

Jeong-Gyu Kim | Curriculum Vitae

Department of Physics and Astronomy, 1 Gwanak-ro, Gwanak-gu

Seoul, 08826 – Republic of Korea

☎ +82 (10) 8638 0722 • ✉ jgkim@astro.snu.ac.kr

📄 jeonggyukim.github.io

Education

Seoul National University

Seoul, Korea

Ph.D. in Astronomy

08/2018, expected

Advisor: Prof. Woong-Tae Kim

Thesis: Disruption of Molecular Clouds by Radiative Feedback from Massive Stars

M.S. in Astronomy

02/2012

B.S. in Astronomy, cum laude

02/2010

Research Experience

Princeton University

Princeton, NJ, USA

Visiting Student Research Collaborator

2014–2016 (2mo/yr)

Mentor: Prof. Eve Ostriker

Scholarships and Fellowships

National Junior Research Fellowship (Grants obtained as PI: \$41,300/yr)

National Research Foundation of Korea

2014–2018

Project name: “Expansion of Dusty Magnetized H II Regions and Their Dynamic Impact on the Interstellar Medium”

SNU Fellowship for the Next Generation of Basic Research

Seoul National University

2013

Scholarship for Superior Academic Performance

Brain Korea 21

2012

Lotte Scholarship

Full tuition awarded by Lotte Foundation

2010–2011

National Scholarship For Science and Engineering

Full tuition awarded by National Research Foundation of Korea

2003–2004, 2008–2009

Publications

Refereed Publications (ADS Link)

7. *Modeling Radiative Feedback from Massive Stars: II. Dispersal of Star-Forming Giant Molecular Clouds by Photoionization and Radiation Pressure*

Kim, J.-G., Kim, W.-T., & Ostriker, E. C. 2018, *submitted to ApJ*

6. *Modeling Radiative Feedback from Massive Stars: I. Implementation of Adaptive Ray Tracing Method and Tests*
Kim, J.-G., Kim, W.-T., Ostriker, E. C., & Skinner A. M. 2017, ApJ, 851, 93
5. *Disruption of Molecular Clouds by Expansion of Dusty H II Regions*
Kim, J.-G., Kim, W.-T., & Ostriker, E. C. 2016, ApJ, 819, 137
4. *Instability of Magnetized Ionization Fronts Surrounding H II regions*
Kim, J.-G., Kim, W.-T. 2014, ApJ, 797, 135
3. *Nature of Wiggle Instability of Galactic Spiral Shocks*
Kim, W.-T., Kim, Y., & **Kim, J.-G.** 2014, ApJ, 789, 68
2. *Instability of Evaporation Fronts in the Interstellar Medium*
Kim, J.-G., Kim, W.-T. 2013, ApJ, 779, 48
1. *Gravitational Instability of Rotating, Pressure-Confined, Polytopic Gas Disks with Vertical Stratification*
Kim, J.-G., Kim, W.-T., Seo Y. M., & Hong, S. S. 2012, ApJ, 761, 131

Papers in Preparation.....

- Modeling Radiative Feedback from Massive Stars: III. Escape of UV Radiation from Star-Forming Giant Molecular Clouds*
Kim, J.-G., Kim, W.-T., & Ostriker, E. C. 2018, *in prep*

Selected Conferences and Seminars

14. Poster, *Dispersal of Giant Molecular Clouds by Photoionization and Radiation Pressure*
231st AAS Meeting, Washington D.C., USA, Jan 11, 2018
13. Seminar Talk, *Dispersal of Giant Molecular Clouds by Photoionization and Radiation Pressure*
Osaka University, Japan, Dec 21, 2017
12. Talk, *Dispersal of Molecular Clouds by Photoionization and Radiation Pressure*
Star Formation in Different Environments, Quy Nhon, Vietnam, Aug 7, 2017
11. Talk, *Dispersal of Molecular Clouds by UV Radiation Feedback from Massive Stars*
2017 Korean Astronomical Society Spring Meeting, Seoul, Korea, Apr 13, 2017
10. Seminar Talk, *Modeling Radiative Feedback from Massive Stars*
Star Formation/ISM Rendezvous, Princeton University, USA, Nov 28, 2016
9. Poster, *Disruption of Molecular Clouds by Radiative Feedback from Massive Stars*
Star Formation 2016, Exeter, UK, Aug 22–26, 2016
8. Talk, *Modeling Radiative Feedback from Massive Stars: Implementation of Adaptive Ray Tracing Method into the Athena Code*
ASTRONUM 2016: 11th Annual International Conference on Numerical Modeling of Space Plasma Flows, Monterey, USA, Jun 8, 2016
7. Seminar Talk, *Disruption of Molecular Clouds by Expansion of Dusty HII Regions*
Star Formation/ISM Rendezvous, Princeton University, USA, Oct 28, 2015

6. Poster, *Instability of Magnetized Ionization Fronts*
225th AAS Meeting, Seattle, USA, Jan 4–8, 2015
5. Seminar Talk, *Instability of Evaporative Layers in the Interstellar Medium*
Star Formation/ISM Rendezvous, Princeton University, USA, Nov 5, 2014
4. Poster, *Instability of Magnetized Ionization Fronts*
12th Asia-Pacific Regional IAU Meeting, Daejeon, Korea, Aug 18–22, 2014
3. Attended, KITP program: *Gravity's Loyal Opposition: The Physics of Star Formation Feedback*,
University of California, Santa Barbara, USA, Jun 16–Jul 3, 2014
2. Poster, *Instability of Evaporation Fronts in the ISM*
Physical Processes in the ISM, MPE, Garching, Germany, Oct 21–25, 2013
1. Attended, International Summer School on AstroComputing 2013: *Star & Planet Formation*,
University of California, Santa Cruz, USA, Jul 22–Aug 9, 2013

Competitively-Obtained Computing Time

Co-I, 1.6 M CPU-hrs from KISTI on Tachyon2,

"Galactic Star Formation and Outflows Regulated by UV Radiation and Supernova Feedback", 2017

Co-I, 1.2 M CPU-hrs from KISTI on Tachyon2,

"Expansion of Dusty H II Regions and Its Dynamical Impact on the Interstellar Medium", 2016

Computer Skills

Programming Language: C/C++, MPI, Python, IDL

Visualization/Software: yt, VisIt, ParaView, Git, GDB

Simulation Code: Athena/Athena++

Teaching Experience

- *Man and the Universe* (non-major course), Teaching Assistant for Prof. Jonghak Woo, Fall 2012
- *Observational Astronomy*, Teaching Assistant for Prof. Jonghak Woo, Spring 2012

Other Experience

Military Service: Served as a weather observer in the Republic of Korea Air Force, 2005–2007

Departmental Service:

- SNU Astronomy Journal Club Coordinator, 2011–2013
- Part-time lecturer for a short course on [An Introduction to IDL Programming for Undergraduates](#), Feb 2014
- Lead editor of [A quick guide to SNU astro graduate students.](#), 2014
- Volunteered multiple times for Astronomy Open House, 2010–2014

Academic References

- **Prof. Woong-Tae Kim**

wkim@astro.snu.ac.kr

Department of Physics and Astronomy

Seoul National University

+82-2-880-6769

- **Prof. Bon-Chul Koo**

koo@astro.snu.ac.kr

Department of Physics and Astronomy

Seoul National University

+82-2-880-6623

- **Prof. Eve C. Ostriker**

eco@astro.princeton.edu

Department of Astrophysical Sciences

Princeton University

+1-609-258-7240