PS Dynamics and Dephasing Times of Internal Amino Acids in Proteins

ROBERT AUSTIN, Princeton University, AIHUA XIE, Oklahoma State University, BRITTA REDLICH, FOM Institute for Plasma Physics, LEX VAN DER MEER, FOM Institute for Plasma Physics — We present results on very narrow linewidth (2 cm$^{-1}$), high peak flux (1 $\mu$J in a 50 $\mu$ spot) pump/probe and photon echo experiments on the amide I band of proteins. Using the continuous tuning capability of the FELIX FEL we scan across the amide I band with these narrow, high intensity pulses searching for signs of energy trapping in the inner core of a protein, and seach for correlations between trapped states and long dephasing times of the trapped states.

$^{1}$Supported by AFOSR and FOM, Netherlands

Robert Austin
Princeton University

Date submitted: 30 Nov 2005