

PLS Auto-mounting System

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We have developed a robotic system for auto-mounting protein crystals from a sample cassette in liquid nitrogen to a goniometer head. A small industrial six joints axis robot is used for this system with a custom built actuator. It is installed at a protein crystallography beam-line with a wiggler source in PAL on September. Our design goal is to make the system apply every type of caps for samples such as screw and magnetic types with about 18mm length pin. The sample cassette is designed to contain 10 crystals similar to ALS and ACTOR system. A new sample Dewar with two type sensors for monitoring liquid nitrogen level can contain 5 cassettes at a time. We are trying to test this system in the beam-line. We will introduce commissioning results of our auto-mounting system.