

Faint Young Sun Paradox: the astrophysical viewpoints

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In this talk, we will discuss the faint young sun paradox from the astrophysical view points. The earth's temperature at the birth time of life (3.5 Gyear before) is believed to be lower than the freezing temperature, because the sun is darker than the present which is predicted by the standard star evolution theory. To solve this paradox, we will discuss the possibility of 5% massive sun at the birth time of life. If the solar mass is 5% heavier than the current sun, this paradox can be solved. The current solar mass loss is very low. Thus we need 1000 times mass loss around ~3.5Gyear before, because the sun should be reduce the 5% mass during 3.5Gyear. We will discuss the possibility of efficient mass loss by the solar wind and coronal mass ejection.

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