

# HOTSAXS

HOTSAXS (High Overall Throughput Small Angle X-ray Scattering detector) is designed for small angle non-crystalline diffraction experiments on synchrotrons.

HOTSAXS offers high count rate capabilities >5MHz globally, excellent dynamic range and very fast time framing <10 $\mu$ s. "This is far in excess of anything possible with the latest CCD technology"<sup>1</sup>.

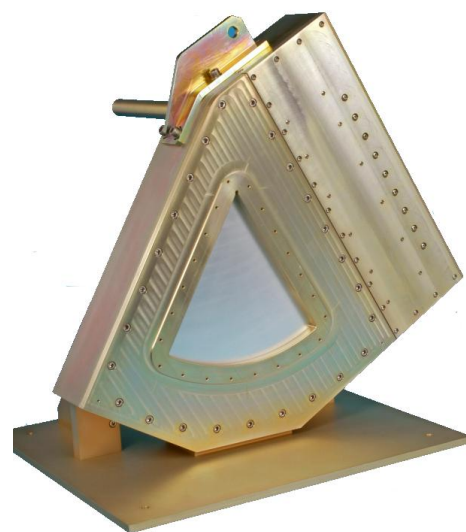
HOTSAXS is based on microstrip gas counter technology and has been built by the Rutherford Appleton Laboratory. This HOTSAXS detector will complement the Wide Angle X-ray Scattering detector HOTWAXS, allowing combined dynamic, small and wide angle X-ray diffraction studies on one experimental station.

## Benefits

High count rate  
Fast framing capability

## Specification

Channels	506 channels
Events / second / channel	1 M
Full parallel readout	1 signal processing chain per channel
Photon counting readout	Window discriminator
Multi channel scaler on every channel	32 bit
Integrating time frames	1 $\mu$ S-10S
X-ray energy sensitivity	4keV – 12keV
Software	da.server based software interface (network accessible via text commands and unified reads in a manner which is common with other synchrotron detector systems)



<sup>1</sup> The non-crystalline Diffraction beamline for Diamond – An Update, Fibre Diffraction Review 12, 9-14, 2004 , (DOI) 10.1382/s20041209 , N.J. Terrill, A.F. Grant, A.R. Marshall, A.D. Smith, K.J. Sawhney