

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 - present*

Education

- **Aix-Marseille Université** Marseille, France
PhD in Astronomy *2020 - present*
 - 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

Oort Scholarship, 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:

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 Pa β High-contrast Imaging and Updated Constraints on PDS 70b**
Uyama, T., Xie, C., Aoyama, Y. +11 coauthors, 2021 AJ, 162, 214

SUBMITTED AS FIRST AUTHOR

1. **Performance of reference-star differential imaging on SPHERE/IRDIS**
Xie, C., Choquet, E., Vigan, A., and et al. submitted to A&A

Successful Telescope Proposals

- **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

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), C (intermediate), MATLAB (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