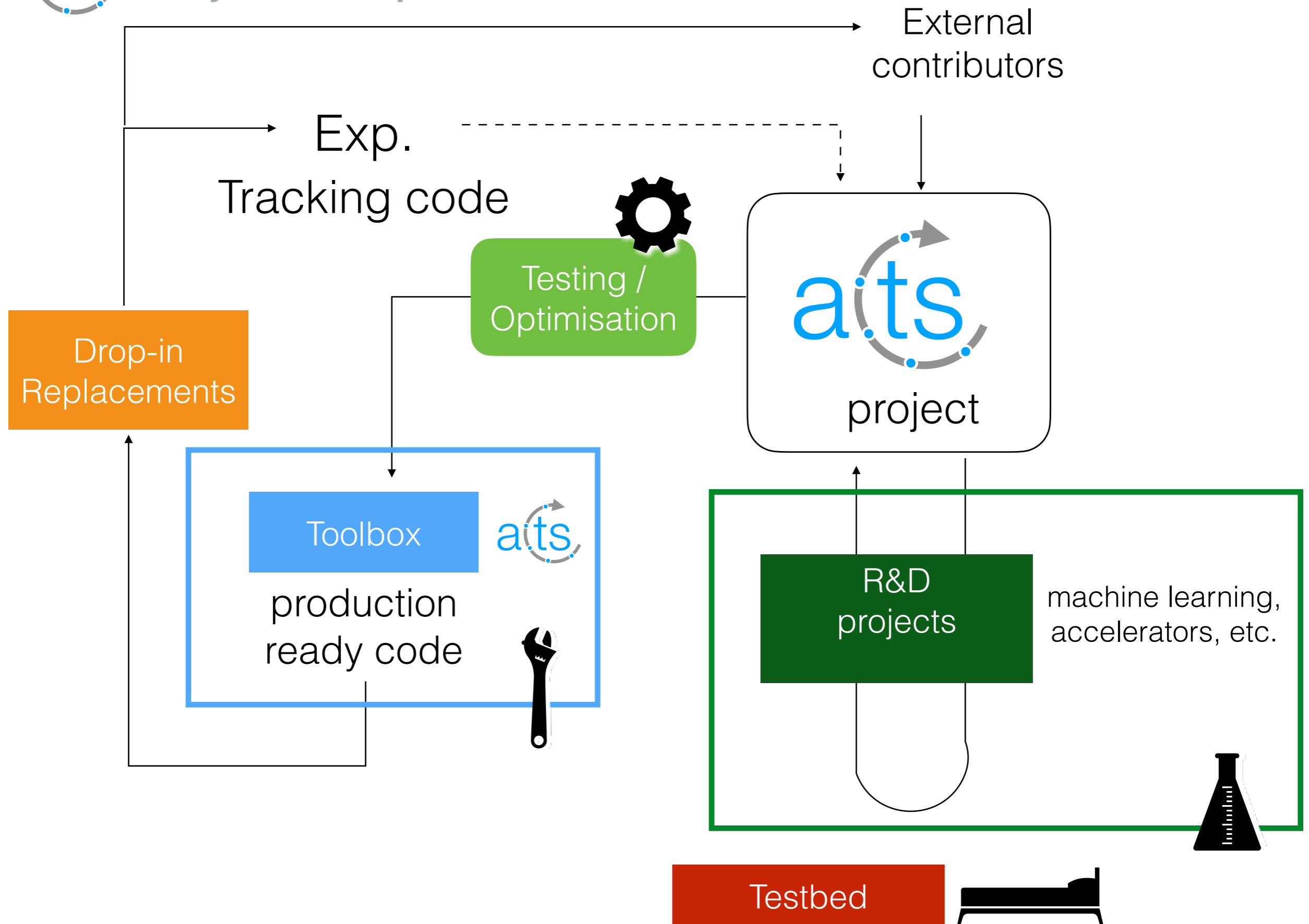


Workshop Introduction

A. Salzburger



ats Project map





Workshop - Weekly schedule

Mo

Tue

Wed

Thu

Fr

16:00

Introduction, Status,
Heather Gray

Q&A Session: Q&A Session

Q&A Session

Q&A Session

Q&A Session

17:00

Tutorial Session: Tutorial Session
Andreas Salzburger

Core Development: Core Development
Xiaocong Ai

R&D Development
Nicholas Styles

Close-Out: Close-Out
Florian Urs Bernlochner

18:00



pre-recorded



Workshop - Weekly schedule

Mo

Tue

Wed

Thu

Fr

16:00	Introduction, Status, <i>Heather Gray</i>	Q&A Session: Q&A Session	Q&A Session	Q&A Session	Q&A Session
17:00		Tutorial Session: Tutorial Session <i>Andreas Salzburger</i>	Core Development: Core Development <i>Xiaocong Ai</i>	R&D Development <i>Nicholas Styles</i>	Close-Out: Close-Out <i>Florian Urs Bernlochner</i>
18:00					

