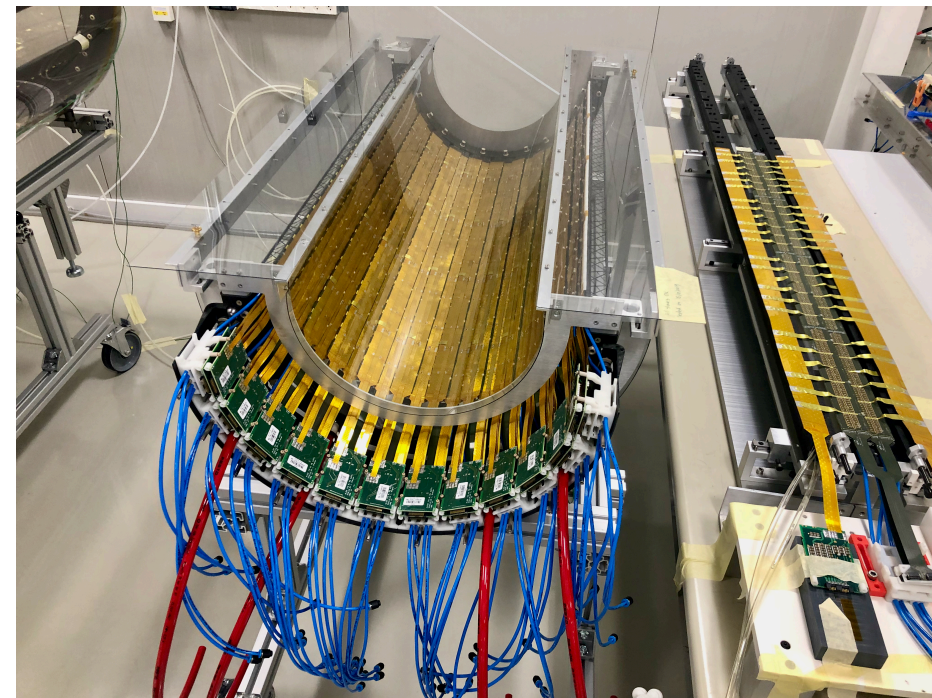
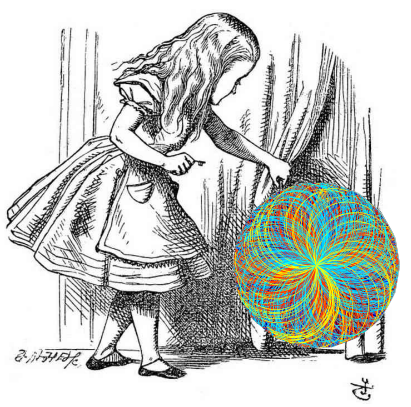
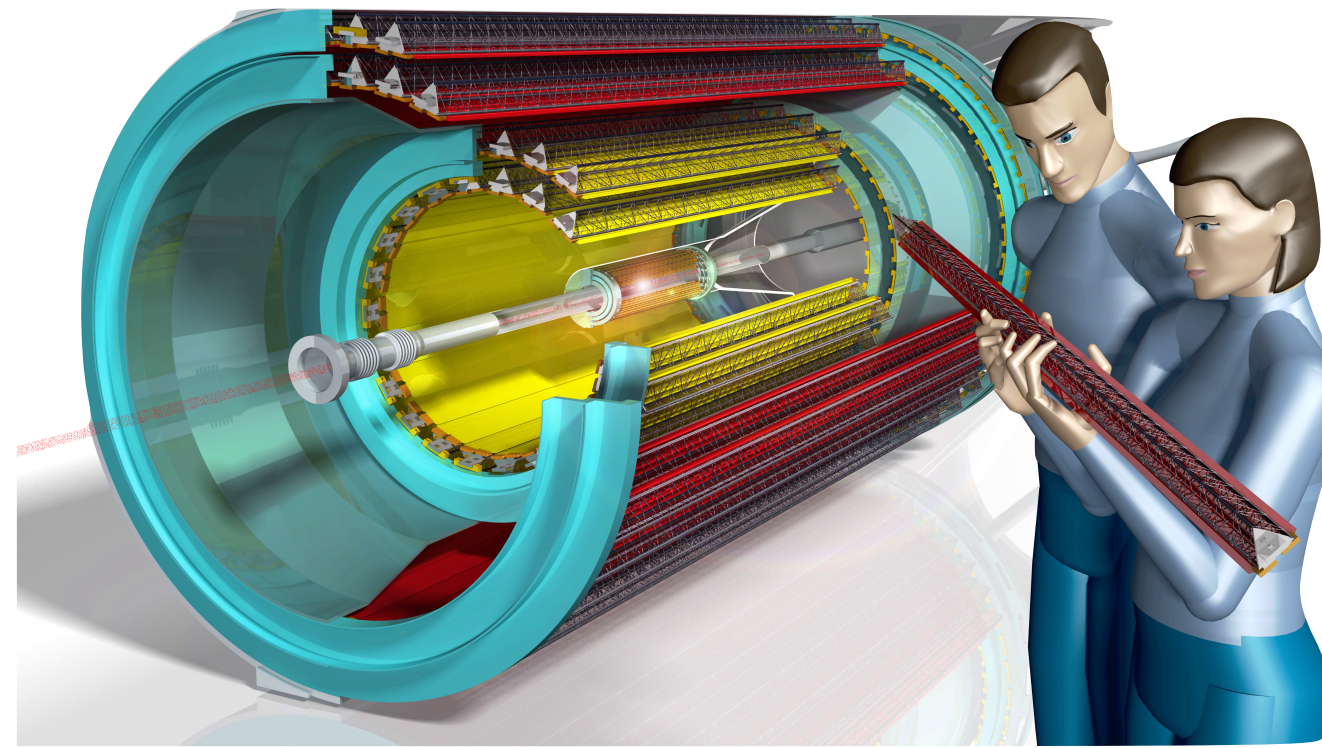


