MXCuBE | LIMS
site report

Kangwen Bao(email:baokw@sari.ac.cn)/Wenming Qin

National Facility for Protein Science in Shanghai (NFPSS)

/Shanghai Synchrotron Radiation Facility (SSRF)

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Contents

▶ Part 1.Beamline Introduction

Shanghai Synchrotron Radiation Facility
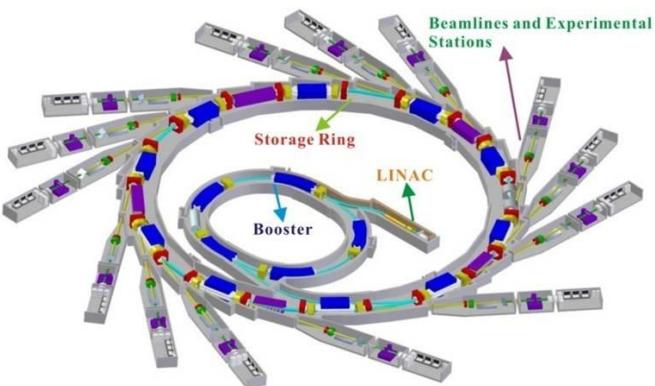
SSRF Ring Parameters

Electron Energy: 3.5 GeV

Electron Current: 300 mA
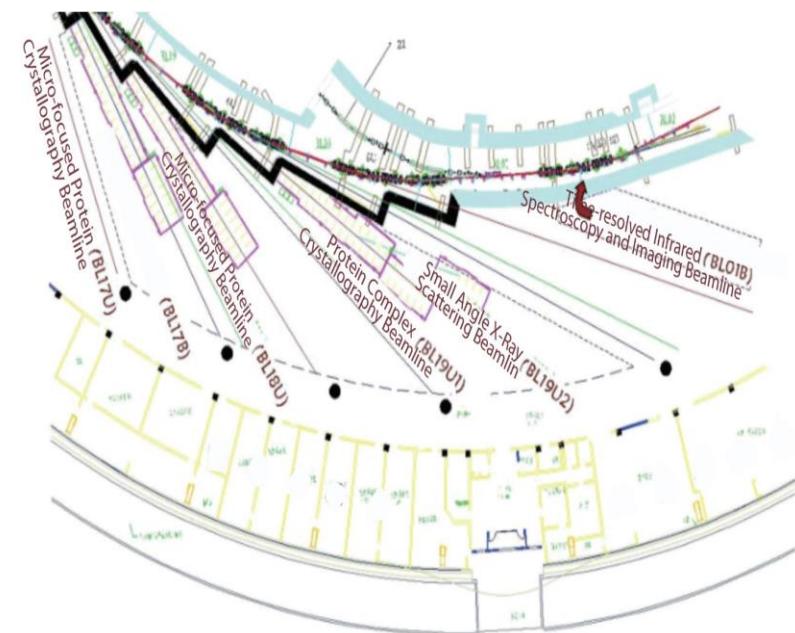
Circumference: 432 m

