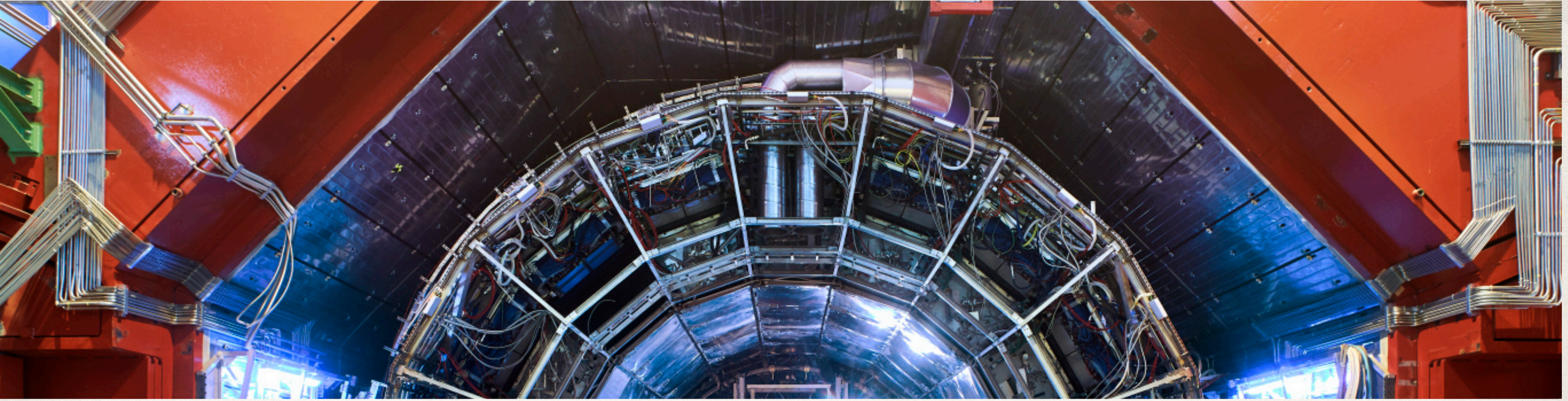


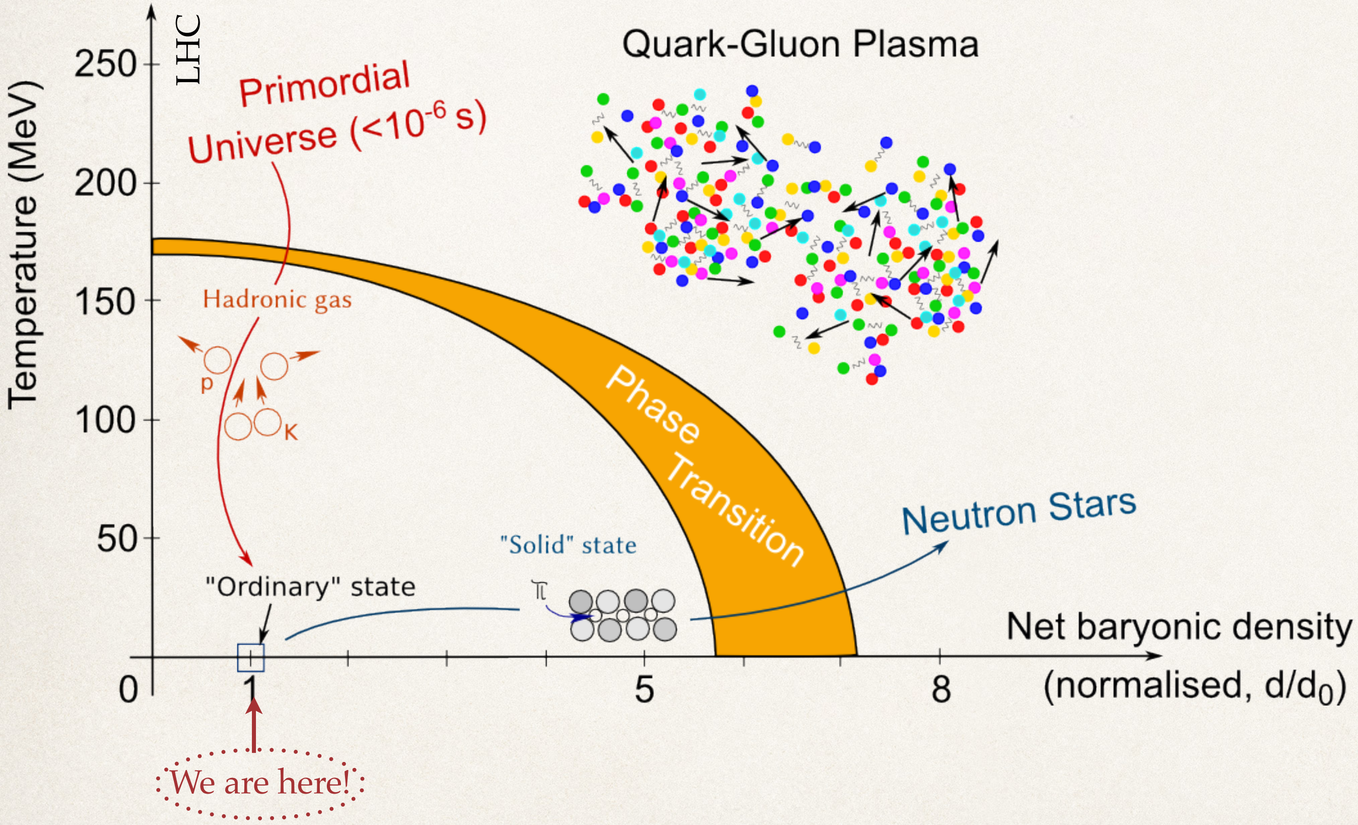
"Study of J/ψ mesons in the ultra-peripheral collisions and MFT commissioning"

Lucrezia Camilla MIGLIORIN

9th March 2021

GDR QCD 2021

QGP and experimental evidences



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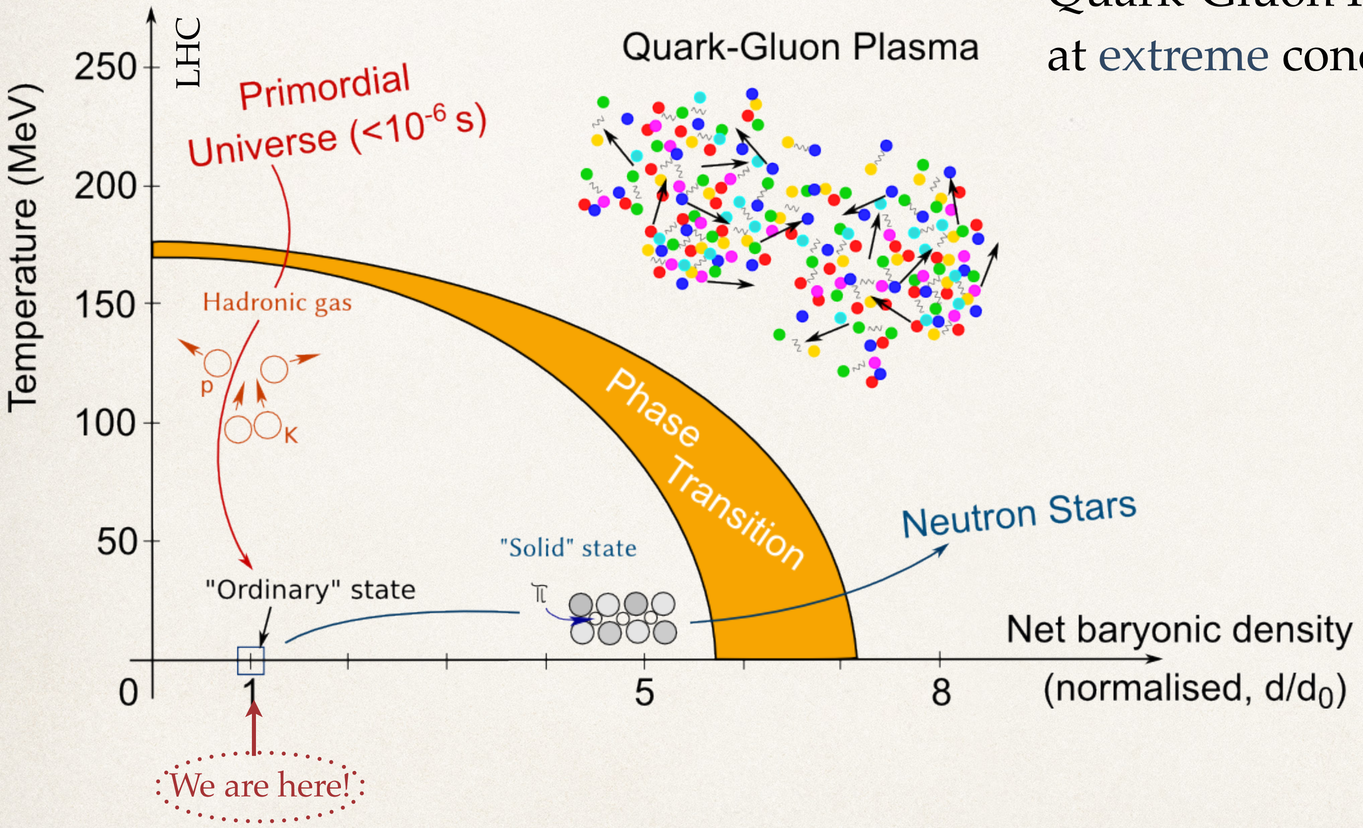

