

RELATION BETWEEN Si AND O ELEMENT ABUNDANCES AND PROBABILITIES OF STARS THAT HAVE PLANETS

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Abstract

Our research aim to investigate the effect of different element abundances on the planet formation. We used a catalog by E. Delgado Mena, et. al. (2010) and investigated **Si, C, O, Ni, Fe** abundances for different systems with planets and for the systems that do not have any planet. We found that systems with planets have richer element abundances than those which do not have a planet system. The difference in element abundances shows that rich-environments are favorable for planetary formation. The reason for this behavior is that terrestrial planets are consist of Silicate and other compounds. Our research shows that the possibility of a star to have a planetary system is higher when the environment is rich in element abundances.

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