

# YUNTING WANG

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## EDUCATION

Department of Astronomy, Xiamen University  
Bachelor of Science Expected Graduation: Jun 2021

Sep. 2017 - Present

· Overall GPA: 87.39/100 (Rank: 2/12) TOFEL iBT: 111/120 (Speaking: 27)

## PROGRAMMING EXPERIENCE

**Python (Experienced):** Model Fitting, Data Reduction & Visualization  
**Basic Proficiency:** Shell, C, R, SQL, CIAO, XSPEC, Machine Learning Algorithms

## OBSERVING EXPERIENCE

**Co-I, Five-hundred-meter Aperture Spherical radio Telescope (FAST) (2020.9)**  
*Probing the HI Gas Contents of Transitional Galaxies Indicated by the [NII]/[SII] ratios*  
ID: PT2020\_0186, allocated **11.2 hours**, **PI: Prof. Taotao Fang**

## RESEARCH EXPERIENCE

**Exploring Transitional Galaxies Indicated by [NII]/[SII] ratios** Jul. 2019 - Present  
Advisor: [Prof. Lei Hao](#) Shanghai Astronomical Observatory, Chinese Academy of Sciences

- Motivated by the unusually high-[NII]/[SII]-ratio found in FUV-luminous galaxies noted in previous works.
- Explored distributions of [NII] and [SII] in SDSS IV MaNGA(Mapping Nearby Galaxies at APO) MPL-8 data of 6500 galaxies with their BPT classifications by mapping  $[\text{H}\alpha]/[\text{NII}] - [\text{H}\alpha]/[\text{SII}]$ .
- Discovered five galaxies with unusually prominent [NII]/[SII] ratio, extracted spectroscopy and mapped their flux and dynamic properties to exclude possible mechanisms.
- Proposed to probe the HI gas contents of 5 galaxies with high [NII]/[SII] ratios and 11 with moderate [NII]/[SII] ratios through FAST.

**Mapping the Star Formation Rate Change in M99 (NGC4254)** Jun. 2020 - Present  
Advisor: [Prof. Amelie Saintonge](#) University College London

- Mosaicked VLT MUSE (Multi Unit Spectroscopic Explorer) data cubes into one for NGC4254. Extracted and matched point-like sources to correct the coordinate shifts in the cubes.
- Ran narrowband  $\text{H}\alpha$  fitting on MUSE data cube. Smoothed MUSE data and combined it with ultraviolet data from GALEX (Galaxy Evolution Explorer) and SDSS u band data, and produced the color-color plot to indicate the star formation history.
- Ran the CIGALE (Code Investigating GALaxy Emission) SED (Stellar Energy Distribution) code to model the spectra given different star formation histories, and compared them with observation.
- Currently working on improving the fitting accuracy using LZIFU(IDL fitting package based on pPXF), and extend the study on other nearby galaxies, e.g. NGC5068, NGC2835 and NGC1365.

## HONORS & AWARDS

Xiamen International Bank Scholarship	03/2020
Undergraduate Research & Training Program, Chinese Academy of Sciences	06/2019
Guangqi Scholarship of Shanghai Astronomical Observatory	2018, 2019
Scholarship of Academic Excellence, Xiamen University	2018, 2019