Supplementary Information: Atomic Iron and Titanium in the Atmosphere of an Exoplanet

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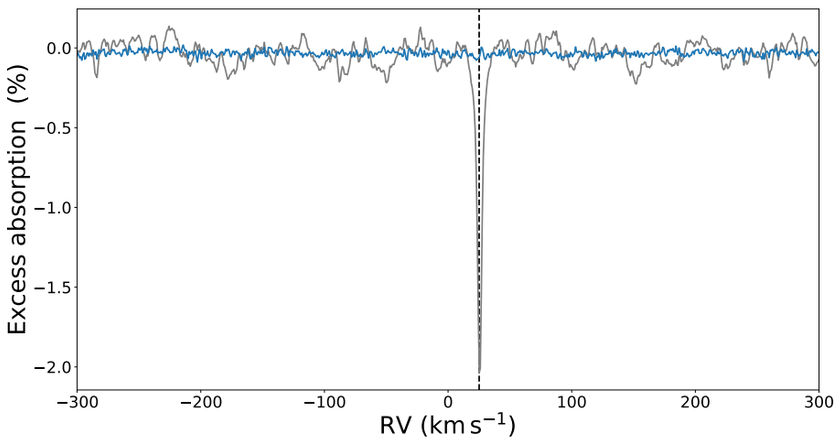
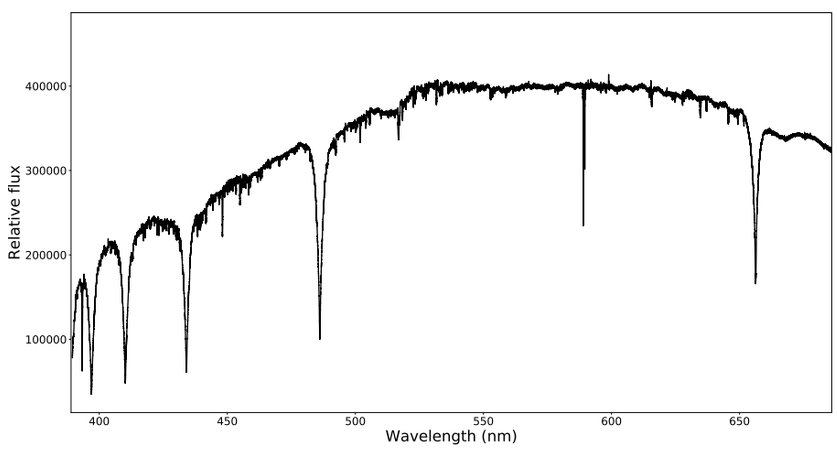
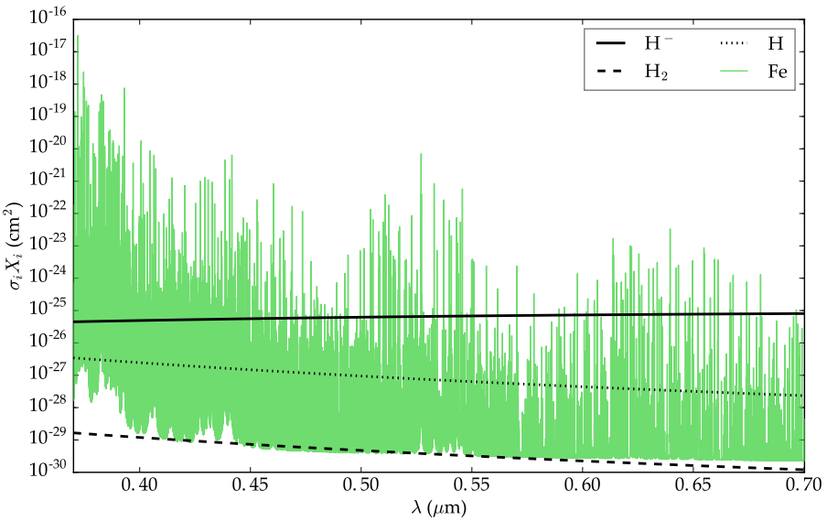


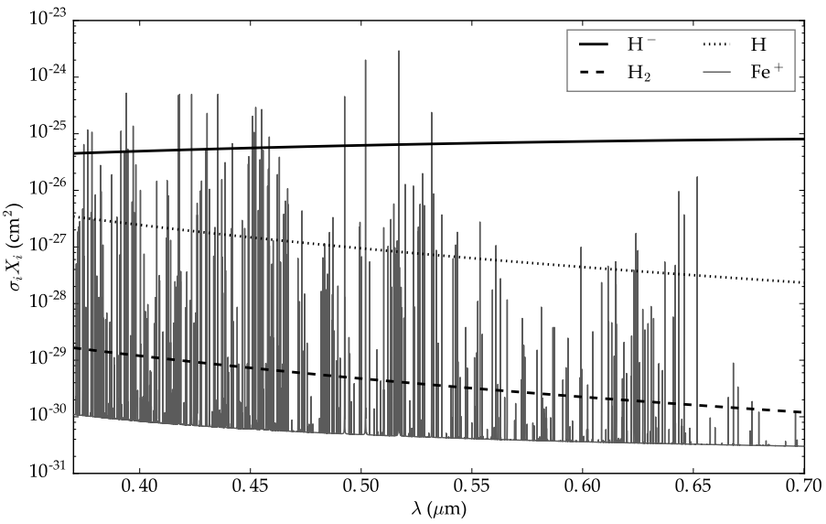
Supplementary Figure 1: Cross correlation analysis performed on the in-transit spectrum with a telluric water-absorption template spectrum (at 296 K). The blue and grey curves are the transit depths with and without the telluric correction, respectively. The data are shifted to the rest frame of the star, such that the signal dominated by telluric water absorption occurs near +25 km s^{-1} (corresponding to the Barycentric Earth Radial Velocity or BERV systemic velocity), as indicated by the dashed vertical line.



