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CMCF 08ID-1 Beamline at the Canadian Light Source. Pawel Grochulski^{1,2}, Riccardo Signorato³, Ingvar Blomqvist¹, Louis Delbaere², ¹Canadian Light Source Inc., ²Dept. of Biochemistry, Univ. of Saskatchewan, ³ACCEL Instruments GmbH.

The 08ID-1 beamline is the initial phase of the Canadian Macromolecular Crystallography Facility (CMCF). The CLS is a 2.9 GeV ring that got its first light in the diagnostic beamline in December of 2003. We have designed and constructing a beamline which is illuminated by a small-gap in-vacuum undulator (SGU), located in the upstream half of the straight section and chicaned inboard by 0.75 mrad. The downstream half of this section is reserved for the future SGU for the 08ID-2 beamline. The mechanical support and a vacuum chamber have been manufactured by the R.M.P.s.r.l. (Italy), but the magnetic structure, shimming and control are done at the CLS. The overall design of the beamline contains white beam slits, indirectly cryo-cooled first crystal of the DCM and sagittally focusing second crystal, and vertically focussing ULE mirror. The beamline is completed with an innovative and very robust endstation. The beamline controls, similarly to the whole CLS facility, are being developed based on EPICS. The scientific goal of the 08ID-1 beamline is to operate a protein crystallography MAD beamline suitable for studying small crystals and crystals with large unit cells.