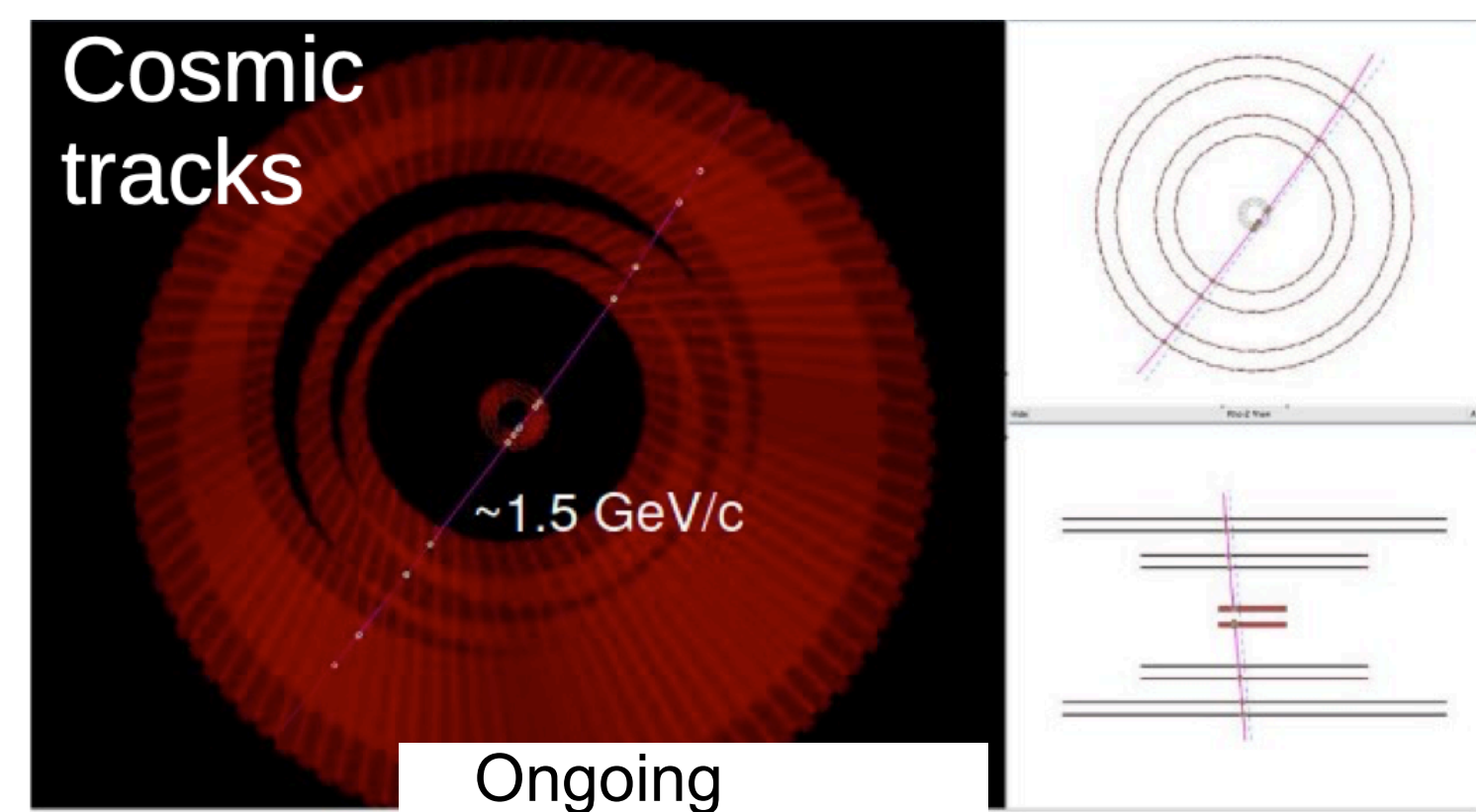
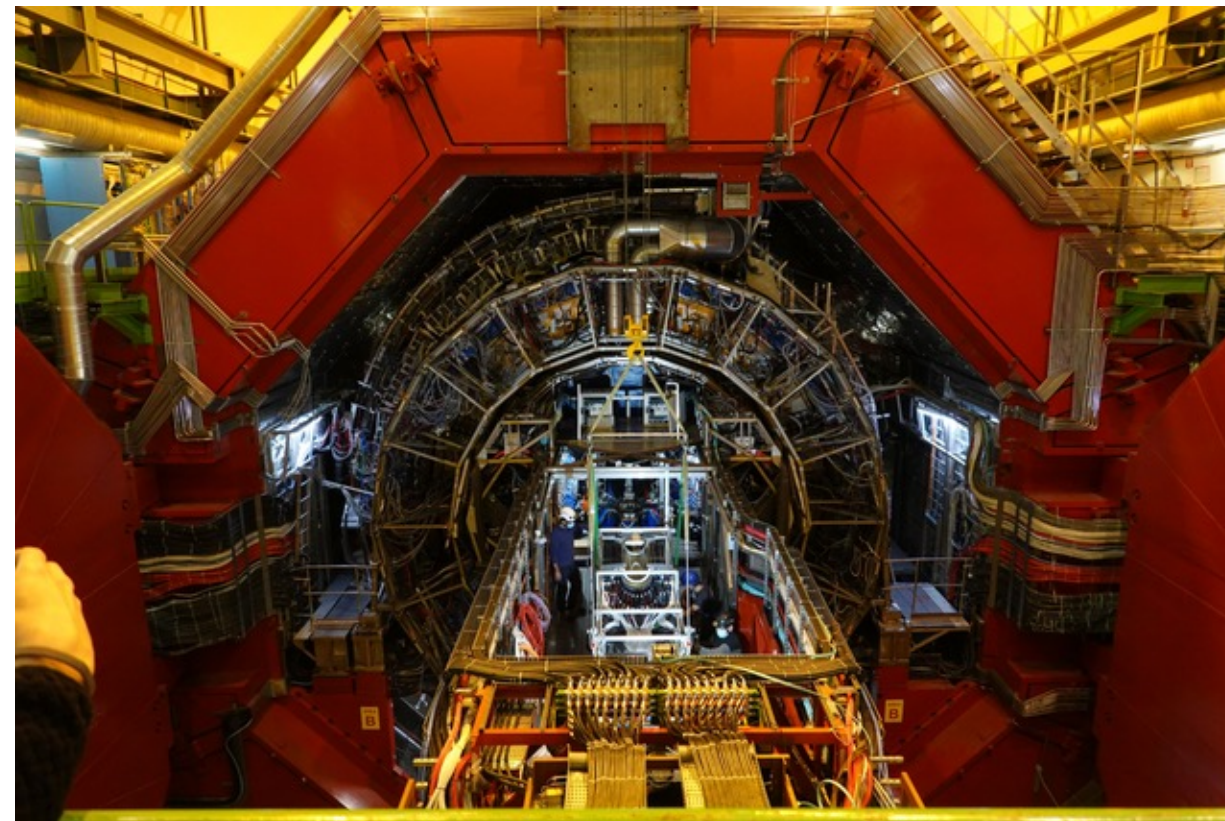