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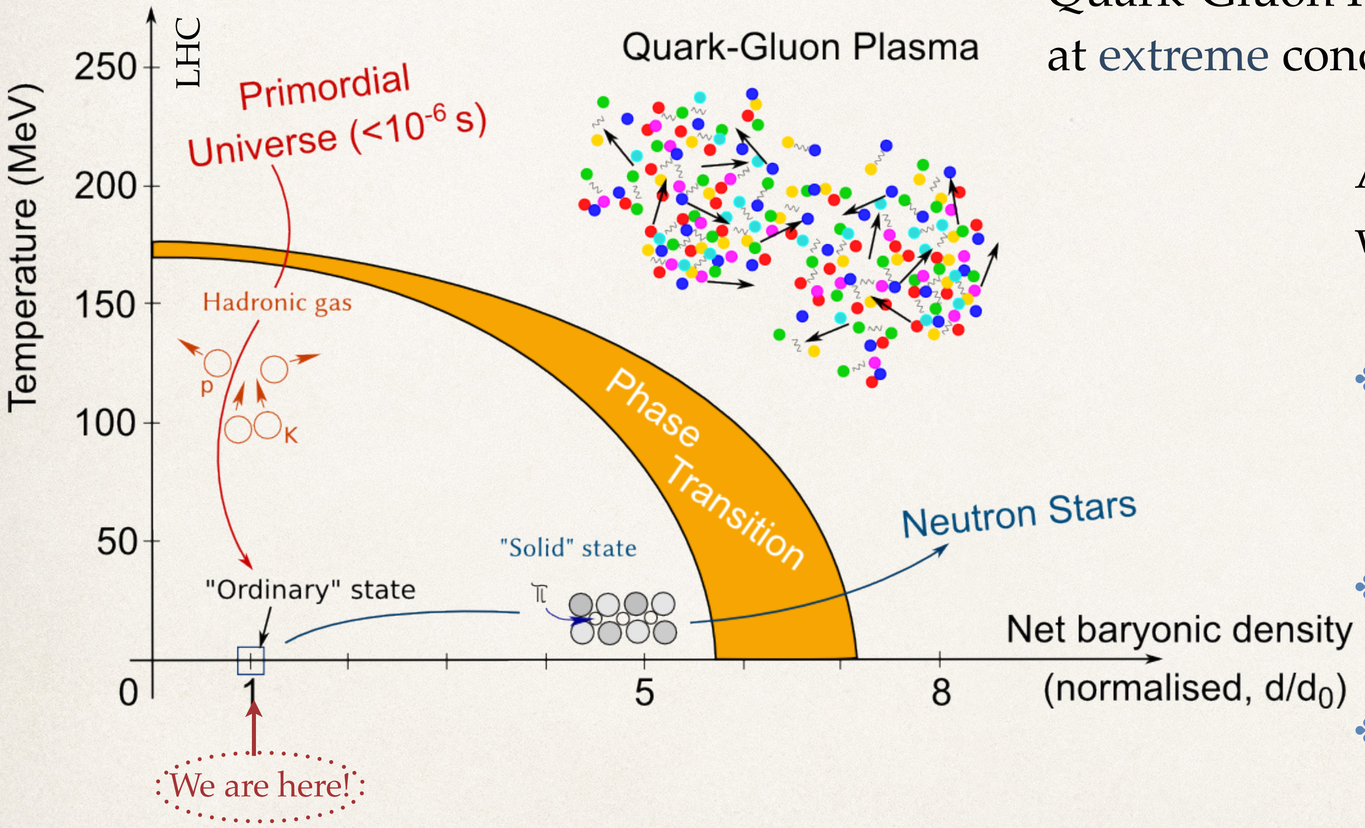

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Among the main experimental observables of QGP, we find:

- Production of strangeness in relativistic heavy ion collisions;
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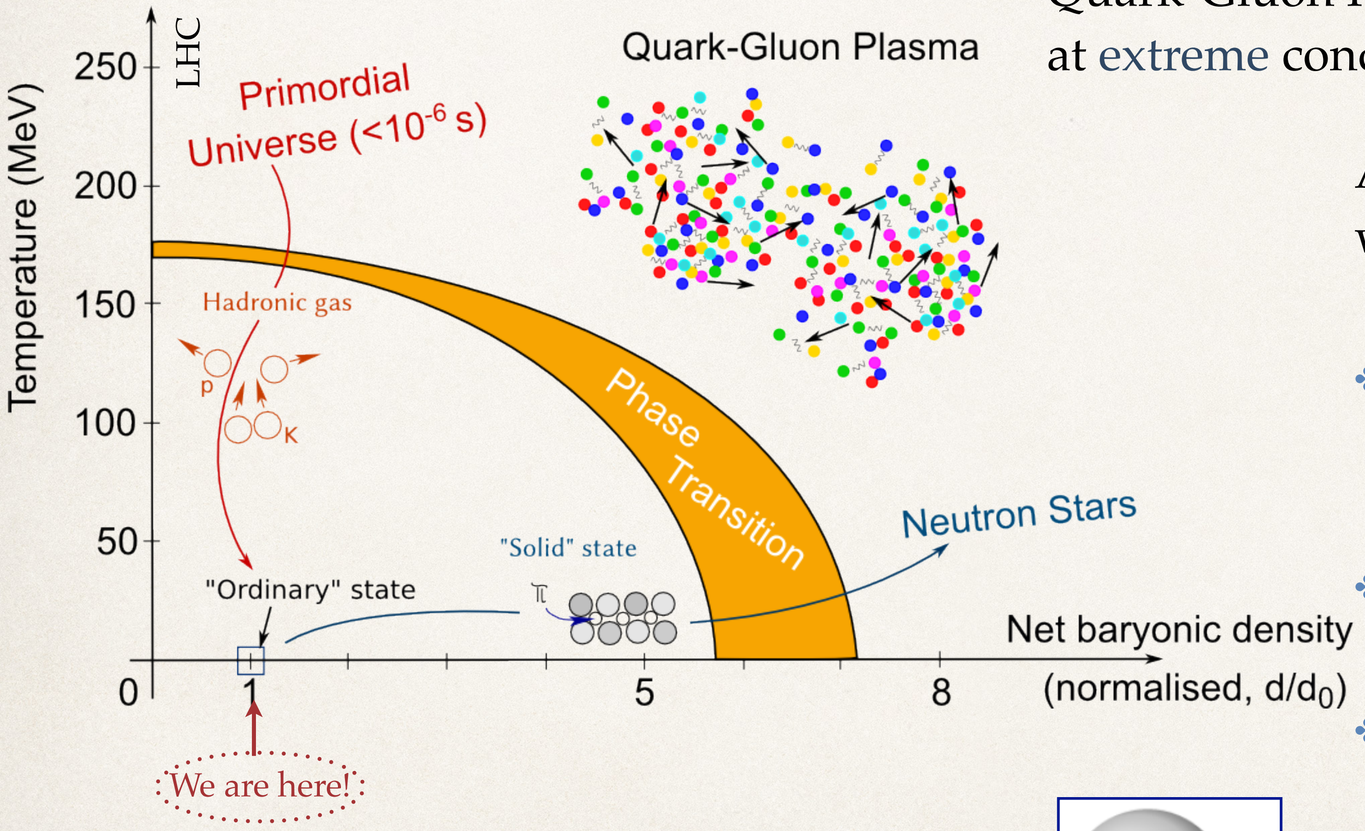

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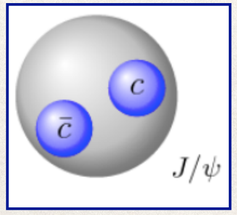

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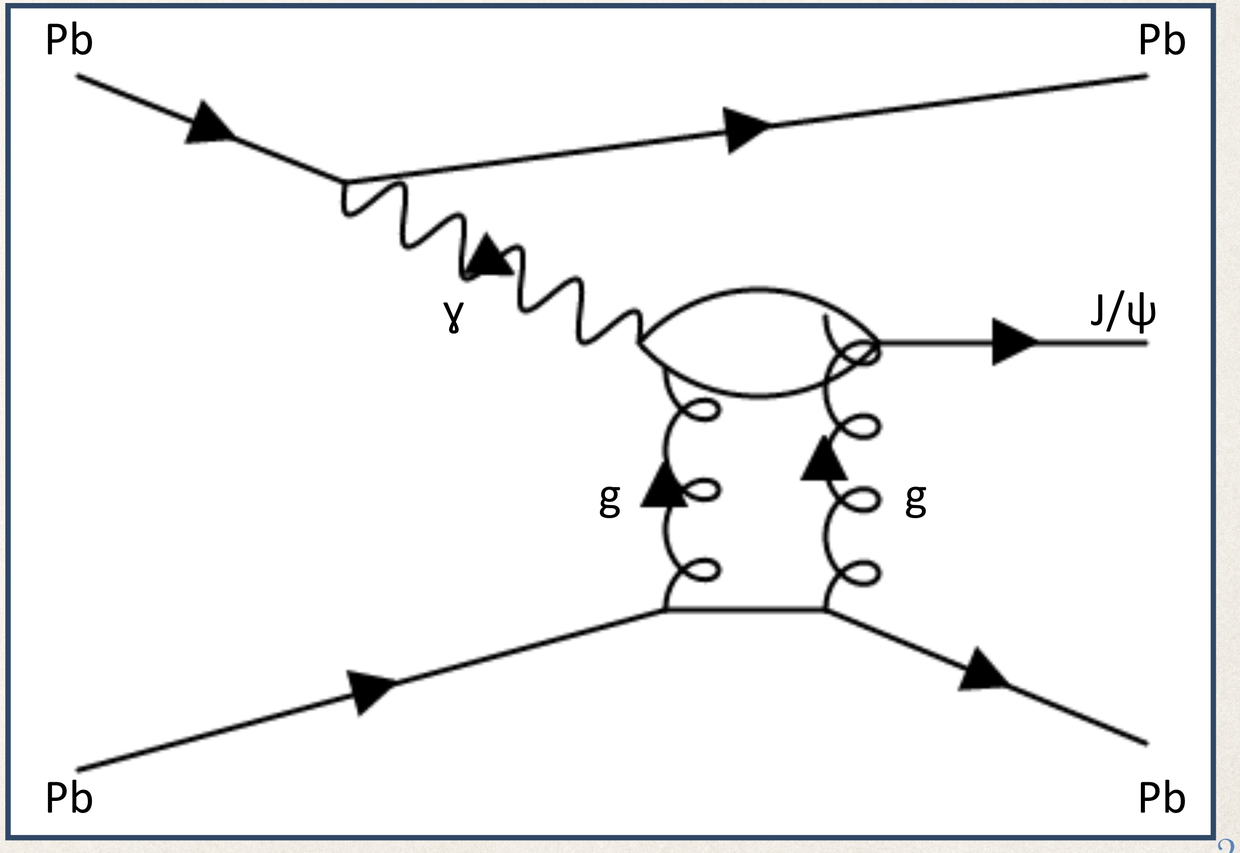

