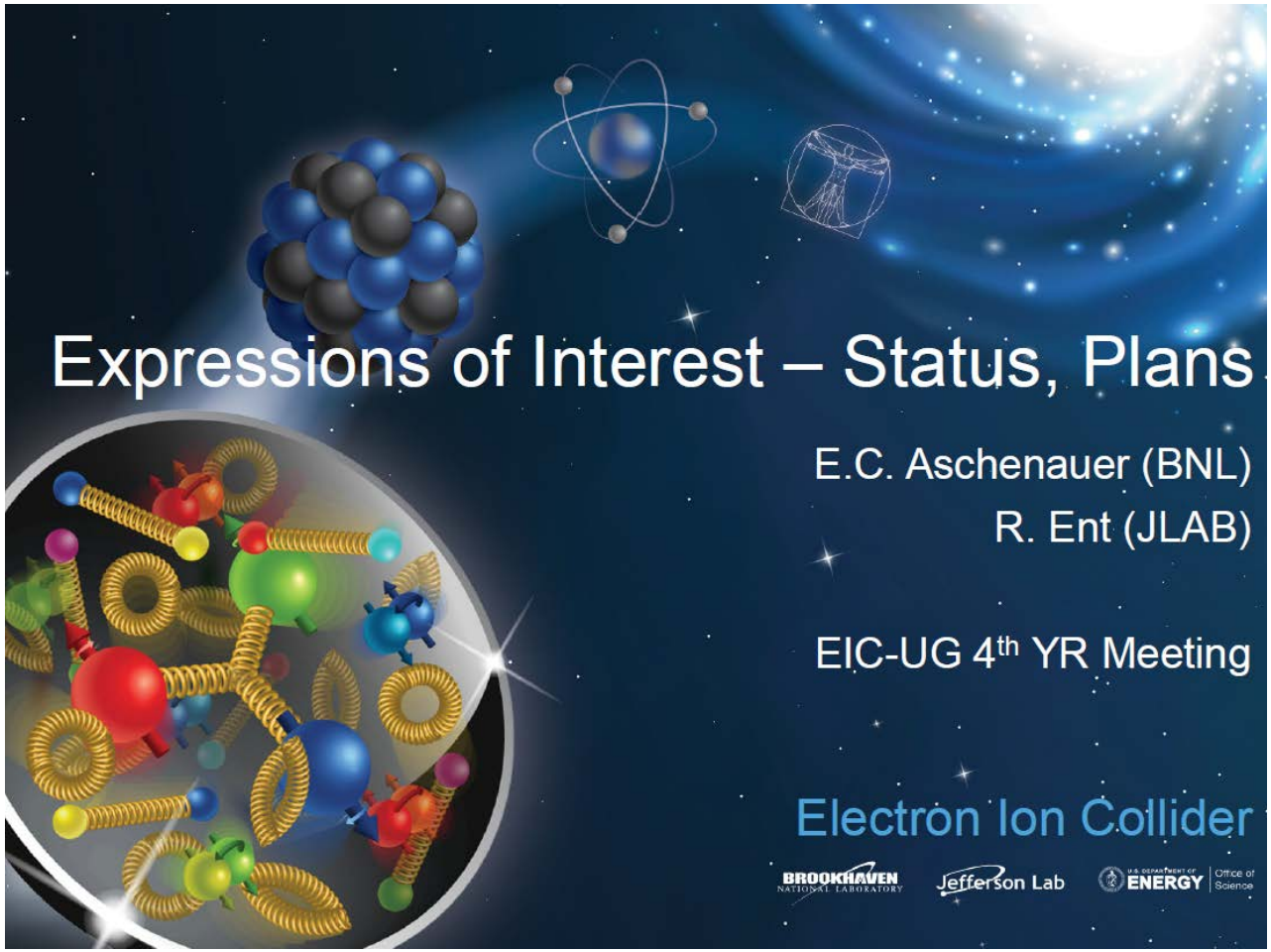
EOIの状況

2020年12月8日（火）

後藤雄二（理研）

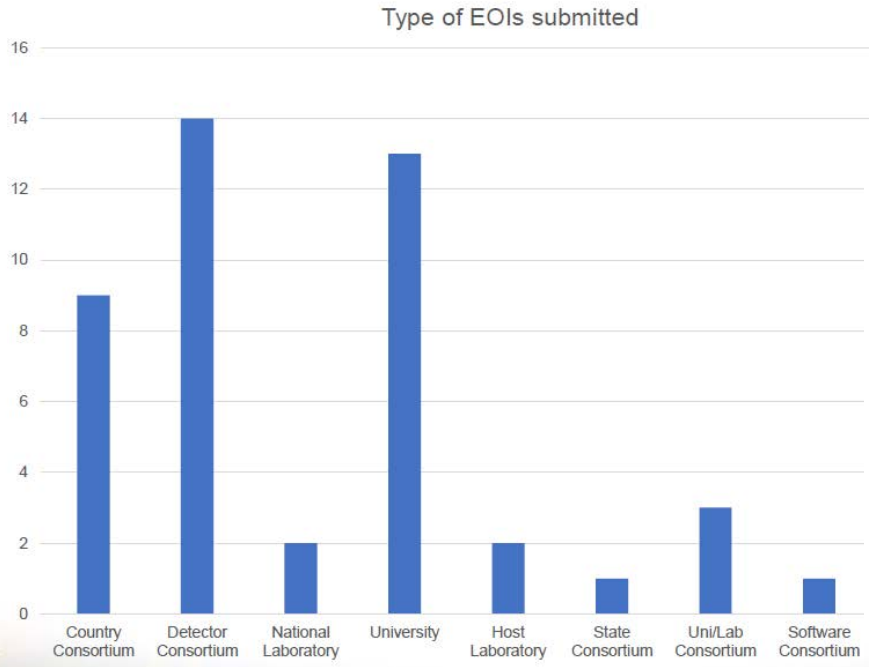
EOI – Status, Plans

- 4th EIC Yellow Report Workshop at LBL
  - 19-22 November 2020
  - https://indico.bnl.gov/event/9913/



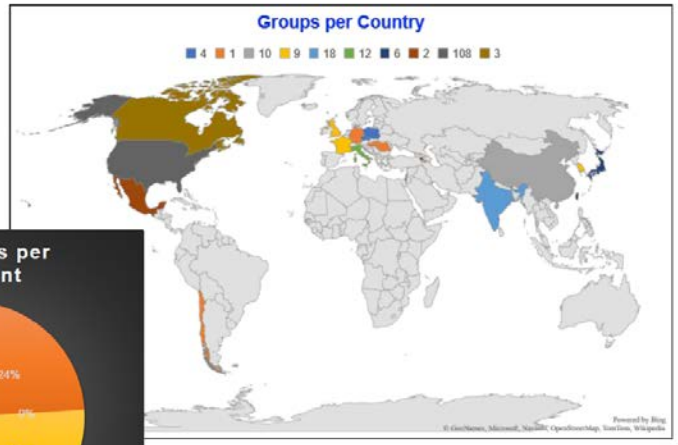
EOI – Status, Plans

