Wang Dong

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EDUCATION

University of Science and Technology of China | Purple Mountain Observatory, Chinese Academy of Sciences 2022 - Present

- MA in Astronomy (Advisor: Chen Xuepeng)

Anhui University of Technology 2018 - 2022

- BA in Opto-electronic Information Science and Engineering

Current Research

I am currently researching the physical properties of Molecular Clouds in the Camelopardalis region, covering an angular area of 96 $\deg^2$ (GLON: 147.5° $\sim$ 159.5°, GLAT: 0° $\sim$ 8°)

Research includes:

- ***Identification of molecular clouds and clumps*** *using GaussPy+ and Acorns for MCs, and FacetClumps for clumps*
- ***Measuring distances and compiling detailed property tables for MCs and clumps****, including excitation temperature, column density, mass, and virial parameter...*
- ***Searching for bubbles****, predicting their possible origins*
- ***Investigating the possible origin of the Shell MCs*** *by examining their dynamics to determine expansion velocities and searching for potential progenitor sources*
- ***Assessing the association of MCs with the Local Bubble****, comparing observations with the Local Bubble model to determine if these clouds are part of its shell and considering the implications of fragmentation*

Research Plan

Title: **From Diffuse to Dense: A Temporal Perspective on the Life of ISM in the Solar Neighborhood**

Research interests: In our solar neighborhood,

- ***Stellar feedback from multiple sources, especially how these various feedback mechanisms affect the properties of the interstellar medium (ISM)——-[First step]***
- *How and when does the converging flow shape during the transition from diffuse HI to molecular clouds (MCs)*
- *The role of gravity in the collapse of molecular clouds (MCs) varies with cloud size*
- *For molecular clouds (MCs), once they are formed, how long does it take for clouds of different sizes to dissipate?*

Publications

Properties and Distribution of Molecular Clouds in the Camelopardalis Region (In Preparation)

Skills

Languages: English (IELTS: overall band 6.5)

Programming: Python (Proficient), GILDAS (Familiar with CLASS), LATEX (Intermediate)