Update

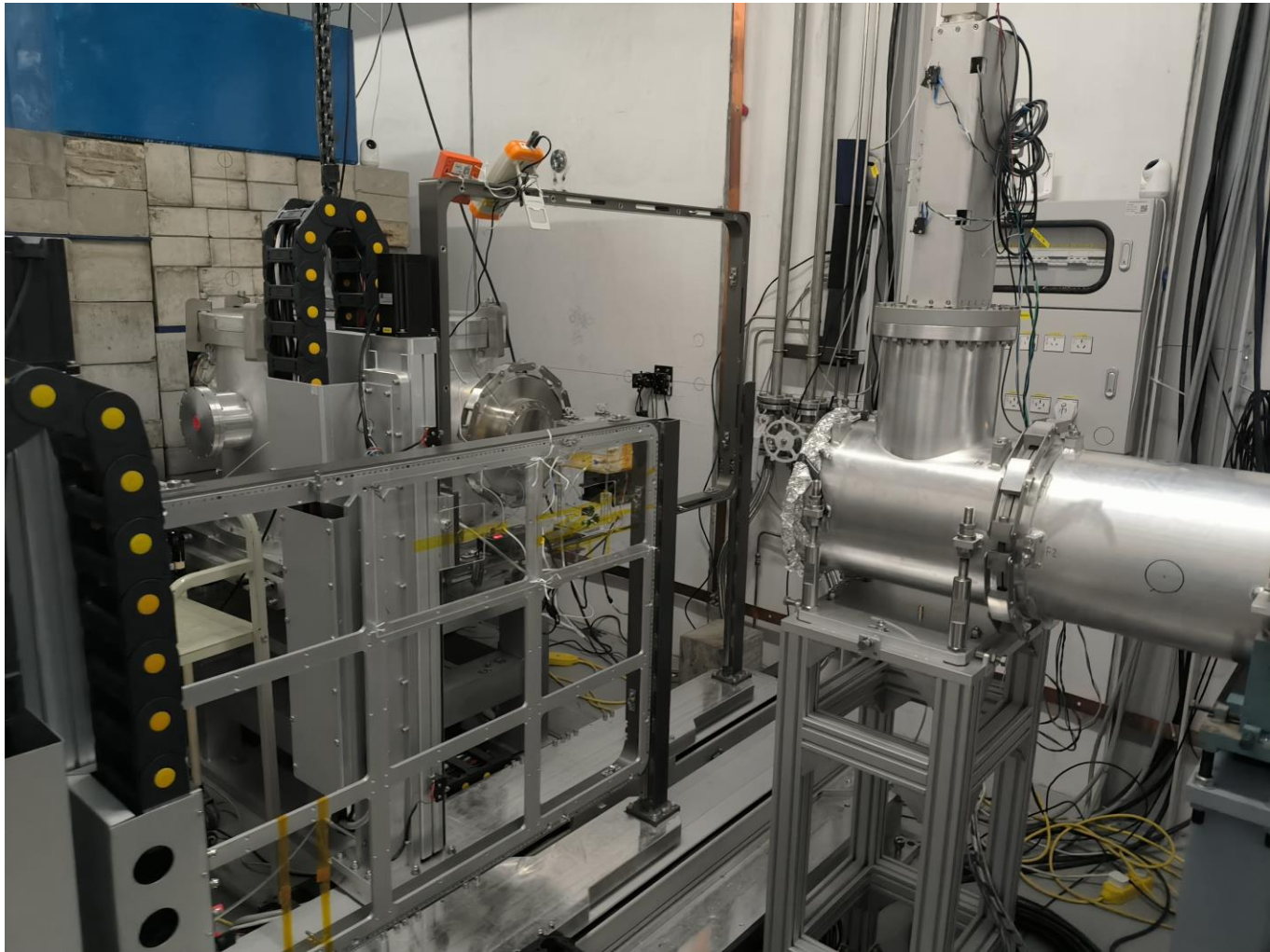
Zhan Li

Introduction

- Sensors on ATLAS are in a high irradiation environment, so the irradiation test is needed.
- We use so-called Mini-sensor, which is offcut of the ITk sensor, to do such destructive test.

CSNS

- The test is on China Spallation Neutron Source (CSNS) Associated Proton Experiment Platform (APEP, 伴生质子束实验平台).
- 80MeV proton beam will be shot on the sensor, and after the irradiation the sensor will be taken back and do some test.



What's new

- ATLAS has no such low flux test before. We do this to verify that CSNS can be qualified to test the sensor.
- We investigate new ways to put the sensors under such low flux.
- Also we need to do Geant4 simulation to understand the process, and also to make it enough for paper.

Simulation

- We use a python based Geant4, called RASER developed by Shi Xin's team.
- Up to now I can get the energy deposition figure.
- IV, CV and CCE (charge collection efficiency) simulation still need to be done.