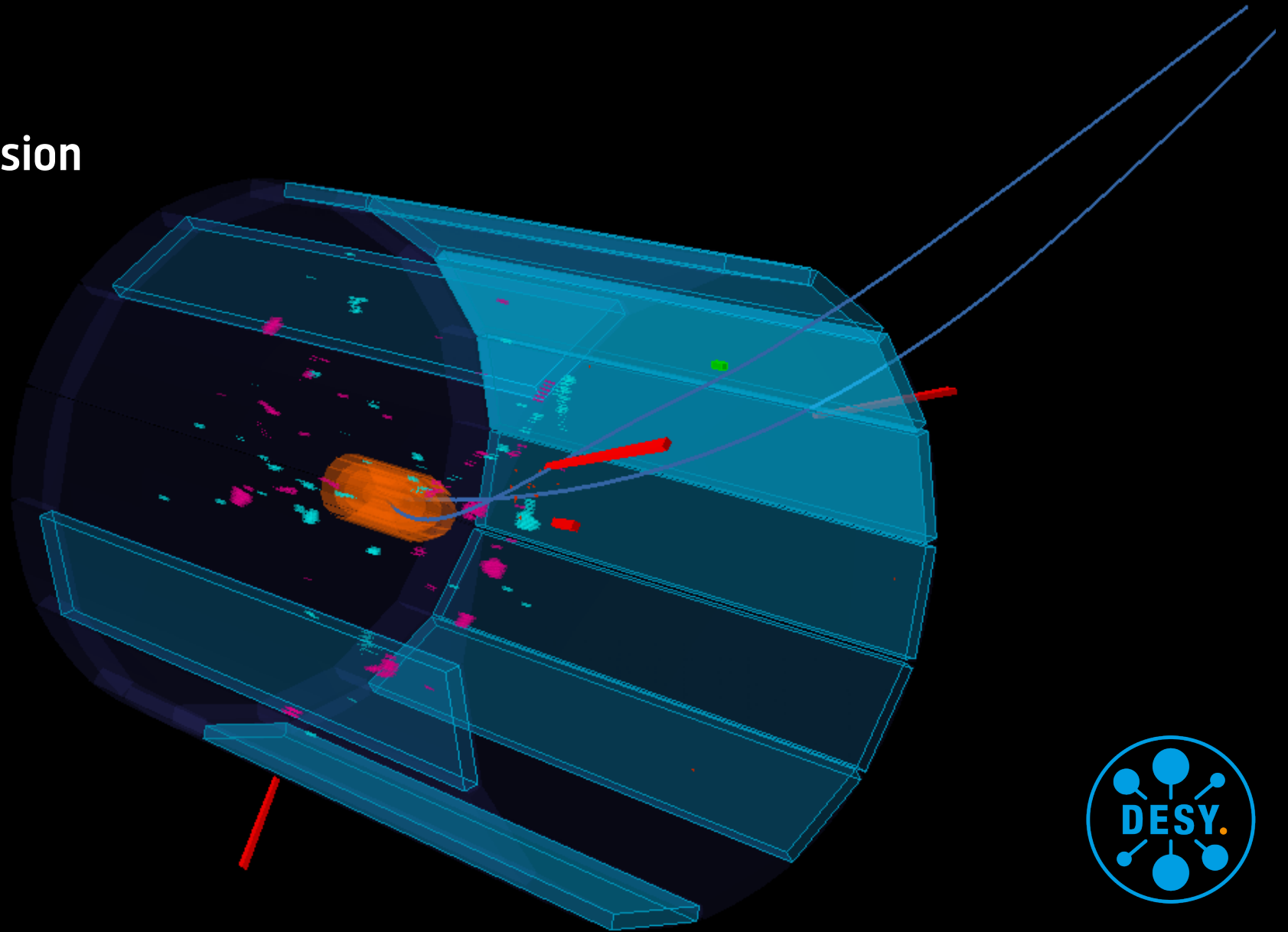


PRC100

Introduction to the Open Session

Ulrich Husemann
PRC 100
November 11, 2025

HELMHOLTZ



Welcome to PRC100

100th Meeting of the DESY Physics Research Committee (PRC) – Open Session

- **A new face:** started my position as Director of Particle Physics at DESY only last week
- **A known face:** was a PRC member between 2019 and 2024
- **Looking forward** to working with all of you
– DESYans and PRC members

