

eRD109 activity in ORNL

Norbert Novitzky, Oskar Hartbrich
(ORNL)

Short summary

New ProtoBoard2.0:

- Under production this week.
 - (Not paid yet) Should be in transit by end of the week
- Comes also with clock distribution board also to sync many different boards
- Firmware under debugging currently:
 - Common firmware development with other projects (e.g. HRPPD)
- Software under development also:
 - Once the new boards are available, also starting with the RcDaq

Different calorimeter projects:

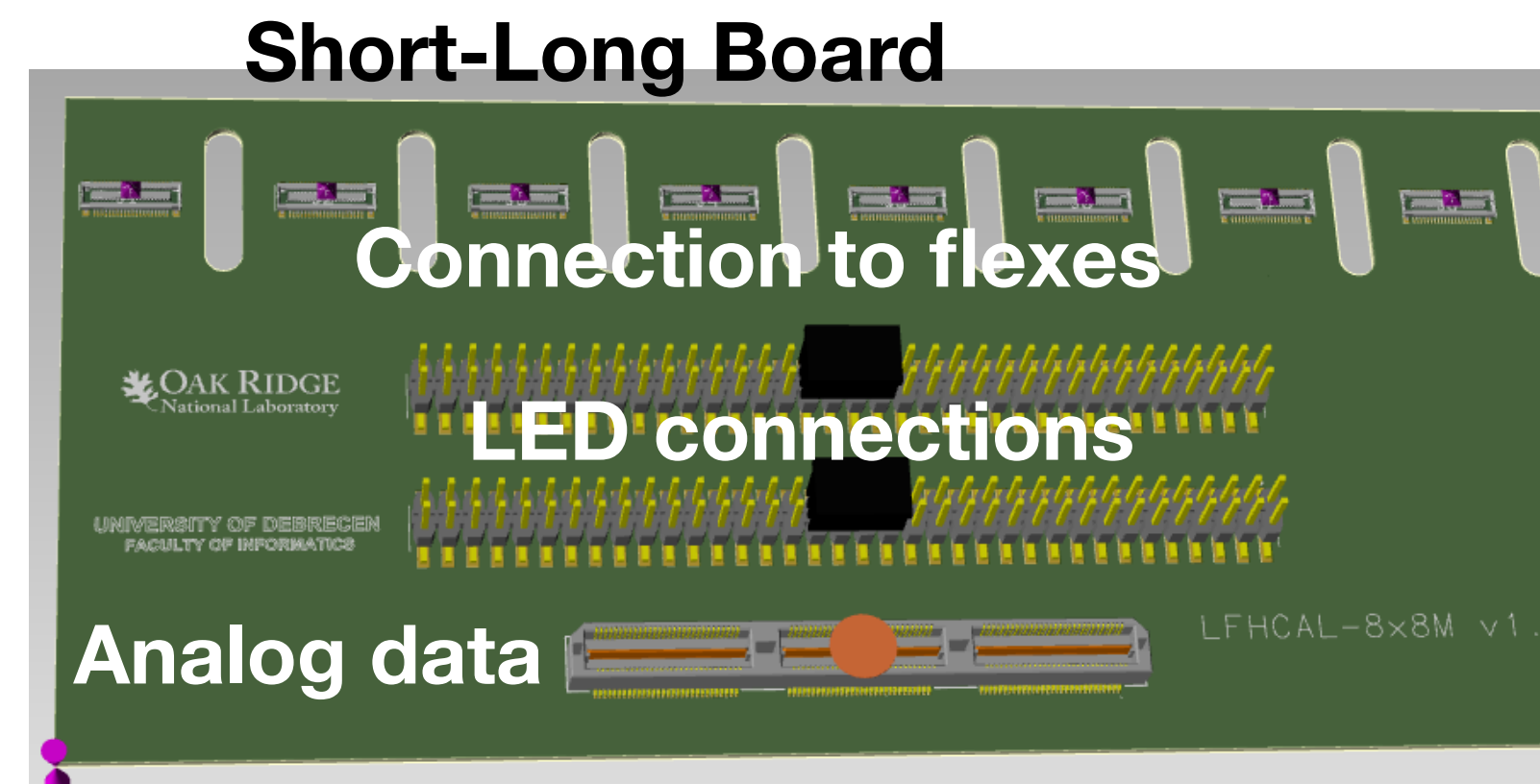
- **Barrel ECal**
 - Test setup ready, currently used for debugging the FW/SW
- **Barrel HCal**
 - The breakout board is ready, can connect all tiles from sPHENIX now
- **LFHCal:**
 - All components (part of eRD107) are under production
 - Preparation for the May testbeam



