

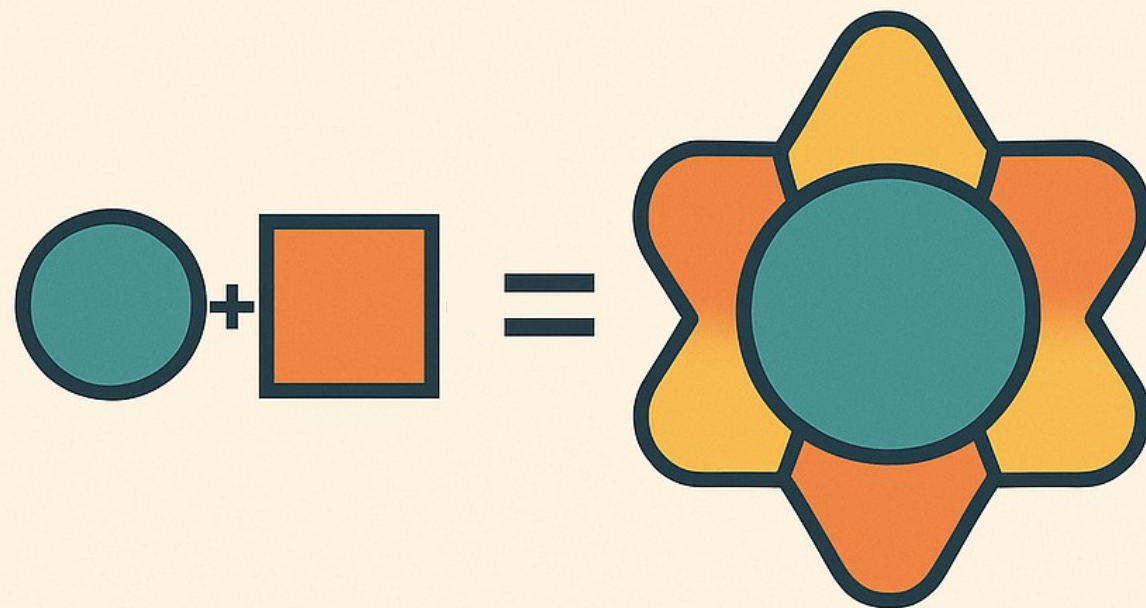
LIEBENBERG RETREAT 2025

The last in Liebenberg

Christian Stegmann

16.9.2025

HELMHOLTZ

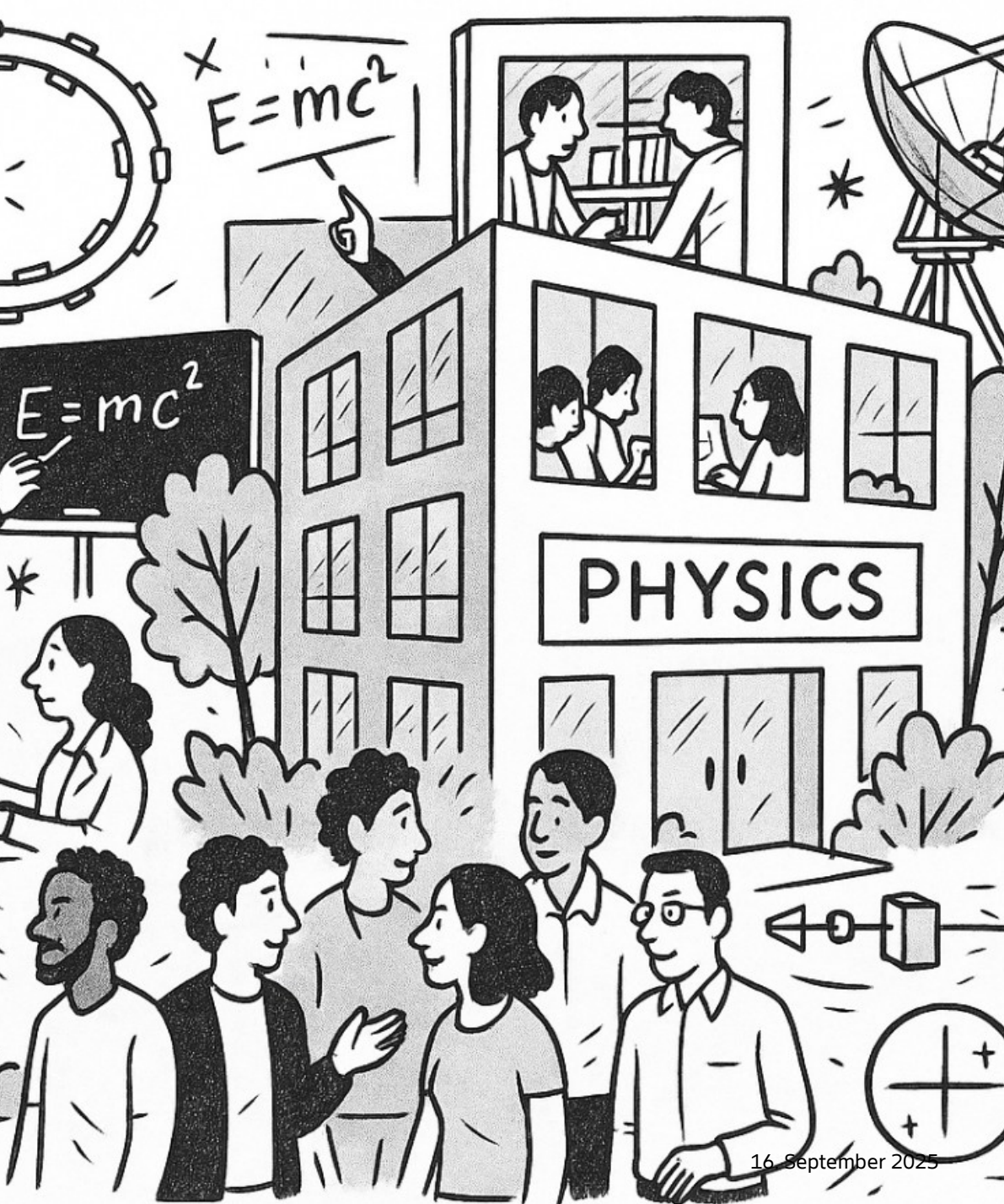


Visit of Florian Oest, MdB, yesterday

Member of the Scientific Committee of the Bundestag and responsible for DESY



When did you start working at DESY?



A warm welcome

Agenda

Where we stand,

- based on the questions raised.