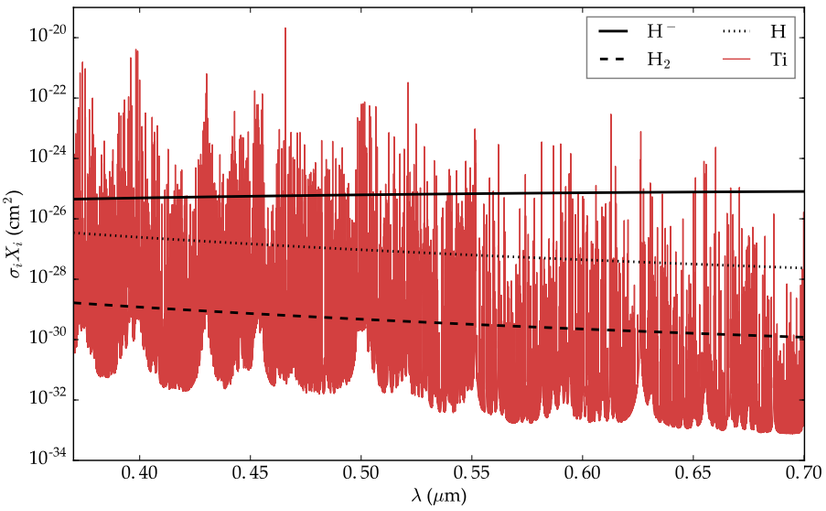
Supplementary Figure 2: HARPS-N spectrum of the KELT-9 system.



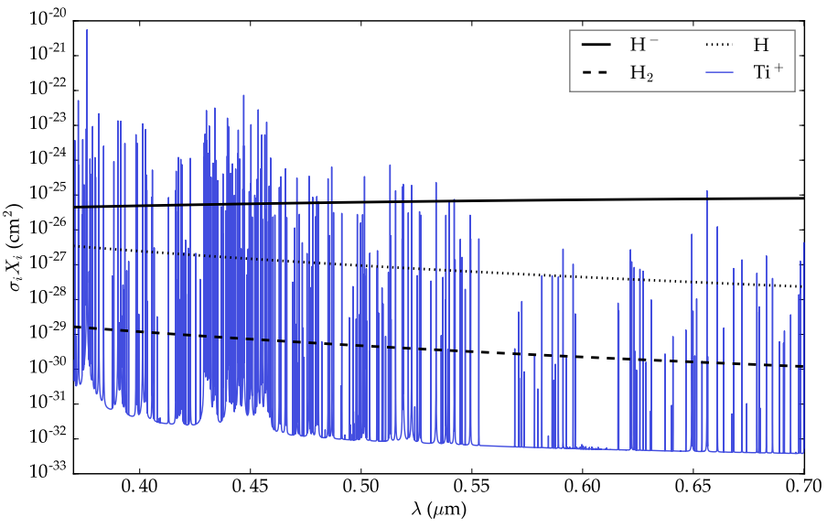
Supplementary Figure 3: Weighted cross sections of neutral atomic iron, Rayleigh scattering due to atomic and molecular hydrogen, and absorption by hydrogen anions.



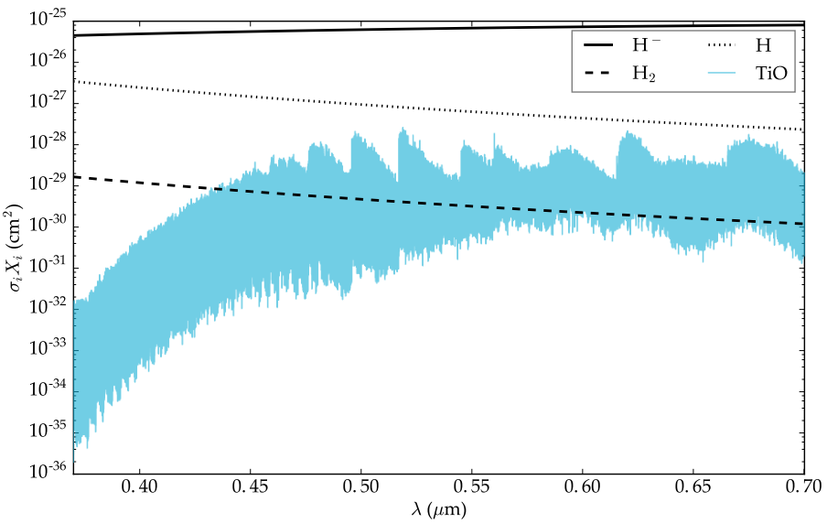
Supplementary Figure 4: Same as Figure 3, but for singly-ionized iron.



Supplementary Figure 5: Same as Figure 3, but for neutral atomic titanium.



Supplementary Figure 6: Same as Figure 3, but for singly-ionized titanium.



Supplementary Figure 7: Same as Figure 3, but for titanium oxide.