## • October 16, 2023 Kickoff Meeting

- Request 1 or 2 page abstracts on collaboration and WP's
- o <a href="https://indico.slac.stanford.edu/event/8288/">https://indico.slac.stanford.edu/event/8288/</a>
- ...Blue-sky Detector R&D not project oriented
- following PRDs identified in the BRN for HEP Instrumentation and at Snowmass
  Ideas...
- Nov 7 -10 CPAD 23 Meeting at SLAC https://indico.slac.stanford.edu/event/8288/
  - o RDC4 #1 Circuits and Architectures for 4D Tracking and Calorimetry
  - RDC3,4,11 #1 SS Tracking, Electronics & ASICS, FAST Timing
  - RDC4 #2 Big Data Management
  - RDC4 #3 Cryogenic and Deep Cryogenics
  - RDC3 #4 Methodologies, Tools, IC blocks, SoCs and Workforce Development
  - RDC3,4,11 #1 SS Tracking, Electronics & ASICS, FAST Timing
  - o RDC1, 4 Noble Element Detectors & Electronics & ASICS
- February 6, 2024
  - o list the RDC4 WP proposals submitted so far
  - 4 short presentations from the authors of WP proposals that appear to fit within a topic of "Detector Mounted Readout ASICs and Support Blocks"
    - Development of next-gen Monolithic Active Pixel Sensors Lorenzo Rota SLAC
    - Readout ASICs and electronics for 4D Tracking Bojan Markovic SLAC
    - On Chip On-detector Data processing Alexander Paramonov ANL
  - 0
- March 12 2024
  - o <u>https://indico.fnal.gov/event/63729/</u>
  - Work underway and New Ideas for Blue Sky Projects at LBNL Timon Heim
    - Introduction to the state of the WP submissions ~ 10 min
    - Presentations (~ 5-10min + Questions and short discussion) 20-30min
- April 11 2024
  - o <a href="https://indico.fnal.gov/event/64221/">https://indico.fnal.gov/event/64221/</a>
  - o eFPGA's for Future HEP ( & NP) Detector systems Larry Ruckman, SLAC
  - Work underway and New Ideas for Blue Sky Projects at FNAL Davide Braga FNAL
- May 8, 2024
  - o <u>https://indico.fnal.gov/event/64571/</u>
- Brookhaven Natoinal Lab Blue Sky Activities and Ideas of Interest 25m Grzegorz Deptuch BNL
- Planning for the September FOA 25m
- Choosing Work Package ideas with strong support.
  - \* Already well formed missions for WP
  - \* Cross RDC possibilities?
  - \* Withing the proposal what might deserve first funding

considering what is currently known about FY25 funding

- Topic Area #1: Circuits and Architectures for 4D Tracking and Calorimetry
  - Picosecond Timing Circuits
  - Monolithic Readouts
  - Models and Techniques for extreme radiation
- Topic Area #2: Big Data Management
  - Energy efficient architectures and circuits

- On-Chip Computing
- On-Chip AI/ML
- Fast Interconnections and I/Os
- Advanced Integration (3D, Photonics, Wireless)
- Topic Area #3: Cryogenic and Deep Cryogenics
  - 4K Circuits and Architectures for QIS
  - Circuits and Architectures for Noble Liquid Detectors
  - Cryogenic Models and Libraries
- Topic Area #4: Methodologies, Tools, and Workforce Development
  - Design for Verification methodologies
  - CAD Tools and Foundries shared joint access
  - Shared libraries and access model
  - Domain knowledge transfer and training