



Joining sPHENIX Collaboration

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Brief CV



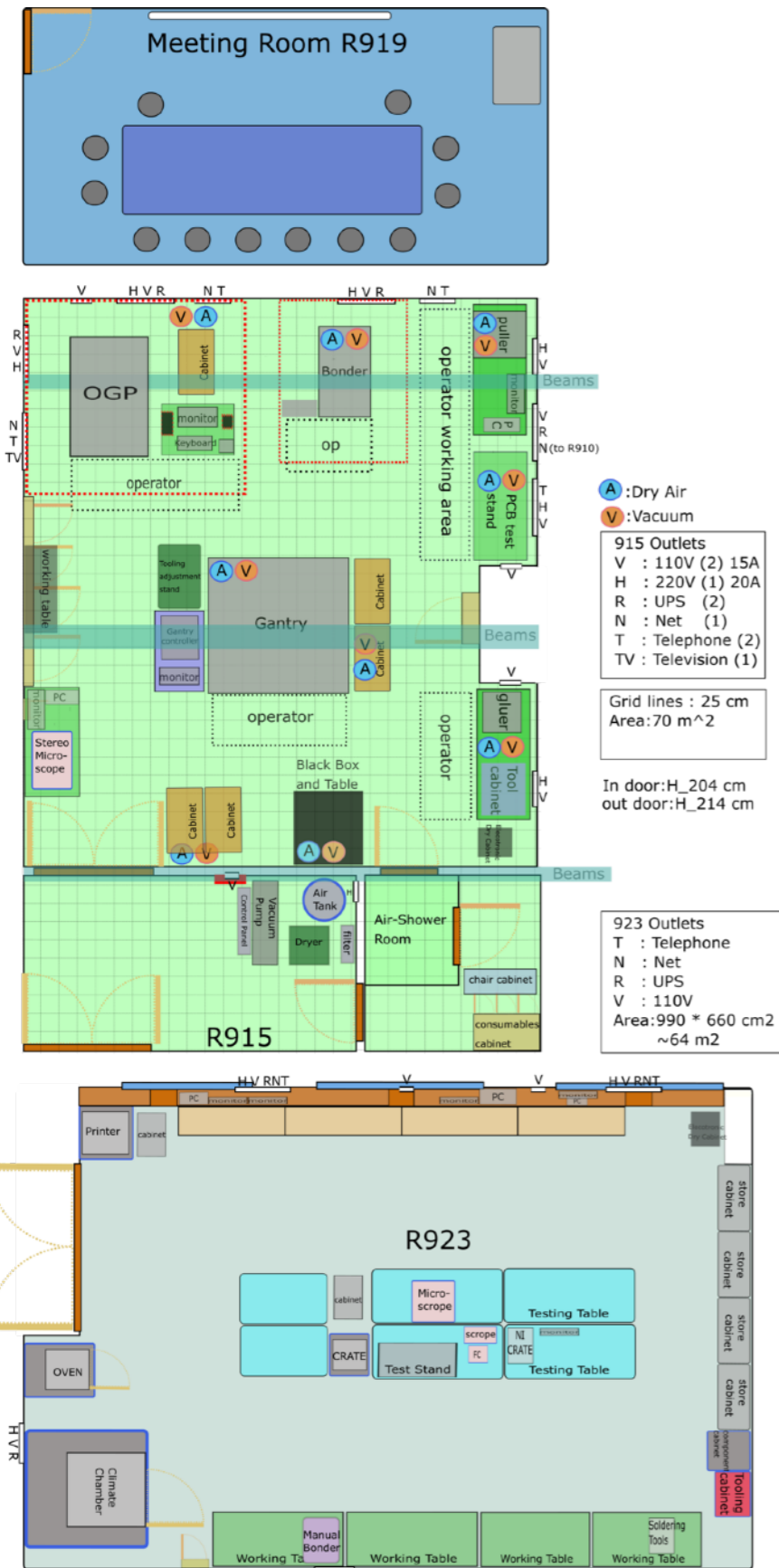
- Ph.D. National Taiwan University
 - Belle (e^+e^-) experiment (1996~2002). BGO crystal calorimeter; B physics analysis
- Postdoc, Academia Sinica
 - CDF ($p\bar{p}$) experiment (2003~2007). SVXII-b and SVXII silicon-strip detector projects; Quarkonium and Higgs analysis
- Researcher / Associated Professor
 - CMS (pp) experiment (2007~). Preshower (silicon strip), phase-1 Pixel upgrade (silicon pixel), phase 2 HGCAL (silicon pad); SM photon, Searches with photon and Higgs analysis



