

Software Working Group



Andrea Bressan (Trieste), Markus Diefenthaler (JLab), Torre Wenaus (BNL)



UNIVERSITÀ
DEGLI STUDI DI TRIESTE

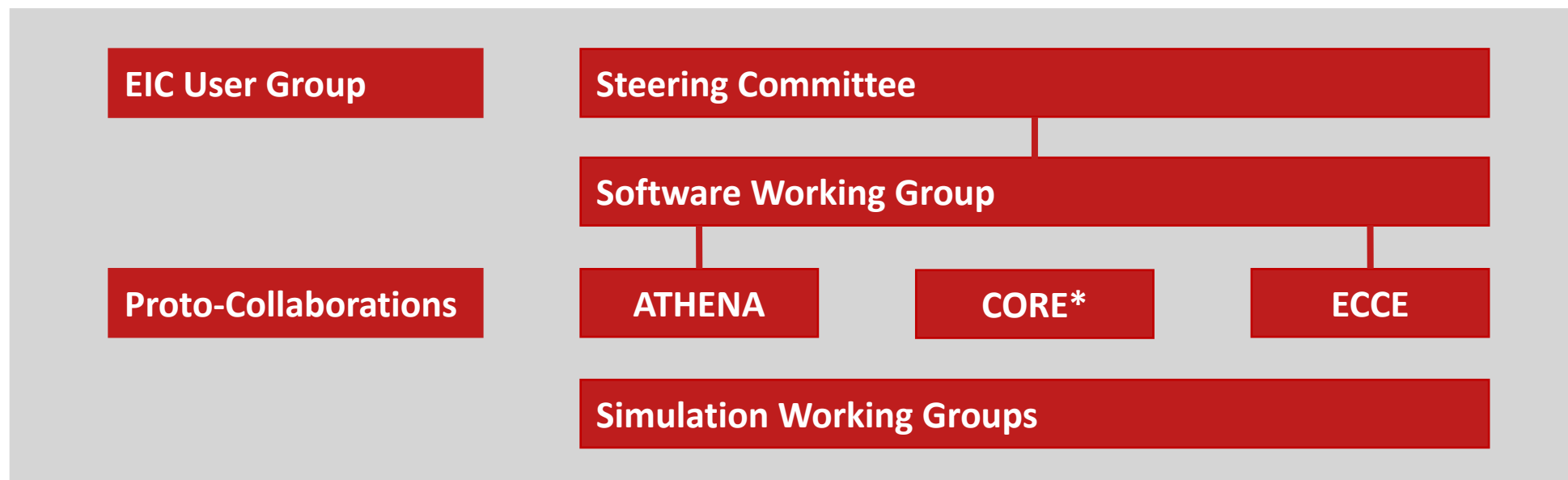
Working Together

After a presentation on “Breakthroughs in Detector Technology”, Ian Shipsey (Oxford) was asked about the role of software.

Anecdote

"Software is the soul of the detector," Ian Shipsey replied in a poetic way and emphasized the **importance of great software for great science**. He added that we need to **work together**, on a global scale and with other fields, to achieve this goal.

Common Software Effort



* CORE adapts existing software for their needs and has a far smaller software effort than other proto-collaborations.

Software Session

Indico

11:00

12:00

13:00

Software Session Overview	Andrea Bressan et al.
	11:30 - 11:35
ATHENA Software Overview	Sylvester Joosten
	11:35 - 11:50
ECCE Software Overview	Joe Osborn
	11:50 - 12:05
Status of Validation	EIC-India
	12:05 - 12:20
Project eAST Overview	Wouter Deconinck
	12:20 - 12:35
Software Working Group Overview	Markus Diefenthaler
	12:35 - 12:45
Discussion	
	12:45 - 13:00

