

P23a **Planetary Spectra Library**

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With in the next 10 years, space borne telescopes such as Kepler, the Terrestrial Planet Finder (TPF), and the SPace Infrared telescope for Cosmology and Astrophysics (SPICA), will be able to directly observe extrasolar planets. With these developments, it will be possible to take the emission spectra of the extrasolar planets. These spectra will contain a wealth of information about the extrasolar planets. Currently, absorption spectra can only be obtained from the small number of extrasolar planets which transit in front of their host star. To date there is no comprehensive framework for interpreting planetary spectra. There are a number of simulated spectra for extrasolar planets. However these simulations have drawn almost exclusively on terrestrial data for materials such as water, ice, and plants. These computer models and may or may not resemble real planets. A comprehensive library of spectra for the Sol system planets should be used along with the simulations. This paper describes observations carried out at Hiroshima Observatory using the TRISPEC instrument to compile such a library. Preliminary observations were carried out from January 15 to January 17, 2008. The results of these observations form the beginning of the Planetary Spectral Library. More complete observations were carried out from May 2 to 13, 2008. When completed, the Library will contain B, V, R, I, J, H and K band spectra for all of the Sol system planets. Information for dwarf planets and moons will be included where available.