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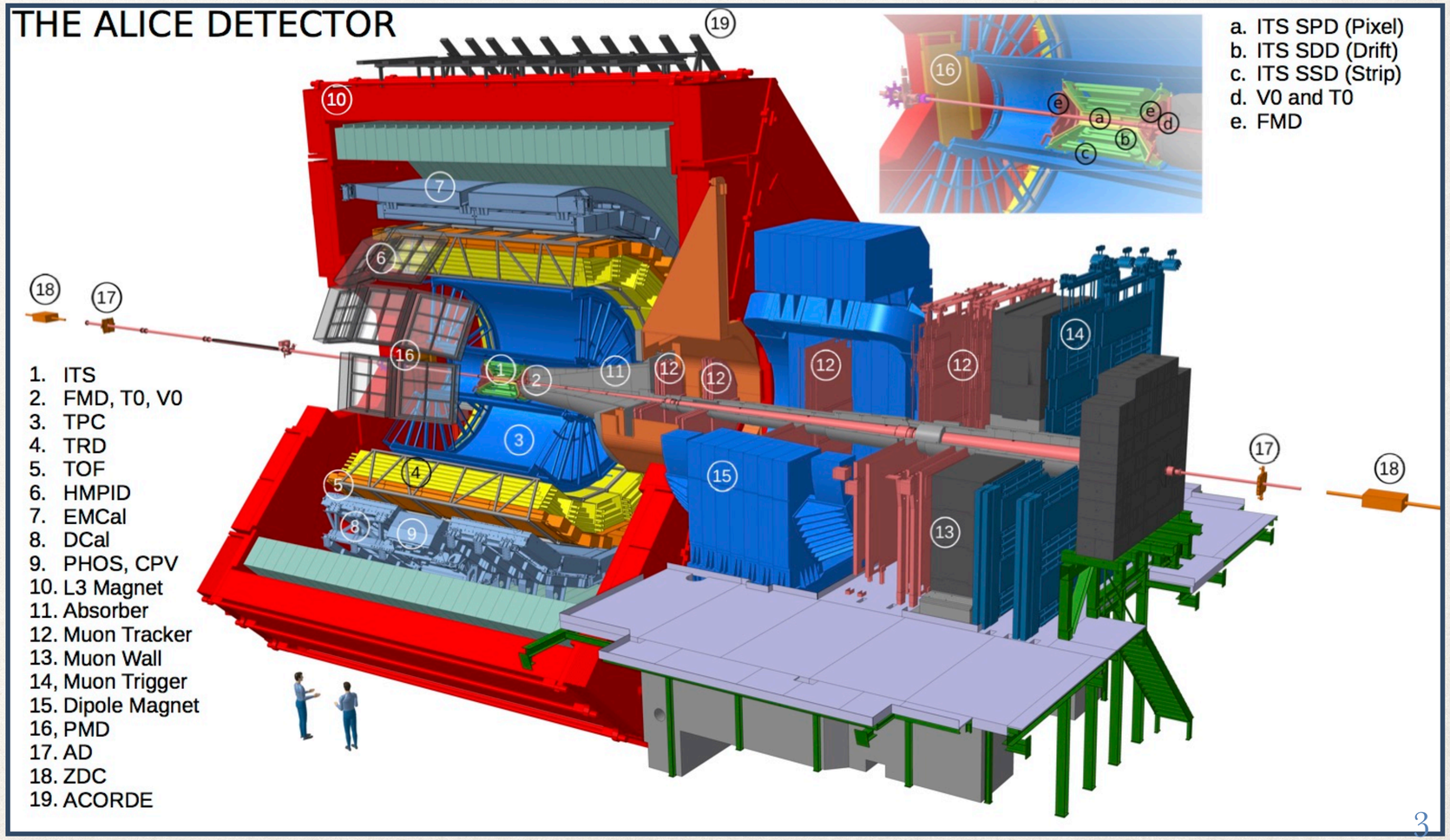
ALICE (A Large Ion Collider Experiment) is one of the four big experiments at LHC-CERN.



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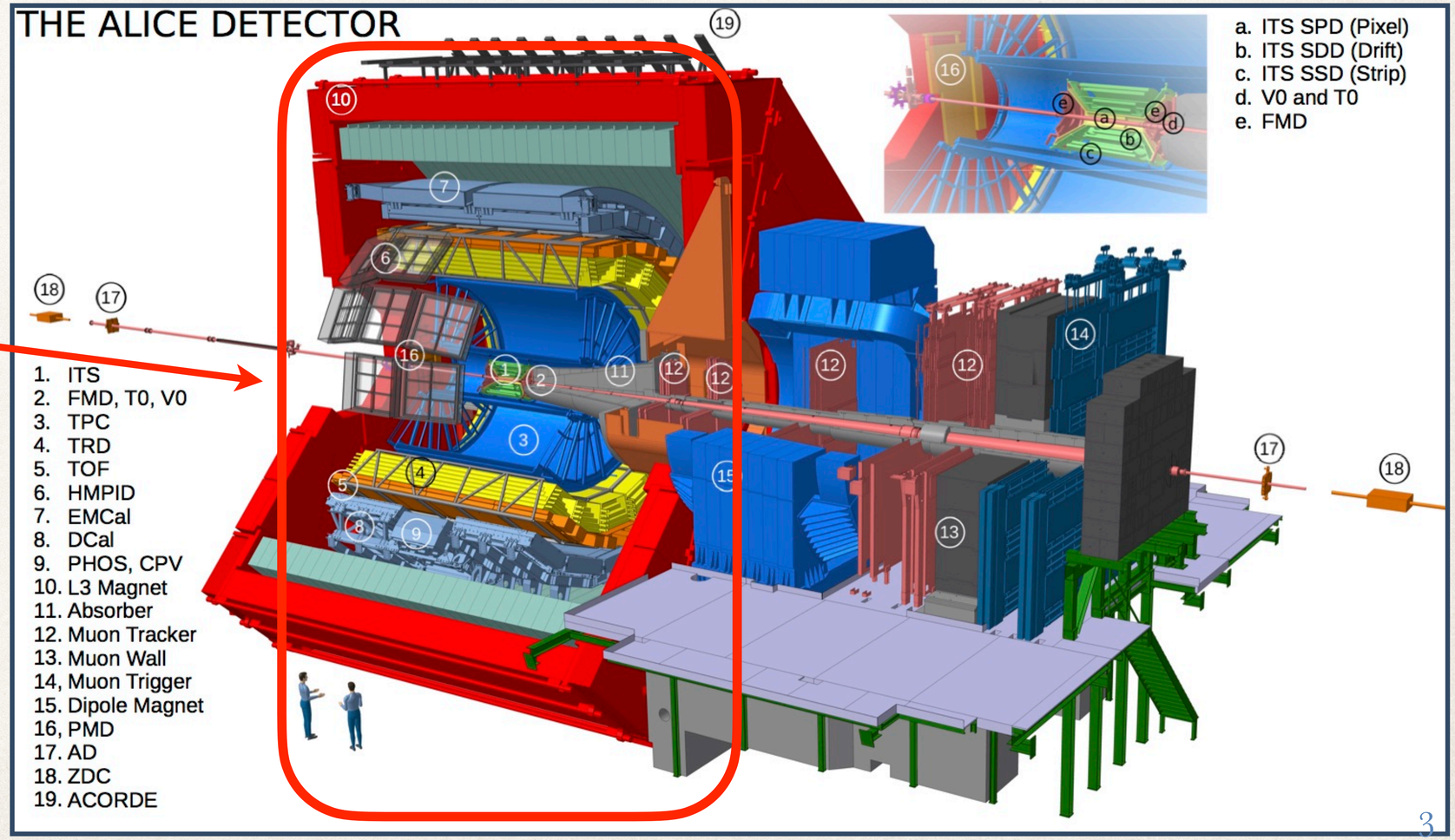

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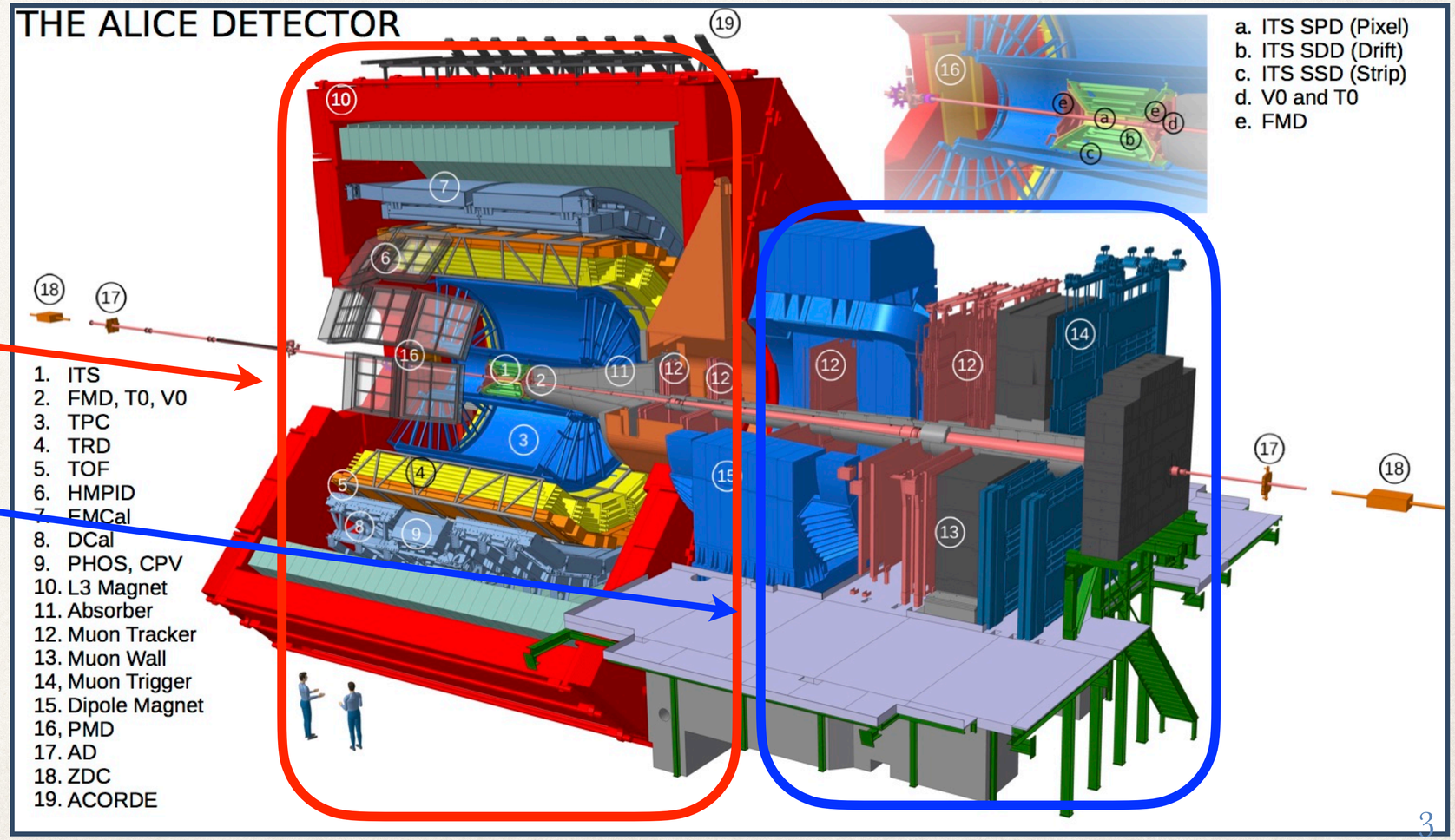

