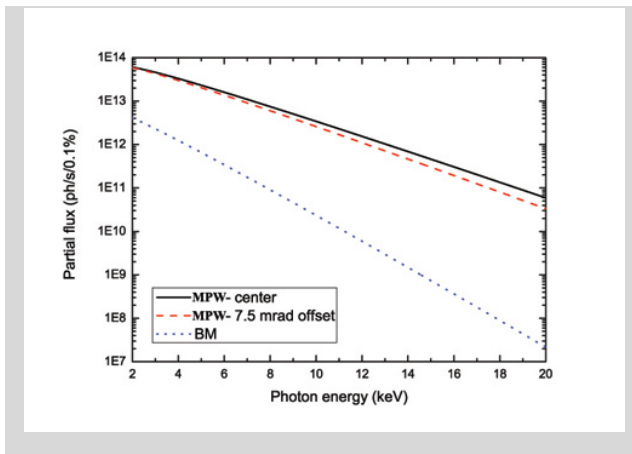


Multipole wiggler beamlines at the Siam Photon Laboratory

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A 2.4 Tesla multipole wiggler (MPW) is being installed in the straight section number one of the Siam Photon Source (SPS) [1] at SLRI. The MPW is on loan from ASTEC, UK, and is the world's highest field permanent magnet wiggler [2,3]. Three branched x-ray beamlines are under construction to utilize the MPW radiation. BL1.1W, jointly funded by SLRI and Khon Kaen University, will be a multi-technique x-ray beamline, having capability of performing X-ray Absorption Spectroscopy (XAS), X-ray Diffraction (XRD), X-ray Fluorescence (XRF) and X-ray Scattering (SAXS/WAXS), with the priority given to XRD and XAS and the coupling of the two techniques. BL1.2W is an imaging beamline planned for X-ray Imaging, X-ray Tomography and micro-beam X-ray Fluorescence. The beamline is primarily aimed at biomedical, environmental and archaeological applications. BL1.3W is a dedicated SAXS beamline which will be transferred, with some modification, from the existing SAXS beamline BL2.2 [4]. The three beamlines are expected to have the photon flux around two orders of magnitude higher than the bending magnet source of the SPS in the photon energy range of 5-20 keV. The SAXS beamline, BL1.3W, will be in operation at the end of 2013, while BL1.1W and BL1.2W are planned to be completed and operational at the beginning of 2015.



The figure shows calculated partial flux from the center beamline for BL1.2W (solid line), the 7.5 mrad branches for BL1.1W and BL1.3W (dashed line), compared to the bending magnet source (dotted line).

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