Curriculum Vitae

Dr. Jeonghee Rho

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Education

1988-1995	**Ph.D., Astronomy**	University of Maryland, College Park, Maryland
1986-1987	**M. S., Physics**	Clemson University, Clemson, South Carolina
1981-1985	**B. A., Astronomy**	Yonsei University, Seoul, South Korea

Professional Experience

2012-present	**Research Scientist**	SETI Institute and
	Scence Outreach Support Lead	SOFIA science Center/NASA Ames
	NASA Group Award	*as a member of SOFIA outreach team*
2010-2012	**Associate Scientist**	USRA, SOFIA Science Center/NASA Ames
	support for FLITECAM,	GREAT and SSPOT development
2002-2010	**Research Scientist**	*Spitzer* Science Center at Caltech
2003	*NASA Group Award*	*as a member of Spitzer MIPS team*
1999-2001	**Staff Scientist**	Infrared Processing and Analysis Center,
	2MASS	California Institute of Technology
2000	*NASA Group Award*	*as a member of 2MASS* team
1998-1999	**Post-doc/**	University of California, Santa Barbara, Physics Department,
	Software Scientist	working on X-ray Multi-Mirror Mission
1996-1997	**Post-doc**	Service d'Astrophysique, Centre d'Etudes de Saclay, France
1991-1995	**Research Assistant**	University of Maryland, Astronomy Department
1988-1990	**Teaching Assistant**	University of Maryland, Astronomy Department
		College Park, MD
1986-1987	**Teaching Assistant**	Clemson University, Physics and Astronomy Department
		Clemson, SC

Research Area

Supernova Remnants, Supernovae, Shock Physics, Pulsars, Massive Star Formation, HII regions, and Interstellar Medium. Nucleosynthetic products, Dust and Molecule Formation in Supernovae to probe the Early Universe.
Infrared, Millimeter, and X-ray Observations.

NASA Group Achievement Awards

NASA Group Award as a member of *Two Micron All Sky Survey* project at IPAC/Caltech (2000)
NASA Group Award as a member of *Spitzer Space Telescope* MIPS group at Spitzer Science Center,

Caltech (2005)
NASA Ames Award as a member of SOFIA Outreach group at NASA Ames Research Center (2012 and 2014)

Professional Organizations

American Astronomical Society (AAS)
International Astronomical Union (IAU)
A member of LSST Science Collaboration Team in the "Supernovae" group
A member of the Association and Korean Physicists in America (AKPA)
A member of Korean-American Scientists and Engineers Association (KSEA)

Community Organizations

Chuch Leader for Youth Ministry as Lead of Small Group Leaders and president of PTA at a large church with 300 Youth junior-high and high school students

Professional Activities

2017	**Served a referee of Nature and ApJ**
2016	**Co-organized a conference** *Preparing for SN Science in the LSST era: A kick-off workshop*, Nov 16-18, 2016, Pittsburg, PA
2016-2017	**Served on NuStar TAC and NSF review committee**
2015 Spring	**Teaching a graduate course** "**Insterstellar medium, Supernovae and Star Formation"** (3 credits) at *Yonsei* University, Seoul, Korea
2013 summer	**Supervised a REU student**
2011 - 2013	**Served as E-link Secretary for Association and Korean Physicists in America**
2011 - 2013	**Principal (and Co-) Investigator of Herschel Space Telescope**
2010 - present	**Co-Investigator of SOFIA observations**
2008 - present	**Guest Observer with CTIO and SOAR telescopes in Chile**
2009 - present	**Guest Observer with Caltech Submillimeter Observatory**
2003 - present	**Guest Observer with** *Spitzer* **Space Telescope**
2009	**Served on NSF proposal review committee**
2007 - 2010	**Supervised a post-doc and a graduate student**
2006 - present	**Served on Chandra time allocation committee**
2006	**Served on XTE time allocation committee**
2005- present	**Guest Observer with Anglo-Australian Telescopes** Near-infrared Imaging and Spectroscopy of supernova remnants
2005 - 2006	**Supervised a post-doc**
2003 - present	**Guest Observer of Millimeter Telescope SMT** Observations of supernova remnants
2003 - 2005	**Supervised two post-doc fellows:** currently college professors
2002 summer	**Supervised a Caltech undergraduate student**
1999-present	**Serving as a Referee for the Astronomy and Astrophysics**
1999-present	**Guest Observer with Palomar Telescopes** Near-infrared Imaging and Spectroscopy of supernova remnants

