25. Title: Ultra-short coherent terahertz radiation from ultra-short dips in electron bunches circulating in a storage ring

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Abstract: Terahertz (THz) coherent synchrotron radiation (CSR) is emitted not only from ultra-short electron bunches, but also from electron bunches with micro-structures. Formation of micro-structures at the sub-picosecond scale in electron bunches by a laser slicing technique is experimentally studied through observation of the THz CSR. The THz CSR spectrum was found to depend strongly on the intensity and the pulse width of the laser. The results agreed qualitatively with a numerical simulation. It was suggested that the evolution of the micro-structure during CSR emission is important under some experimental conditions.