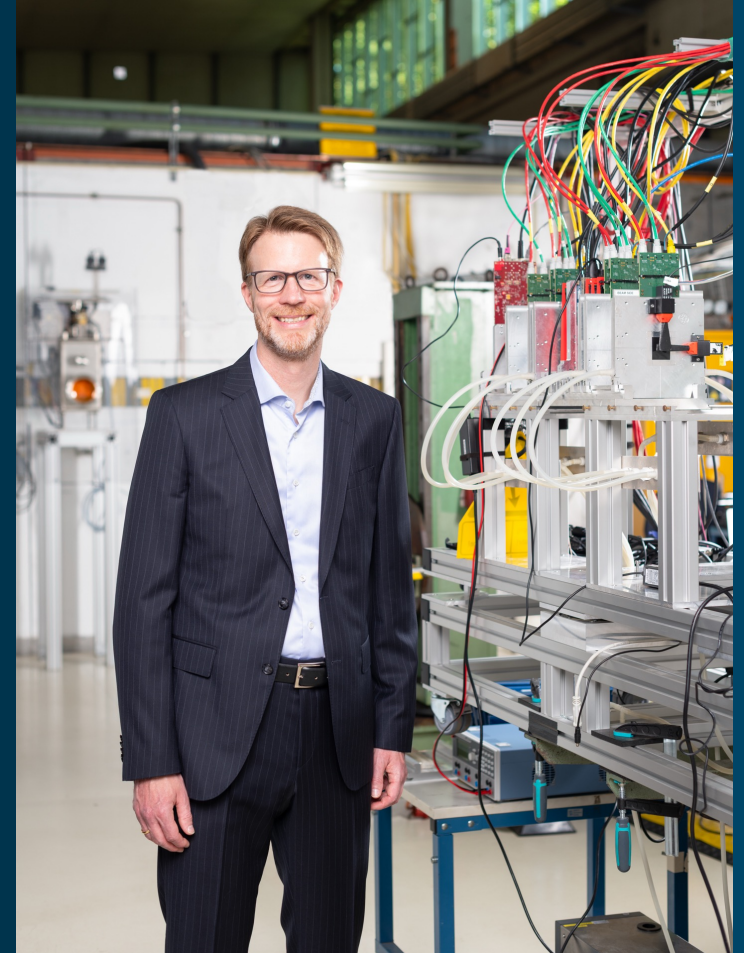


Image credit: DESY/J. Müller

Let's Celebrate: PRC100 Colloquium this Afternoon (16:00)

... with three distinguished speakers: Albrecht Wagner, Joachim Mnich, Phil Burrows

Particle and Astroparticle Physics Colloquium Hamburg

100th meeting of the DESY Physics Research Committee (PRC100)

by Albrecht Wagner (DESY), Joachim Mnich (CERN), Phil Burrows (Oxford), Ties Behnke (DESY), Ulrich Husemann (DESY)

 Tuesday Nov 11, 2025, 4:00 PM → 5:30 PM Europe/Berlin

 Auditorium (DESY)

Description We are celebrating the 100th session of the PRC! Today the acronym "PRC" stands for "[Physics Research Committee](#)" - but the committee has come a long way: It was in fact founded in the 1970s as the "PETRA Research Committee", at a time when the PETRA e^+e^- machine was envisaged as the next high-energy particle collider. At this colloquium, previous DESY directors and PRC chairs - Albrecht Wagner, Joachim Mnich and Phil Burrows (U Oxford) - will give you an entertaining overview of the history of the committee and, with that, of particle physics at DESY during the past 5 decades.

- Introduction and welcome by Ulrich Husemann and Ties Behnke (DESY)
- From the PETRA Research Committee to the Physics Review Committee: Albrecht Wagner (DESY)
- From HERA to the LHC: Joachim Mnich (CERN)
- The modern PRC: Phil Burrows (Oxford)

We invite you to attend the presentation in person at the DESY Auditorium. We will also offer a webcast to this colloquium.

<https://desy.zoom.us/j/99616528733>

Meeting ID: 996 1652 8733

Meeting Password: 733220



PAcolloquium-post...

Let's Celebrate: ERC Synergy Grant for NP-QED

Studying High-field QED with Plasma Accelerators and High-powered Lasers



From left to right: A. Maier & J. List (DESY), H. Vincenti (CEA), A. di Piazza (U Rochester)

European Strategy for Particle Physics

The 2026 Update

Very visible DESY contributions:

- Various input documents: future colliders, on-site program, role of national labs
- Physics Preparatory Group (PPG): several DESY members
→ Open Symposium
→ [Briefing Book](#)
- European Strategy Group (ESG): particle physics director as member

Timeline for the update of the European Strategy for Particle Physics



<https://europeanstrategyupdate.web.cern.ch/process-0>

German Research Infrastructure Roadmap

Prioritized Projects with Major DESY Involvement (Decision: July 2025)