Essential Experience

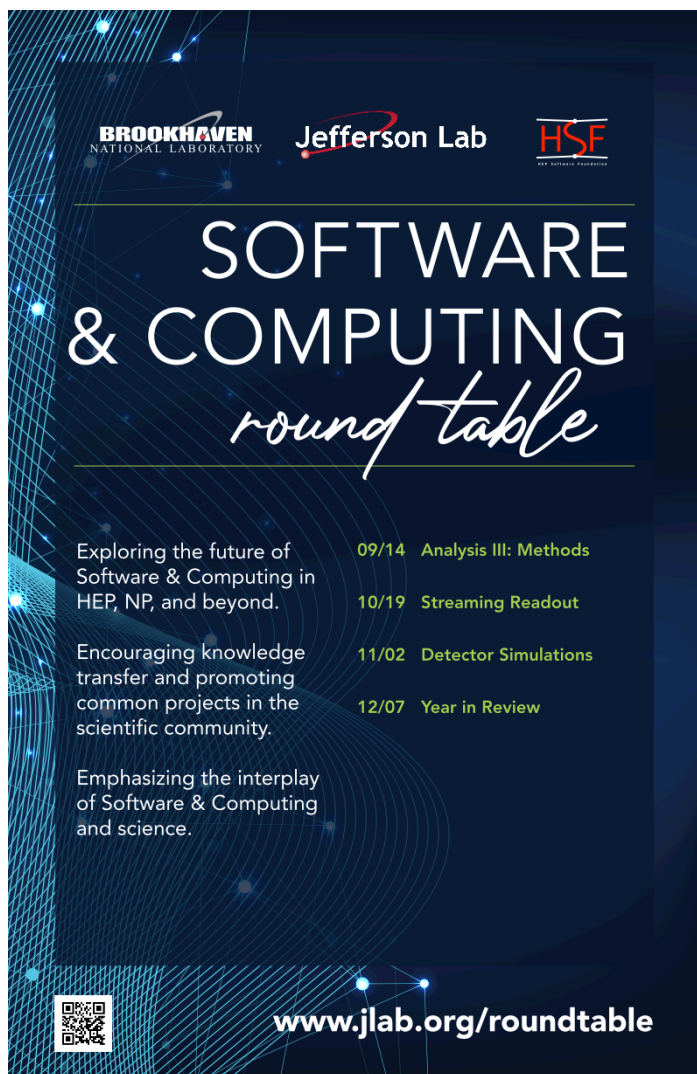
- **ATHENA, CORE, ECCE** Build upon common software and simulation effort of the recent years, e.g., YR.
- **ATHENA** Explore modern software tools (as specified in YR).
- **CORE, ECCE** Take advantage of mature software tools.
- **ATHENA, ECCE** Detailed full simulations of detector concepts with more than 435M events produced.

Lessons learned from ATHENA, CORE, and ECCE important for future direction(s) of EIC Software.

Common Software Projects

- Software EoI (29 institutions), including:
 - Validation of simulations tools
 - Next-generation eA Simulation Toolkit (eAST)

Interplay of Science and Software & Computing



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SOFTWARE & COMPUTING *roundtable*

Exploring the future of Software & Computing in HEP, NP, and beyond.

Encouraging knowledge transfer and promoting common projects in the scientific community.

Emphasizing the interplay of Software & Computing and science.

09/14 Analysis III: Methods
10/19 Streaming Readout
11/02 Detector Simulations
12/07 Year in Review



www.jlab.org/roundtable



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Workshop Summary

WORKSHOP REPORT

FUTURE TRENDS IN NUCLEAR PHYSICS COMPUTING

SEPT. 29 - OCT. 1, 2020

EDITORS

Alexander Kiselev (BNL)	Markus Diefenthaler (JLAB)
Amber Boehnlein (JLAB)	Ofer Rind (BNL)
Graham Heyes (JLAB)	Paul Laycock (BNL)
Mark Ito (JLAB)	Torre Wenaus (BNL)

<https://indico.bnl.gov/event/9023/>