

Commissioning Results of the APS Storage Ring Photon Monitor Systems*, A.H. LUMPKIN and B.X. YANG, ANL - Initial commissioning of the Advanced Photon Source (APS) 7-GeV storage ring and the installed synchrotron radiation monitors has been done. Early studies involved single bunch measurements on the transverse beam sizes, $\sigma_x \text{ \AA} \times 150 \text{ \mu m}$, $\sigma_y \text{ \AA} 50 \text{ \mu m}$, and longitudinal profile, $\sigma_t \sim 25$ to 50 ps as a function of stored beam current (0.2 to 7.7 mA). Additionally, the fast, head-tail vertical instability was graphically displayed by the use of a dual-sweep streak camera for the first time in a ring in the USA. More recent measurements have involved multi-bunch studies with beam currents up to 86 mA. Phase shifts of the beam during the pulse train were observed. These measurements were all based on optical synchrotron radiation (OSR). Progress on the x-ray synchrotron radiation (XSR) imaging station will also be addressed.

* Work supported by the U.S. Department of Energy, Office of Basic Energy Sciences, under Contract No. W-31-109-ENG-38.