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Performance Characteristics of a New Confocal MaxFlux optic coupled with a Sealed Tube Source.

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Screening of samples for synchrotron trips does not typically require the highest quality data collection capabilities. In order to address the needs of the community of crystallographers who collect most of their data at synchrotron beamlines, we have designed and built a new Confocal MaxFlux optic specifically for large (> 0.3 mm) focal spot sources, i.e. conventional sealed tube sources.

This optic uses a novel deposition process in order to provide a multilayer that more efficiently uses larger sources. We will discuss the performance characteristics of this optic coupled with a conventional copper sealed tube X-ray generator using a Saturn 92 CCD detector. This system provides adequate capabilities to screen and collect data on routine samples. We will compare this system to the FR-E SuperBright generator coupled to the VariMax-HF optic, which provides many times the throughput for the demanding applications of screening very tiny crystals and collecting data on those same samples.