Curriculum Vitae : Young-Min Lee

Ph.D.
Sejong University
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EDUCATION

Mar. 2019 ~ Aug. 2021	**Sejong University** Department of Physics and Astronomy *Integrated Master and Ph.D. Course* Thesis: Radiative Transfer and Hydrodynamics of Stellar Wind Accretion in the S-type Symbiotic Star AG Draconis *Advisor: Hee-Won Lee* *Ph.D. in Astronomy and Space Science* GPA: 4.21 / 4.5	Seoul, Korea
Mar. 2011 ~ Feb. 2017	**Sejong University** Department of Physics and Astronomy *B.S. in Astronomy and Space Science, Minor in Physics* GPA: 3.31 / 4.5	Seoul, Korea

PUBLICATIONS (SCIE/ESCI)

1. **Lee, Young-Min**, Kim,Hyosun, "Formation of the Asymmetric Accretion Disk from Stellar Wind Accretion in an S-type Symbiotic Star", *THE ASTROPHYSICAL JOURNAL*, (2022)
2. **Young-Min Lee**, Hee-Won Lee, Ho-Gyu Lee, Rodolfo Angeloni, "Stellar-wind accretion and Raman-scattered O vi features in the symbiotic star AG Draconis", *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*, (2019)
3. **Young-Min Lee**, Dae-Sub Lee, Seok-Jun Chang, Jeong-Eun Heo, Hee-Won Lee, Narae Hwang, Byeong-Gon Park, Ho-Gyu Lee, "A MONTE CARLO STUDY OF FLUX RATIOS OF RAMAN SCATTERED O vi FEATURES AT 6825 AND 7082 Å IN SYMBIOTIC STARS", *ASTROPHYSICAL JOURNAL*, (2016)

CONFERENCE PROCEEDING

1. **Young-Min Le**e, Jeong-Eun Heo, Hee-Won Lee, Ho-gyu Lee, Rodolfo Angeloni, Francesco Di Mille, Tali Palma, "Stellar Wind Accretion and Raman O VI Spectroscopy of the Symbiotic Star AG Draconis", W*HY GALAXIES CARE ABOUT AGB STARS: A CONTINUING CHALLENGE THROUGH COSMIC TIME. PROCEEDINGS OF THE INTERNATIONAL ASTRONOMICAL UNION*, VOLUME 343, PP. 449-451, (2019)

AWARDS AND HONORS

- Best presentation award : 1st prize, Sejong University, Korea (Nov. 2015)
- Best poster presentation award : 1st prize, Korea Astronomical Society, Korea (Apr. 2018)
- Best poster presentation award : 2nd prize, Korea Astronomical Society, Korea (Oct. 2019)

RESEARCH INTERESTS

- Hydrodynamics
- Radiative transfer
- Radiative heat loss
- Accretion disc
- Data analysis

INTERNATIONAL CONFERENCES

1. Young-Min Lee, Hyosun Kim, Hee-Won Lee, "A Hydrodynamic study of stellar wind accretion in S-type symbiotic stars", XVI Latin American Regional IAU Meeting (LARIM), Antofagasta, Chile (Nov. 2019) - Poster
2. Young-Min Lee, Hee-Won Lee, Ho-Gyu Lee, Rodolfo Angeloni, "Stellar Wind Accretion and Raman O VI Spectroscopy of the Symbiotic Star AG Draconis", 2018 IAU XXXth General Assembly, Vienna, Austria (Aug. 2018) - Poster

DOMESTIC CONFERENCES

- 2020 Korean Astronomical Society Fall Meeting
- 2019 Korean Astronomical Society Fall Meeting
  Title : A Hydrodynamic Study of Stellar Wind Accretion in S-typr Symbiotic Stars (Poster)
- 2019 Korean Astronomical Society Spring Meeting
- 2018 Korean Astronomical Society Fall Meeting
- 2018 Korean Astronomical Society Spring Meeting
  Title : Stellar Wind Accretion and Raman O VI Spectroscopy of the Symbiotic Star AG Draconis (Poster)
- 2017 Korean Astronomical Society Fall Meeting
- 2017 Korean Astronomical Society Spring Meeting
- 2016 Korean Astronomical Society Fall Meeting -
  Title : A Monte Calro Study of Flux Ratios of Raman Scattered O VI Features at 6825 and 7082 Å in Symbiotic Stars (Poster)
- 2016 Korean Astronomical Society Spring Meeting

