

Planets under extreme stellar conditions

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More lower mass and size planets outside our own Solar System will be discovered during the near future from the ground and from space (CoRoT, Kepler, GAIA, SIM, Darwin/TPF, etc.). For characterising these new planets where many of them are exposed to extreme stellar radiation and plasma environments as well as slow rotation (due to tidal locking) an easy access to data bases established during the past decades by various space missions (MEX, VEX, Cassini/Huyges, Earth Observatories, etc.) in the Solar System and laboratory experiments related to planetary atmospheres (atomic and molecular parameters, collision cross sections, production, dissociation, ionization rates, etc.), solar radiation and particle environment (SoHO, etc.) as well as astrophysical data are needed. Furthermore, for actual data analysis related to mass-size distribution/evolution of Hot Jupiter's and precursor science programs related to planetary habitability for future missions which can spectroscopically study and characterize atmospheres, a "need to know" about the availability and application of numerical codes (hybrid plasma interaction models, global circulation models, climate models, etc.) and related data bases in Europe and beyond would be fruitful. Finally we discuss the possible integration of existing and planned data bases related to precursor science projects for the Darwin terrestrial planet finding mission into the Europlanet Integrated and Distributed Information Service (IDIS).