Participate INTT project

- Collaborates with Prof. C.-M. Kuo in NCU to build INTT ladders.
- Utilize the silicon detector facility located in NTU campus in Taipei city, 35 km away from NCU.
- Ongoing project of the lab is on building CMS phase-2 High Granularity Calorimeter (HGCal) based on silicon-pad sampling calorimeter.

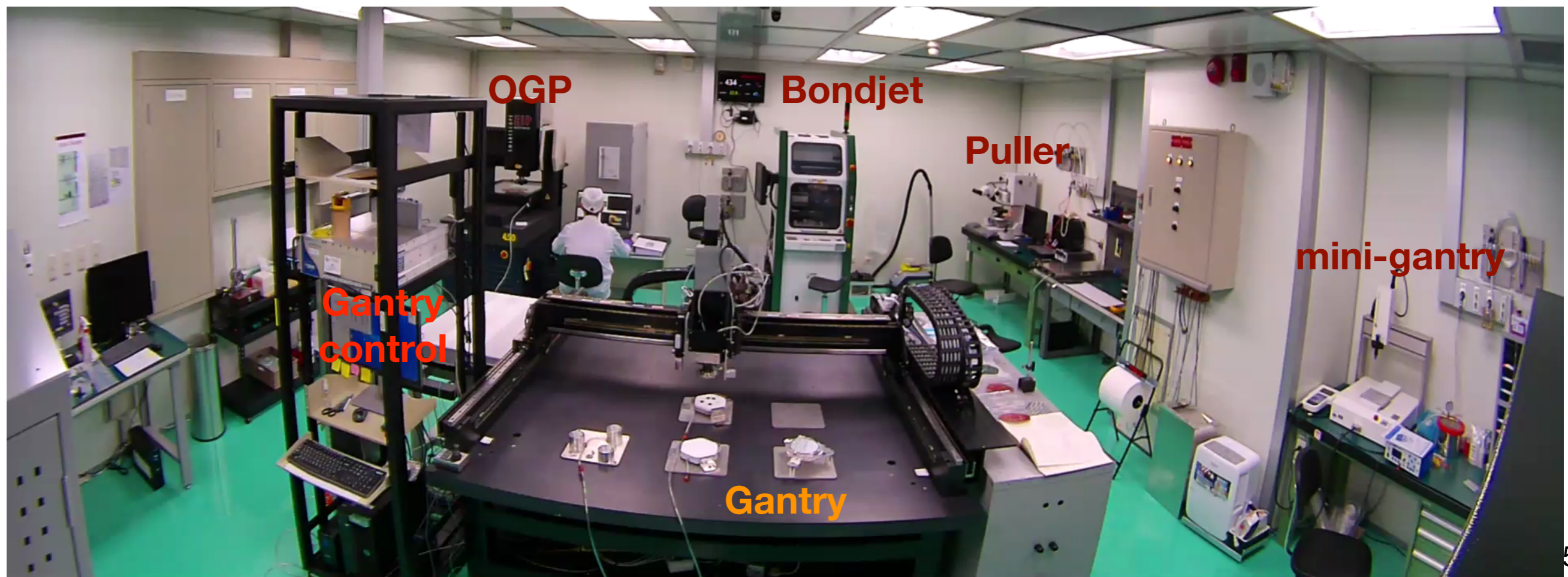
NTU Si-Detector Lab



- A cluster of 3 rooms consist of a cleanroom 70m², a lab space 64 m² and a meeting room for HEP Si-Det projects.
- Cleanroom is class 10,000 with temperature and humidity controlled at 23C and RH 50% all year round.
- Lab space serves as a testing, inspection and repair workspace.

