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An Attosecond Transient Absorption Spectroscopy Setup with a Water Window Attosecond source[1] ANDREW CHEW, YANCHUN YIN, JIE LI, XIAOMING REN, YANG WANG, YI WU, ZENGHU CHANG, Univ of Central Florida — Attosecond transient absorption, or time-resolved pump-probe spectroscopy, are excellent tools that can be used to investigate fast electron dynamics for a given atomic or molecular system. Recent push for high energy long wavelength few cycle laser sources has resulted in the production of x-ray spectra that would allow the probing of electron dynamics at the carbon k-edge in molecules such as CH_4 and CO_2. The motion of charges can be caused by photo-dissociation and charge migration. We present here the first results from our experimental setup where we produce a broadband attosecond pulse with spectra that stretches into the water window.

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