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## An investigation of the position resolution of the HOTWAX detector

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The HOTWAXS detector has been available for use by the scientific community at the Daresbury SRS for the last 18 months on stations 9.3 and 2.1. A second system has also recently been commissioned on station I22 of the Diamond light source and is in routine use. The detector is based on Microstrip Gas Chamber (MSGC) technology and offers high counting rate, parallax free, photon counting detection with 512 independently instrumented position sensitive channels. The detector was designed to be used in the combined studies of X-ray absorption fine structure and X-ray diffraction (XAFS/XRD), and also in the technique of small angle and wide angle X-ray scattering (SAXS/WAXS). The energy range covered by stations I22 and 9.3 are very similar and vary from 6 to 30keV. The routine operation of the detectors is generally about 8keV using an Ar:DME gas mixture. This report demonstrates that in the higher energy range very significant gains in both detection efficiency and position (angular) resolution are achieved by moving to a Xenon based gas mixture.

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