Marcie (Jae Yeon) Mun

Research School of Astronomy & Astrophysics
Australian National University, Canberra
ACT 2611, Australia

Last updated: 12th March, 2025
jaeyeon.mun@anu.edu.au
ORCID: 0000-0002-3706-9955
Website: https://jymarcie.github.io

Education

- **Australian National University (ANU)** — Canberra, Australia
  Ph.D. in Astronomy & Astrophysics — *Mar 2021 - Apr 2025*
  - **Thesis:** *Spatially resolved star formation and quenching: insights from observations and simulations*
  - **Primary supervisor:** A/Prof. Emily Wisnioski
  - **Co-supervisors:** Dr. Andrew Battisti, Dr. Trevor Mendel, Prof. Sara Ellison
- **Seoul National University (SNU)** — Seoul, Korea
  M.S. in Astronomy — *Mar 2018 - Aug 2020*
  - **Thesis:** *Star Formation Activity of Galaxies Undergoing Ram Pressure Stripping in the Virgo Cluster*
  - **Advisors:** Prof. Myung Gyoon Lee, Dr. Ho Seong Hwang
- **University of California, Los Angeles (UCLA)** — Los Angeles, CA, USA
  B.S. in Astrophysics — *Sep 2012 - Jun 2016*

Research Appointments

- **Korea Astronomy and Space Science Institute (KASI)** — Daejeon, Korea
  Visiting Researcher — *Sep 2020 - Feb 2021*
  - **Project title:** *Role of galaxy-galaxy interactions on the evolution of galaxy properties in IllustrisTNG*
  - **Host:** Dr. Ho Seong Hwang

Teaching Experience

- **Seoul National University (SNU)** — Seoul, Korea
  Graduate Teaching Assistant — *Mar 2019 - June 2019 / Mar 2020 - June 2020*
  - **Course:** *Techniques in Astronomical Observation*
  - Covered topics ranging from basics of data reduction, aperture and PSF photometry, deep field photometry, to long-slit spectroscopy, along with the basics of IRAF and SExtractor.

Publications

I used to publish under the name of Mun, Jae Yeon, but now publish under either Mun, Marcie or Mun, M. Please refer to this ADS Library for an easily accessible list of all my publications.

First-author publications

- **Mun, M.**, Wisnioski, E., Harborne, K.E., Lagos, C.D.P., Valenzuela, L.M. et al. (2024), *The MAGPI Survey: radial trends in star formation across different cosmological simulations in comparison with observations at $z \sim 0.3$,* MNRAS, 538, 976
- **Mun, M.**, Wisnioski, E., Battisti, A.J., Mendel, J.T., Ellison, S.L., et al. (2024), *The MAGPI Survey: evolution of radial trends in star formation activity across cosmic time,* MNRAS, 530, 5072
- **Mun, J.Y.**, Hwang, H.S., Lee, M.G., Chung, A., Yoon, H., Lee, J.C. (2021), *Star Formation Activity of Galaxies Undergoing Ram Pressure Stripping in the Virgo Cluster*, JKAS, 54, 17

Co-author publications

- Park, H.-J., Battisti, A.J., Wisnioski, E., Cortese, L., Seibert, M., — 6 authors — **Mun, M.**, et al. (2024), *The spatially resolved relation between dust, gas, and metal abundance with the TYPHOON survey*, MNRAS, 535, 729
- Mai, Y., Croom, S.M., Wisnioski, E., Vaughan, S.P., Varidel, M.R., — 2 authors — **Mun, M.**, et al. (2024), *The MAGPI Survey: the evolution and drivers of gas turbulence in intermediate-redshift galaxies*, MNRAS, 533, 3878
- Derkenne, C., McDermid, R.M., D'Eugenio, F., Foster, C., Khalid, A., — 6 authors — **Mun, M.**, et al. (2024), *The MAGPI Survey: Massive slow rotator population in place by $z \sim 0.3$*, MNRAS, 531, 4602
- Chen, Q.-H., Grasha, K., Battisti, A.J., Wisnioski, E., Mendel, T., — 4 authors — **Mun, M.**, et al. (2024), *The MAGPI Survey: effects of spiral arms on different tracers of the interstellar medium and stellar populations at $z \sim 0.3$*, MNRAS, 527, 2991
- Bagge, R.S., Foster, C., Battisti, A., Bellstedt, S., **Mun, M.**, et al. (2023), *The MAGPI Survey: Drivers of kinematic asymmetries in the ionised gas of $z \sim 0.3$ star-forming galaxies*, PASA, 40, 60
- Lee, J.H., Lee, M.G., **Mun, J.Y.**, Cho, B., Kang, J. (2022) *A GMOS/IFU Study of Jellyfish Galaxies in Massive Clusters*, ApJ, 940, 24
- Lee, J.H., Lee, M.G., **Mun, J.Y.**, Cho, B., Kang, J. (2022), *Enhanced Star Formation Activity of Extreme Jellyfish Galaxies in Massive Clusters and the Role of Ram Pressure Stripping*, ApJL, 931L, 22

