

Supporting plots

Blackboard talk + Q&A session

TOPICS:

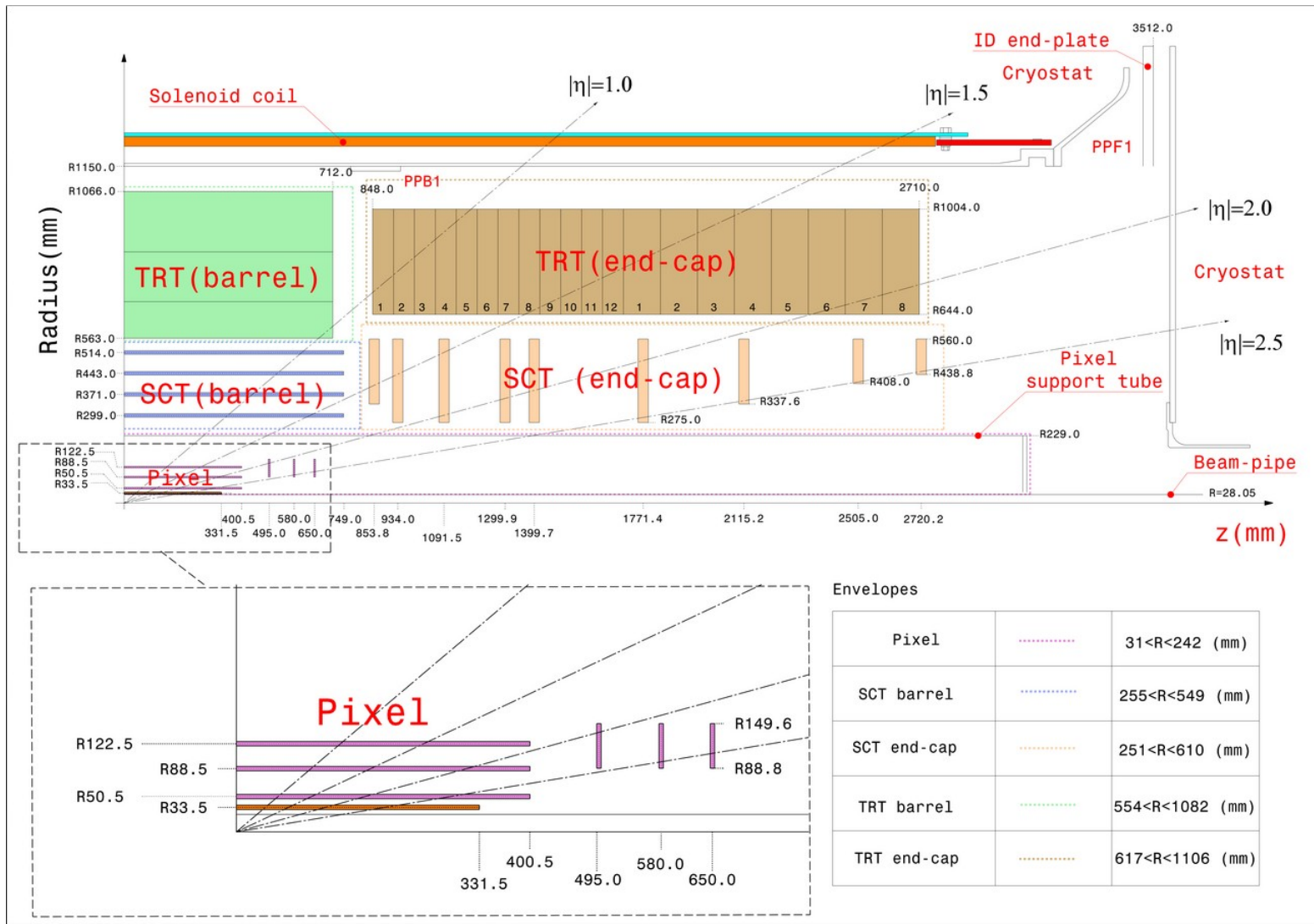
- 1) ATLAS tracking now
- 2) Challenges for HL-LHC
- 3) From “toy” to “production” tracking

