Investigation of Sun-like G Stars and Their Exoplanets

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Abstract

Humans' quest is to understand how the universe is originated and has been evolved; how the stars, planets and finally, life is emerged on the Earth? How the Sun and Solar system are formed? Although it is too naive, nebular hypothesis of solar system formation doesn't explains many of these intriguing observations of solar system, especially the angular momentum problem and architecture of solar system, etc. In order to find clues for some of these problems, by employing exoplanetary data, we have carried out a research on understanding the influence of dynamics, chemical abundance and magnetic field structure of Sun-like G stars on the formation and orbital migration of their exoplanets. During this talk, I will also discuss some of the results (possible solution for the faint young sun paradox, missing mass in the vicinity of the sun, etc..,) that are emerged from this study.