Straight sections: 20

Beamlines and Experimental Stations

Storage Ring

LINAC

Booster

Hard X-ray Free Electron Laser

Soft X-ray Free Electron Laser

SSRF
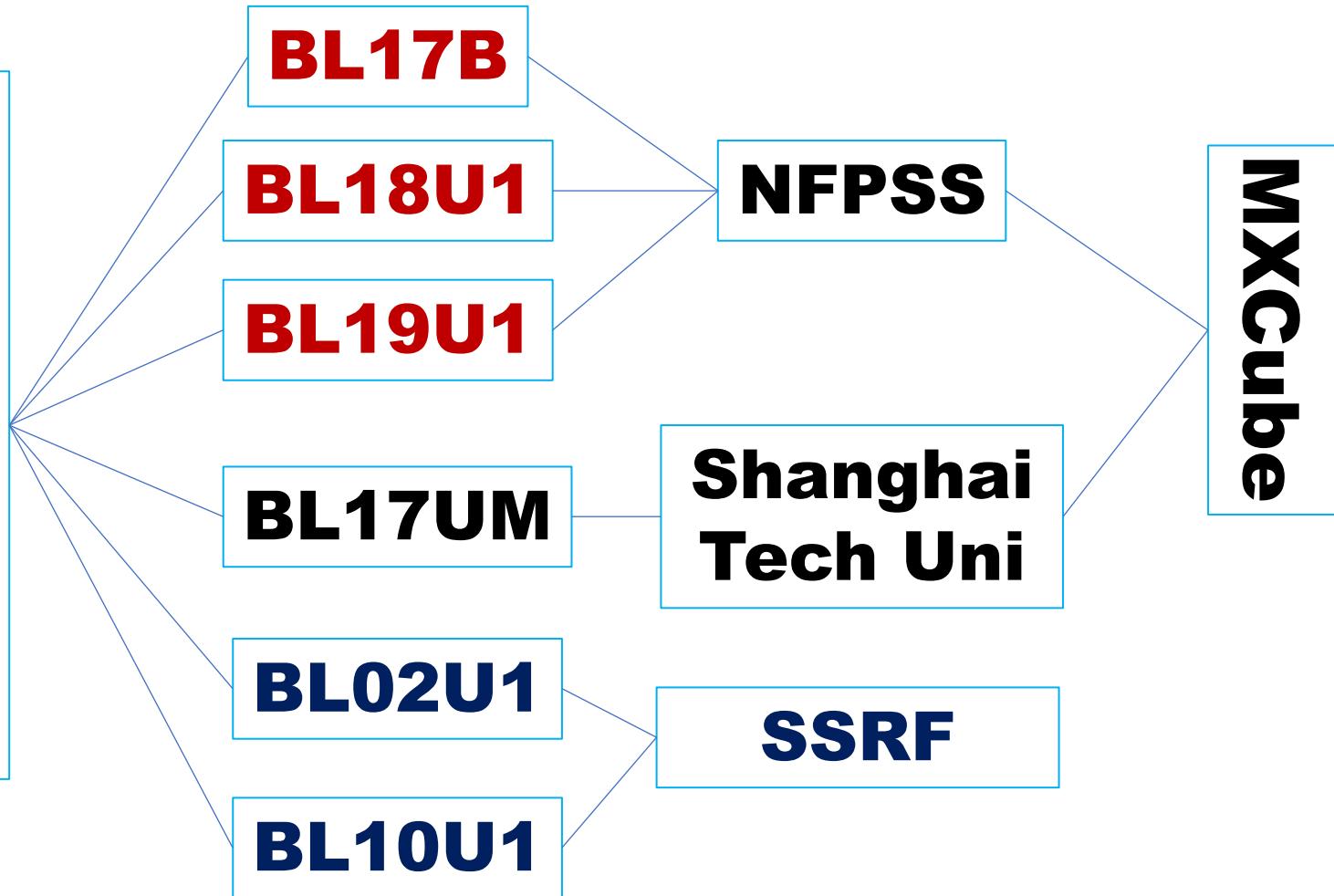
National Facility for Protein Science . Shanghai

- ➢ NFPS passed the National Acceptance Review, and formally opened to the users in July 2015.

- ➢ NFPS is composed of 9 technology systems with state-of-the-art instruments in its Haike Road Campus and 5 Beamlines within the Shanghai Synchrotron Radiation Facility.

· 国家蛋白质科学研究（上海）设施海科路园区

国家蛋白质科学中心·上海（筹）
NATIONAL CENTER FOR PROTEIN SCIENCE · SHANGHAI

Micro-focused Protein Crystallography Beamline (BL17U)
Micro-focused Protein Crystallography Beamline (BL18U)
Protein Complex Crystallography Beamline (BL19U1)
Small Angle X-Ray Scattering Beamline (BL19U2)
Time-resolved Infrared (BL01B) Spectroscopy and Imaging Beamline