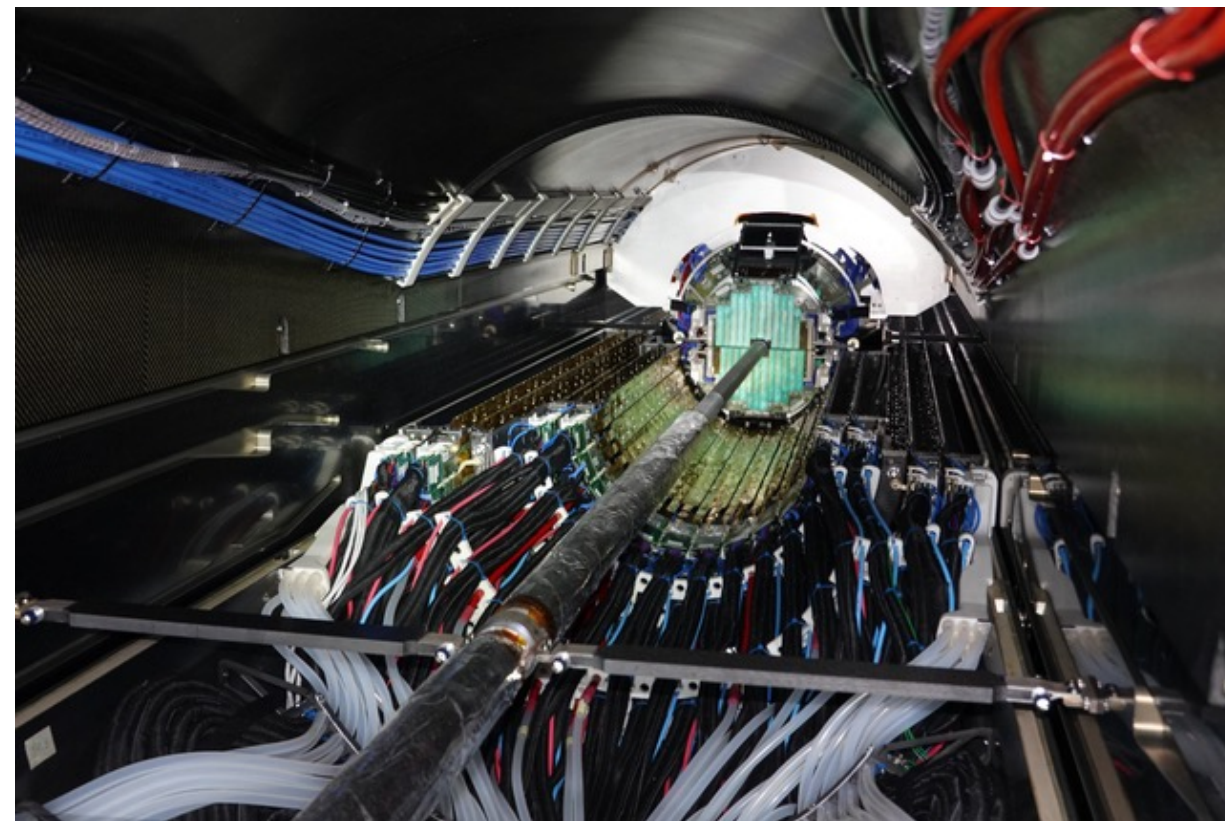
ITS 2, 2021-2030

