

**An Apparatus for Measuring Turn-by-Turn Transverse Beam Profile in Electron Storage Rings**<sup>\*</sup>, T. CHEN, R.H. SIEMANN, SLAC; D. HARTILL, S. SMITH, Cornell University - A new apparatus is designed to measure turn-by-turn beam profile using synchrotron light. The apparatus consists of optical fibres, photo multiplier tubes and digitizers. It is cost efficient and easy to operate. Monte Carlo simulations have shown that the apparatus has an acceptable resolution. The concept has been tested preliminarily on SLC damping ring, and a full equipment is being set up at CESR to observe coherent beam-beam phenomenon.

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