PETRA IV

Ultimate 4D X-Ray
Telescope



IceCube Gen2

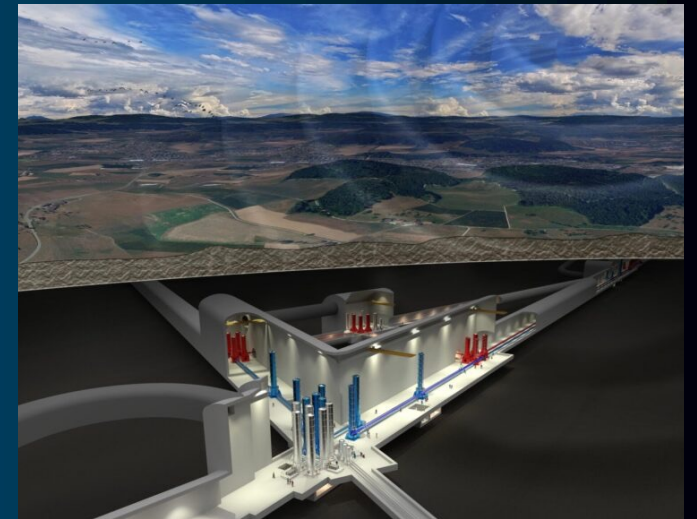
Neutrino Observatory



ICECUBE
GEN2

Einstein Telescope

Preparatory Phase



The DESY Environment

Major Ongoing and Future Projects

PETRA IV: project prioritized,
funding decision pending
(but expected)

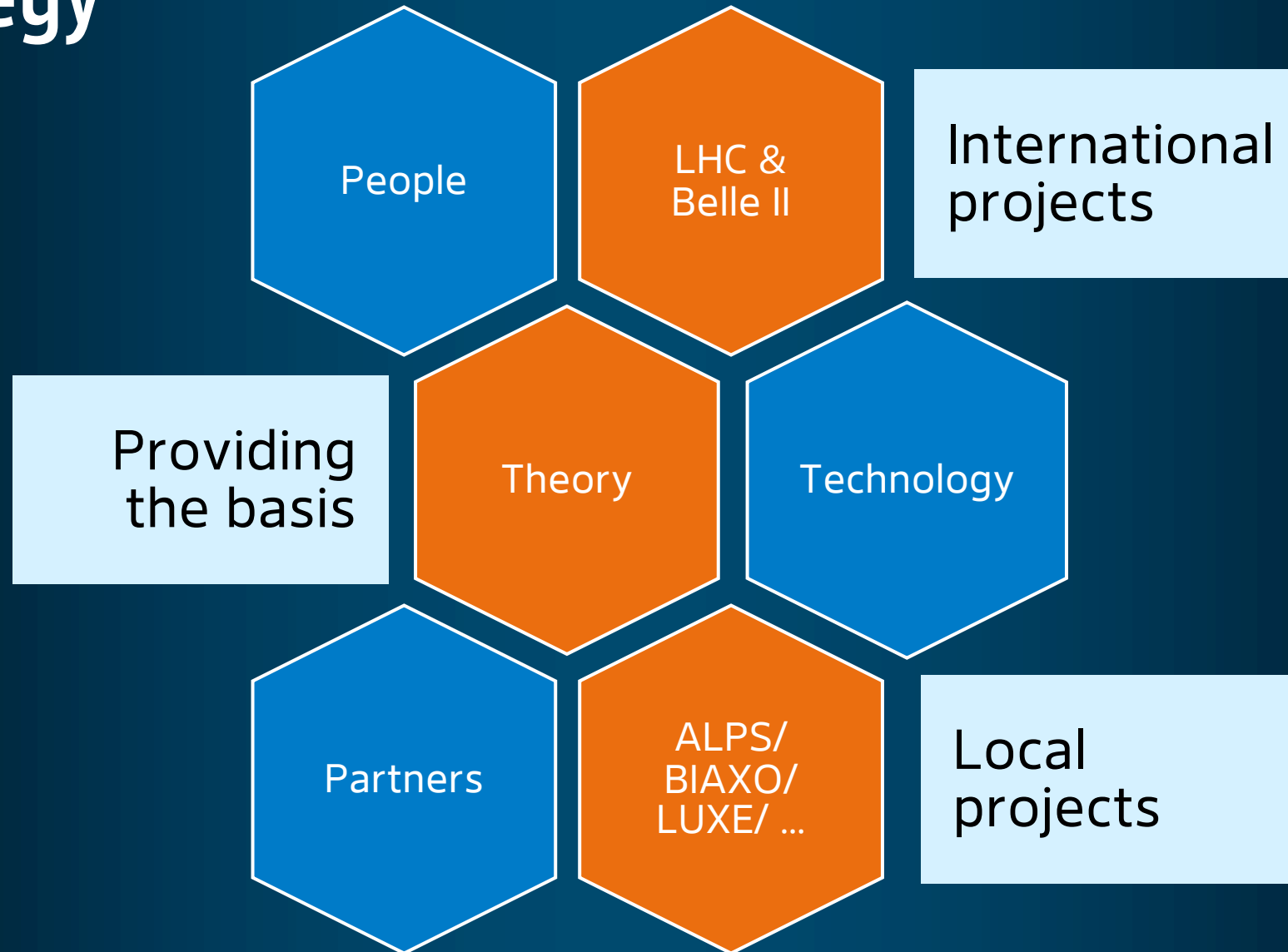
- Start: "now"
- Dark time 2029–2031
(approx.)

