Abstract Submitted
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Multi-photon Molecular Tagging Velocimetry with Femtosecond Excitation (FemtoMTV)[1] MANOOCHEHR KOOCHESFAHANI, SHAHRAM POUYA, ALEXANDER VAN RHIJN, MARCOS DANTUS, Michigan State University — We report results from first MTV measurements in water under non-linear resonant femtosecond excitation of a phosphorescent supramolecule. Both two-photon and three-photon absorption processes are examined and the feasibility of measurements is demonstrated by single component velocimetry in a simple jet flow. The new capabilities enabled by FemtoMTV include elimination of the need for short wavelength UV excitation source and UV optical access in flow facilities, and potential for high rep-rate flow imaging.

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