Atmospheric Oxocarbons: Implications on New Planets for Human Life

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The term “habitable exoplanets” is currently used to describe exoplanets that are in the habitable zone, areas around a star with the right conditions to support liquid water. This project aimed at finding exoplanets that can support life, not just water, since the entire purpose of studying habitable exoplanets is to find life-supporting planets. To do this, the Atmos software was used to calculate effective stellar flux for various CO2 levels. These sets of data were graphed against effective stellar temperatures along with conservative estimates of effective stellar flux vs effective stellar temperature. The exoplanets that were confirmed to be able to support life in the last study were then plotted on the same graph, with careful observations on which planets lied inside and outside of the life habitable zone. It was found that there is only a limited number of exoplanets that currently lie inside the habitable zone that supports life. Furthermore, no planets were found to be able to support life outside of the type F stars, leading to the conclusion that type F stars serve as the temperature boundary for life formation. This discovery can be used in aiding astronomers to look at the right exoplanets when trying to find life forms in the universe.

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