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Run Pb–Pb UPC periods at $\sqrt{^{S}\mathrm{NN}} = 5.02$ TeV :

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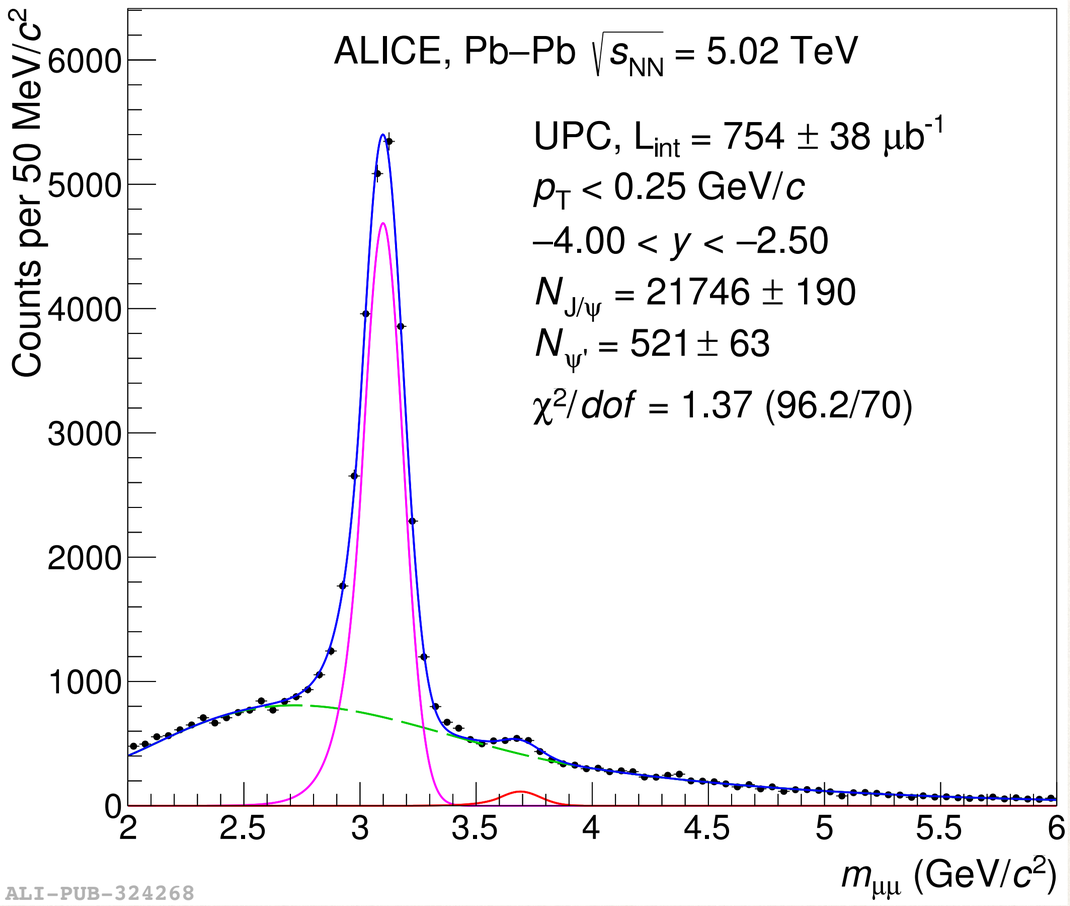
Detectors Included

- SPD;
- Forward Muon Spectrometer;
- V0;
- AD;
- ZDC.

First results



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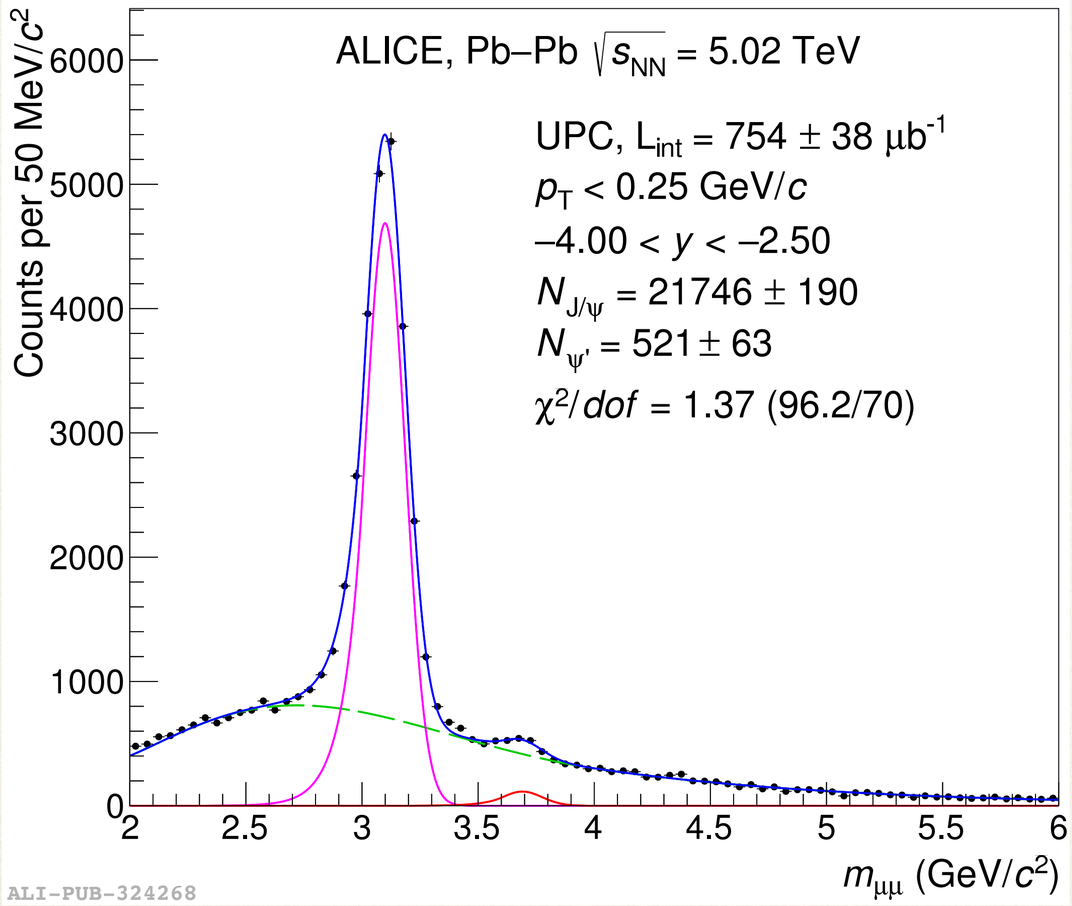

Invariant mass distribution for muon pairs in the full rapidity range -4.0 < y < -2.5

The dashed green line corresponds to the background.

The solid magenta and red lines correspond to Crystal Ball functions representing J/ψ and ψ' signals, respectively.

The solid blue line corresponds to the sum of background and signal functions.

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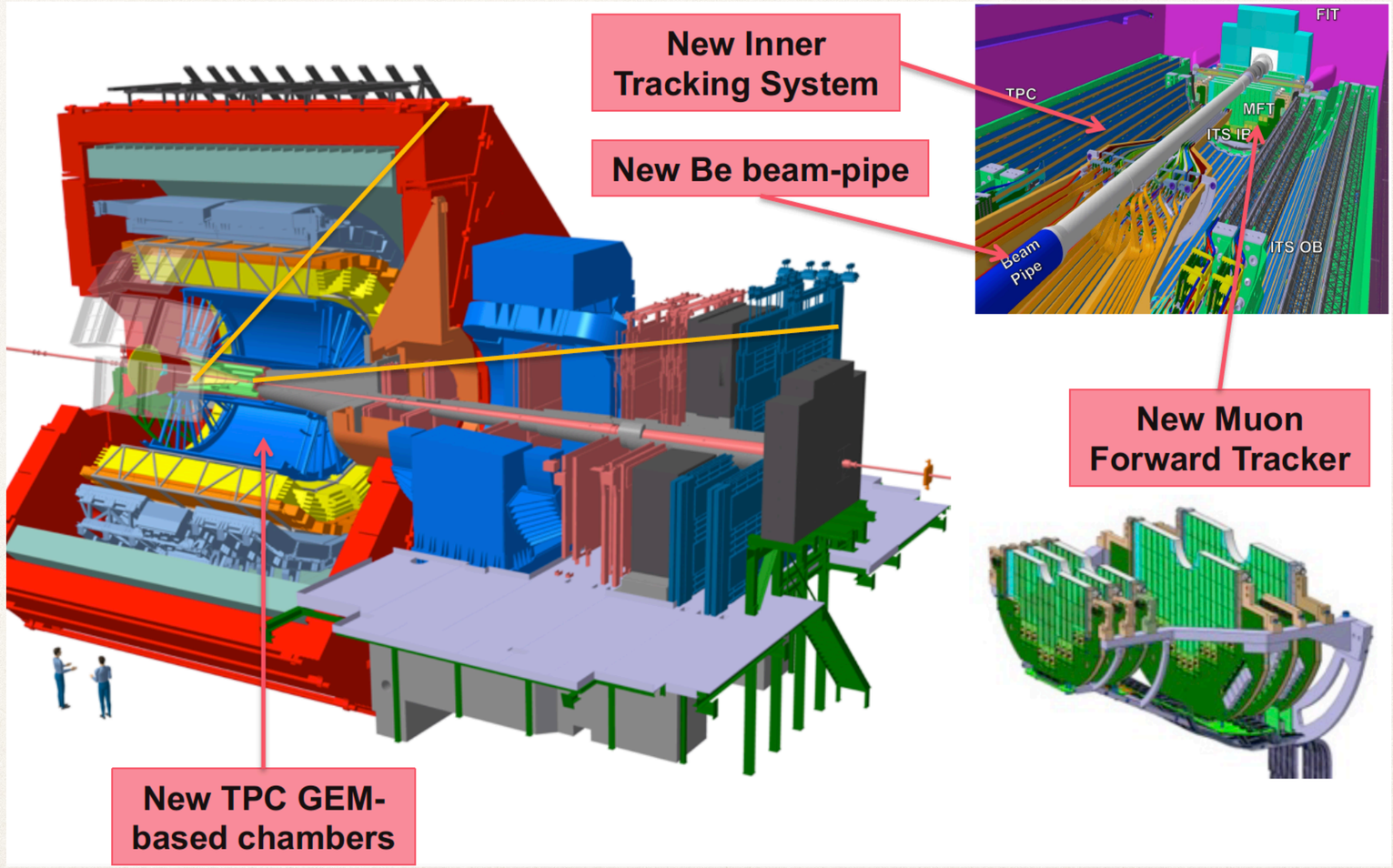
And for LHC Runs 3 and 4?



