Moon-Forming Disc Discovered by Webb

Observations of CT Cha b reveal a carbon-rich circumplanetary disc

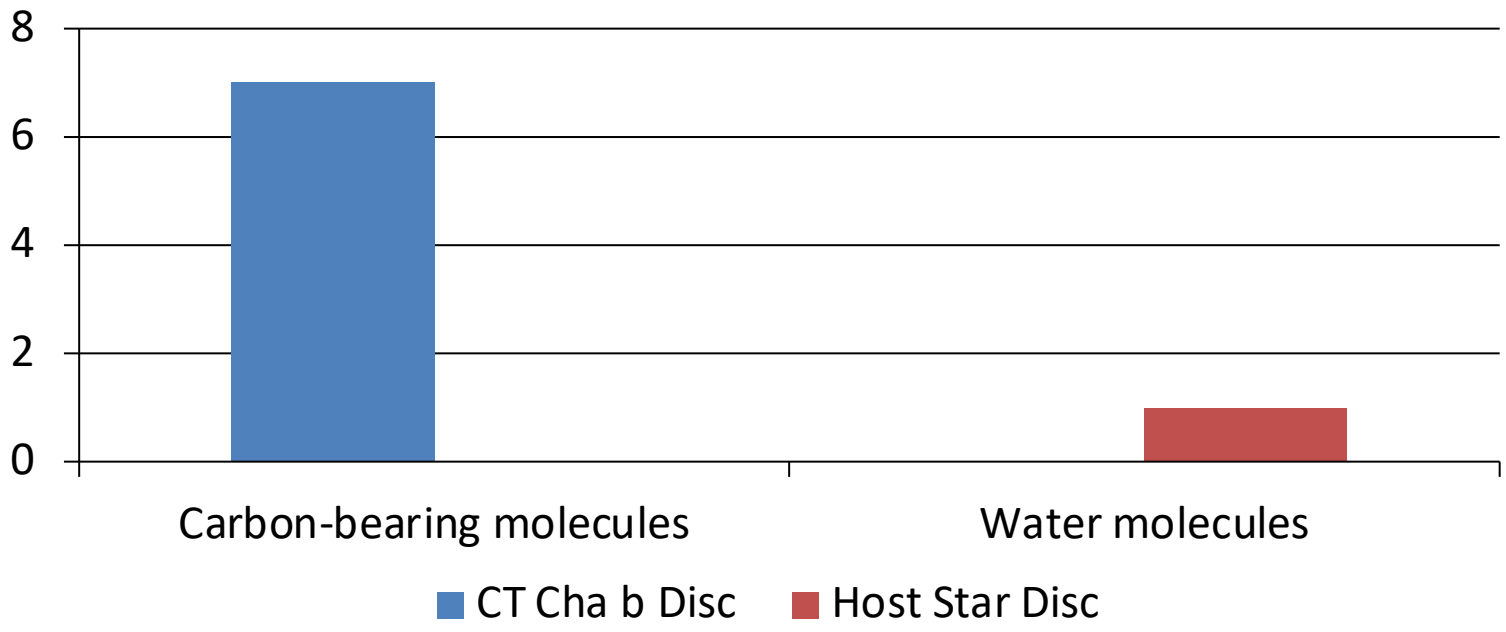
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Key Findings

- First direct measurements of a potential moon-forming disc around CT Cha b
- CT Cha b is 625 light years away and surrounded by a carbon-rich disc
- Host star is 2 million years old; disc is not part of the star's accretion disc
- Disc and star are 74 billion km apart
- Seven carbon-bearing molecules discovered; host star disc contains water but no carbon

