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  • e.g. all R&D for HL-LHC
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• **Matter** is currently preparing a proposal for the next funding period (7 years) to start in 2021
Detector R&D happens in MT DTS
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Introduction - Structure of MT DTS in POF IV

Detector Technologies & Systems

**ST1**
Detection and Measurement
- Doris Eckstein (DESY)
- Michele Caselle (GSI)

**ST2**
System Technologies
- Andreas Kopmann (KIT)
- Andreas Mussgiller (DESY)

**ST3**
Science Systems
- Christian Schmidt (GSI)
- Cornelia Wunderer (DESY)

**DDL**
Distributed Detector Lab
- Heinz Graafsma (DESY)
- Andreas Kopmann (KIT)
- Christian Schmidt (GSI)
- Silvia Masciocchi (GSI)

**Sensing**
- Alexander Dierlamm (KIT)
- Andrea Wilms (GSI)

**Advanced Data Transmission**
- Marc Schneider (KIT)
- Karsten Hansen (DESY)

**Digital Real-Time Data Acquisition and Processing Systems**
- Oliver Sander (KIT)
- David Emschermann (GSI)

**Novel Engineering Techniques, Advanced Materials and Interconnects**
- Andreas Mussgiller (DESY)
- Thomas Blank (KIT)

**Particle Physics, Hadrons and Nuclei**
- Christoph Caesar (GSI)
- Ingrid-Maria Gregor (DESY)

**Photon Science**
- Michael Fiederte (KIT)
- David Pennicard (DESY)

**Astroparticle Physics**
- Matthias Kleifges (KIT)
- Timo Karg (DESY)

**Beam Physics**
- Matthias Balzer (KIT)
- Markus Schwickert (GSI Zeuthen)
R&D Ideas and Plans

• Funding application document is at advanced state
• From a detector mechanics and cooling point of view we tried to
  • get more visibility in the document
  • put more emphasis on generic R&D activities
• In parallel to the POF IV proposal we are preparing an application for a distributed detector lab
  • shared between DESY, GSI and KIT (each centre contributes with a specific infrastructure and expertise)
  • GSI: additive manufacturing
  • DESY: CFRP and cooling
• At the moment the DESY ATLAS and CMS groups are deeply involved in the tracker upgrades for HL-LHC
  • some generic R&D is possible if in some way related to the upgrades
• Once (pre-) production starts some resources will be available for generic R&D activities
  • have to be driven by a specific detector project
  • if successful, DDL could be a source of such projects
• Current (generic) R&D plans
  • micro-channel cooled imaging detector for photon science
  • next generation of PLUME
  • additive manufacturing in metal and inside acceptance (e.g. inserts printed onto cooling pipe)