Slot for follow-up and Q&A



Starts 25 May 2020, 16:00

Ends 29 May 2020, 19:00

Europe/Zurich

<http://cern.ch/go/Dww9>



Andreas Salzburger

Florian Bernlochner

Heather Gray

Nicholas Styles

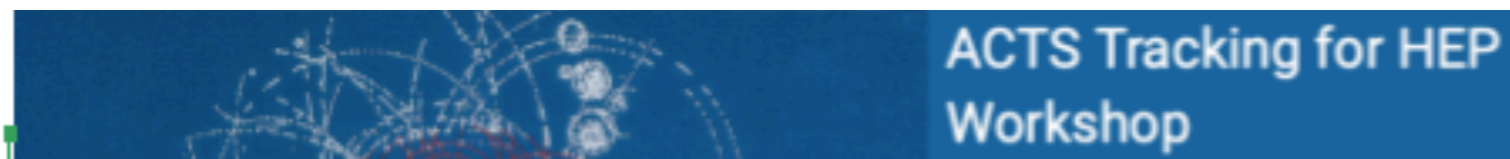
Xiaocong Ai



[LIVE NOTES](#)



Andreas Salzburger is inviting you to a scheduled Zoom meeting.



LIVE NOTES

Monday, 25/05/2020:

16:00

Introduction - Workshop Goals, Andreas Salzburger

16:15

ACTS Project Status, Xiaocong Ai



Starts 25 May 2020, 16:00
Ends 29 May 2020, 19:00
Europe/Zurich

<http://cern.ch/go/Dww9>



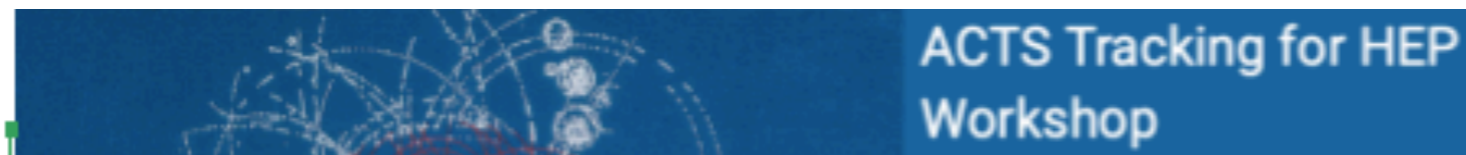
Andreas Salzburger
Florian Bernlochner
Heather Gray
Nicholas Styles
Xiaocong Ai



 LIVE NOTES



Andreas Salzburger is inviting you to a scheduled Zoom meeting.



LIVE NOTES

Monday, 25/05/2020:

16:00

Introduction - Workshop Goals, Andreas Salzburger

[This introduction is taking too long already ...](#)