Change of technology: new tracker based on monolithic CMOS sensors!



24-10-2019

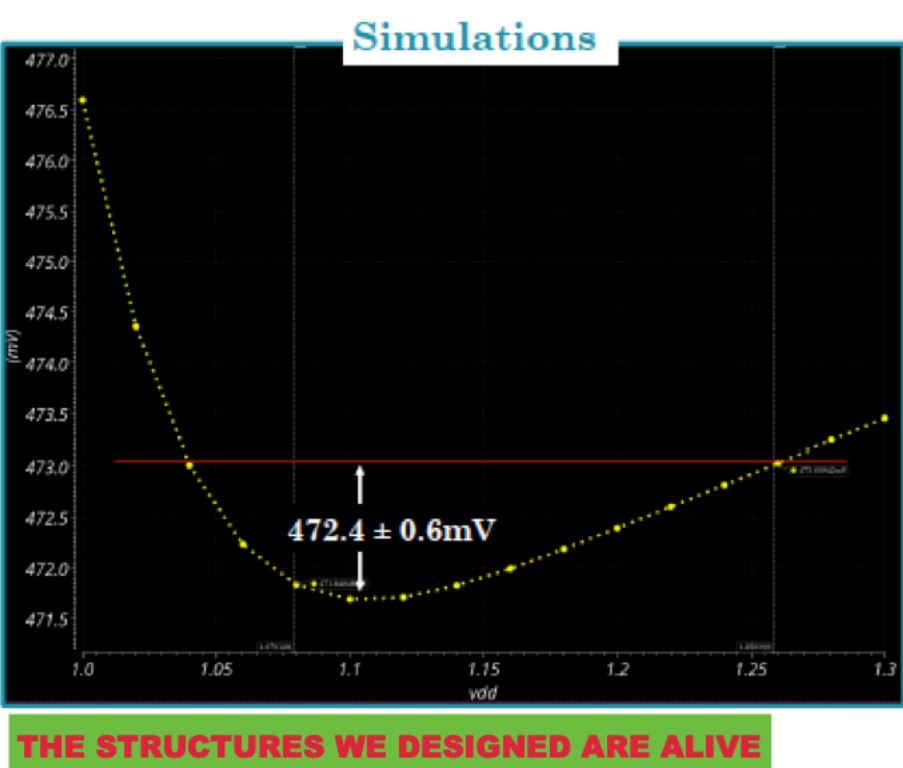