Project review by committee
installed by Wissenschaftsrat
on December 2/3, 2025



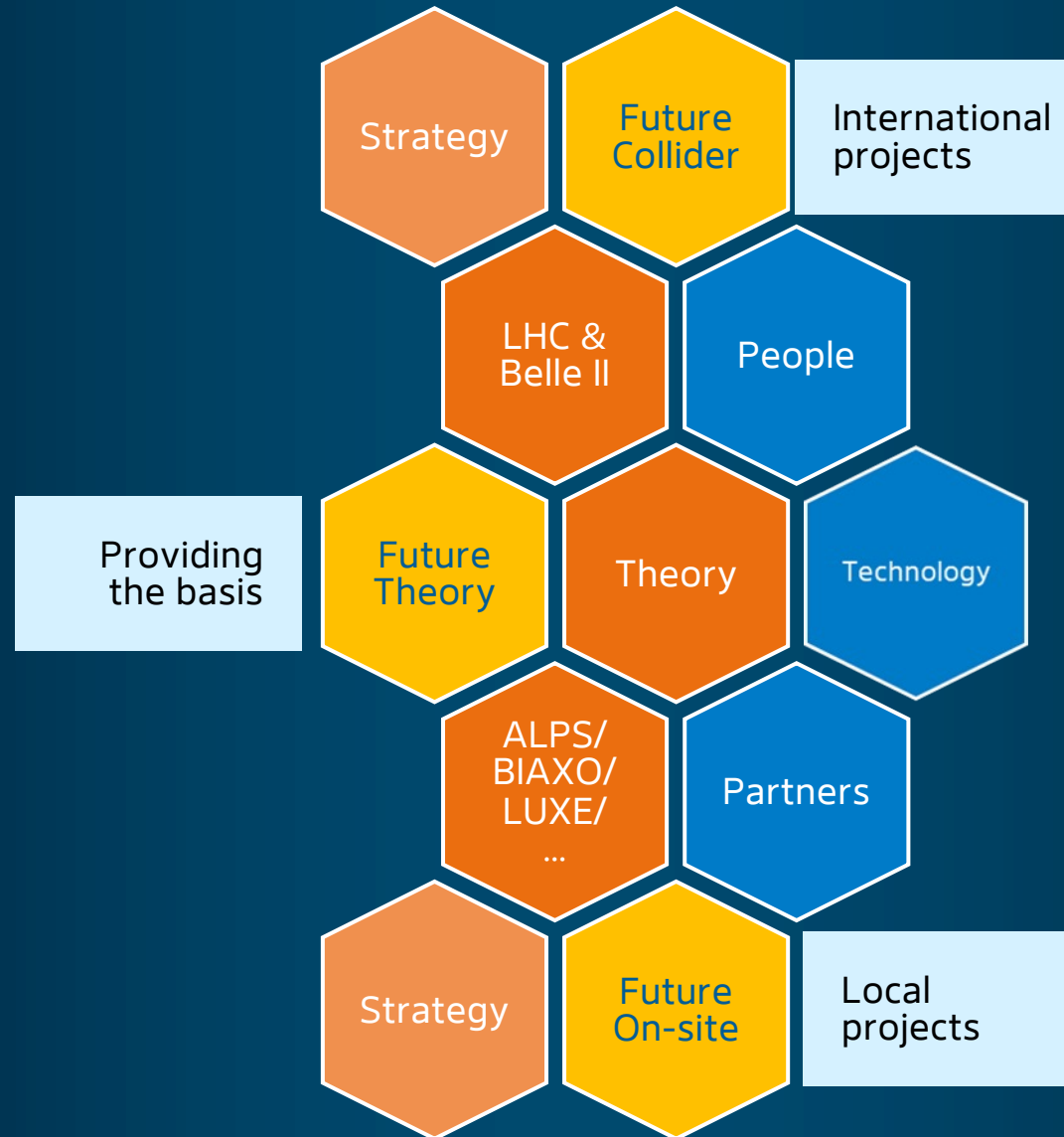
Our Strategy

