# Probing the Atmospheres of Hot-Jupiters with Emission Spectroscopy

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The past decade has witnessed the detection of over 400 extrasolar planets. For a growing sample of the Jupiter-sized planets that orbit very close to their parent star (hot-Jupiters), one can probe their atmospheric constituents and temperature structures using transit techniques. The secondary eclipse provides a measurement of the emission from the planet's dayside atmosphere, since the combined emission of planet and primary star can be compared to the emission of star alone, when it eclipses the planet. The resultant exoplanetary spectra reveal highly coupled information on the temperature and composition profiles of the planet. Here we will discuss the radiative transfer analyses of the secondary transit spectra recorded by HST, Spitzer and ground-based observations of those exoplanets with measured emission spectra and photometry. We find that there is significant degeneracy in the temperature and composition solutions that can explain the emission spectra of exoplanetary atmospheres. Yet, there are also reasonable approaches for breaking the degeneracy and separately deriving the temperature and composition of these beasts. The retrieved temperature and composition profiles will be presented along with their implications with respect to the exoplanet's chemistry and dynamics.