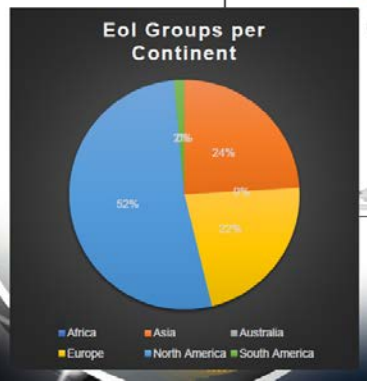
Expressions of Interest – Distribution



Note: some arbitrariness in categorization, like two national labs (and or
came in together with universities, and one national lab came in as dete

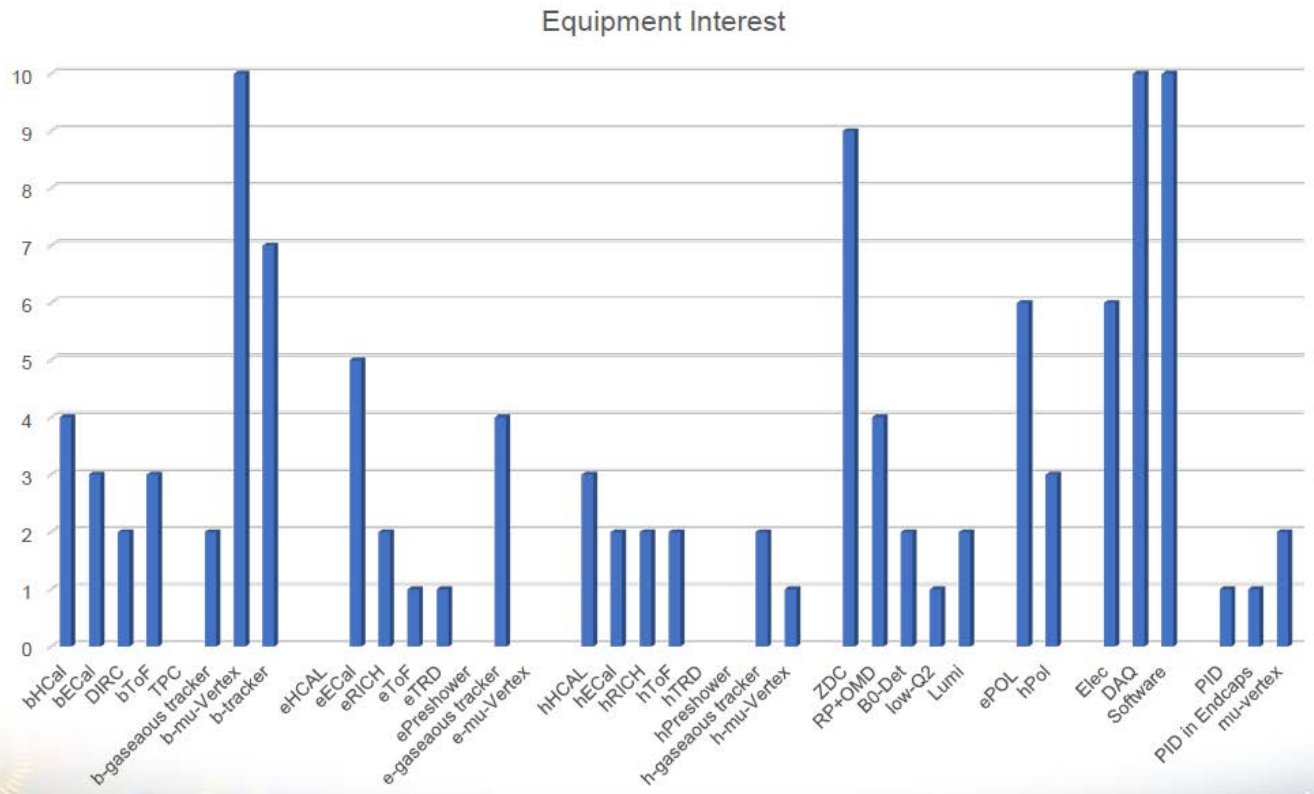
Expressions of Interest – Geographically