Project View



Our Strategy

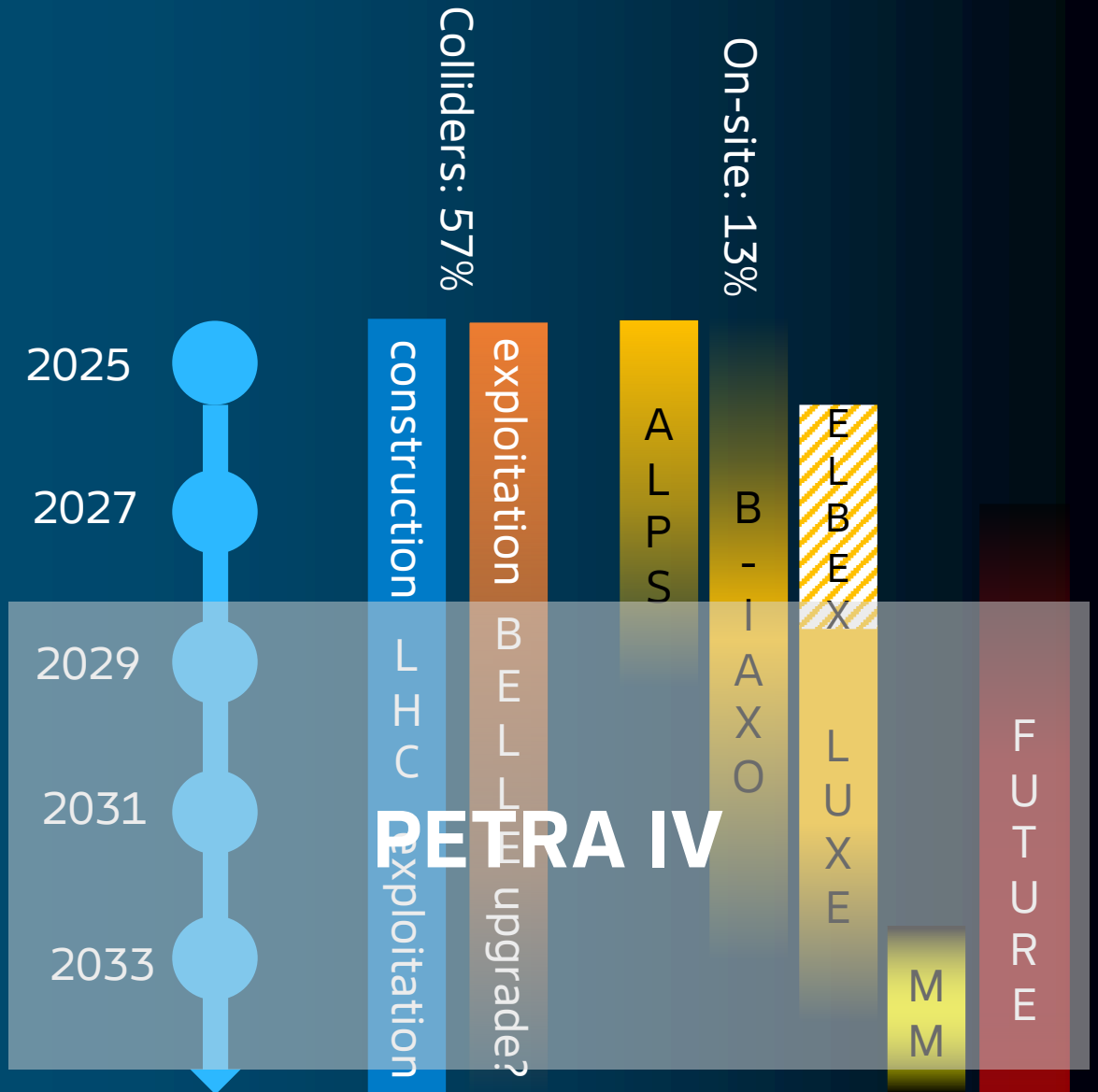
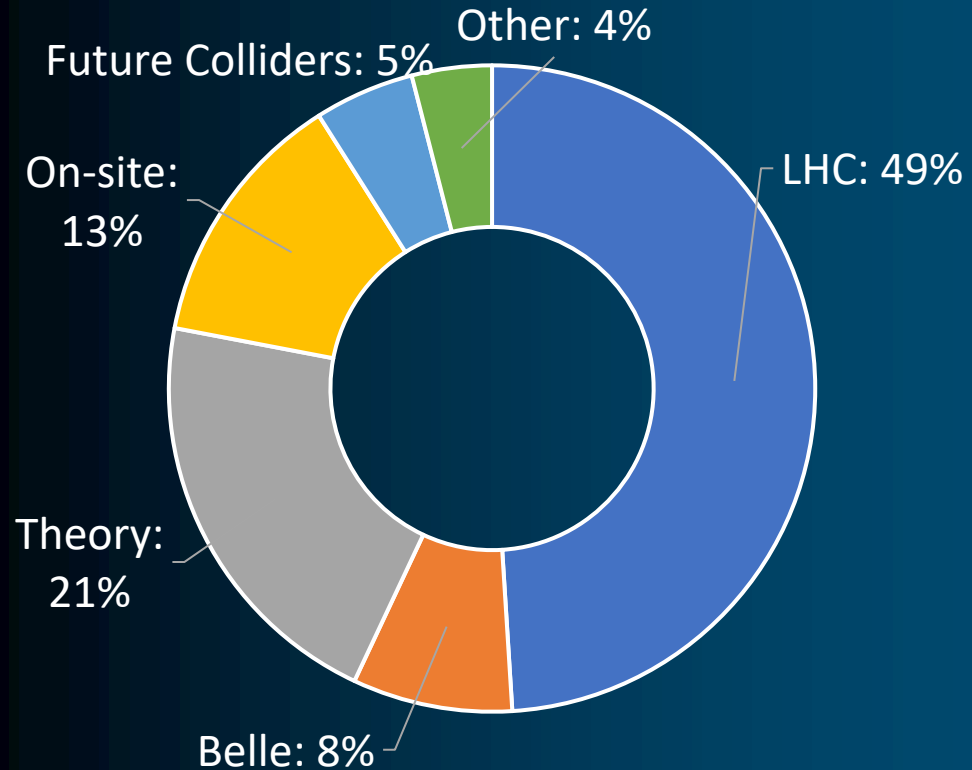
Project View



