
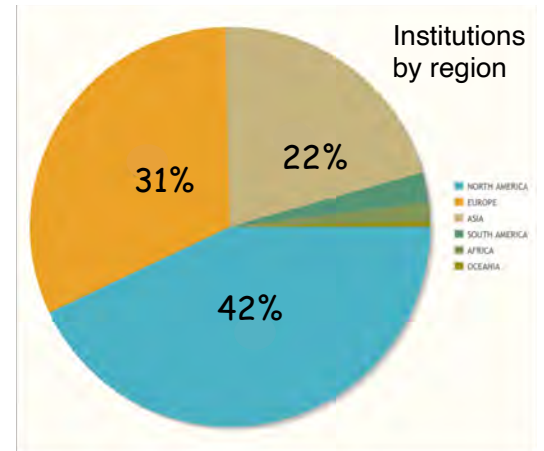


Discussion: International Engagement

Christine Aidala, Andrea Bressan, Bernd Surrow
Abhay Deshpande

International contributions and engagement in the EIC project emphasized in all presentations.

- Welcome remarks by Bernd Surrow 
- Opening remarks by Berndt Mueller and Bob McKeown
 - *Identify & secure int. contributions & international community building*
- Machine design by Ferdi Willeke: BNL/JLab collaborations with HERA, LHC, SuperK... (and other DOE Labs)
- National and International Contributions: Non-Binding Expressions of Interest (Eol) to get the guidance on detector scope – Rolf Ent
 - *Suggested & explained an aggressive timeline for Eol & Y*
- Complementary Detectors @ the EIC Discussion -- Elke Aschenauer
 - *Cost considerations, and value/magnitude of possible non-DOE contributions*



Jim Yech:
EIC Project
Director

International Partnership

- General approach and strategy for engaging potential international partners in the EIC
 - Bob Tribble and Bob Mckeown are Points of Contact for international partners
 - Experimental Program
 - Build on historical engagement in RHIC and CEBAF, engage new partners
 - Detector(s) – International collaborations propose detectors that include plans for in-kind contributions and are delivered by project teams
 - Machine – Leveraged off interests in the scientific program and interests in accelerator technologies (XFEL, ESS, PIP-II ...)
- Considerations
 - Expectations for the experimental program including scale of international engagement
 - Alignment with DOE Office of Science and international funding agency objectives

And it has been clear from the EIC Users Engagement on physics studies and leadership in many of them: that International EIC UG is enthusiastically engaged.

We take this opportunity while many of you are online to have a discussion on ANY aspect of “international engagement”.

Aim: To take your input on any issues, impressions that you think need more focus or ask questions...

- from the EICUG's perspective

- from BNL/Jlab's perspective

We asked for slides or questions/comments without slides

Received following inputs:

INFN

CEA

Any other? Please speak up, raise your e-hand

INFN & the EIC, a bit of history

- Since 2013 – participation of INFN scientists in projects of the “generic R&D for EIC” program
 - More and more participants in the following years
- INFN participation in EIC scientific program is discussed in the periodical bilateral meeting between INFN and DOE:
 - October 2016 October 2017 December 2018
- 11 May 2017 – a BNL delegation visits INFN headquarters: EIC is the main element of the agenda
 - Representatives of the EIC interested community invited
- 19-22/7/2017 – EICUG meeting in Trieste
 - E. Nappi: “INFN consider EIC an important opportunity for the hadronic physics community and encourage partnerships and collaborations with the other Institutions involved in the project”
- May 2018 – INFN management visits Jlab, INFN contribution to the EIC project discussed in this context
- May 2018 – a collaboration of INFN experimentalists interested in EIC is formed
- 10 June 2018 – project EIC_NET approved
- 1/1/2019 – EIC_NET starts its activity
- July 2019 – E. Nappi (INFN vice president) attends the EICUG2019 opening session
- August 2019 – E. Nappi attends the in-camera meeting in London
- End 2019 - important engagement of the INFN community in the YR initiative

INFN
CommunityINFN
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Community