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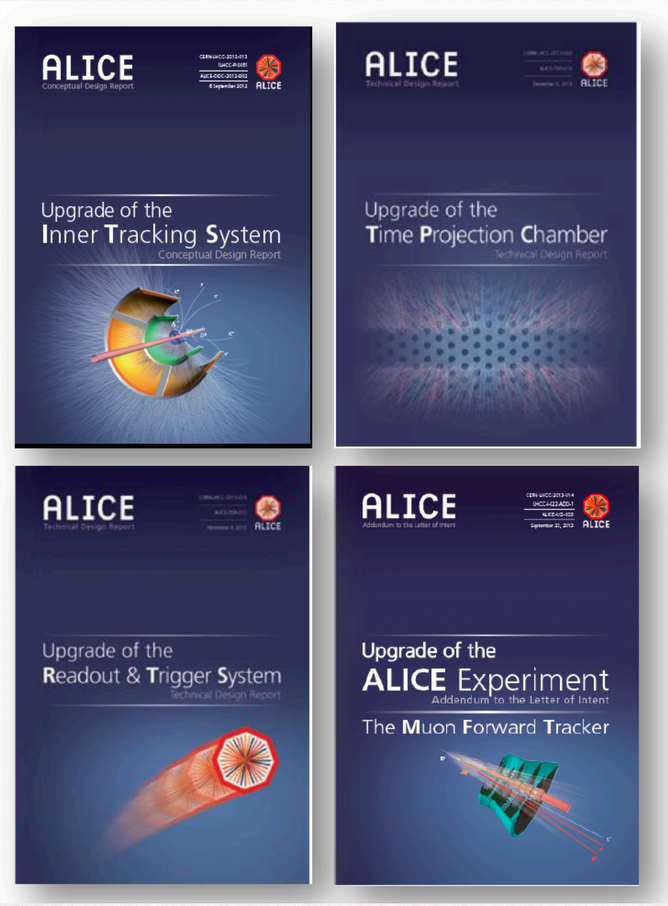