Particle Physics at DESY

Our Portfolio and Roadmap

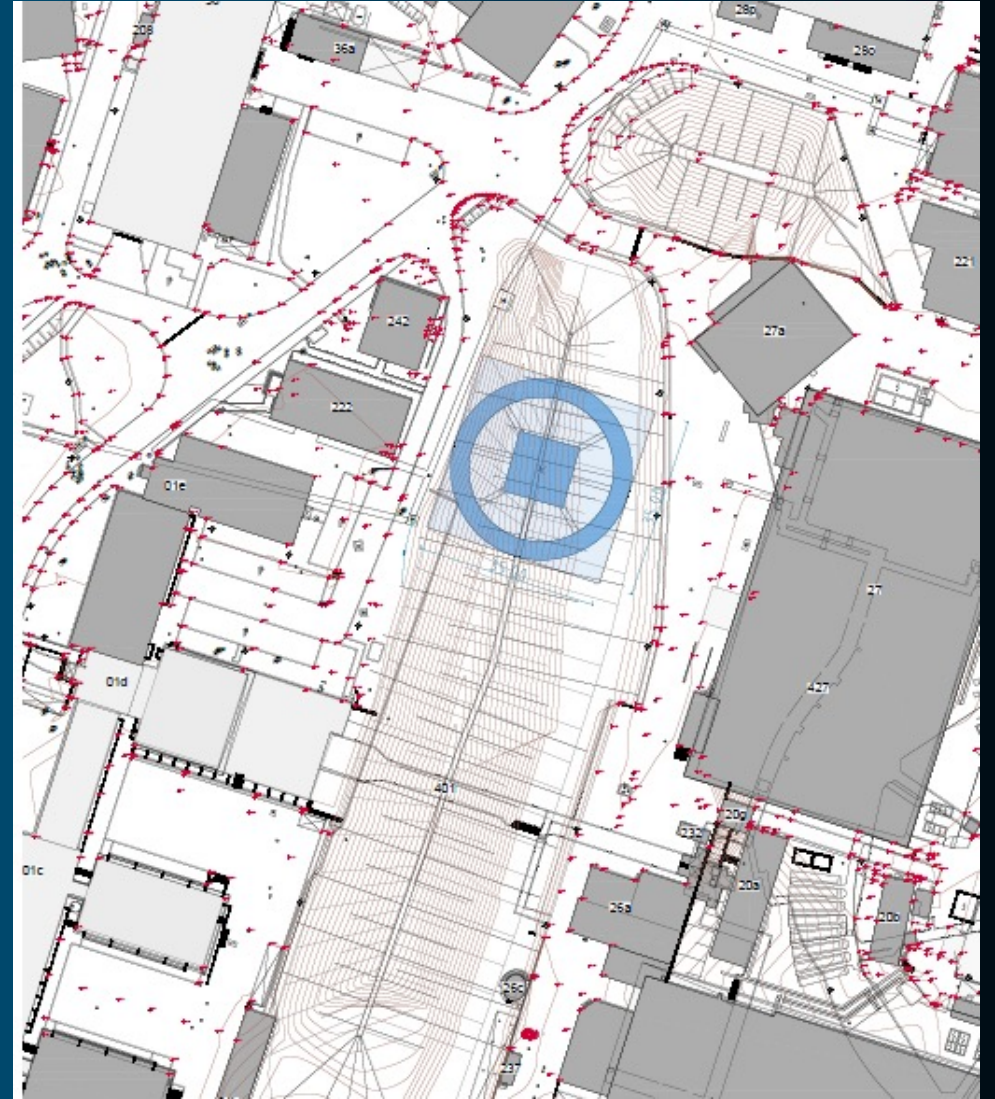
Relative weight of activities in FH



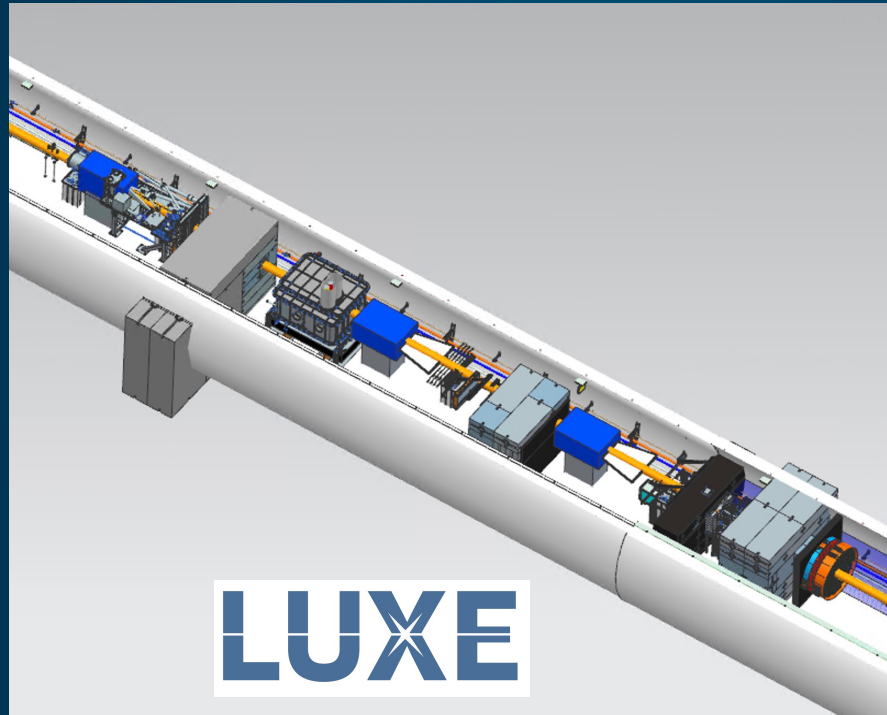
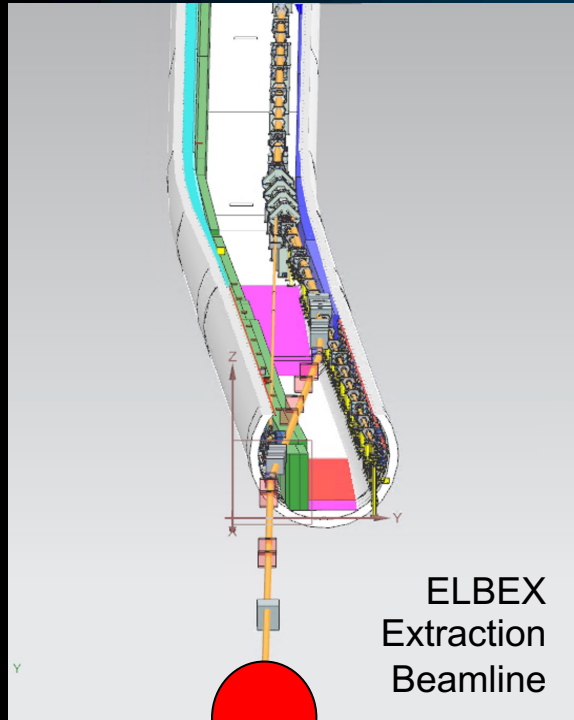
BabyIAXO News

New site proposal: use the “hill” between Building 1 and Hall 2

- Close to the particle physics group and to technical infrastructure
- Visible/reachable in central campus area
- Preparation of experiment for outside operation required (previously: inside hall)
- Interference: minimal with other DESY activities, none with existing installations
- Discussions with construction department under way → no showstoppers yet