MX Beamlines at SSRF

▶ **Part 2.MXCuBE Status**

MXCUBE Status

- Version of mxcubecore
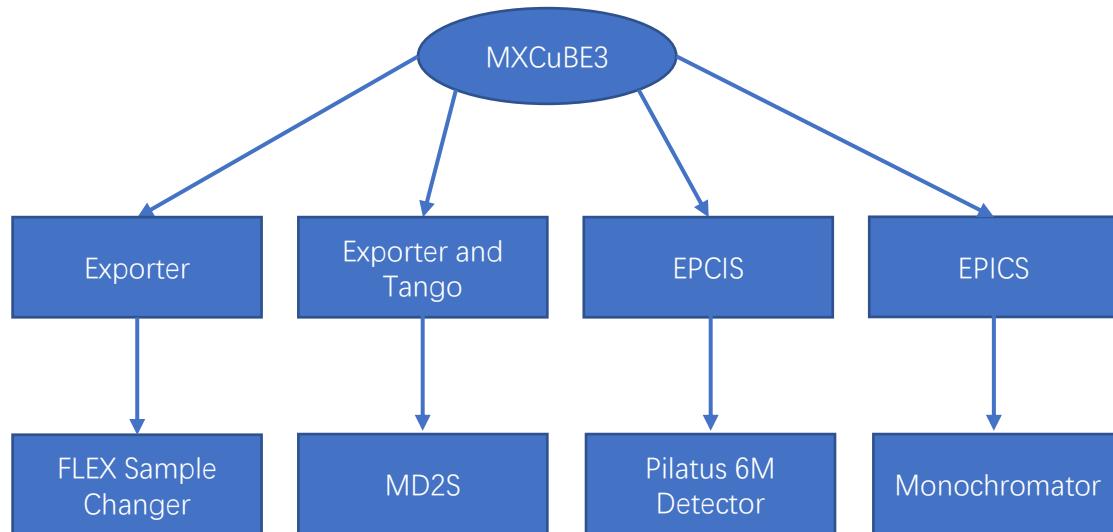
    BL17B　 : Origin version from 2022.2.23

    BL18U1　: Origin version from 2023.4.9
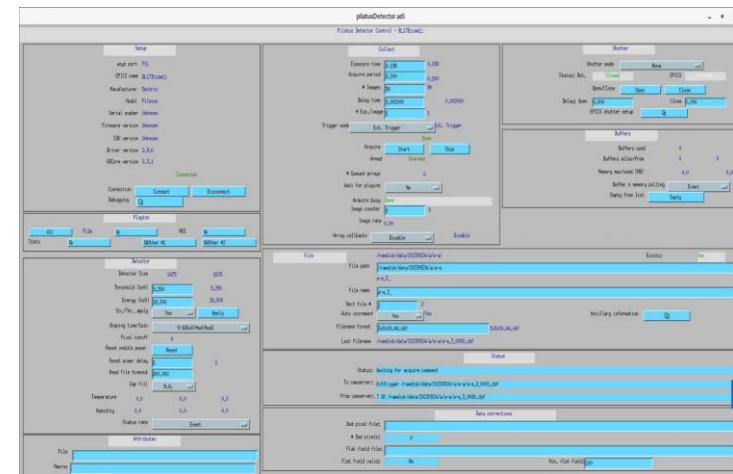
    BL19U1　: Origin version from 2023.4.9

MXCuBE Status

- ## Hardware Interface Control System

  - Integrate Flex sample changer into MXCuBe by Exporter.

  - Integrate Pilatus 6M detector into MXCuBe by EPICS.