EOI – Status, Plans

Expressions of Interest – Equipment Interest



Note: some double counting in numbers, e.g., interest expressed by a detector consortium could be echo'ed in EoIs of countries, universities, etc. participating in this consortium.

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Silicon Barrel

- LGAD
  - EOI: Fast timing silicon detectors for EIC detectors (Rice/BNL/ANL/LANL/MIT/ORNL)
  - EOI for the ECCE Consortium (MIT/Rice/ORNL)
  - EOI on Silicon Detectors at EIC (UIC/NCKU)
- MAPS
  - EOI for Si Consortium (LBNL/UK/BNL/China/ORNL)
  - EOI for UC Consortium (LBNL/UCB/LANL)
  - EOI for the ECCE Consortium (LANL/ORNL/BNL)
  - EOI of the INFN Community
  - EOI for Indian Consortium
  - EOI for Korean Institutions
  - EOI Czech Republic
- SOI
  - EOI for ANL (ANL/KEK/RIKEN)
  - EIC-Japan EOI

ZDC

- LHC-ZDC
  - EOI for high resolution ZDC (Kansas/UIUC)
  - EOI for the ECCE Consortium (UIUC/MIT/ORNL)
- ALICE-FoCal
  - EOI for high resolution ZDC (ORNL/LBNL/ODU/RIKEN)
  - EOI for LBNL and UCB
  - EOI for Korean Institutions
  - EIC-Japan EOI
- RHIC-ZDC
  - EOI for BNL
  - EOI for China
  - EOI Czech Republic

Hadron Calorimeter (Forward)

- STAR-FCS (Fe-Sci/SiPM)
  - EOI for UC Consortium (UCLA)
  - EOI for BNL Public Final
  - EOI for Korean Institutions
  - EIC-Japan EOI
- sPHENIX Barrel (Fe-Sci/SiPM)
  - EOI for BNL Public Final
  - EOI for Georgia State University
- sPHENIX Forward
  - EOI for the ECCE Consortium (ISU/BNL)
- Fe-Sci
  - EOIL for Jefferson Lab
- Dual-Readout
  - EOI for Korean Institutions
- CMS
  - EOI Laboratories of CNRS-IN2P3

EOI – Status, Plans

Expressions of Interest – In-Kind Equipment (reuse)

Possible equipment for use of EIC detector:

- sPHENIX/BABAR magnet (with some modifications)
- Accompanying sPHENIX Hadronic Calorimetry
- Perhaps also some sPHENIX EM Calorimetry
- STAR HCal Calorimetry (FeSc 520 towers)
- E864 lead-scintillating fiber HCal 754 towers, 10cm x10cmx117cm
- TPC
- Few-100 PbWO4 crystals (2.05 x 2.05 x 20 cm3)
- JLab + BNL ~10k Pb-Glass blocks (3.8 x 3.8 x 45 cm3)
- BNL Pb-Glass blocks (5.8 x 5.8 x 60 cm3)
- Ex-BABAR DIRC bars

Examples only!

EOI – Status, Plans

Expressions of Interest – Final Perspective

- There is clearly large interest in EIC science and experimental equipment
  - Both domestically among universities and national labs
  - And international, with many countries represented (Canada, China, Czech, France, India, Italy, Japan, Korea, Poland, UK and institutional EoIs of Chile, Hungary, Mexico, Rumania, and group EoIs with Armenia, Israel, Saudi Arabia and Taiwan as members)
- At this stage of early-project development, with EIC science still a decade away, impressively many are committed to work on EIC.
- In-kind contributions, from EIC project point of view, clearly suffice to maintain low-risk for a general-purpose EIC detector that is assumed to be 70% project-funded and 30% contributions (in-kind and labor).
  - EIC Project Risk Registry #120: "Failure to Secure in-Kind Detector Components and Labor" – risk assignment "Very Low".
- The EIC train clearly left the station!
- However, it is clear we need to remain vigilant and follow up to secure in-kind contributions and even argue, based on our strong EIC science, for further contributions, if we want to be able to secure a second detector, with crisp arguments on why.
- We is all of us: remain unified and (internationally) argue our EIC case.

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Workshop Series on IR2 & Detector EIC