16:15

ACTS Project Status, Xiaocong Ai



Workshop - Monday: status quo



< Mon 25/05 Tue 26/05 Wed 27/05 Thu 28/05 Fri 29/05 All days >

Print PDF Full screen Detailed view Filter
Session legend

Introduction, Status, an... X

16:00 Introduction - Workshop Goals *Andreas Salzburger*
16:00 - 16:10

ACTS Project Status *Xiaocong Ai*
16:15 - 16:40

R&D Line: New Algorithms & ML *Moritz Kiehn*
16:45 - 17:00

17:00 R&D Line: Accelerators and Parallelization *Georgiana Mania*
17:05 - 17:20

ATLAS Experience *Corentin Allaire*
17:25 - 17:35

BELLE-2 Experience *Ralf Farkas*
17:40 - 17:50

18:00 sPHENIX Experience *Joe Osborn*
17:55 - 18:05

CEPC Experience *Jin Zhang*
18:10 - 18:20

FASER Experience *Ke Li*
18:25 - 18:35

Toolbox





Workshop - Monday: status quo



< Mon 25/05 Tue 26/05 Wed 27/05 Thu 28/05 Fri 29/05 All days >

Print PDF Full screen Detailed view Filter
Session legend

Introduction, Status, an... X

16:00 Introduction - Workshop Goals *Andreas Salzburger*
16:00 - 16:10

ACTS Project Status *Xiaocong Ai*
16:15 - 16:40

Toolbox

17:00 R&D Line: New Algorithms & ML *Moritz Kiehn*
16:45 - 17:00

R&D Line: Accelerators and Parallelization *Georgiana Mania*
17:05 - 17:20

R&D projects

ATLAS Experience *Corentin Allaire*
17:25 - 17:35

BELLE-2 Experience *Ralf Farkas*
17:40 - 17:50

18:00 sPHENIX Experience *Joe Osborn*
17:55 - 18:05

CEPC Experience *Jin Zhang*
18:10 - 18:20

FASER Experience *Ke Li*
18:25 - 18:35



Workshop - Monday: status quo



< Mon 25/05 Tue 26/05 Wed 27/05 Thu 28/05 Fri 29/05 All days >

Print PDF Full screen Detailed view Filter
Session legend

Introduction, Status, an... X

16:00 Introduction - Workshop Goals *Andreas Salzburger*
16:00 - 16:10

ACTS Project Status *Xiaocong Ai*
16:15 - 16:40

Toolbox

17:00 R&D Line: New Algorithms & ML *Moritz Kiehn*
16:45 - 17:00

R&D projects

R&D Line: Accelerators and Parallelization *Georgiana Mania*
17:05 - 17:20

ATLAS Experience *Corentin Allaire*
17:25 - 17:35

BELLE-2 Experience *Ralf Farkas*
17:40 - 17:50

18:00 sPHENIX Experience *Joe Osborn*
17:55 - 18:05

CEPC Experience *Jin Zhang*
18:10 - 18:20

FASER Experience *Ke Li*
18:25 - 18:35

experiments
Tracking
integration



Workshop - Tuesday: status quo

< Mon 25/05 **Tue 26/05** Wed 27/05 Thu 28/05 Fri 29/05 All days >

Print PDF Full screen **Detailed view** Filter
Session legend

Q&A Session Tutorial Session

16:00	Q&A Session: Q&A Session	16:00 - 16:30
	Prerequisite	16:30 - 16:35
	Hello World Examples	Andreas Salzburger 16:40 - 16:50
17:00	Geometry Building	Andreas Salzburger 16:55 - 17:10
	Propagation Examples	Andreas Salzburger 17:15 - 17:25
	Fast Track Simulation	Moritz Kiehn 17:30 - 17:40
	Truth Tracking Example	Xiaocong Ai 17:45 - 17:55
18:00	CKF Example	Xiaocong Ai 18:00 - 18:15
	Vertex Reconstruction	Bastian Schlag 18:20 - 18:35

(partly)
pre-recorded
tutorials





Workshop - Wednesday: quo vadis?

< Mon 25/05 Tue 26/05 **Wed 27/05** Thu 28/05 Fri 29/05 All days >

Print PDF Full screen **Detailed view** Filter
Session legend

● Core Development ● Q&A Session

16:00	Q&A Session	16:00 - 16:30
	Workpackage: Geometry	<i>Andreas Salzburger</i> 16:30 - 16:50
17:00	Workpackage: Repository cleanup	<i>Moritz Kiehn</i> 16:50 - 17:10
	Workpackage: Tracking for TPC/DC	<i>Fabian Klimpel</i> 17:10 - 17:30
	Workpackage: KalmanFilter-based alignment approach	<i>Xiaocong Ai</i> 17:30 - 17:50



Workshop - Wednesday: quo vadis?

16:00

Q&A Session

Workpackage: Geometry

Define paths
for feature
completion

Workpackage: Geometry #185

Open asalzburger opened this issue 18 days ago · 1 comment



asalzburger commented 18 days ago · edited

Member

This is the epic description of the geometry streamlining and cleanup.

Cleanup and Bugfixes:

- #73** harmonise the orientation of boundary surfaces (cleanup), PR: [#196](#)
 - the idea of PR is to reduce the complexity of the boundary surface orientation, inside/outside as concepts are replaced by along/opposite w.r.t normal vector
- #166** fix polyhedron description for sectoral bounds (bugfix)
 - at least the visualisation of sectoral bounds (cylindrical/conical) could be flawed
- #186** refactor the surface parsing module (improvement)
 - this PR promotes a new class `ProtoLayerHelper` that receives a list of surfaces and sorts them into `ProtoLayer` objects, PR: [#212](#)
 - the `ProtoLayer` objects can then be used to build `LayerArray` objects or later Volume structures
- Remove `TAKE_SMALLER_BIGGER` macros (improvement), PR: [#206](#)
- Check and fix `noexcept(false)` usage for constructors

Add some missing functionality:

- #14** add conical volume bounds (new functionality), PR: [#200](#)
 - conical volume bounds are needed for `Belle-2` description

R&D:

- Investigate if fully local bounds memory and transform memory is CPU superior
 - currently, volume bounds are shared object that can be shared between volumes, however this could potentially lead to memory cache misses, investigate if a by value model is better in terms of CPU performance

Add Documentation:

- Documentation for surface module
- Documentation for geometry module

New DetectorVolume infrastructure:

- #13** remove layers and describe them as volumes (improvement)
 - layers have become very close to volume objects, but have a different navigation, this can be streamlined
- Implement a new `Tracer` instead of the `Navigator` for the new `DetectorVolume` type



Workshop - Thursday: quo vadis?

< Mon 25/05 Tue 26/05 Wed 27/05 **Thu 28/05** Fri 29/05 All days >

Print PDF Full screen **Detailed view** Filter
Session legend

● Q&A Session ● R&D Development ×





Workshop - Friday: wrap up

Navigation: < Mon 25/05 | Tue 26/05 | Wed 27/05 | Thu 28/05 | **Fri 29/05** | All days >

Actions: Print | PDF | Full screen | Detailed view | Filter

16:00	Q&A Session	16:00 - 16:30
17:00	Close-Out: Close-Out <i>Florian Urs Bernlochner</i>	16:30 - 17:30

- Summarise Weds/Thurs sessions
- Define follow-ups (e.g. ATLAS bootcamp)