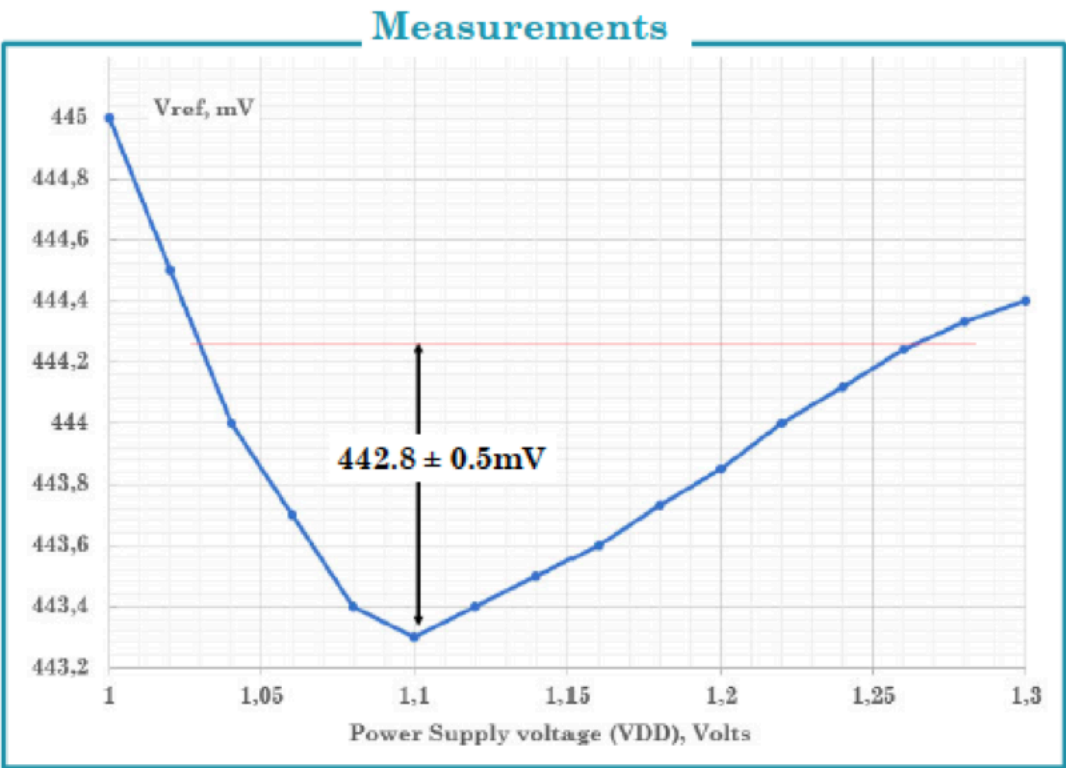
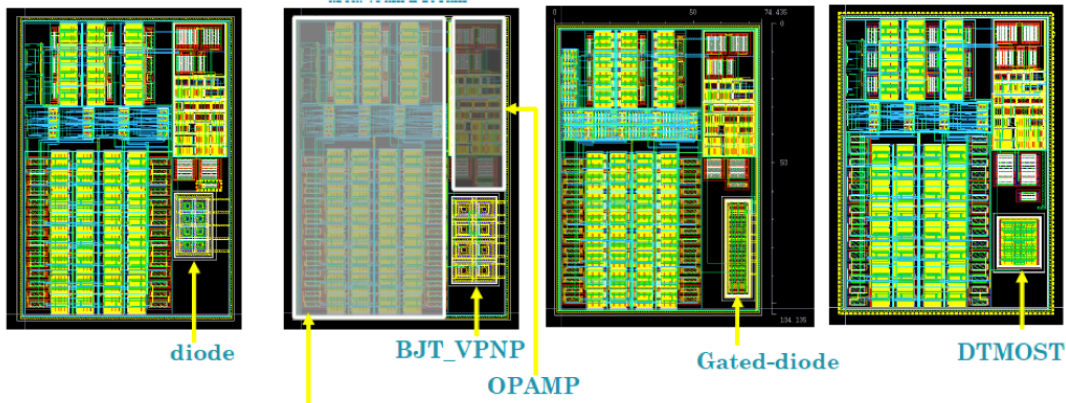
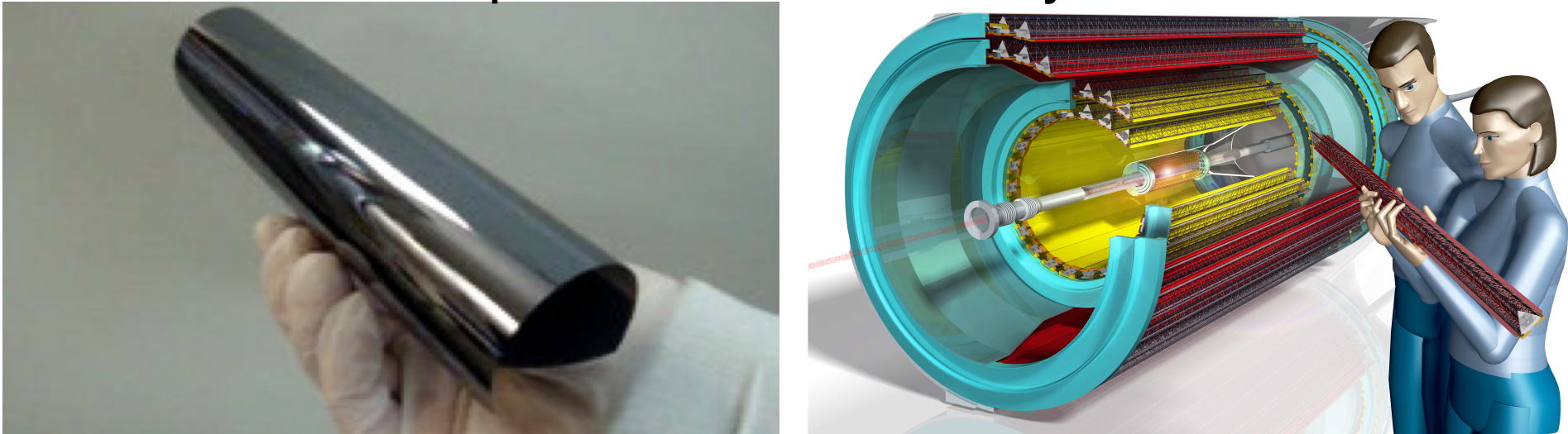
16-03-2021



