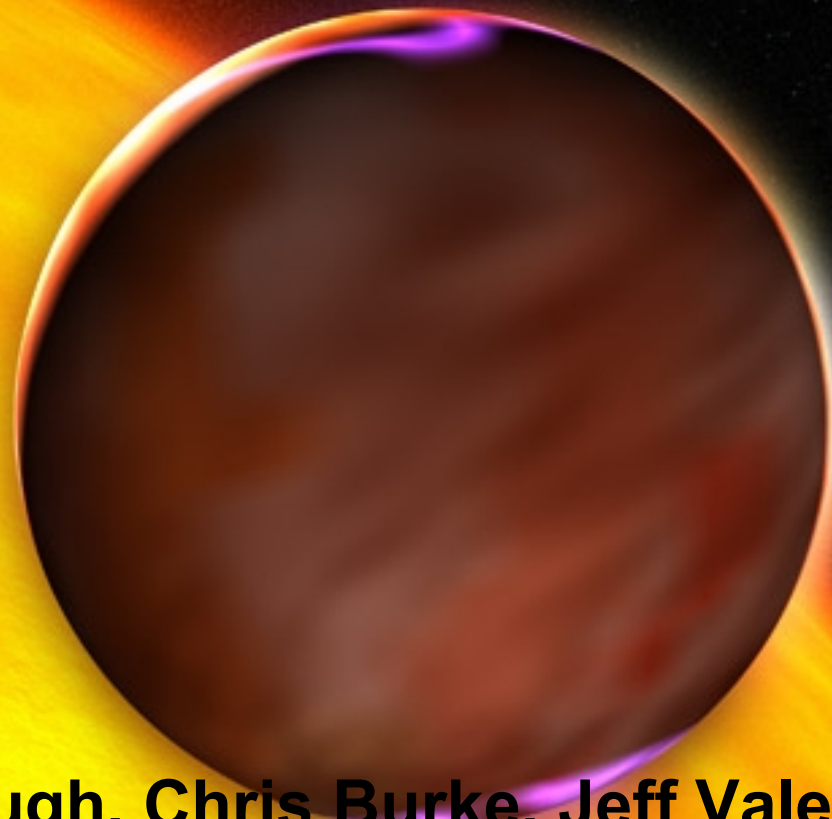


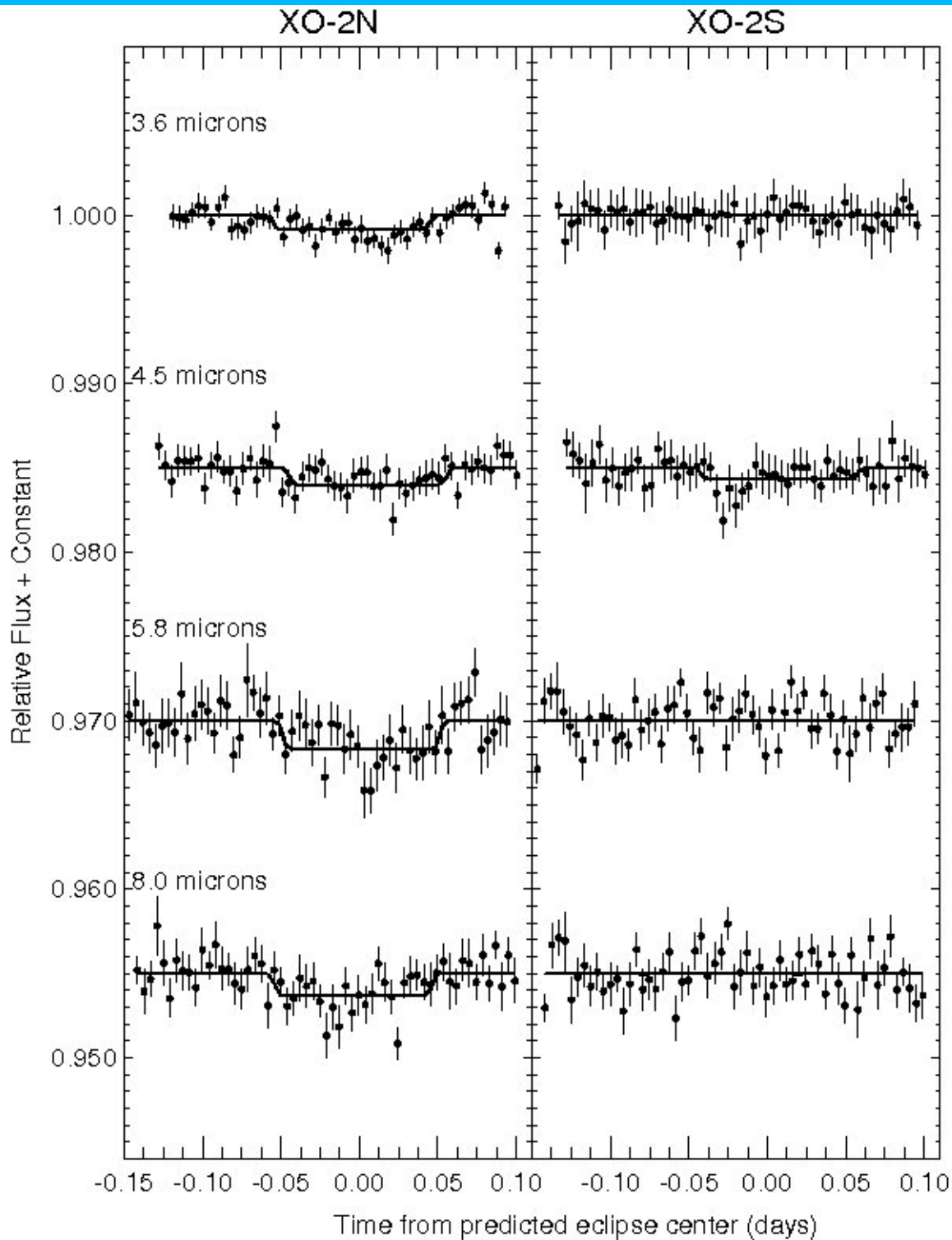
Study of Hot-Jupiter Atmospheres using Infrared Photometry

2009 Sagan Summer Workshop

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- Thanks to Peter McCullough, Chris Burke, Jeff Valenti, Adam Burrows, Chris Johns-Krull, Joseph Hora, Nicolas Iro, Drake Deming, Greg Laughlin



- We estimate **flux ratios of the extrasolar planets XO-1b, XO-2b and XO-3b** to their host stars at 3.6, 4.5, 5.8 and 8.0 microns during their secondary eclipse with the IRAC on the Spitzer Space Telescope.
- The fluxes are compared with atmospheric models for the thermal emission from a Hot-Jupiter and used to deduce the presence of a **thermal inversion layer in the upper atmosphere**.
- Correlation between a thermal inversion layer in the planetary atmosphere and **stellar insolation** is refined and secondary effects are studied.