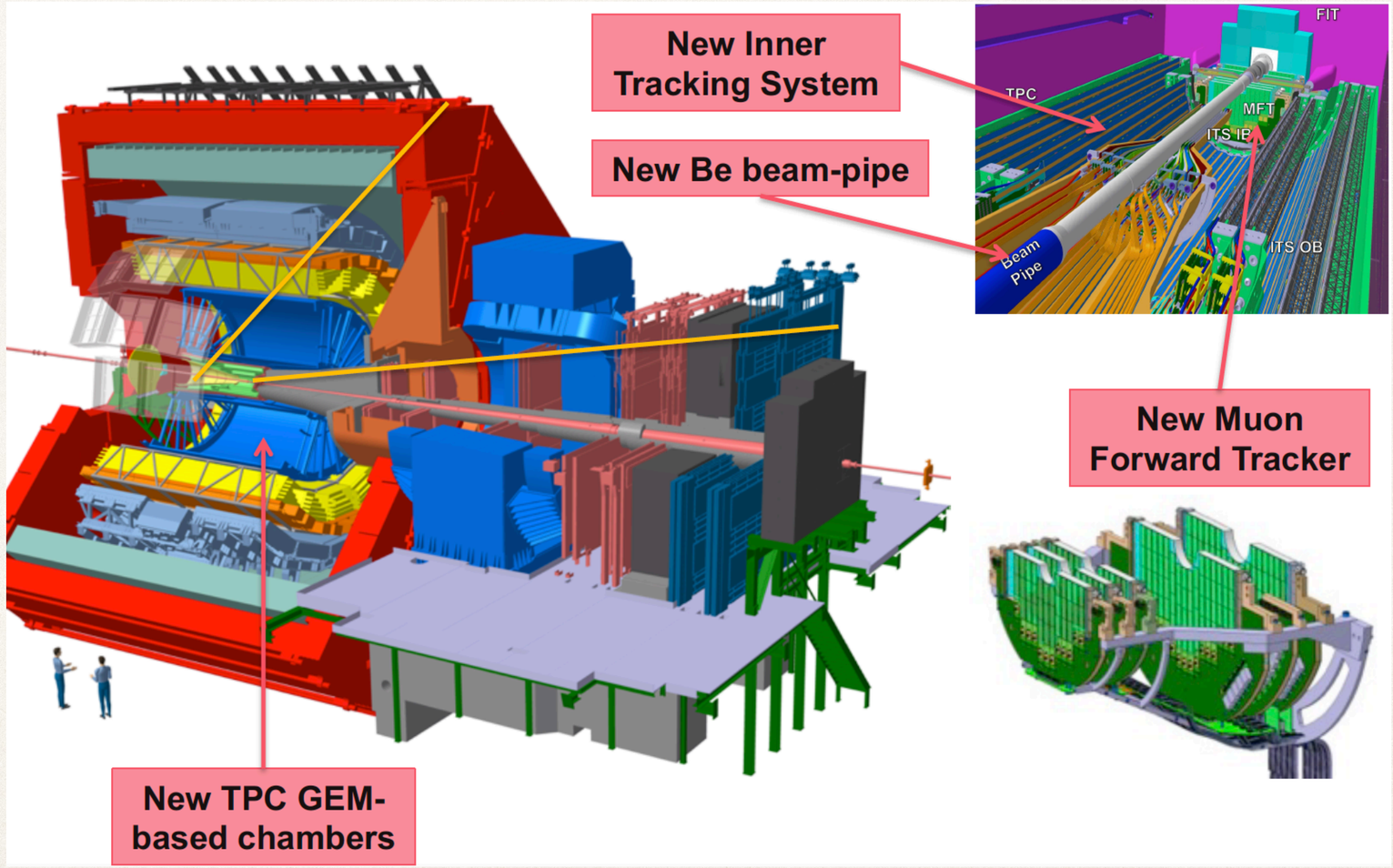

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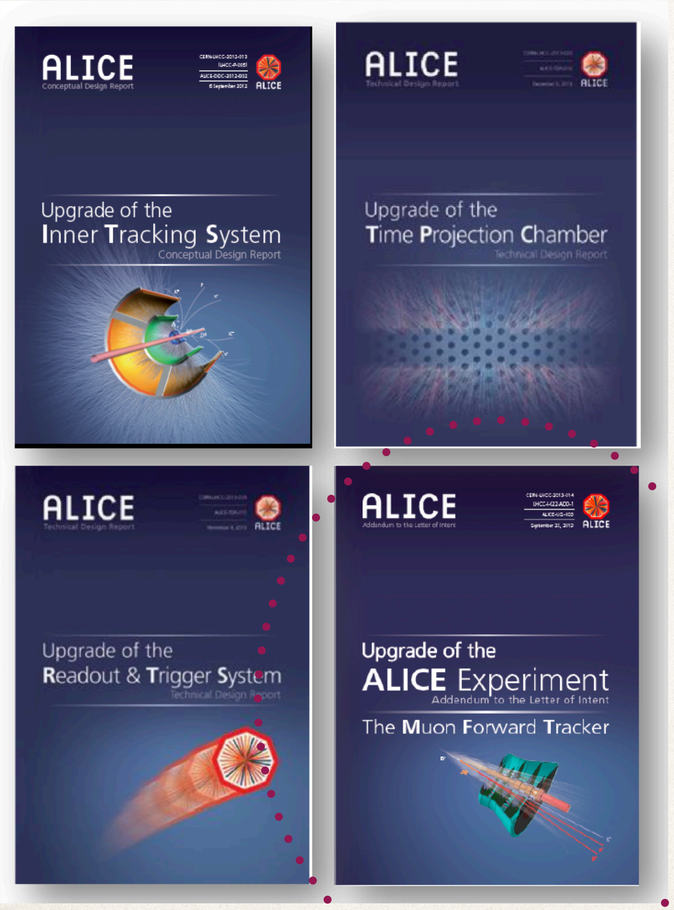
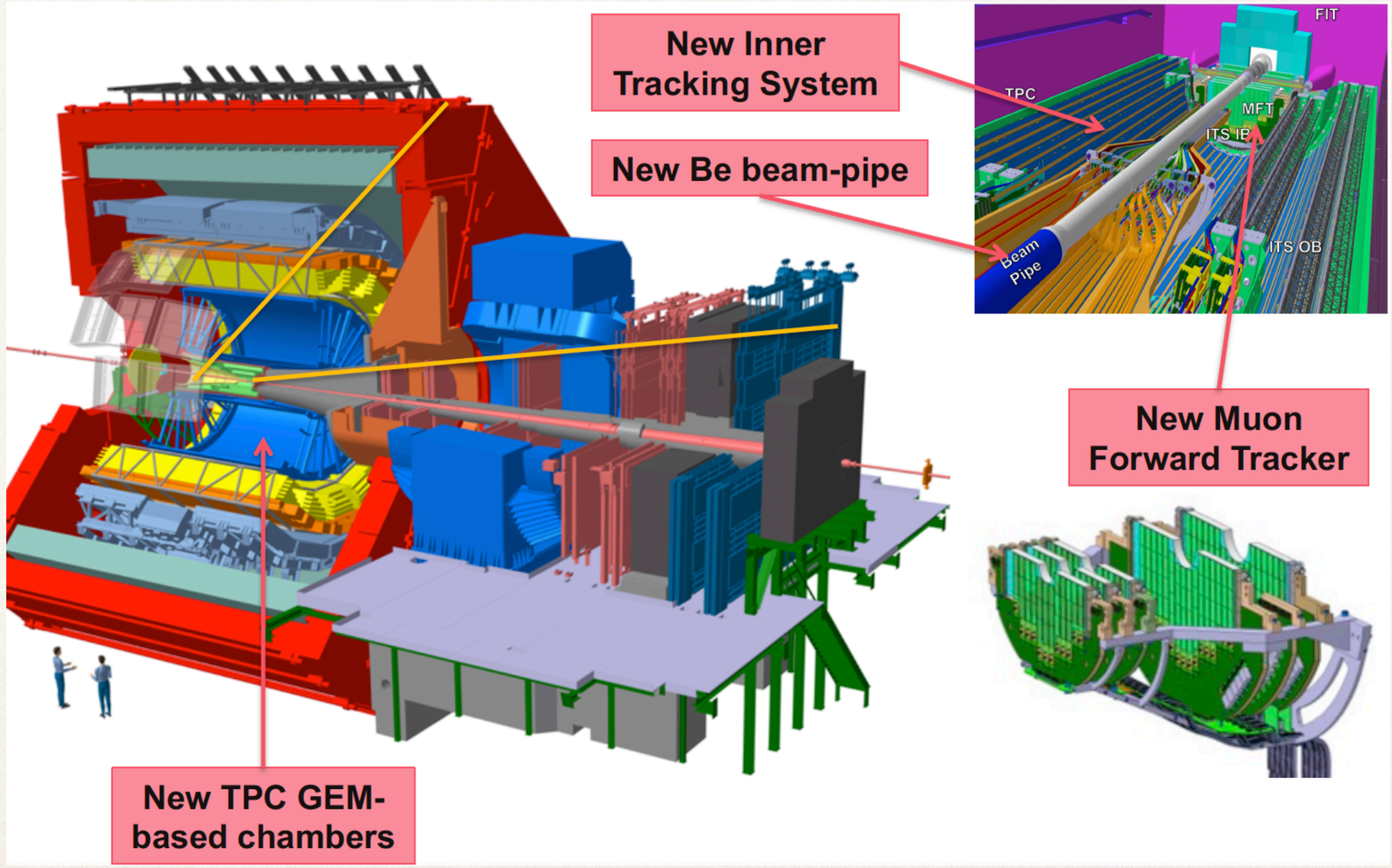
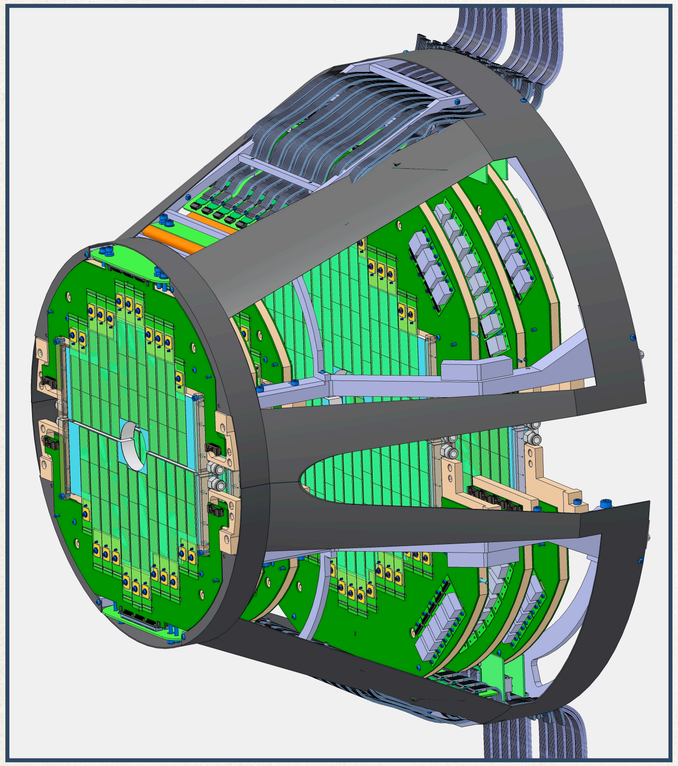




Muon Forward Tracking



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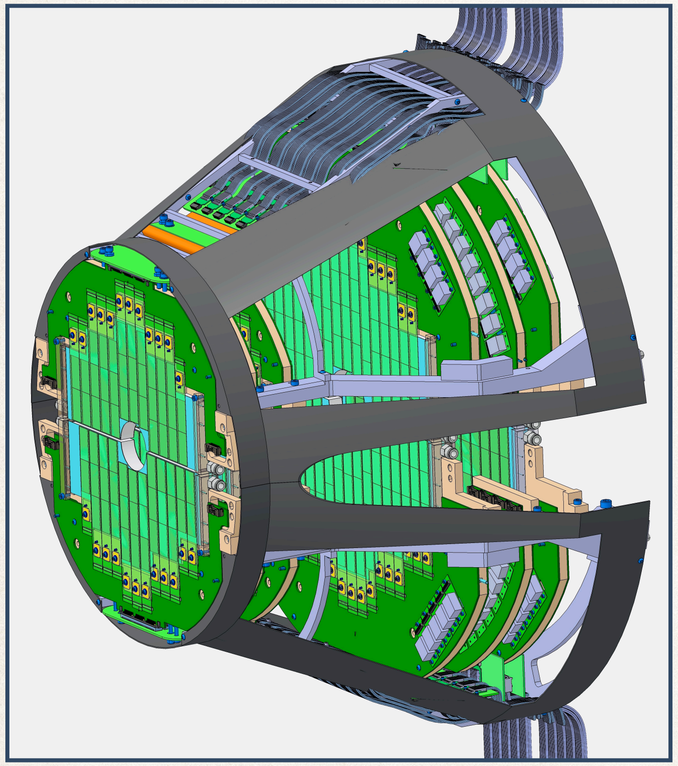

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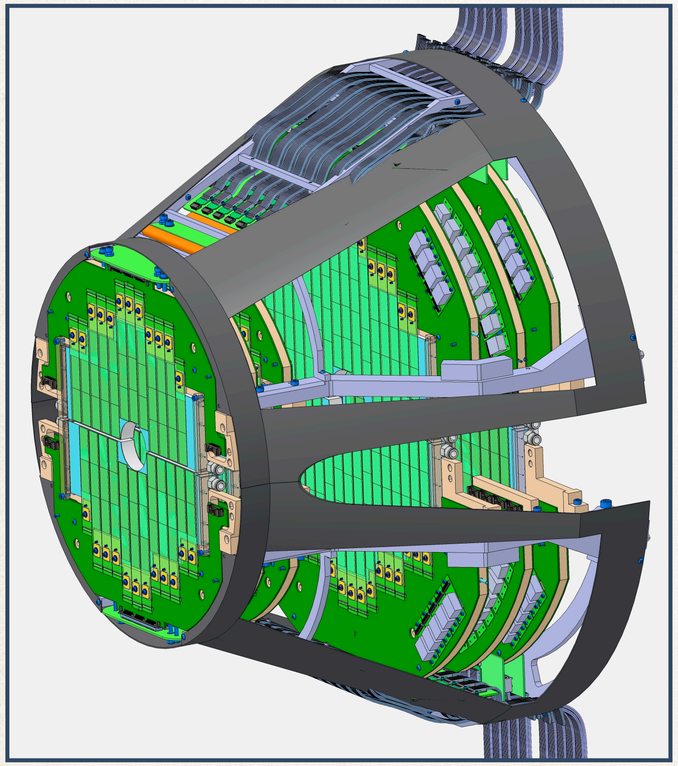

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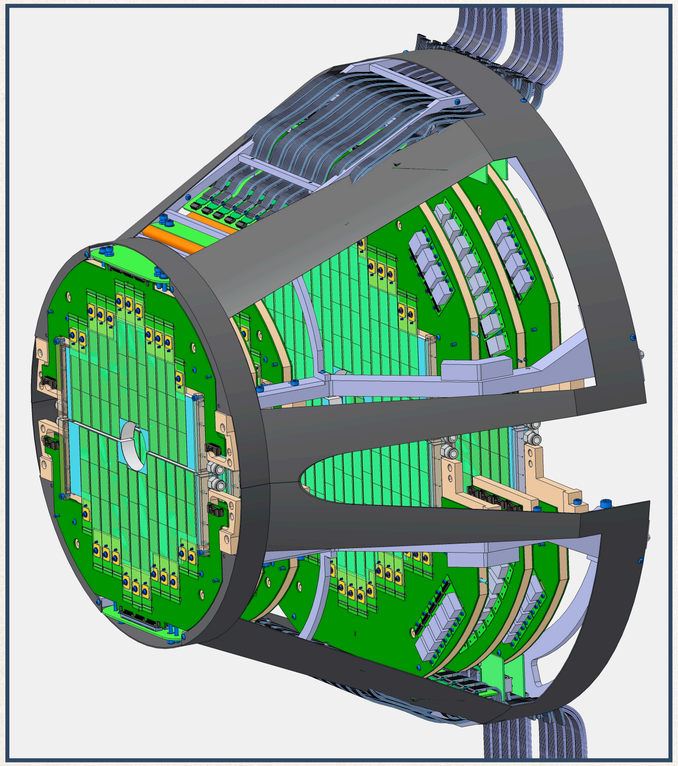

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Main objectives of the MFT:

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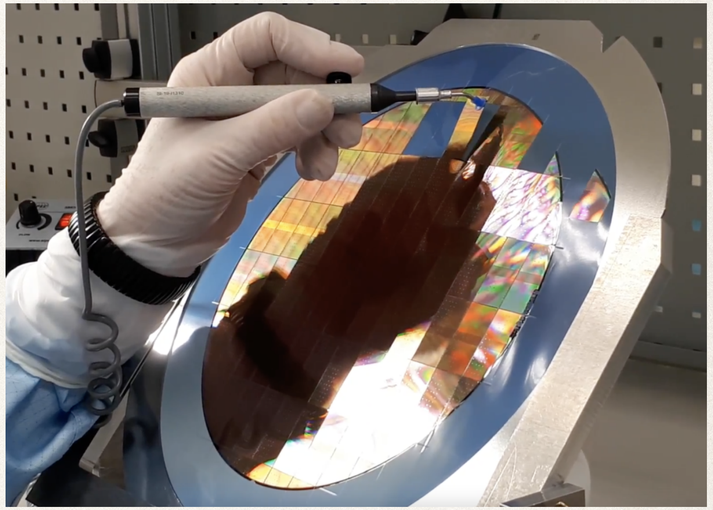
MFT Commissioning (1)

MFT is composed of **936** ALPIDE sensors distributed on **5 disks**. Each sensor is made up of 1024x512 silicon pixels of size 28 μm x 28 μm.