  - Integrate MD2S into MXCuBE by Exporter and Tango.
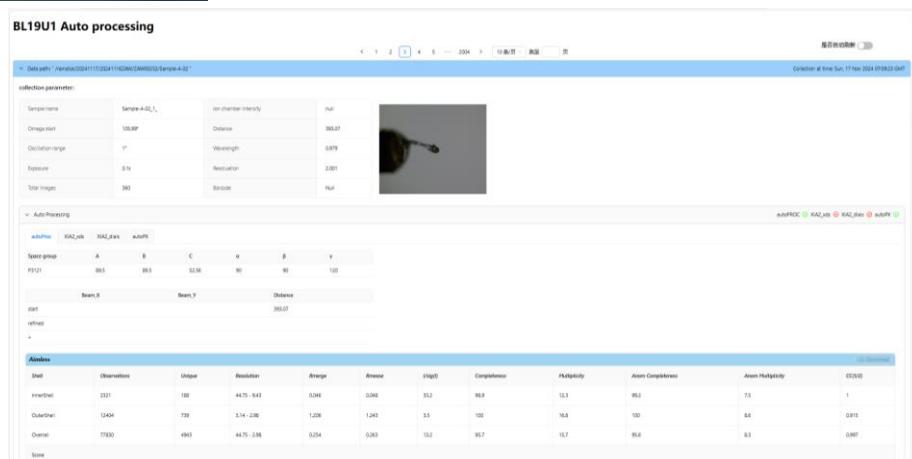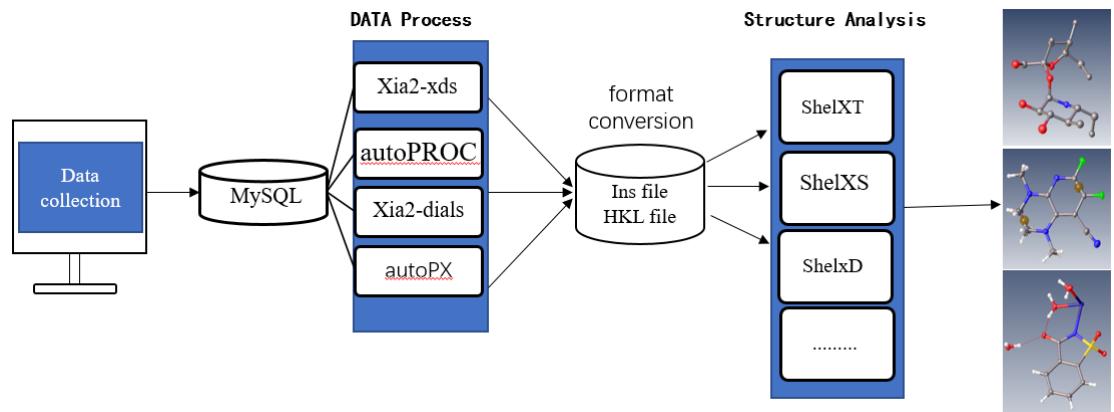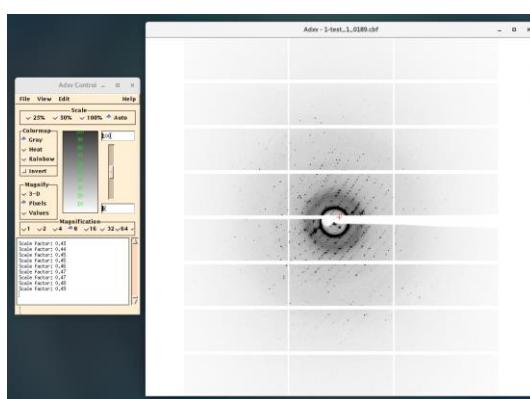
Integrated Control Systems

Detector EPICS Control Interface

MXCUBE Status

- Other development

  - Auto update diffraction pattern in ADXV.