Cleanroom Equipments

- Aerotech 1.25x1.25 m² robotic gantry with Labview control.
- OGP optical 3d measurement
- Hesse BJ820 automatic Bondjet and DAGE 4000 Bondtester (puller)
- Manual probe station and picoprobes (not visible in this pic)
- glue dispensers, mini-gantry, microscope, degassing chamber, Keithley 2410 and tools ...



Lab 923

- Lab space for after-assembly testing and repair.
- Equipped with work-stations with tools and soldering iron.
- Yamato Oven to cure epoxy and Hitachi Climate Chamber (-70C~100C) for thermal stress tests.
- Oscilloscope, fun. generator, Keithley 2410, NIM crate and modules, NI PXIe crate and modules.
- PCs and Mac's for LabVIEW and SolidWork.



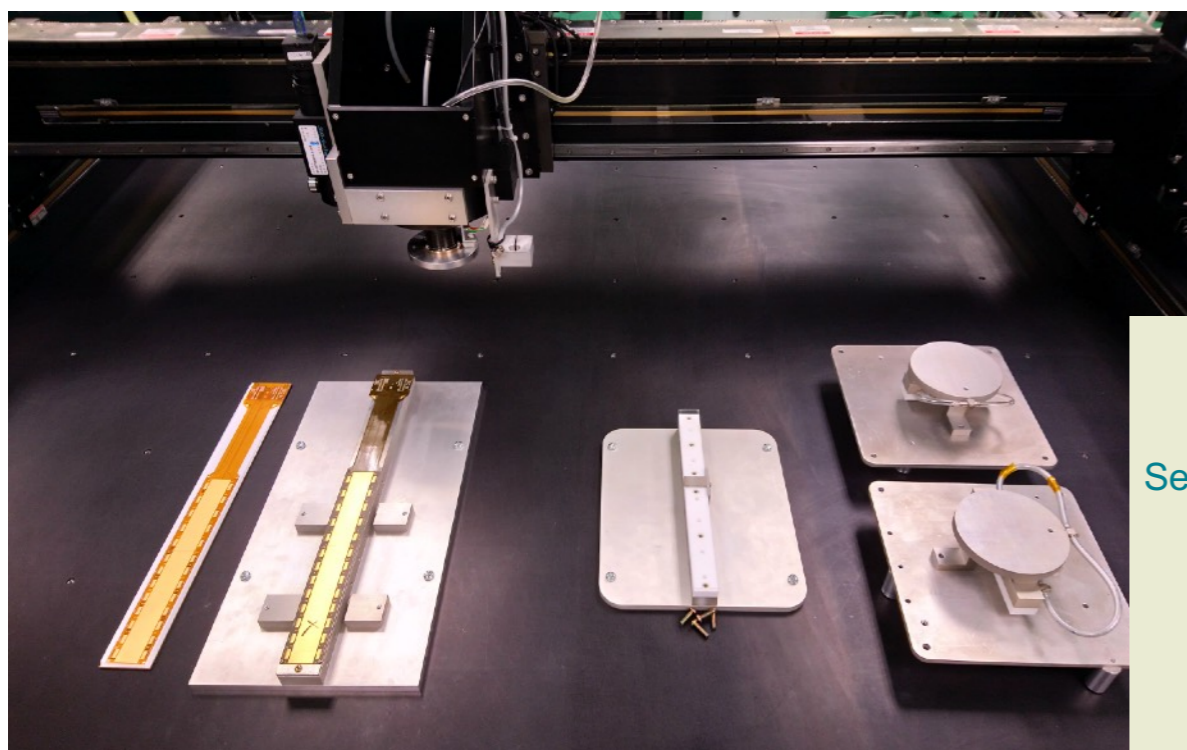
sPHENIX visited NTU

- sPHENIX collaboration visited NTU on Mar 26, 2019
- A demonstration on how we assembly a 6-in HGCAL module was shown.



