation Toward the Galactic Center Region Using Methanol Masers," Hewitt, J.W., Yusef-Zadeh, F., Stolovy, S., Arendt, R. G., Cotera, A., Gezari, D., Karr, J., Law, C., Moseley, H., Ramirez, S., Sellgren, K., Smith, H. A., and Smith, R. 2006, 207th AAS Meeting, Poster 181.01

"A 20cm Survey of the Galactic Center Region using the VLA and GBT," Hewitt, J.W., Yusef-Zadeh, F., Roberts, D.A., Law, C.J., Cotton, W.D. and Maddalena, R.J. 2004, 204th AAS Meeting, Poster 59.03

PROFESSIONAL
ACTIVITIES

VLA Observations of Interacting Supernova Remnants (PI: J.W. Hewitt)
Primary investigator **2004 - Present**
Coordinated VLA observations of hydroxyl maser emission and other signatures of interacting supernova remnants as part of my dissertation project.

Green Bank Telescope Observations
PI and Guest Observer **2003 - Present**
Investigations into supernova remnants, the galactic center and radio recombination line emission. I obtained several GBT Student Support grants for this research.

Spitzer IRS Survey of Supernova Remnants (PI: J. Rho)
co-Investigator **2007 - 2008**
Analysis of the IR emission from interacting supernova remnants between 5 and 95 microns. I was responsible for analysis of the excitation of molecular hydrogen and ionic lines and shock modeling.

MIPS Survey of the Galactic Center (PI: F. Yusef-Zadeh)
Contributor **2005 - Present**
Analysis of the mid-IR properties of supernova remnants and massive star formation in the Galactic center as traced by masers and "extended green objects" (molecular outflows).

TEACHING

Teaching Assistant **2005 - 2006**

- Modern Cosmology, Northwestern University, Spring 2006
- Milky Way Galaxy, Northwestern University, Winter 2006
- Highlights of Astronomy, Northwestern University, Fall 2005

PUBLIC OUTREACH
ACTIVITIES

Dearborn Observatory Public Observing **2001 - Present**
Public Observing Host
Guided tours with the historic 18.5" refracting telescope offered weekly for the public through the year. I have extensive experience discussing science with the public and with telescope maintenance.

Adler Planetarium Volunteer **2006 - 2007**
Telescope Interpreter
Facilitated observing for visitors to the Adler Planetarium. The goal was to increase understanding of telescopes and allow visitors to interact with a knowledgeable astronomer.

World Year of Physics Day, Northwestern **May, 2005**
Planning Committee
Established the first open house with demonstrations targeted at middle school students.

COMPUTER SKILLS

- Astronomical Software: AIPS, CIAO, GIPSY, MIRIAD, WIP, Spitzer Analysis Tools
- Computer Languages: IDL, Python, L^AT_EX, HTML, and some use of BASIC, C and shell scripts