  - Deploy four types of auto processing pipeline.
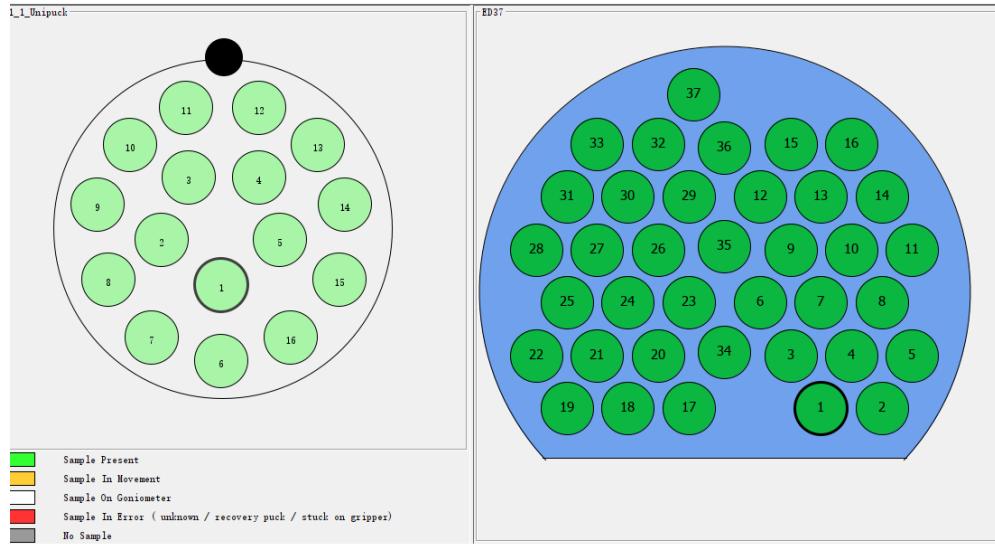
Data Process Display Interface
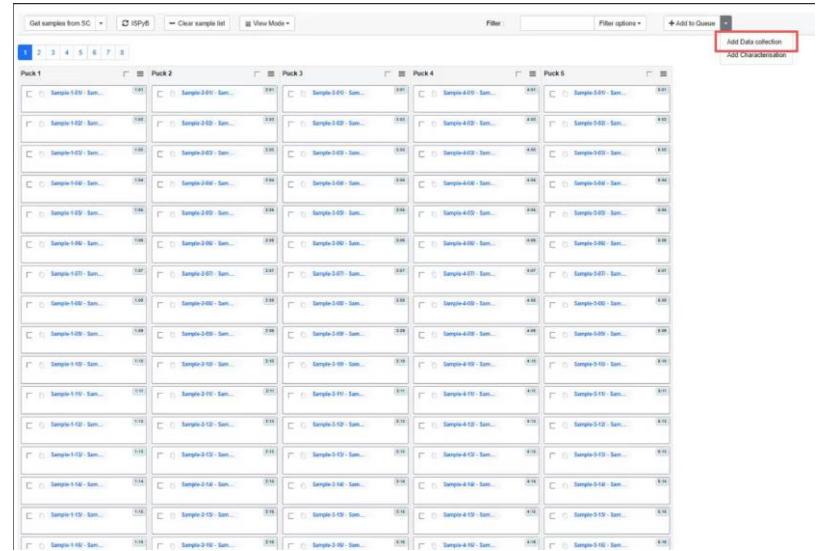
▶ Part3. Developments since last meeting

Developments since last meeting
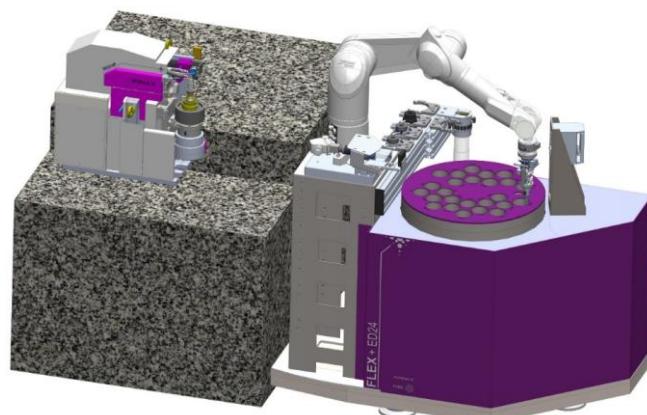
- Successfully Integrated the Flex Robotic Arm （From Arinax）