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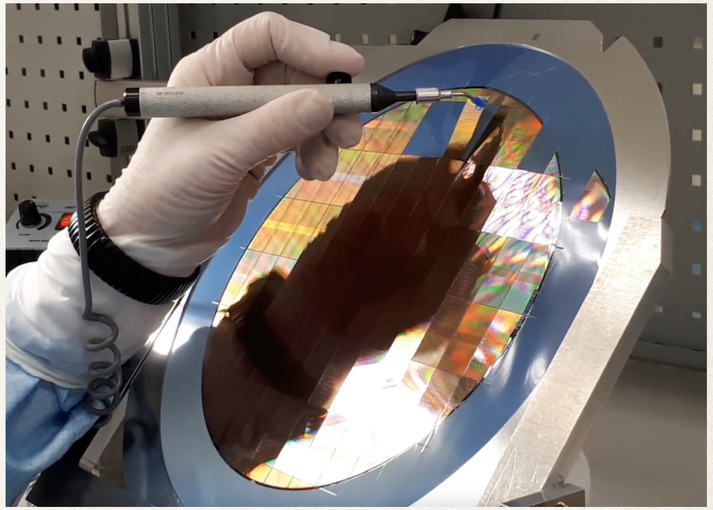

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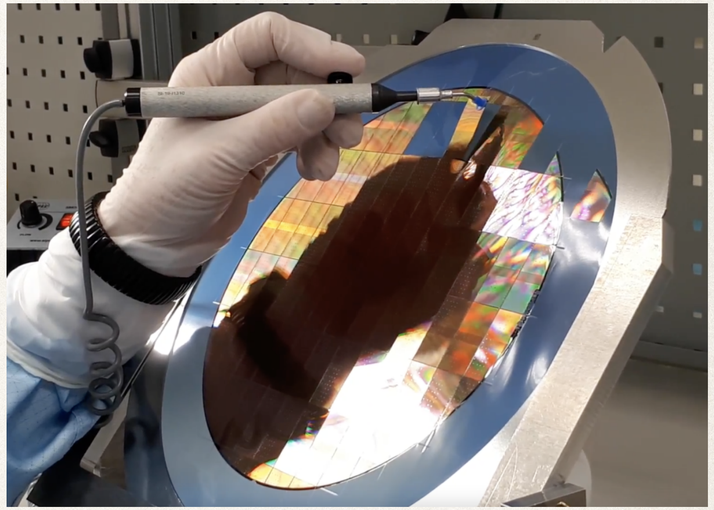

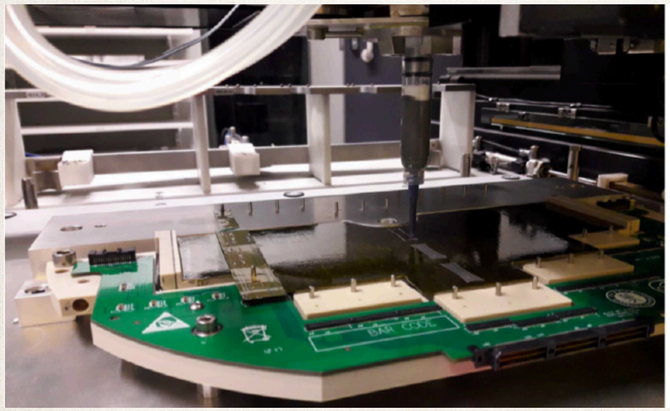

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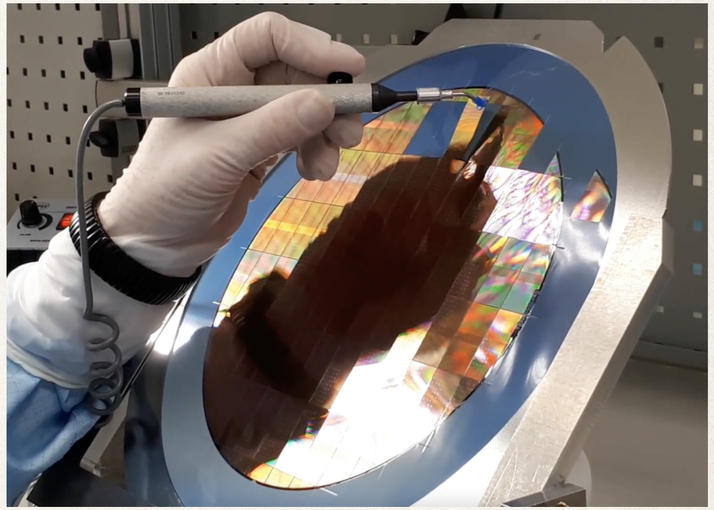

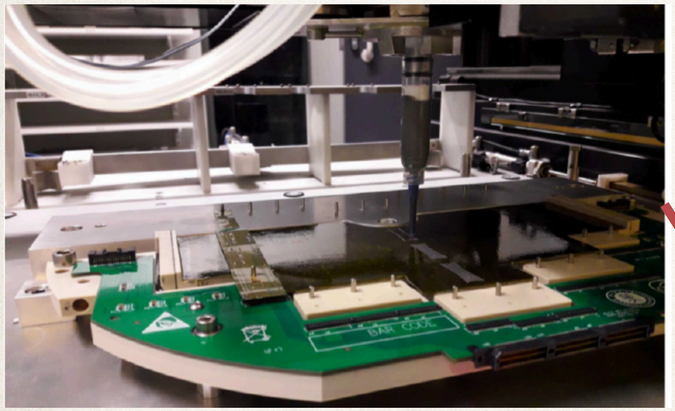

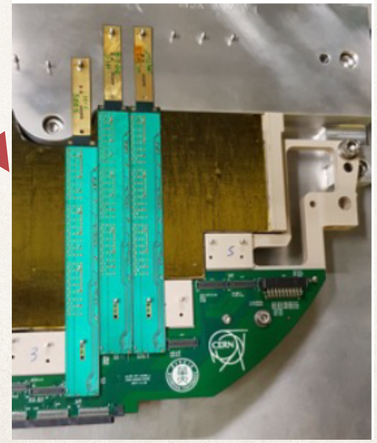

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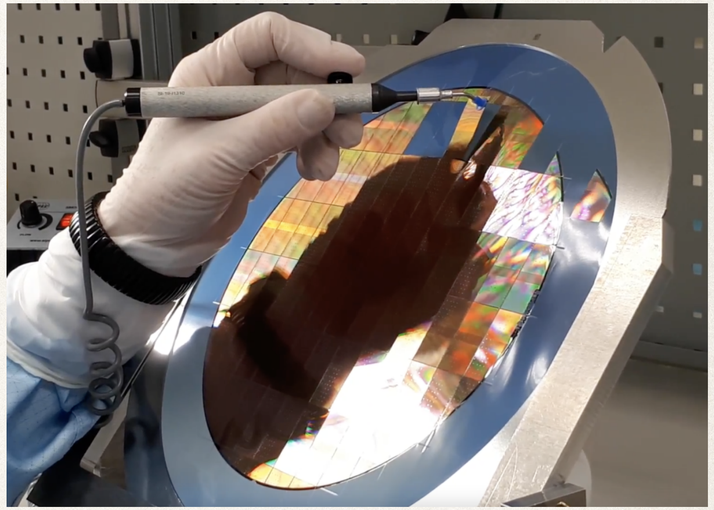

