

REVIEWER'S REPORT

Manuscript No.: IJAR-59102

Title: An Overview of the Interstellar Medium and Its Role in Star Formation

Recommendation:

Accept as it is ☐☐☐☐..

Accept after minor revision ☒☐☐☐

Accept after major revision ☐☐☐☐☐

Do not accept (*Reasons below*) ☐☐☐

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality		√		
Clarity			√	
Significance		√		

Reviewer ID: JP085

Reviewer's Comment for Publication.

The article provides a broad review of the interstellar medium (ISM) and its role in star formation. It discusses ISM phases, molecular clouds, Jeans instability, magnetic fields, turbulence, ambipolar diffusion, protostellar evolution, accretion disks, stellar feedback, and future observations using JWST and ALMA.

Strength:

1. The topic is relevant and scientifically important.
2. The article covers major stages of star formation in a logical order.
3. Different phases of the ISM are explained in detail.
4. Important concepts such as gravity, turbulence and magnetic fields are explained.
5. Recent technologies such as JWST and ALMA are included.

Weakness:

1. The article covers too many topics and needs better focus.
2. The literature search method is not clearly explained.
3. Inclusion and exclusion criteria are not given.
4. Some scientific values and statements need verification.
5. Some equations are difficult to read because of formatting problems.
6. Units, symbols and superscripts need correction.
7. Some statements are too strong and need proper references.
8. The section on Indian astronomers is not discussed in enough detail.

Overall assessment:

The article gives a useful overview of the ISM and star formation. However, it needs improvement in scientific accuracy, references, review methodology, equation formatting and language.

Recommendation: Manuscript accepted for publication after minor revision.