INFN & the EIC, a bit of history

From Silvia Dalla Torre

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 - E. Nappi: “INFN consider EIC an important opportunity for the hadronic physics program, and for the development of partnerships and collaborations with the other Institutions”
- May 2018 – INFN management visits Jlab, INFN contribution to EIC is discussed in this context
- May 2018 – a collaboration of INFN experts is formed
- 10 June 2018 – project EIC is approved
- 1/1/2019 – INFN management and community start to work on EIC
- 1/1/2019 – INFN vice president) attends the EICUG2019 opening session
- 1/1/2019 – E. Nappi attends the in-camera meeting in London
- End 2019 - important engagement of the INFN community in the YR initiative

A set of bottom up and top down actions

INFN
Community

INFN
Management

INFN
Community

INFN
Management

INFN
Management

INFN
Community

INFN
Management

INFN
Community

INFN & the EIC

- There is an EIC enthusiastic community within INFN
- The INFN management is positive and supportive
- The level of INFN contribution will depend on
 - the final size of the interested community (plateau not yet reached) and
 - the negotiation between INFN and DOE + Labs

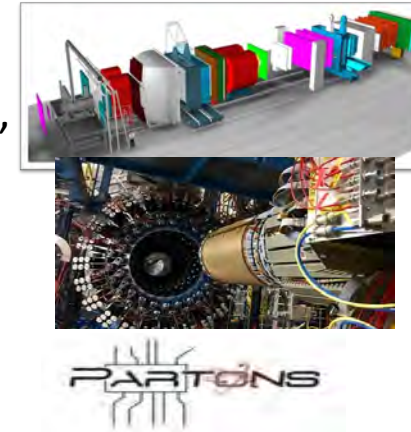
- **Concrete links have to be created**
 - CERN is the European “national” laboratory
 - CERN is a unique point of accumulation of scientific and technological know-how
 - It can offer a context that facilitates R&Ds and then constructions of the European groups in the EIC
- **These links require to be promoted by the community and established by managements**
 - For this purpose, we need the support of the Labs (and DOE ?) + the project management to establish the correct contacts with CERN managements
- **Steps**
 1. EIC as a CERN “**recognized experiment**”
 - participants registered as CERN users
 - easy access to CERN scientific information
 - possibility to organize meetings at CERN
 - access to test beam
 - access (even if, in this case, not for free) to technological laboratories, workshop and services
 2. An 1-2 day EIC **workshop** at CERN, possibly every year
 3. **Further steps** if possible (the CERN support for the Dune project is an example)

From Francesco Bossu/Franck Sabatie (CEA)

From Francesco Bossu
& Franck Sabatie

The EIC project belongs to the CEA-Irfu 2030 roadmap:

- Long time involvement in experimental hadron physics (COMPASS, CLAS, Hall-A,...)
- Strong involvement in hadron physics phenomenology (PARTONS,...)
- About 15 staff members already involved in EIC related activities
- State of the art infrastructures for construction of superconducting magnets, RF accelerator elements and large-scale detectors
- Outstanding experience in design of (micro)electronics, DAQ and computing systems
- **Our interests:**
 - superconducting magnets and accelerator components
 - MPPD detectors
 - Front end electronics
 - Data analysis and software



DETECTORS

Large megameters detectors
integration and tests
(LHC UPGRADES)
Clean room - 130m²



SPACE

Clean rooms for space
instruments
integration and tests



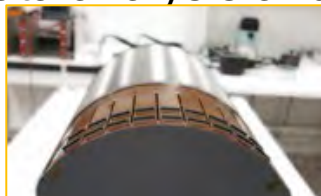
Magnets and accelerators

Synergium - 25 000m²
Integration halls,
clean rooms
cryostats



Computing

HPC cluster
Node of Grid@LHC



Iseult
11.7 T



- **Suggestions and questions:**
- The Eol process should be specified as soon as possible: this will give more time to the institutions to internal discussions and preparation in this uncertain period
- The Eol requests vs the YR: competitions may arise among groups that may be reflected in the YR. The YR should be as neutral as possible
- To facilitate the discussions with our funding agencies, more details on the decision process and schedule for the CD stages will help

Any other comments: open for discussion

Before we end this session and this meeting....

I ask Richard Milner to take the microphone.... To thank Bernd Surrow and his fantastic team.....

These are difficult times..... But...