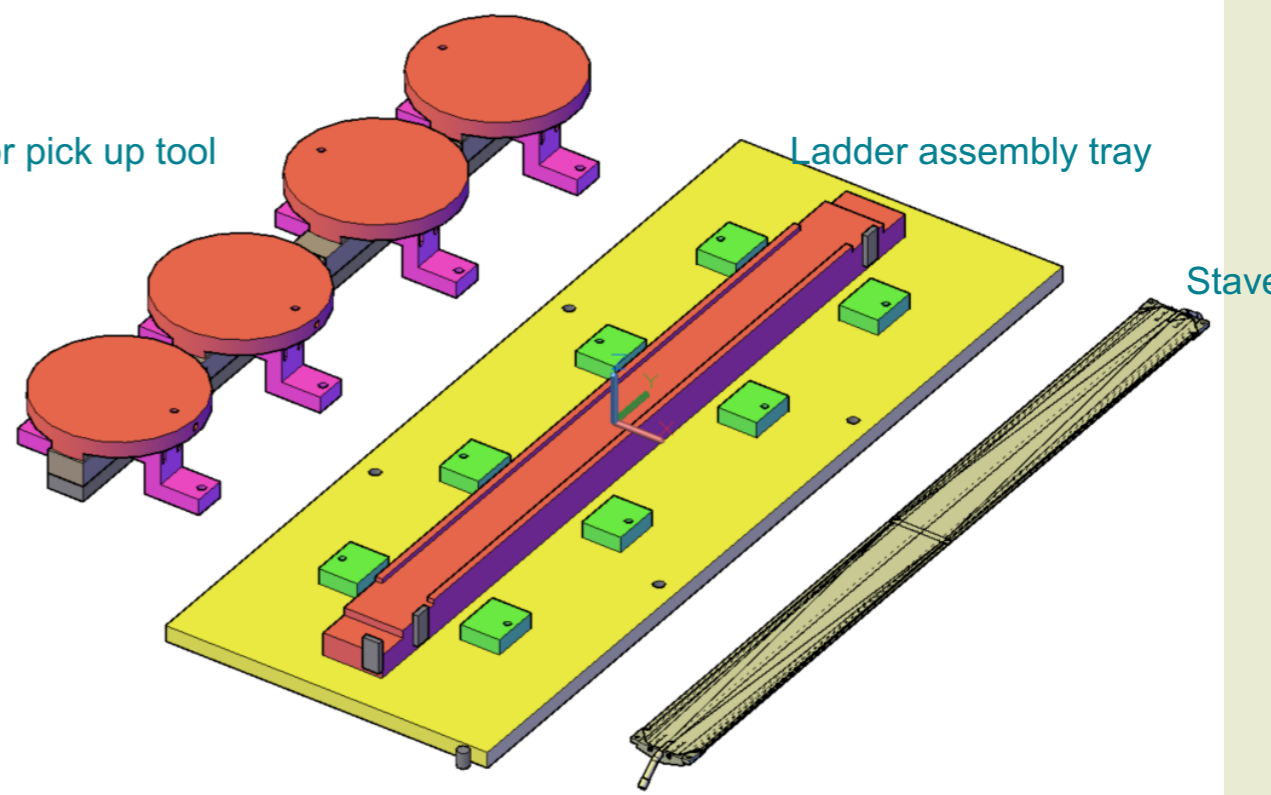
INTT ladder assembly preparation

- Ongoing design and preparation of module/ladder assembly tools



Short movie @<https://www.dropbox.com/s/t23tgppmnhdz6x/INTT-dryrun.mp4?dl=0>

Sensor pick up tool





Manpower

- 1 faculty (Rong-Shyang LU)
- 2 lab technicians + 1 secretary (share among all silicon projects)
- 1 grad student (master)
- 1 undergraduate
- Get support from other grad students in CMS/BelleII experiments.

Summary



- We propose to join INTT collaboration and form a group (NCU + NTU) in Taiwan to build INTT silicon ladders
- We will utilize the existing detector facility in NTU campus and design the assembly procedure for INTT ladder assembly.