

Session Program

31 May 2023 to 2 June 2023



Forum on Tracking Detector Mechanics 2023

Plenary

Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty
Liebermeisterstr. 16

Wednesday 31 May

09:20

Plenary: Session 1

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Burkhard Schmidt

09:20–09:30

Welcome

Speaker

Prof. Hans Rudolf Schmidt

09:35–09:55

Validation of the mechanical design of the BESIII cylindrical GEM tracker against buckling-induced deformation

Speaker

Stefano Gramigna

10:00–10:30

Services for the LHCb SciFi detector at the LHC at CERN

Speaker

Sune Jakobsen

10:35

11:00

Plenary: Session 2

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Prof. Hans Rudolf Schmidt

11:00–11:20

Mechanical Integration of the Micro Vertex Detector of the CBM Experiment

Speaker

Franz Matejcek

11:30–11:50

Thermal Management of the CBM-FAIR's Silicon Tracking System (STS) - Concept and Demonstrators

Speaker

Kshitij Agarwal

12:00–12:20

Impact of air cooling on mechanical stability of silicon sensors in CBM-STs

Speaker

Shaifali Mehta

12:30

14:00

Plenary: Session 3

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Paolo Petagna

14:00–14:30

Progress towards the design of Phase-2 CO₂ cooling systems

Speakers

Krzysztof Sliwa, Viren Bhanot

14:45–15:05

3D printed pipes including sensors and heaters for thermal management systems in space and on earth

Speaker

Chrysoula Manoli

15:15–15:35

Prototyping and testing of the transportation strategy for a high-energy physics detector

Speaker

Dr Mariana Zimbru

15:45

16:05

Plenary: Session 4

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Antti Onnela

16:05–16:35

Experimental, Analytical and Numerical Analysis of of Insert Debonding in Carbon Fiber Structures for Particle Detectors

Speaker

Todd Claybaugh

16:50–17:20

Design and manufacturing of complex shaped service interface panel with sheet moulding compound -process

Speaker

Mikko Tapani Barinoff

17:35

Thursday 1 June

09:00

Plenary: Session 5

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Antti Onnela

09:00–09:20

High precision TFPX-TBPX adjustable mechanical connection for the Phase II installation of the CMS Inner Tracker

Speaker

Daniele Benvenuti

09:30–09:50

CMS-Phase2 Upgrade of the Inner Tracker: TBPX service flanges

Speaker

Simone Garrafa Botta

10:00–10:20

Solution for cooling of portcards for CMS Tracker Phase 2

Speaker

Francesco Bianchi

10:30

11:00

Plenary: Session 6

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Andreas Mussgiller

11:00–11:20

Mechanical structure of the CMS TEDD detector: FEA dimensioning, mechanical tests on prototype and comparison to simulations

Speaker

Emilie Schibler

11:30–11:50

Services Design and Integration of the CMS Phase II Outer Tracker Endcaps (TEDDs)

Speaker

Izzeddin Suat Donertas

12:00–12:20

The CMS Outer Tracker endcaps - All the tools needed

Speaker

Moritz Guthoff

12:30

14:00

Plenary: Session 7

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Georg Viehhauser

14:00–14:30

ATLAS ITk Pixel Outer Endcap CO2 cooling system prototype

Speaker

Sonia Carra

14:45–15:15

Mechanical Vibrations of the ATLAS ITk Structures Under Transportation Loads**Speaker**

Giorgio Vallone

15:30

16:15

Plenary: Session 8**Session** |**Location:** Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |**Convener:** Georg Viehhauser

16:15–16:45

Thermo-mechanical performance of the local supports for the ATLAS ITk Pixel Outer Barrel: Experimental and Finite Element Studies**Speaker**

Ricardo Tavares Rego

17:00–17:20

Design, thermal, and dynamic stability analyses of the air-cooled ALICE Inner Tracking System 3**Speaker**

Aitor Amatriain Carballo

17:30–17:50

Cleaning procedure of 3D printed warm nose heat exchanger and other applications**Speaker**

Cecilia Rossi

18:00

Friday 2 June

09:00

Plenary: Session 9

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Andreas Werner Jung

09:00–09:30

Heat Extraction through Structural Components of the CMS Phase II Tracker Forward Pixel Detector

Speaker

Dr Souvik Das

09:40–10:00

Terahertz Time Domain Spectroscopy for strain mapping in composite multi-material interfaces

Speaker

Sushrut Rajendra Karmarkar

10:10–10:30

Low-mass support structures with integrated services for detector systems

Speaker

Sushrut Rajendra Karmarkar

10:40

11:00

Plenary: Session 10

Session |

Location: Eberhard Karls Universität Tübingen, Lecture hall (Nr. 211) at the Protestant Theological Faculty, Liebermeisterstr. 16 |

Convener: Burkhard Schmidt

11:00–11:30

Studies on supercritical carbon dioxide as a refrigerant for future detectors

Speaker

Ms Camila Rocio Pedano Medina

11:40–12:00

Cold Krypton system for the Phase III Upgrade of the LHC

Speaker

Luca Contiero

12:10–12:30

Interlocking modular microfluidic cooling substrate for future HEP experiments

Speaker

Massimo Angeletti

12:40–12:50

Closeout

13:20