Presentations

Conference talks / Colloquia

- **Nov 2024.** Seminar (University of Vienna, Austria)
- **Nov 2024.** Seminar (Universitäts-Sternwarte München, Germany)
- **Nov 2024.** *A decade of discoveries with MUSE and beyond* (ESO Garching, Germany)
- **Nov 2024.** Galaxies Discussion Group Talk (Kavli Institute for Cosmology, Cambridge, United Kingdom)
- **Oct 2024. (Invited)** *ASA*[1] *Early Career Researcher Chapter Symposium Series* (Macquarie University, Sydney, Australia)
- **Oct 2024.** Astro Seminar (University of New South Wales, Sydney, Australia)
- **Jun 2024.** *ASTRO 3D*[2] *Science Legacy Meeting* (Sydney, Australia)
- **Sep 2023.** *Galaxy Transformation Across Space and Time – 3rd ESO-Australia Meeting* (Canberra, Australia)
- **Jul 2023.** *ASA Annual Science Meeting 2023* (Macquarie University, Sydney, Australia)
- **Sep 2022.** *Epoch of Galaxy Quenching 2022* (Kavli Institute for Cosmology, Cambridge, United Kingdom)
- **Aug 2022.** *IAU Symposium 373: Resolving the Rise and Fall of Star Formation in Galaxies* (Busan, Korea)
- **Aug 2021. (Invited)** *Korean Young Astronomers Meeting (K-YAM) Colloquium* (Online)
- **Feb 2021.** *Galaxy Evolution Workshop 2020* (Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan; Online)

Awards

ANU RSAA Olin J Eggen Research Award (2,500 AUD) 2023–2024
– *For excellence in research by an international PhD student in astronomy & astrophysics*

ANU RSAA Supplementary Scholarship 2021–2024

ANU PhD Scholarship 2021–2024

Korean Astronomical Society (KAS) Rising Star Award (500,000 KRW) 2021
– *For best student paper published in the Journal of the Korean Astronomical Society (JKAS) in the first half of 2021*

SNU Merit-Based Scholarship 2018, 2019

[1] ASA: Astronomical Society of Australia
[2] ASTRO 3D: ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions

Observing Proposals

Co-I *Influence of the environment in shaping galaxies at the $z \sim 0.3$ transitional epoch* (PI: Barsanti, S.)
– AAT/AAOmega+2dF: A/2023A/07 – 4 nights; A/2023B/06 – 2.5 nights; A/2024A/04 – 1 night; total: 7.5 nights

Co-I *Spectroscopic Mapping of Jellyfish Galaxies in Massive Galaxy Clusters with GMOS/IFU* (PI: Lee, J.H.)
– Gemini North/GMOS: GN-2021A-Q-205 – 11.4 hours

Co-I *Dissecting the Most Extreme Jellyfish Galaxy F0083 in a Very Massive Galaxy Cluster Abell 2744 with GMOS/IFU* (PI: Lee, J.H.)
– Gemini South/GMOS: GS-2019B-Q-219 – 8.4 hours

Services

ASTRO 3D ANU Student Representative . . . . . Apr 2022 - Mar 2024
– *Point of contact for student concerns at the ANU node of ASTRO 3D*

ASTRO 3D Student Committee Chair . . . . . Apr 2023 - Mar 2024
– *Lead the national committee to run student workshops for networking & career development opportunities*

Research Skills

Programming Languages

- Python, IDL, Bash, SQL, LaTeX

Software

- IRAF, SExtractor, GALFIT, LePhare, PSFex, TOPCAT

Data & Simulations

- **Instruments:** Multi-Unit Spectroscopic Explorer (MUSE)
- **Simulations:** EAGLE (gadget3/anarchy), Magneticum (gadget3), IllustrisTNG (arepo)

Collaborations/Memberships

- MAGPI (Middle Ages Galaxy Properties with Integral Field Spectroscopy)
- ASTRO 3D (ARC Centre of Excellence in All Sky Astrophysics in 3 Dimensions)
- ASA (Astronomical Society of Australia)