The number of pucks has increased to 37
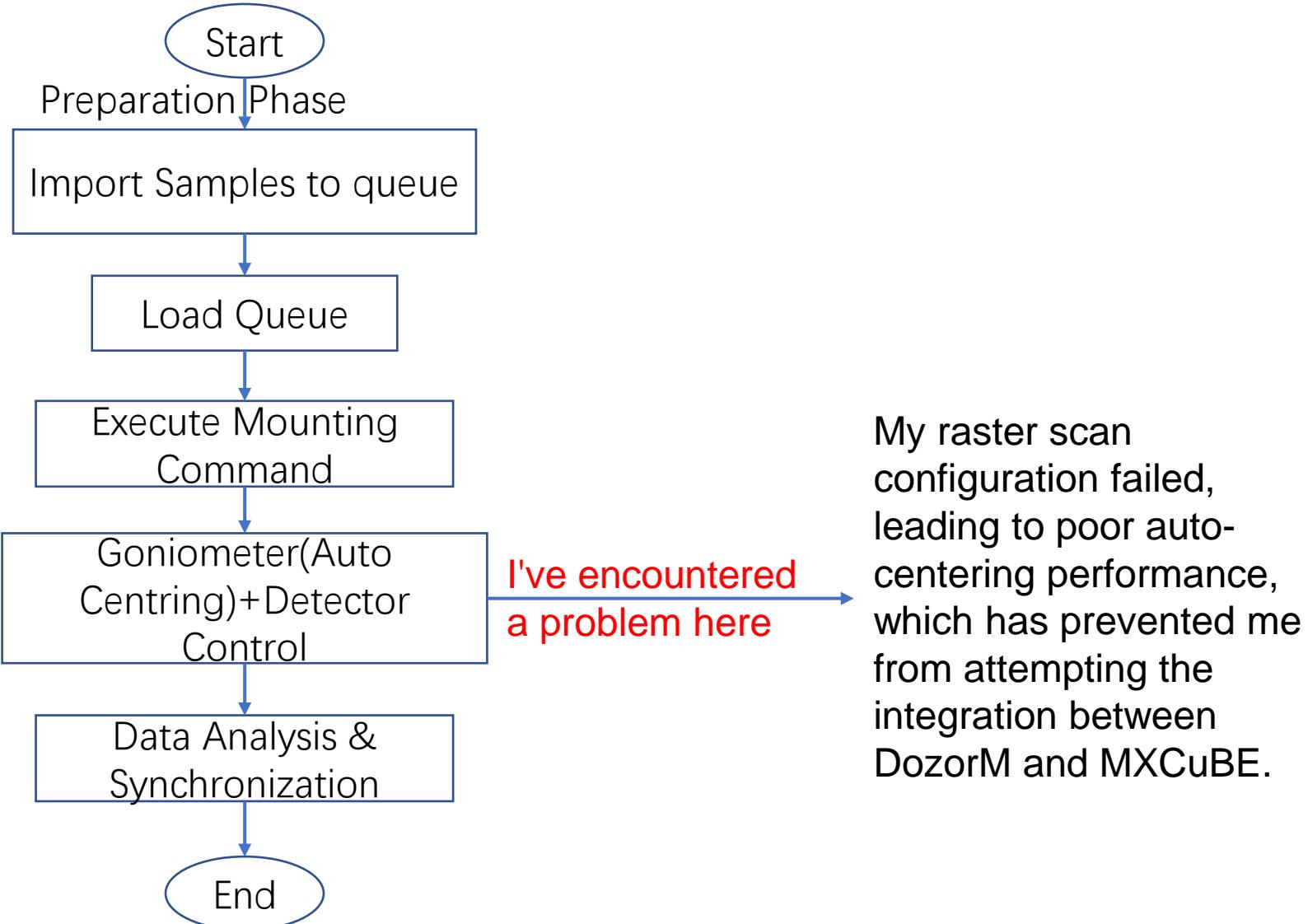
Sample Layout in MXCuBE

FLEX-ED35

Developments since last meeting

- Successfully completed automated mounting and data collection

Start

Preparation Phase

Import Samples to queue

Load Queue

Execute Mounting Command

Goniometer(Auto Centring)+Detector Control

I've encountered a problem here

My raster scan configuration failed, leading to poor auto-centering performance, which has prevented me from attempting the integration between DozorM and MXCuBE.

Data Analysis & Synchronization

End

▶ Part4.Plan the next work

Plan the next work

- Complete the configuration of Raster Scan.

- Integrater Dozor/Dozorm for Crystal detection for fully automated data collection.

- Complete the configuration of ISPyB(This is a long-term process).

Thank you for your attention!