Serial Crystallography Data Processing for PAL-XFEL

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The PAL-XFEL, a 0.1-nm hard X-ray free-electron laser (FEL) facility based on a 10-GeV S-band linac, had been constructed at Pohang, Korea [1]. Its commissioning began in January 2016 and the first lasing of the hard X-ray FEL and the construction of its three beam lines are well in progress. In the following years, one third of beam times may be available for macromolecular crystallography (MX) users. At LCLS, serial crystallography has become the major method for MX users. In this regard, Korean Synchrotron User Association (KoSUA) has supported its MX user group to promote the use of serial crystallography method in Korea. Especially, as a major MX user group in Korea, KRIBB researchers have been supported by KoSUA for the the testing and porting of 'existing' serial crystallography data processing suites for PAL-XFEL. Two major software suites, *Cheetah/CrystFEL* [2] and *cctbx.xfel* [3], have been considered for such testing and porting efforts. While both suites have served MX community for serial crystallography, they do have different flavors and strengths. Practical consideration from third-party perspective and planning for PAL-XFEL implementation will be discussed.

Reference

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