ITS 3, 2025-2030

Chip size is traditionally limited by CMOS manufacturing

- New option: stitching and bending
- replace innermost 3 layers ITS 2



THE STRUCTURES WE DESIGNED ARE ALIVE

ALICE 3, 2030-

LOI currently in last editing stage

ALICE 3

next-generation heavy-ion programme for LHC Run 5 and beyond

Invited speakers

- E. Aschenauer (BNL)
- S. Bass (Duke Univ.)
- Y. Lee (MIT)
- R. Rapp (Texas A&M Univ.)
- G. Roland (MIT)
- A. Rothkopf (Univ. of Stavanger)
- J. Stroth (Univ. of Frankfurt)
- Z. Xu (BNL)

Workshop
Oct 18 + 19, 2021
(CERN + zoom)

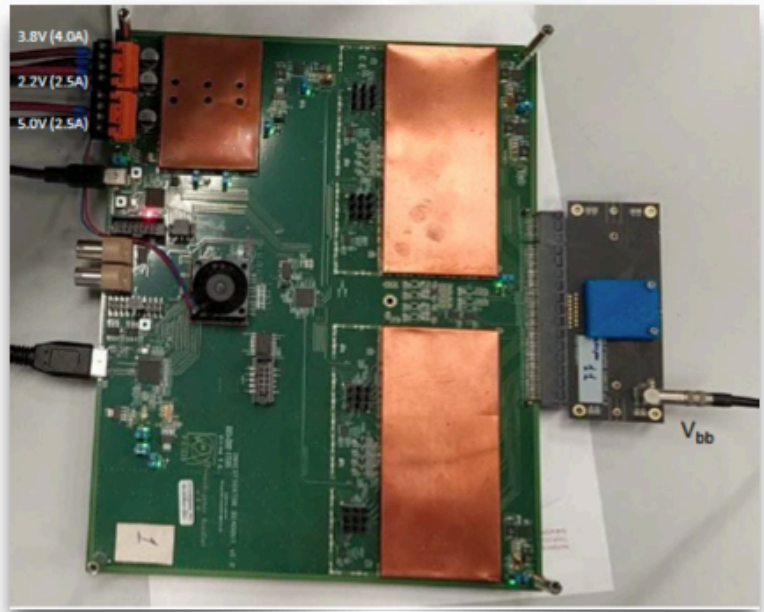
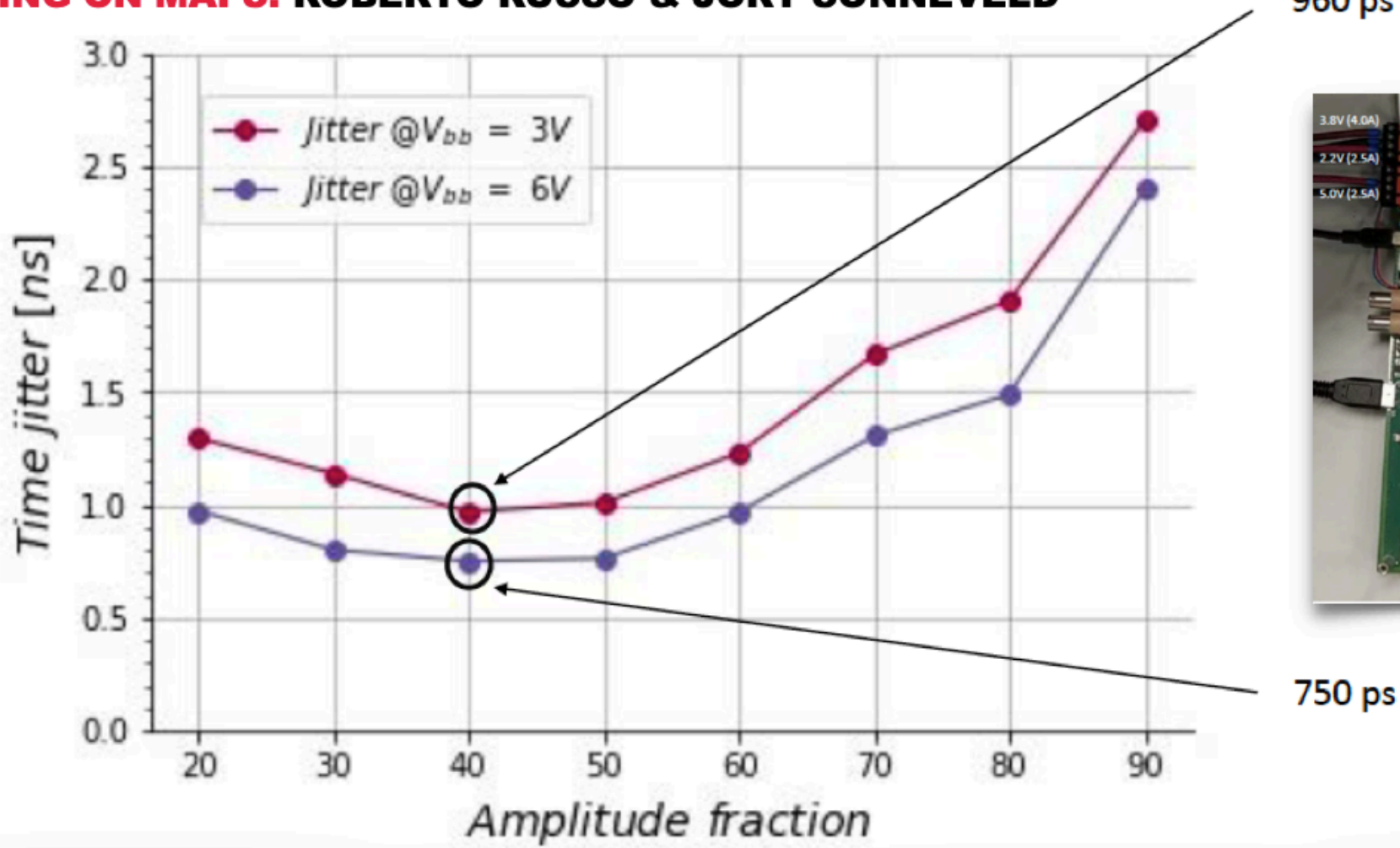
<https://indico.cern.ch/e/alice3>

Topics

- Physics programme
 - Heavy flavour probes of QGP transport and hadronisation
 - Multi-charm baryons
 - Exotic states in the QGP
 - Electromagnetic probes of the QGP
 - Nuclear states
 - Strong interaction potentials
 - ...
- Physics performance
- Detector concept