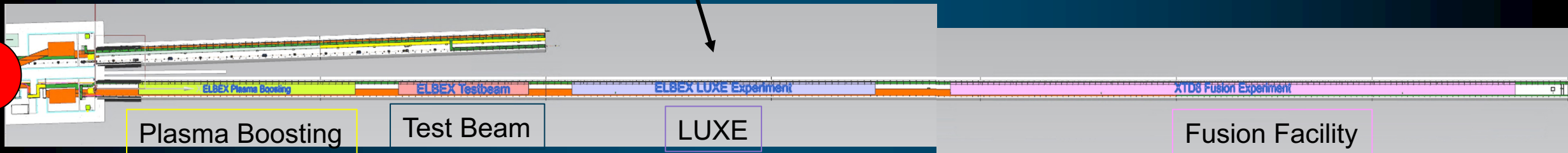
ELBEX News



ELBEX users:

- LUXE: **strong-field QED** and **long-lived particles** search
- Plasma: joint effort from FH and M to explore use of ELBEX for **beam-driven energy doubling**
- Test Beam: crystal-based extraction of GeV electrons for **beam test facility**

Longitudinal space required for three ELBEX users: about half of distribution tunnel XTD8
→ subject to optimization



Helmholtz Research Field *Matter*

News on Project-oriented Funding (PoF V)



Topic **MU-FPF**
*Fundamental Particles
and Forces*

Fundamental Interactions

Pushing the limits of our understanding of fundamental interactions

- EW precision and Higgs physics (HH, H potential)
- Strong-field QED
- QCD (incl. lattice and QC)
- Probing SM extensions

The Origin of Mass

Covering the puzzle of the origin of mass and of flavor, and the imbalance between matter and antimatter in the universe

- EW symmetry breaking
- Higgs portal
- Top, beauty, tau physics
- CP violation
- Lepton flavor universality

The Early Universe

Exploring the evolution of the early universe and the nature of the dark sector

- Cosmology (inflation, ...)
- DM searches (WIMPs, axions, ALPs, ...)
- Gravitational waves
- EW phase transitions

- Supercond. RF systems
- Hadron & electron acc.
- Beam control, diagnostics, dynamics
- Plasma accelerators

- Sensing and detecting
- Quantum technologies
- Systems and systems technologies
- Detection methods

- Frontier methods in computational and data science
- Sustainable solutions
- Innovation for research infrastructures



Accelerator R&D (ARD)

Accelerator science and technology for highest performance and sustainability

Detector Technologies and Systems (DTS)

Advancing discovery through world-leading detector innovation

Data Management and Analysis (DMA)

Enabling and accelerating *Matter* science with frontier digital solutions

Agenda for Today

PRC100 – Open Session

PRC100: 100th meeting of the DESY Physics Research Committee - open session

 Tuesday Nov 11, 2025, 9:00 AM → 1:15 PM Europe/Berlin

 Auditorium (DESY Hamburg)

9:00 AM	→ 9:15 AM	Welcome and introductory remarks	🕒 15m
Speaker: Ulrich Husemann (ATLAS (ATLAS-Experiment))			
9:20 AM	→ 9:30 AM	Infrastructure projects in FH	🕒 10m
Speaker: Thomas Schörner (DESY)			
9:33 AM	→ 9:53 AM	Theory: strings and mathematical physics	🕒 20m
Speaker: Elli Pomoni (T (Stringtheory))			
9:56 AM	→ 10:16 AM	ATLAS	🕒 20m
Speaker: Ludovica Aperio Bella (CERN)			
10:19 AM	→ 10:39 AM	CMS	🕒 20m
Speaker: Andreas Hinzmann (CMS (CMS Fachgruppe Searches))			
10:42 AM	→ 11:02 AM	Coffee break	🕒 20m
11:02 AM	→ 11:22 AM	Overview of MT research activities in FH	🕒 20m
Speaker: Friederike Januschek (DESY)			
11:25 AM	→ 11:45 AM	Belle II	🕒 20m
Speaker: Alexander Glazov (DESY)			
11:48 AM	→ 12:08 PM	The DESY Axion platform	🕒 20m
Speaker: Axel Lindner (ALPS (ALPS _ Any Light Particle Search))			
12:11 PM	→ 12:31 PM	LUXE and ELBEX	🕒 20m
Speaker: Ruth Magdalena Jacobs (FHR (Bereichsreferent FH))			
12:34 PM	→ 12:54 PM	DESY IT and particle physics, AI focus, LHC computing	🕒 20m
Speaker: Philipp Neumann (IT (Informationstechnik))			

Thank You

Contact

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