

Ultrafast Soft X-ray Pinhole Camera

B. Stratton, PPPL

Presented by J. Menard

NSTX 5 Year Plan Ideas Forum

June 24–26, 2002

Princeton Plasma Physics Laboratory

Ultrafast Soft X-ray Pinhole Camera

- Goal: Do rapid 2-D tangential imaging of plasma in soft x-ray emission to study details of MHD events, e. g., sawtooth crashes
- Capabilities:
 - Frame rates up to 1 MHz for 300 frames (maximum frame rate in practice will be determined by soft x-ray flux)
 - Images are 64 X 64 pixels
 - Wide-angle tangential view of plasma

Ultrafast Soft X-ray Pinhole Camera

- Schedule:
 - September: Receive CCD camera from vendor
 - Fall : Test and calibrate camera using lab soft x-ray source
 - Late Fall and early Winter: Install camera on NSTX and debug
 - Late Winter onwards: Take plasma data