SKILLS AND TECHNIQUES

- OS: Mac OS, Linux
- 3D Monte-Carlo Radiative Transfer modelling
- 3D Hydrodynamics Modelling
- FORTRAN - simulation build up
- PYTHON - data analysis

RESEARCH EXPERIENCES

- Research Student at Korea Astronomy and Space Science Institute(KASI), Korea (Feb. 2020 ~ Aug. 2021)
- Research Student at Korea Astronomy and Space Science Institute(KASI), Korea (Jan. 2018 ~ Feb. 2018) / Visiting students to KASI : Astrophysical Fluid Dynamics
- Research Student at Korea Astronomy and Space Science Institute, Korea (Jul. 2018 ~ Aug. 2018) / Visiting student to KASI : Astrophysical Fluid Dynamics

OBSERVATION EXPERIENCE

- Bohyunsan Optical Astronomy Observatory, Korea - 1.8m BOAO Telescope

1. Bohyunsan Optical Echelle Spectrometer (BOES)
2. BOES with Spectropolarimeter

- Accepted observation proposal

1. 2017a BOAO Co-I, 6 nights -
   Title : Spectropolarimetric Monitoring of Raman-scattered O VI features in S-type Symbiotic Stars - I
2. 2017b BOAO Co-I 6 nights-
   Title : Spectropolarimetric Monitoring of Raman-scattered O VI features in S-type Symbiotic Stars - II
3. 2018a BOAO Co-I, 6 nights -
   Title : Spectropolarimetric Monitoring of Raman-scattered O VI features in S-type Symbiotic Stars - III
4. 2018b BOAO Co-I, 6 nights -
   Title : High Resolution Raman He II Spectroscopy of Symbiotic Miras
5. 2019a BOAO Co-I, 6 nights -
   Title : Spectroscopic Survey of Raman-Scattered He II Features in Planetary Nebulae
6. 2019b BOAO Co-I, 3 nights -
   Title : Spectropolarimetry Monitoring of Raman Scattered O VI Features in S-type Symbiotic Stars
7. 2020a BOAO Co-I, 7 nights -
   Title : Spectroscopic Survey of Raman-Scattered He II Features in P. N.
8. 2020b GEMINI Co-I, 3.2hr -
   Title : Deep High-resolution Spectroscopy of the Planetary Nebulae NGC 6886 and NGC 6790

PROJECTS

- Emission Line Spectroscopy and Mass Loss Processes in Symbiotic Stars and Related Objects, Ministry of Science, ICT and Future Planning, Korea / Development of hydrodynamic simulation code of mass accretion process (Jan. 2017 ~ Dec. 2020)
- High Resolution Spectroscopic and Fast Photometric Study of Wind Accretion and Mass Loss in Stellar Systems Involving White Dwarfs, Ministry of Science, ICT and Future Planning, Korea / Development of Raman Spectroscopic Radiative Transfer code of mass transfer process (Jan. 2016 ~ Dec. 2017)
- Profiles and Polarization of Lyman Lines in the Early Universe, Ministry of Science, ICT and Future Planning, Korea / Development of Radiation Hydrodynamic simulation code (Mar. 2021 ~ Present)

- Designing hydrofluoric wastewater treatment system : Fluidized Bed Crystallizer using Chemo-hydrodynamical calculation, SEP Engineering, Korea / Calculating Mass balance, heat balance, Project manager (Nov. 2021 ~ Sep. 2022)

TEACHING ASSISTANT

- **Stellar Astronomy** (2016 Spring - Sophomore, undergraduate)
- **Galactic Astronomy** (2016 Fall - Sophomore, undergraduate)
- **Single variable calculus** (2017 Spring - Freshman, undergraduate)
- **Gravity and Universe** (2018 Fall - Senior, undergraduate)
- **Introduction to Astrophysics** (2019 Spring - Sophomore, undergraduate)
- **Gravity and Relativity** (2019 Fall - Senior, undergraduate)