

Modelling of atmospheric profiles of terrestrial exoplanets

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Until now, most of the extrasolar planets detected have been gas giants. However given the recent detection of Gliese 581c together with the results expected from CoRoT, the search for extrasolar planets now enters a new era where smaller, earth-sized terrestrial exoplanets will be detected. We model the atmospheres of terrestrial exoplanets using a radiative-convective model coupled with a photochemical model. A parameter study of several types of expected terrestrial exoplanets has been made and the resulting atmospheric profiles (T,p, concentrations) will be presented as well as some examples of their resulting spectral appearance.