Barrel ECal SiPM module under testing

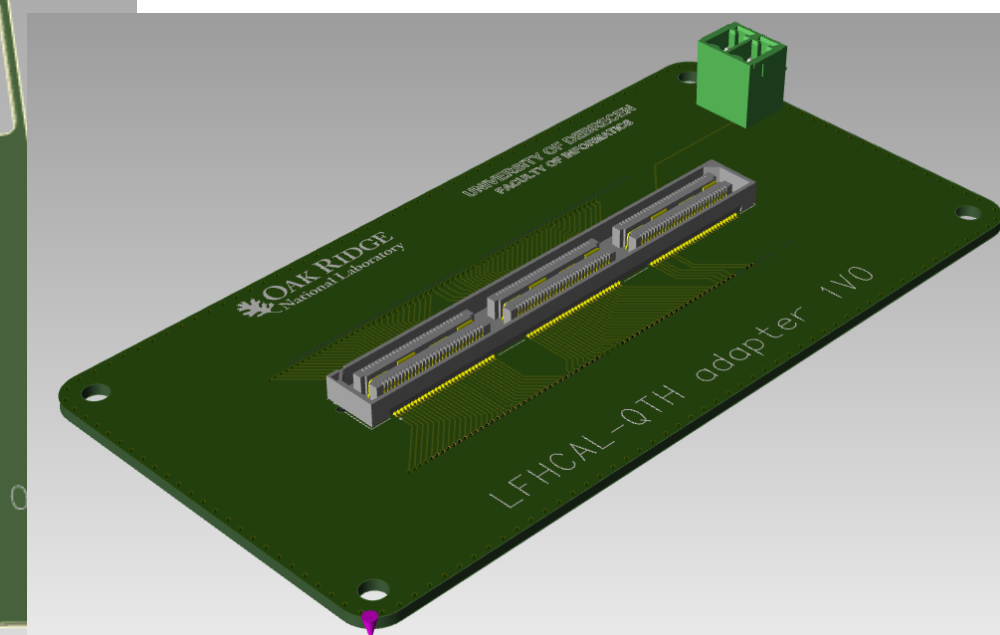


Barrel HCal SiPM breakout board



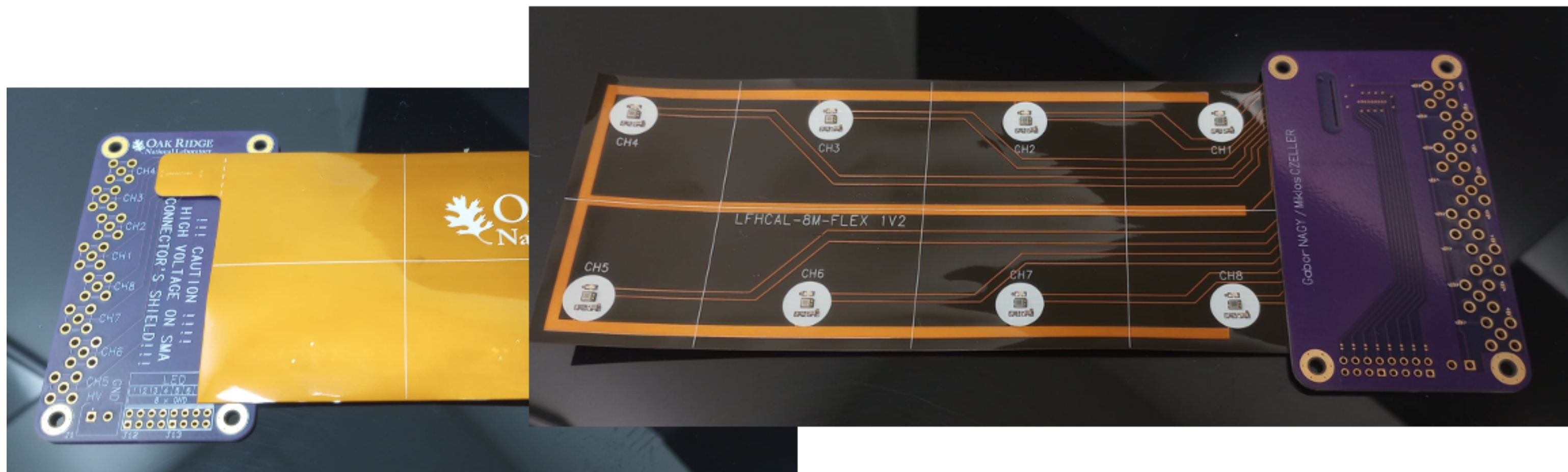
Short-Long Board

CAEN/HGCROC adapter



TOF-Flex development

- Third version of LFHCAL flexes returned from Chinese manufacturer
 - 150pcs 200um + 100pcs 80um
- Issue with minimum structure width of solder stop lithography
 - Impacts yield of high density connector solder connection
 - Sent out to external assembly vendor now
- Have one fully assembled LFHCAL flex in hand
- Will be able to compare 200um to 80um process once returned from assembly



TOF Barrel Flex

- Actual implementation detail discussions of TOF Barrel Flex continue within TOF group
- Takashi Hachiya: “Long Flexible Print Circuit Board experience and Nara/RIKEN”
 - https://indico.bnl.gov/event/22760/contributions/89120/attachments/53440/91472/20240320_INTTBusExt_hachiya.pdf
- Tonko Ljubicic: “BTOF RDO Design”
 - <https://indico.bnl.gov/event/22912/contributions/89792/attachments/53673/91826/BTOF%20RDO%20Design%2029Mar2024.pdf>