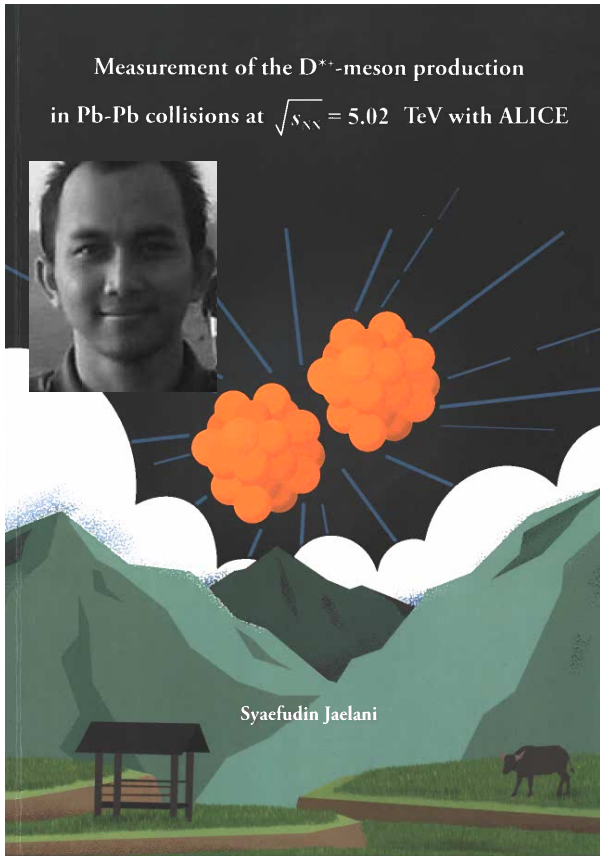
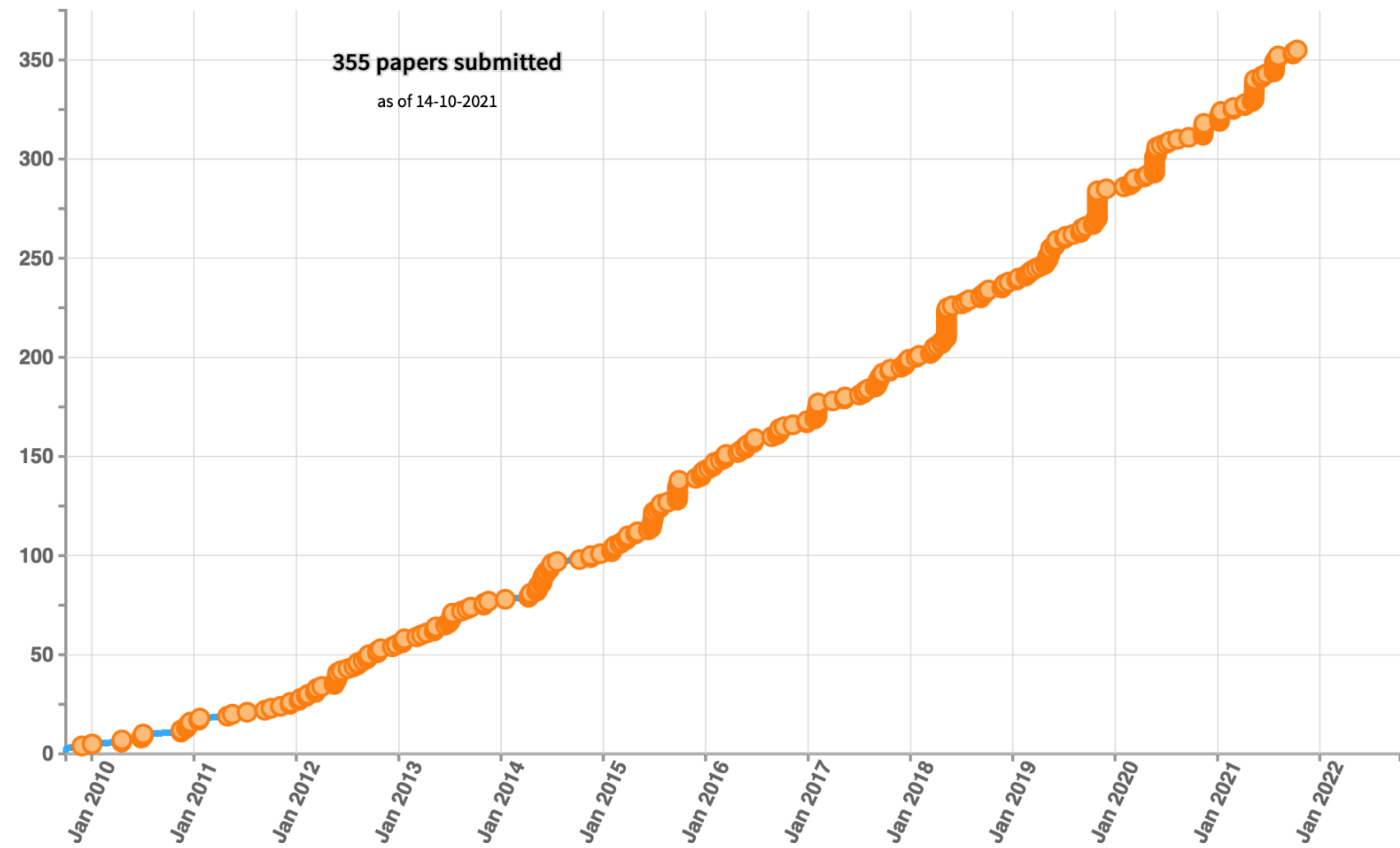


