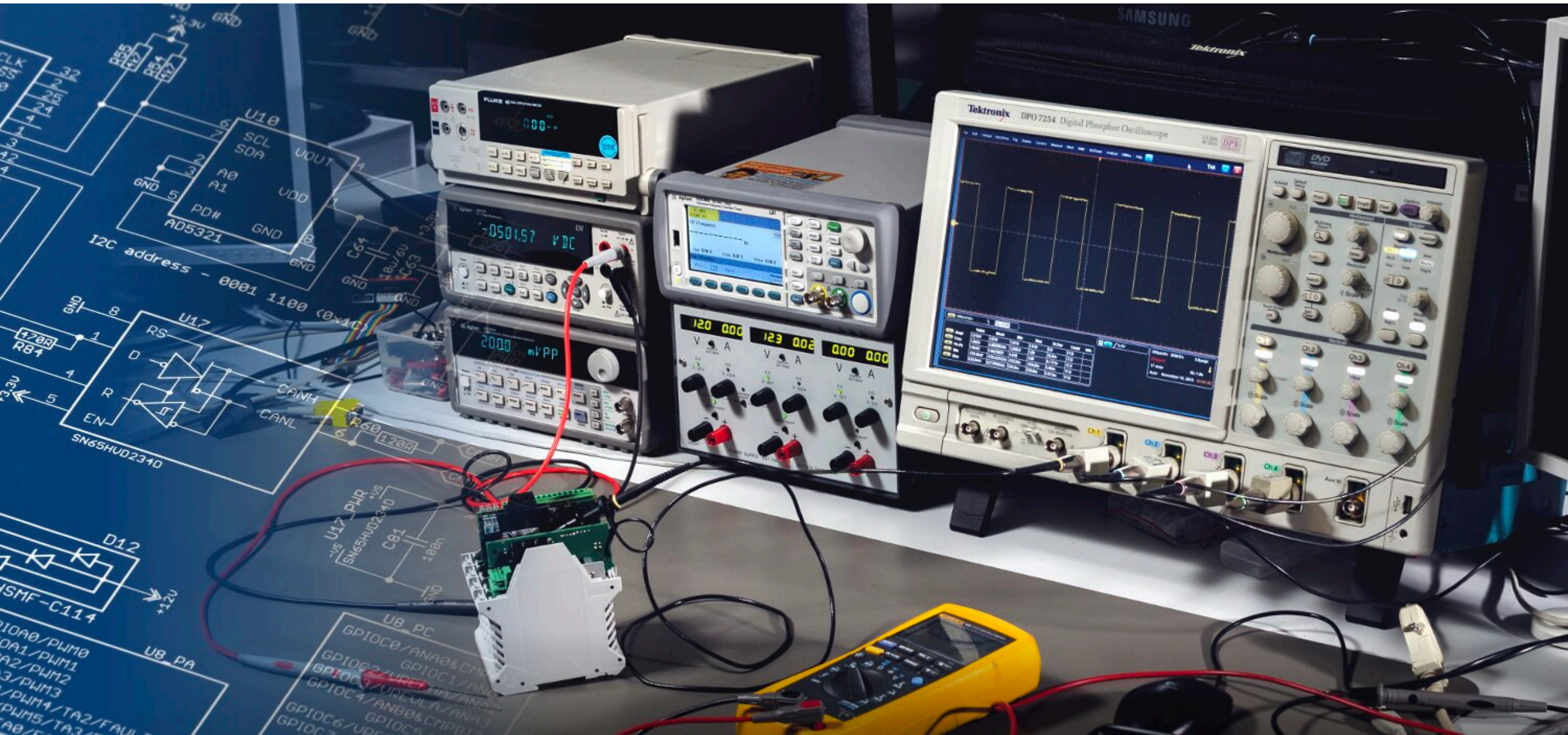


Introduction for Overall Report of Instrumentation Frontier



Phil, Petra, Jinlong

Conduct @ Snowmass Community Summer Study

By participating in this workshop, you are consenting to abide by the DPF Core Principles & Community Guidelines (see <https://snowmass21.org/cpcg/start>).

Respect and support community members.

- Use privileged status to empower & amplify voices that are being excluded.

Communicate with *empathy*.

- Try to understand others' ideas and perspectives before addressing them.

Commit to *constructive dialogue*.

- Criticize ideas, not people. Provide reasoned arguments that improve conversation.

Take initiative.

- Intervene when you see behavior that violates community standards.

Violations of community guidelines can be reported to the Ethics Advisory Committee's Code-of-Conduct Response Team via email (snowmass-code@u.washington.edu) or Slack ([#code-of-conduct](#)) message, over Zoom, or in person.

- The CRT will treat all reporters respectfully and all complaints seriously.
- » Behavior requiring an **immediate response** should also be reported to the session chair, Slack moderator, or similar authority.

You are encouraged to invoke the CP&CG as needed to promote and maintain a welcoming, professional, and safe environment for all workshop participants!

Plan for this morning

- Reminder: we should be listening and recording feedback from the community
- Google doc we shared with you and the community
 - <https://docs.google.com/document/d/10d9V7K6VGCE1iAUZJ-htfjaqw4levE-2GzVt2lxvvgI/edit?usp=sharing>
- But also on the IF wiki
- Reminder: Please upload your draft PDFs

Final Reports (Draft)

The IF report and all IF topical group reports will appear soon.

-  IF report and  Community feedback
-  IF01 topical group report and  Community feedback
- IF02 topical group report and Community feedback
-  IF03 topical group report and  Community feedback
-  IF04 topical group report and  Community feedback
- IF05 topical group report and Community feedback
-  IF06 topical group report and  Community feedback
- IF07 topical group report and Community feedback
-  IF08 topical group report and  Community feedback
- IF09 topical group report and Community feedback
- IF10 topical group report and Community feedback

This Morning's Plan

- We hope to move through each Topical Group and discuss (openly) the Top Messages that can be distilled from your TG executive summaries
- These should be 3-5 bulleted comments
- We have been recording this in the link I sent around

IF5: Micro Pattern Gas Detectors (MPGDs)

- **IF05-1:** Micro-patterned gaseous detectors (MGPDs) constitute an **enabling technology** that is key for large segments of the future U.S. HEP and NP program.
 - Flexible go-to-solution whenever particle detection w/ large area coverage, fine segmentation, and good timing is required
- **IF05-2:** The technology is relatively young and should be **advanced to performance limits**, e.g.:
 - Pico-second timing for tracking layers in high-rate environments
 - Low background, 3d single-electron-counting in time projection chambers (TPCs)
 - Standardized electronics capable of topological triggers, for cost-effect scale-up
- **IF05-3:** The global HEP community would benefit from U.S. / ECFA **strategy coordination**.
- **IF05-4:** U.S. NP + HEP communities would benefit strongly from a joint MP GD **production facility and center of excellence**.
 - Jefferson Lab has expressed interest in this.

What will be done with this?

- We are trying to distill these down into common themes that can then be pushed into a cross-TG, factorized list for the overall IF report

- 1. Advance Performance limits of existing technologies and push new techniques, enabling technologies for new physics**

- a. IF05-1
- b. IF05-2
- c. IF08-1
- d. IF08-2
- e. IF08-3

- 2. Scaling technology challenges**

- a. IF07-3
- b. IF07-4
- c. IF08-4

- 3. Facilities/Centers/Collaboration/Sharing**

- a. IF05-3
- b. IF05-3
- c. IF07-2
- d. IF07-5
- e. IF09-1, 2, 3, 5, 6

- 4. Workforce development/maintenance**

- a. IF05-4
- b. IF09-4