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June 4th, 2019

Exa.TrkX kickoff meeting

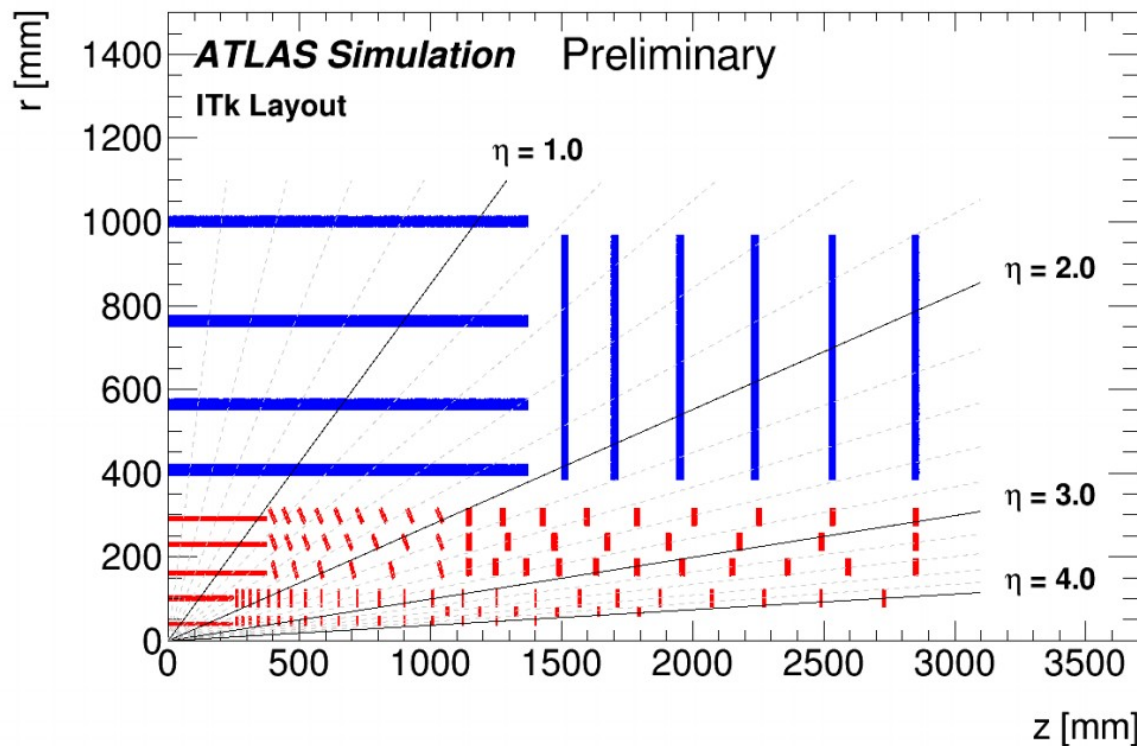
Run 2 layout



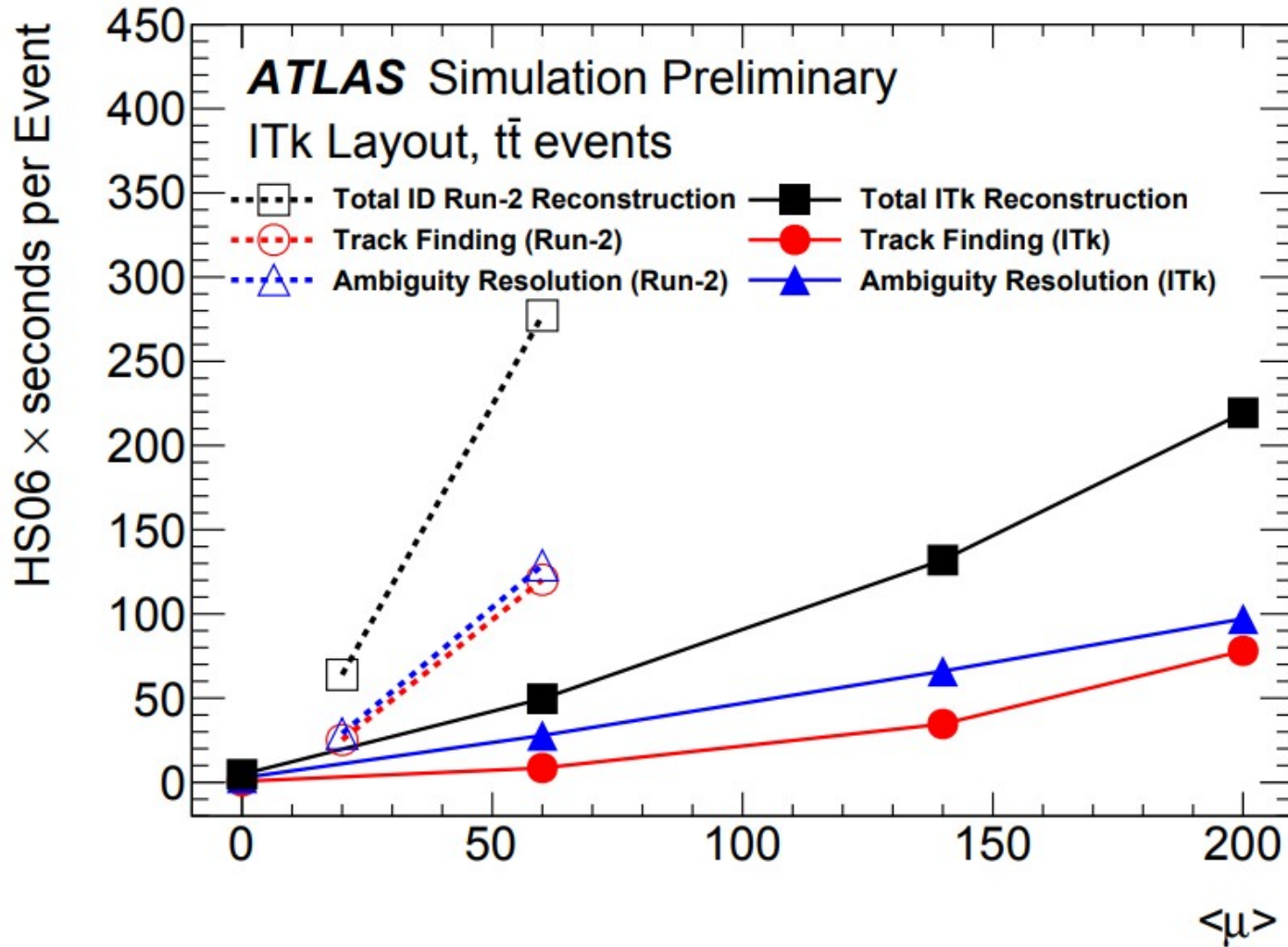
Itk Layout & track reco selections



Requirement	Pseudorapidity interval		
	$ \eta < 2.0$	$2.0 < \eta < 2.6$	$2.6 < \eta < 4.0$
pixel+strip hits	≥ 9	≥ 8	≥ 7
pixel hits	≥ 1	≥ 1	≥ 1
Holes	< 2	< 2	< 2
p_T [MeV]	> 900	> 400	> 400
$ d_0 $	≤ 2 mm	≤ 2 mm	≤ 10 mm
$ z_0 $	≤ 20 cm	≤ 20 cm	≤ 20 cm



CPU time



CPU time track candidate formation



Run 2

Tool	Total Time [s]	TimePerEvt [s]	TimePerCall [s]	N _{calls}
Total	5316	2.66066	2.65800	1998
TrackFinder	2316	1.15916	0.00016	14910819
TrackFinder2	2238	1.12012	0.00015	14749421
SeedNewEvent	342	0.17117	0.17100	1998
SeedNewEvent1	295	0.14765	0.14800	1998
Seed	23.4	0.01171	0.00000	14912817
Rest	22.4	0.01121	0.01120	1998
Seed2	21	0.01051	0.00000	14751419
TrackNewEvent	0.173	0.00009	0.00009	1998