Chen XIE

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Research Interests

- Direct imaging of exoplanets and circumstellar disks
- Post-processing methods for high-contrast imaging and spectroscopy data
- Planet-disk interaction
- Using integral-field spectroscopy for the detection and characterization of proto-planets and their formation

Research Position

- **Graduate Student Researcher** — Marseille, France
  Aix-Marseille Université — *2020 - 2023 (expected)*

Education

- **Aix-Marseille Université** — Marseille, France
  PhD in Astronomy — *2020 - 2023 (expected)*
  - PhD Thesis: Development of advanced post-processing methods for the direct detection of exoplanets with ground-based high-contrast imagers
  - Thesis Advisor: Dr. Arthur Vigan, Dr. Elodie Choquet
- **Leiden University** — Leiden, The Netherlands
  M.Sc. in Astronomy — *2018 - 2020*
  - Major Thesis: VLT/MUSE as a high-contrast imager
  - Thesis Advisors: Prof. Matthew Kenworthy, Dr. Jos de Boer, and Dr. Sebastiaan Haffert
  - Minor Thesis: Radio Observations of Frontier Fields Clusters Abell S1063 and Abell 370: The Discovery of New Radio Halos
  - Thesis Advisor: Prof. Reinout van Weeren
- **Xiamen University** — Xiamen, China
  B.Sc. in Physics — *2012 - 2016*
  - Bachelor Thesis: On the Host Galaxy of GRB 150101B
  - Thesis Advisor: Prof. Taotao Fang

Internship

- **ASTRON/JIVE Summer Student Programme** Dwingeloo, 2017
  - Built a blind search for diffuse radio emission in galaxy clusters using MSSS data, and doubled the number of clusters with diffuse emission at low frequency (<235 MHz). 10 new candidates of halos and relics were found. The scaling relations were also explored.

Awards

Poster Prize, Lyot conference 2022
Oort Scholarship (€22k + tuition waiver), Leiden University . . . . . 2018 – 2020
First Prize of Lin Qiao Prize for Excellent Undergraduate Research Project, Peking University 2016
First Prize of Guang Qi Scholarships, Shanghai Astronomical Observatory 2016
Aierdan Photoelectric Technology Award, Xiamen University 2015
First Prize of Cai Wenzhong Scholarships, Xiamen University 2014

Publications

REFEREED
1st authored:

5. **Reference-star differential imaging on SPHERE/IRDIS**
C. Xie, *E. Choquet, A. Vigan, + 14 coauthors,* **accepted to A&A**

4. **A MUSE view of the asymmetric jet from HD 163296**
C. Xie, *S. Y. Haffert, J. de Boer, M. A. Kenworthy +4 coauthors, 2021,* **A&A 650, L6**

3. **Searching for proto-planets with MUSE**
C. Xie, *S. Y. Haffert, J. de Boer, M. A. Kenworthy +4 coauthors, 2020,* **A&A 644, A149**

2. **The discovery of radio halos in the Frontier Fields clusters Abell S1063 and Abell 370**
C. Xie, *R. J. van Weeren, L. Lovisari +13 coauthors, 2020,* **A&A 636, A3**

1. **On the Host Galaxy of GRB 150101B and the Associated Active Galactic Nucleus**
Xie, C., *Fang, T., Wang, J., Liu, T., Jiang, X. 2016,* **ApJL, 824, L17**

2nd/3rd authored:

1. **Keck/OSIRIS Paβ High-contrast Imaging and Updated Constraints on PDS 70b**
Uyama, T., **Xie, C.**, *Aoyama, Y. +11 coauthors, 2021* **AJ, 162, 214**

Successful Telescope Proposals

- **VLT/MUSE: Astrochemistry hints at the presence of a young accreting planet**
d-PI, *3 hrs* *2022*
- **Subaru: Astrochemistry hints at the presence of a young accreting planet**
co-I, *0.5 night* *2022*
- **GMRT: Testing turbulent re-acceleration in Abell S1063**
PI, *10 hrs* *2019*

- **VLA: Testing turbulent re-acceleration in Abell S1063**
  PI, *5.6 hrs* *2019*
- **LOFAR: Observing the previously undetected diffuse radio emission**
  Col-I, 8 hrs *2017*
- **CFHT: Studying the origin of X-ray arcs in M51b**
  Col-I, 1 hrs *2016*

Meetings & Summer schools

Spirit of Lyot 2022, ... Poster, Leiden, 2022
European Adaptive Optics Summer School . . . . . UK (virtual), 2021
Bonn-Dwingeloo Neighbourhood VLBI Meeting . . . . . Bone, 2017
Peking University Undergraduate Symposium . . . . . **Speaker**, Beijing, 2016
The 19th CAS Guoshoujing Symposium . . . . . **Speaker**, Beijing, 2016
The 10th Jing-Guang-Xia astrophysics Colloquia . . . . . **Speaker**, Xiamen, 2016
SHAO-XMU astrophysics Colloquia . . . . . **Speaker**, Xiamen, 2016
China-New Zealand-South Africa Joint SKA Summer School . . . . . Kunming, 2015
Shanghai Astronomical Observatory Summer Camp . . . . . Shanghai, 2014

Skills

Coding: Python (advanced), MATLAB (intermediate), C (intermediate), IDL (basic), SQL (basic)
Software: EsoRex, CASA, CIAO, DS9, CIGALE, SPENVIS
Engineering: LabView
Language: Chinese (native), English (fluent)

References

Dr. Elodie Choquet	Laboratoire d'Astrophysique de Marseille	elodie.choquet@lam.fr
Prof. Matthew Kenworthy	Leiden Observatory, Leiden University	kenworthy@strw.leidenuniv.nl
Prof. Reinout van Weeren	Leiden Observatory, Leiden University	rvweeren@strw.leidenuniv.nl
Prof. Taotao Fang	Department of Astronomy, Xiamen University	fangt@xmu.edu.cn