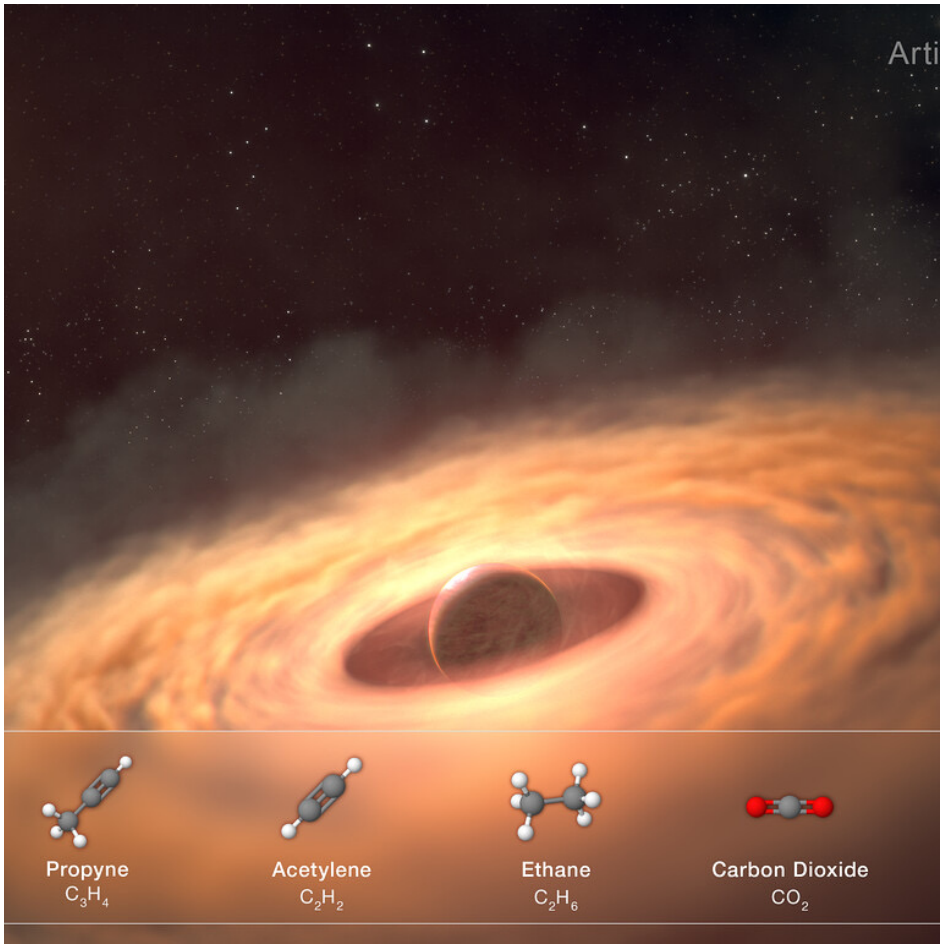
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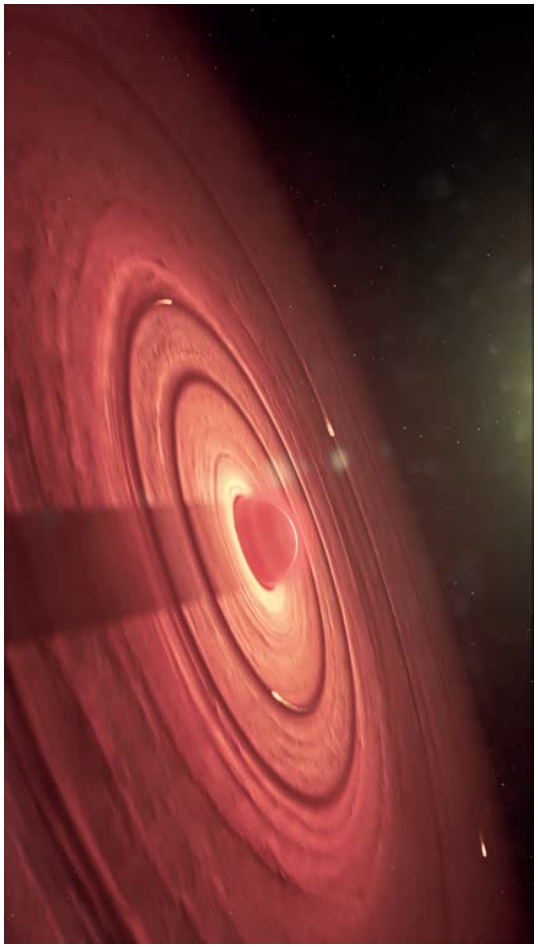
Molecule Comparison



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Illustration: Moon-Forming Disc





Artist's impression of the circumplanetary disc around CT Cha b and its host star

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Conclusion & Next Steps

- Discovery provides first glimpse into moon formation around exoplanets
- Carbon-rich chemistry highlights rapid evolution in young planetary discs
- Studying systems under construction helps us understand our own Solar System's history
- Future surveys with Webb will explore other young planets and discs

[1] [2] [3]