

# **Canted Undulator Expansion of 20-ID**

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## **Abstract**

We are proposing to replace the current Sector 20 ID beamline with two beamlines on a canted undulator source. These two beamlines will build on the current sector 20 programs, and provide a comprehensive suite of endstations and detectors to provide a coordinated combination of x-ray spectroscopy tools. The high brilliance of the MBA lattice will greatly enhance the possibilities for micro(nano)-spectroscopy, and this will be an emphasis on the micro-Spectroscopy (MS) branch line. In addition to improving our standard micro-XAFS capability, this line will include easily variable spot size, confocal detection, and improved detectors allowing simultaneous fluorescence mapping and emission spectroscopy at scan rates typical of current microprobe stations. The second or Advanced Spectroscopy (AS) branch will provide a versatile set of detection options including high energy resolution detection of fluorescence and inelastic scattering. These include an enhanced LERIX spectrometer, miniXS spectrometers, a high resolution crystal spectrometer, and enhanced capability for detection of XAFS in very dilute samples.