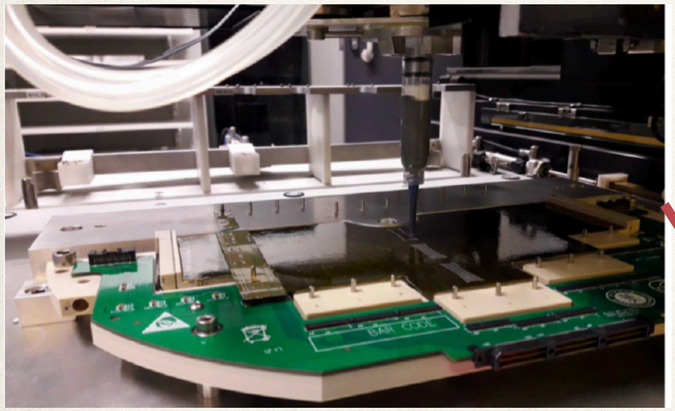

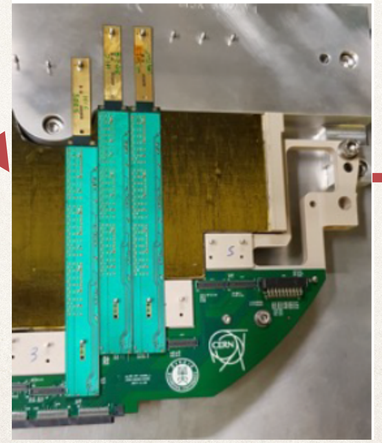

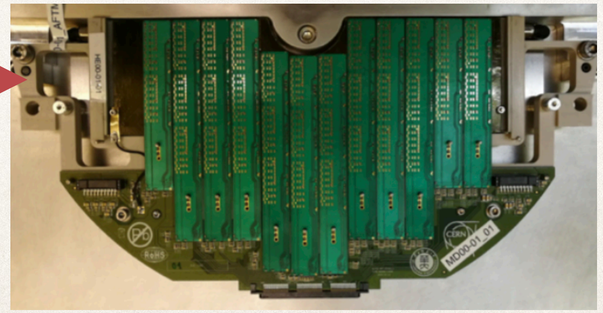

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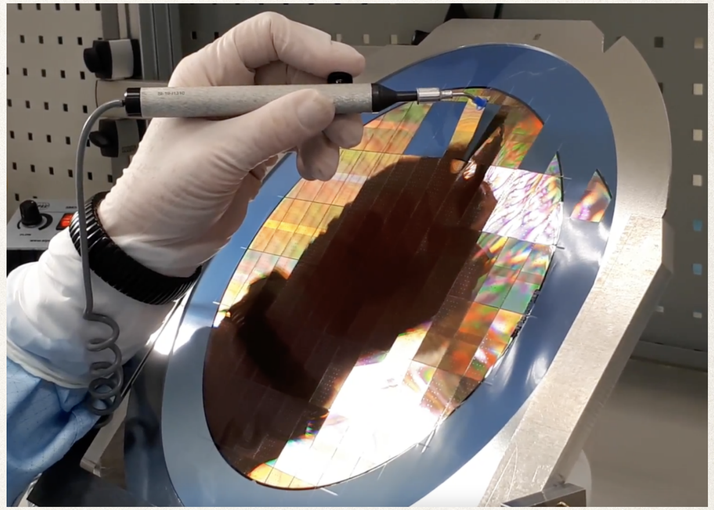

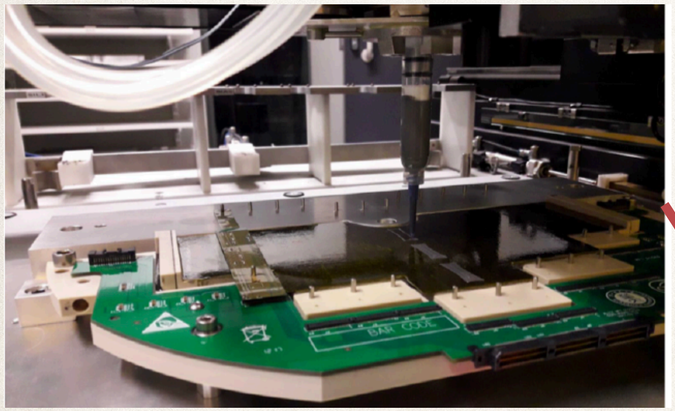

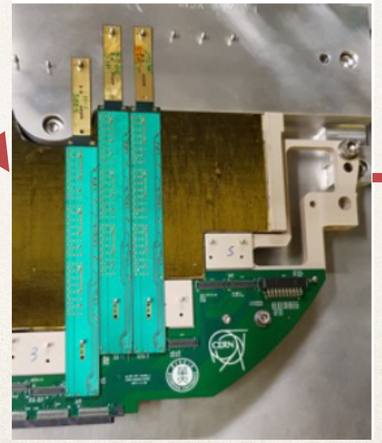

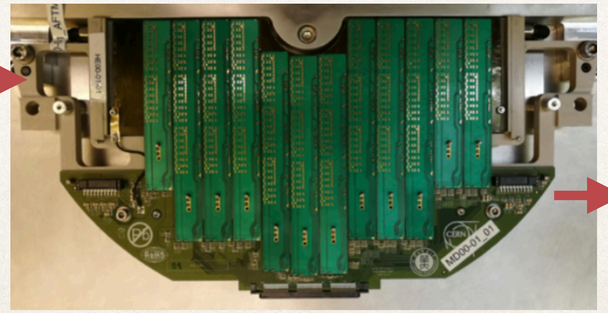

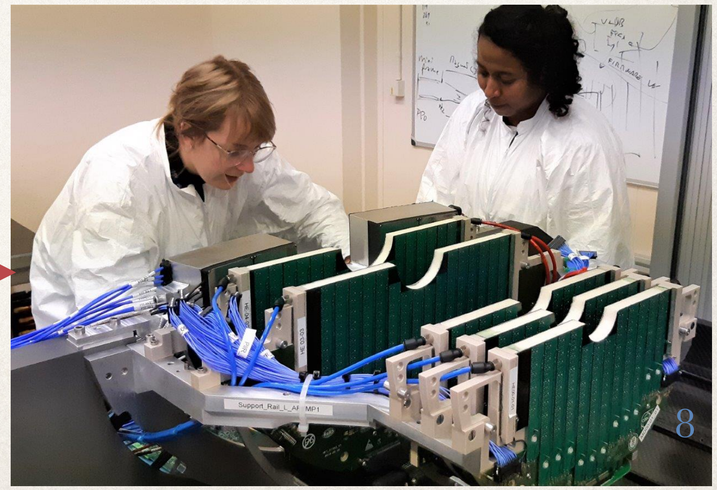

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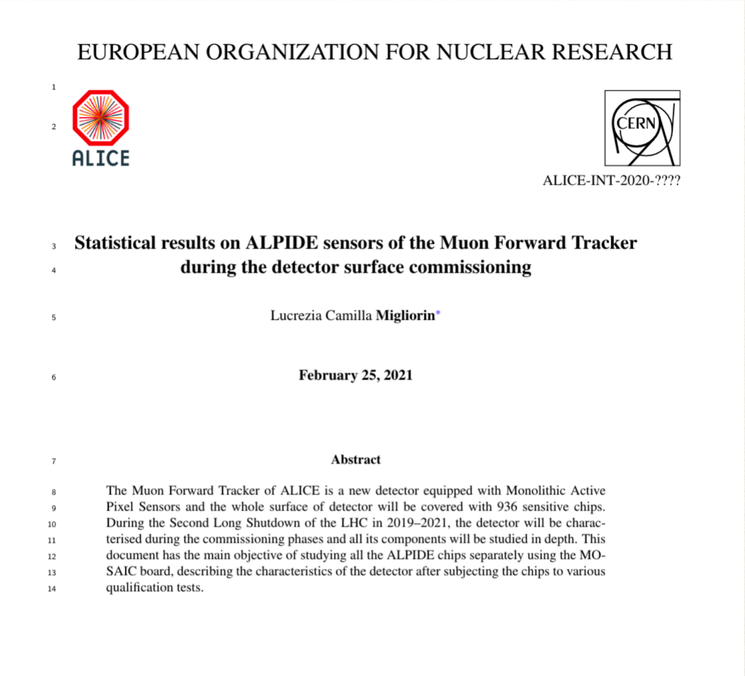

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

ALICE-INT-2020-????

Statistical results on ALPIDE sensors of the Muon Forward Tracker during the detector surface commissioning

Lucrezia Camilla **Migliorin***

February 25, 2021

Abstract

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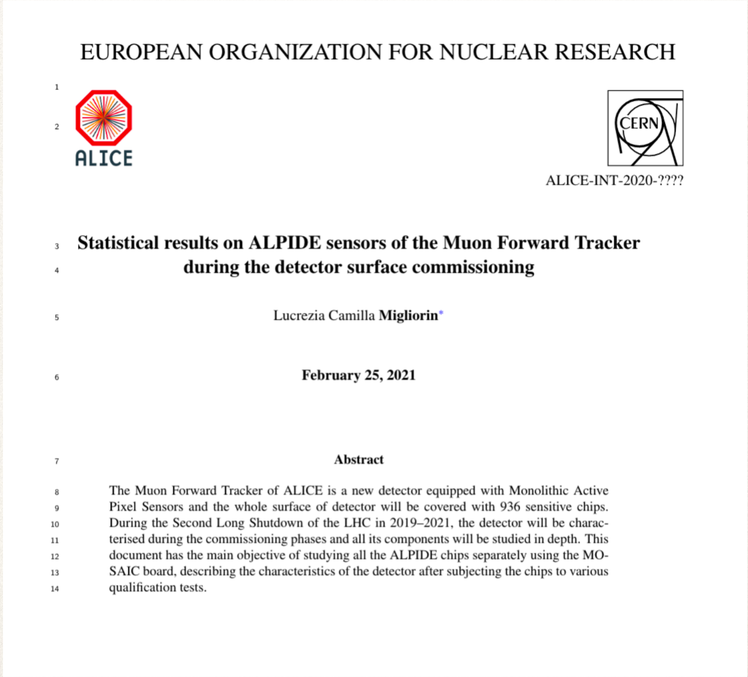

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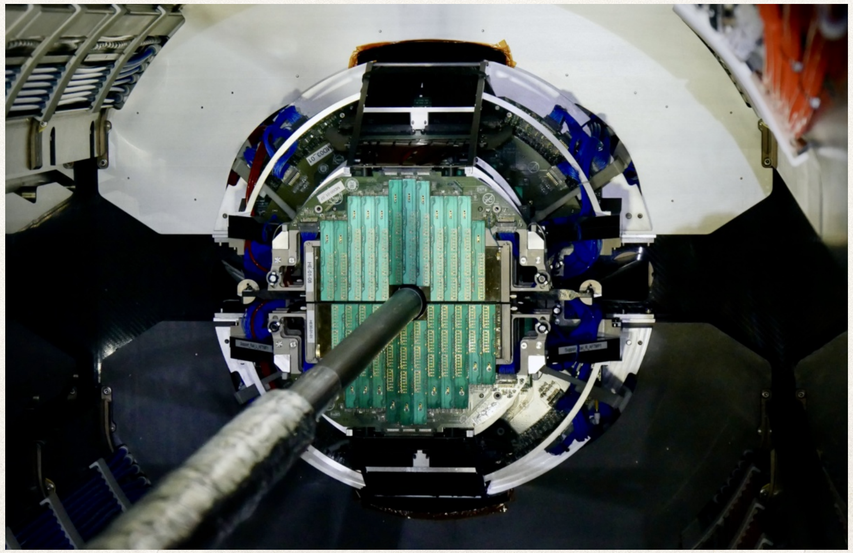

Follow R. Sadek speech 10/03/2021 !