

Jeong-Gyu Kim | List of Publications

Publications

Journal Publications – ADS Search.....

Led by a student under direct supervision

20. *Implementation of Chemistry in the Athena++ Code*
Gong, M. et al. (incl. **JGK**), 2023, ApJS, 268, 42
19. *Physical Modeling of Dust Polarization from Magnetically Enhanced Radiative Torque (MRAT) Alignment in Protostellar Cores with POLARIS*
Giang, N. C., Hoang, T., **Kim, J.-G.**, & Tram, L. N. 2023, MNRAS, 520, 3788
18. *Introducing TIGRESS-NCR: I. Co-regulation of Multiphase ISM and Star Formation Rates*
Kim, C.-G., **Kim, J.-G.**, Gong, M., & Ostriker, E. C. 2023, ApJ, 946, 3
17. *Photochemistry and Heating/Cooling of the Multiphase Interstellar Medium with UV Radiative Transfer in Magnetohydrodynamic Simulations*
Kim, J.-G., Gong, M., Kim, C.-G., & Ostriker, E. C. 2023, ApJS, 264, 10
16. *Slow Star Formation in the Milky Way: Theory Meets Observations*
Evans, Neal J., II, **Kim, J.-G.**, & Ostriker, E. C. 2022, ApJL, 929L, 18E
15. *Star Formation Regulation and Self-Pollution by Stellar Wind Feedback*
Lancaster, L., Ostriker, E. C., **Kim, J.-G.**, & Kim, C.-G. 2021, ApJL, 922L, 3L
14. *Efficiently Cooled Stellar Wind Bubbles in Turbulent Clouds: II. Validation of Theory with Hydrodynamic Simulations*
Lancaster, L., Ostriker, E. C., **Kim, J.-G.**, & Kim, C.-G. 2021, ApJ, 914, 90L
13. *Efficiently Cooled Stellar Wind Bubbles in Turbulent Clouds: I. Fractal Theory and Application to Star-Forming Clouds*
Lancaster, L., Ostriker, E. C., **Kim, J.-G.**, & Kim, C.-G., 2021, ApJ, 914, 89L
12. *Star Formation Efficiency and Dispersal of Giant Molecular Clouds with UV Radiation Feedback: Dependence on Gravitational Boundedness and Magnetic Fields*
Kim, J.-G., Ostriker, E. C., & Filippova, N. 2021, ApJ, 911, 128K
11. *The environmental dependence of the X_{CO} conversion factor*
Gong, M., Ostriker, E. C., Kim, C.-G., & **Kim, J.-G.** 2020, ApJ, 903, 142
10. *Factories of CO-dark gas: molecular clouds with limited star formation efficiencies by far-ultraviolet feedback*
Inoguchi, M., Hosokawa, T., Mineshige, S., & **Kim, J.-G.** 2020, MNRAS, 497, 5061I
9. *# Diffuse Ionized Gas in Simulations of Multiphase, Star-forming Galactic Disks*
Kado-Fong, E., **Kim, J.-G.**, Ostriker, E. C., & Kim, C.-G. 2020, ApJ, 897, 143

8. *Modeling UV Radiative Feedback from Massive Stars: III. Escape of Radiation from Star-Forming Giant Molecular Clouds*
Kim, J.-G., Kim, W.-T., & Ostriker, E. C. 2019, *ApJ*, 883, 102
7. *Modeling UV 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, *ApJ*, 859, 68
6. *Modeling UV 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, Polytropic Gas Disks with Vertical Stratification*
Kim, J.-G., Kim, W.-T., Seo Y. M., & Hong, S. S. 2012, *ApJ*, 761, 131

Papers in Preparation.....

Structure and Dynamics of Density-Bounded H II Regions with Photoevaporative Outflows

Kim, J.-G., Ostriker, E. C., Lancaster, L., & Kim, C.-G. 2024, *in prep.*

The Geometric and Numerical Roots of Cooling and Dynamics in Simulated Wind-Blown Bubbles

Lancaster, L., Ostriker, E. C., **Kim, J.-G.**, & Kim, C.-G. 2024, *in prep.*

UV Radiation Fields in Star-Forming Disk Galaxies: Numerical Simulations with TIGRESS-NCR

Linzer, N., Ostriker, E. C., **Kim, J.-G.**, & Kim, C.-G. 2024, *in prep.*

TIGRESS-NCR: Low Metallicity Simulation Suite

Kim, C.-G., Ostriker, E. C., **Kim, J.-G.**, & Gong, M. 2024, *in prep.*