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**High Accuracy Characterization of an Astro-comb with an FTS**
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— Searches for extrasolar planets using the periodic Doppler shift of stellar lines are approaching Earth-like planet sensitivity. To find a 1-Earth-mass planet in an Earth-like orbit, an order of magnitude improvement in state-of-the-art radial velocity spectroscopy is necessary. An astro-comb, the combination of an ocatve-spanning laser frequency comb with a Fabry-Perot cavity, producing evenly spaced frequency markers with the potential for large wavelength coverage is a promising avenue towards improved wavelength calibration. Key to achieving high accuracy and long-term stability of the astro-comb is high-quality suppression of undesired comb laser lines by the Fabry-Perot filter cavity. Here we present a characterization of a green astro-comb produced by broadening a Ti:Sapphire laser using photonic crystal fiber (PCF) and filtered through zero group delay dispersion mirror sets optimized for the green. The characterization is performed using a high-resolution FTS constructed in our laboratory.

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