Selected Results & Conclusions

- Prebiotic M-dwarf planets have much less surface UV than planets around Sunlike stars. It is uncertain whether UV-dependent prebiotic chemistry can proceed on M-dwarf planets.
- Laboratory studies of the reaction rates of putative prebiotic photochemistry as a function of irradiation level are required to determine:
  - Can UV-dependent prebiotic chemistry proceed on M-dwarf planets?
  - If not, can M-dwarf flares compensate for low steady-state UV? If so, there is reason to prioritize active M-dwarfs in biosignature searches.
- Such measurements are also relevant to early Mars, which may have been low-UVA due to atmospheric dust.
- If laboratory measurements suggest that UV-dependent origin of life scenarios cannot proceed around M-dwarf planets, then biosignature searches on such worlds provide an opportunity to test origins-of-life hypotheses.

For More Details:
- https://github.com/sukritranjan/

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