

Habitability of extrasolar planets around M stars

Shigeru Ida[1]

[1] Dept. of Earth and Planetary Sci., Tokyo Inst. of Tech.

About 140 extrasolar Jupiter-mass planets have been discovered through the observation of Doppler shift in the light of their host stars that is caused by acceleration due to planet orbital motions. Although the extrasolar planets so far observed may be limited to gas giant planets, Neptune-sized planets are also being discovered. The small size suggests that they are rocky or icy planets rather than gas giants. These discovery suggest not only abundant existence of extrasolar rocky or icy planets but also habitable planets (planets on which oceans exist). Although earth like planets around FGK stars are interesting, we here discuss planetary systems around M stars, because M stars are most abundant in our galaxy. In particular, we focus on possible habitable planets in these systems.