1998-present	**Serving as a Referee for the Astrophysical Journal Letter**
1998-2000	**Served on ASCA time allocation committee**
1998-present	**Principal Investigator of *Chandra* observations**
	Observation of Supernova remnants, HII regions, and Clusters of galaxies
1996-present	**Serving as a Referee for the Astrophysical Journal**
1996-present	**Serving as a Referee for the Astronomical Journal**
1996-present	**Principal Investigator of XTE observations**
	Observation of a Supernova Remnant and GRO source
1995-1996	**Co-Investigator of ISO observations**
	Observations of Supernova Remnants
1993-2000	**Principal Investigator of ASCA and ROSAT observations**
	Observations of Supernova Remnants
1995-2000	**Guest Observer of IRAM and Kitt Peak 12m Telescopes**
	CO Observations of shocked molecular clouds interacting with supernova remnants
1989-1991	**Guest Observer of Interferometer Millimeter Telescopes** (BIMA)
	Observations of galaxies

Professional Expertise and Experience

• Outreach Experience in SOFIA team

I have served as a science outreach support lead within the SOFIA outreach group and a liaison from the SOFIA Science Team to the Education and Public Outreach (E&PO) group. In this position, I supported SOFIA missions for astronomical community and the general public. I have organized SOFIA special or splinter sessions at the AAS or DPS meetings and represented SOFIA at international topical conferences. I have also organized and presented SOFIA tours in connection with various astronomy meetings. I have regularly written and distributed SOFIA's electronic version of science newsletters. I have been in charge of writing web-feature articles about important SOFIA science publications, and the articles are published at the SOFIA website. The experience demonstrates my ability for effective written and verbal communication skills.

• Astronomical Calibration and Pipeline Testing and Validation for Spitzer MIPS

My primary responsibilities in the *Spitzer* MIPS (Multiband Imaging Photometer for *Spitzer*) team included planning, implementing, and deriving the facility calibrations. From this experience I became an expert in mid- and far-infrared calibration and I made significant contributions to the successful MIPS calibration. The knowledge includes methods for selection of calibration stars, fitting the MIPS data to templates of calibrations stars (I used Martin Cohen's templates and solar models), cross-calibration with optical data, 2MASS and IRAS, stellar atmospheric models, characterizing point-spread-functions, calibration dependency of the array position, and deriving aperture and color corrections.

During the processes of validating the *Spitzer* calibration, I implemented adjusting data acquisition methods. As part of this work, I tested the MIPS pipelines, characterized pipeline problems for improvement and provided algorithms to update various issues of the pipeline. The topics include frequency of anneal intervals, flux linearity correction, and flat-fielding dependency on the array and astronomical backgrounds.

• **Science Data Analysis and Quality Assurance for 2MASS**

I worked on Two Micron All Sky Survey (2MASS) for Science Data Analysis and Quality Assurance when I was at IPAC/Caltech. 2MASS is a near-infrared digital imaging survey of the entire sky conducted at 1.25, 1.65 and 2.17 microns using a pair of matched 1.3-m diameter telescopes in Arizona and Chile. 2MASS project and the excellent quality of its data – such as its high-precision astrometry and accurate photometry – is well-known to the astronomy community. During 2MASS mission, I assessed the reliability associated with seeing, one-band detection, the sensitivity to faint sources, and exposure dependency. I performed various testing in determining the saturation threshold including noise characteristics in the array, verifying point-spread-function fitting statistics, and in assuring complete sky coverage. As a member of the 2MASS team, I thoroughly examined 2MASS data for Quality Assurance (QA): I assigned overall grades for the data quality and I contributed to adapting the QA system to resolve unexpected issues using automated QA web sites.