TIMING ON MAPS: ROBERTO RUSSO & JORY SONNEVELD

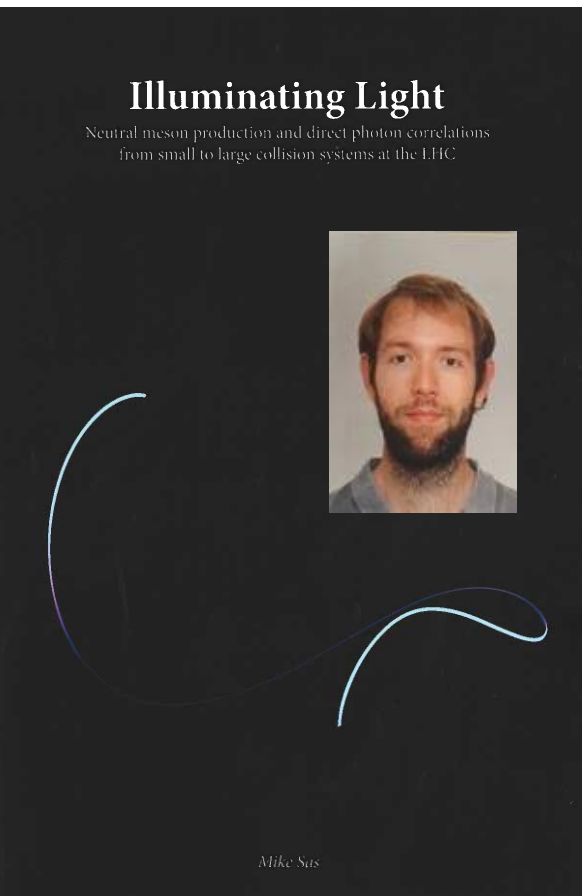
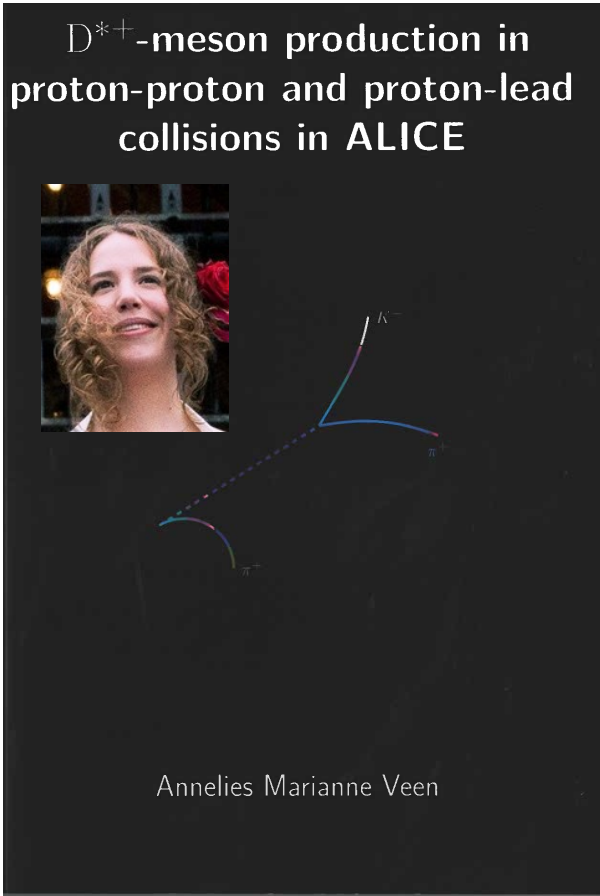
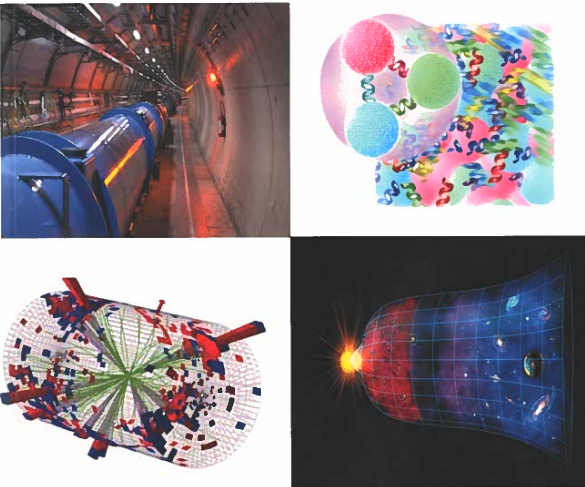


ALICE 2021

ALICE Physics Papers Timeline



Azimuthal angular correlations between D^{*+} mesons and charged hadrons in proton-proton collisions at 13 TeV with the ALICE experiment at the LHC



Luuk Vermunt
Hadronisation of Heavy Quarks

Dimitra Andreou
Detector
characterization & Λ_B
measurements ..



EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH



CERN-EP-2021-XXX
27 May 2021

The ALICE experiment - A journey through QCD

ALICE Collaboration

Abstract

The ALICE experiment was proposed in 1995, to study strongly interacting matter at extreme energy densities via a systematic and comprehensive study of nuclear collisions at the LHC. Its physics programme initially focused on the determination of the properties of the Quark-Gluon Plasma, a deconfined state of quarks and gluons and was extended along the years, covering a diverse ensemble of QCD-related observables. The experiment has collected data for Pb-Pb, Xe-Xe, p-Pb and pp collisions in the multi-TeV energy range, during the Run 1 and Run 2 data taking periods at the LHC (2009-2018). The aim of this review paper is to gather and summarise a selection of ALICE physics results and also to discuss their implications on the current understanding of the macroscopic and microscopic properties of the strongly interacting matter at the highest possible temperature reached in the laboratory. It will be shown that it is possible to have a quantitative description of the intensive properties of the QGP and, at the same time, analyse how various features, commonly ascribed to QGP formation, can be detected for a wide range of interacting system sizes. Prospects for future developments of this field of investigation, as they will be accessible to ALICE in the next and mid-term future, will also briefly be touched upon.

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200 page summary paper of ALICE results and their implications