The whole is greater than the sum of its parts

- Laura Creon, Fin Frohn, HRPepper
- Impulse talk
- Working sessions

Graphic recording by Anna Lena Schiller

Open questions

- Space for topics too large for this morning

Agenda for today

Wrap-up Day 1

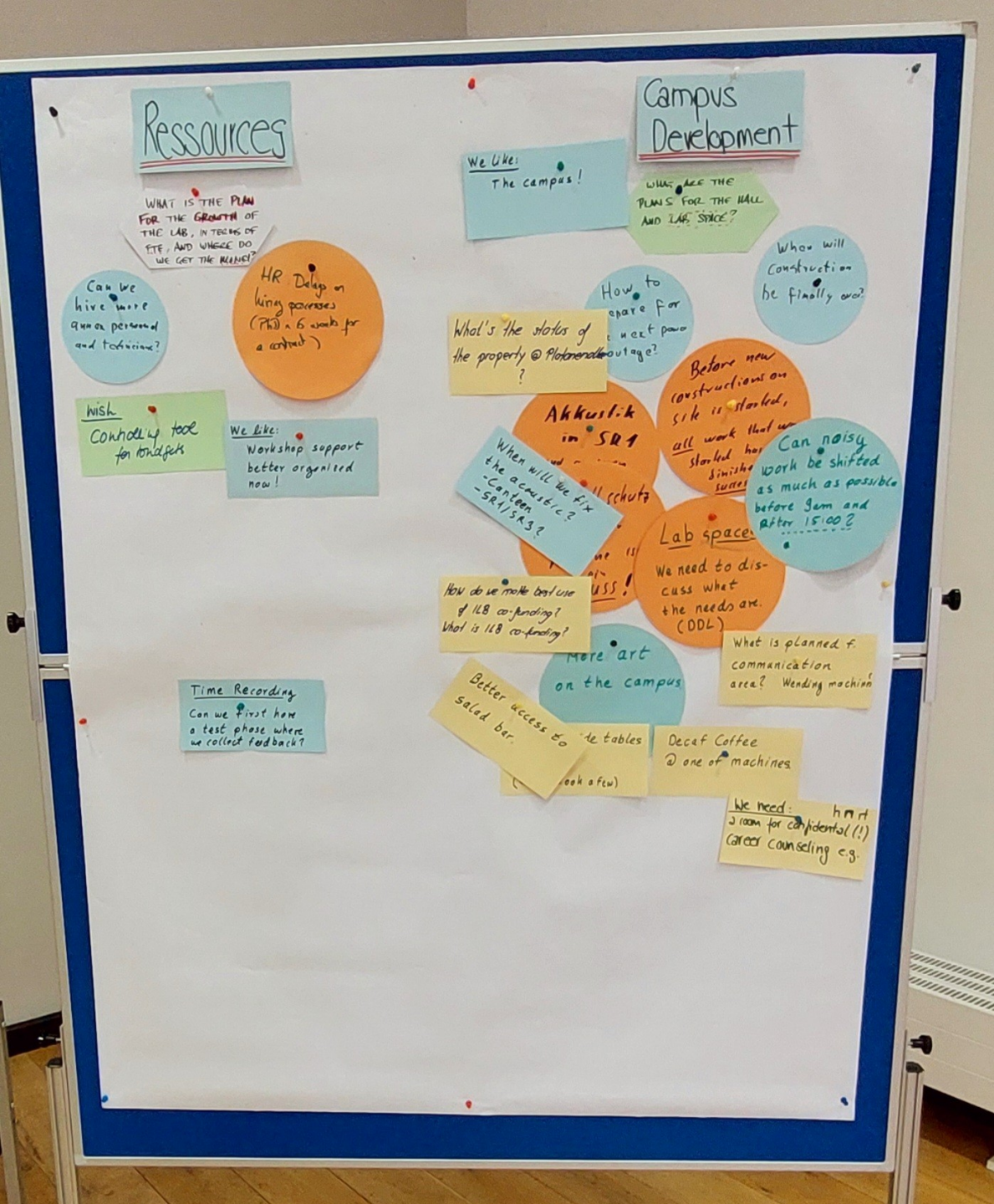
- Action items

Remaining open issues

Lunch Break

Final Summary

- What we take home from the retreat



What were your personal highlights at the DESY site in Zeuthen over the last 12 months?



What are three take aways to communicate back?

Overview

Forschungsinfrastruktur (FIS)

Priorisierungsverfahren

C **CREATION**, Medizinische Hochschule Hannover, Universitätsmedizin Göttingen, Universitätsklinikum Leipzig, Fraunhofer-Institut für Zelltherapie und Immunologie (Leipzig/Potsdam-Golm/Halle (Saale)/Rostock/Würzburg)

D **DALI**, Helmholtz-Zentrum Dresden-Rossendorf e.V.



E **Vorphase für das Einstein-Teleskop**, RWTH Aachen, Universität Münster, Ruhr-Universität Bochum, Technische Universität Dresden

H **HBS-I**, Forschungszentrum Jülich, Helmholtz-Zentrum Hereon (Geesthacht)



I **IceCube-Gen2**, Deutsches Elektronen-Synchrotron (Hamburg/Zeuthen), Karlsruher Institut für Technologie

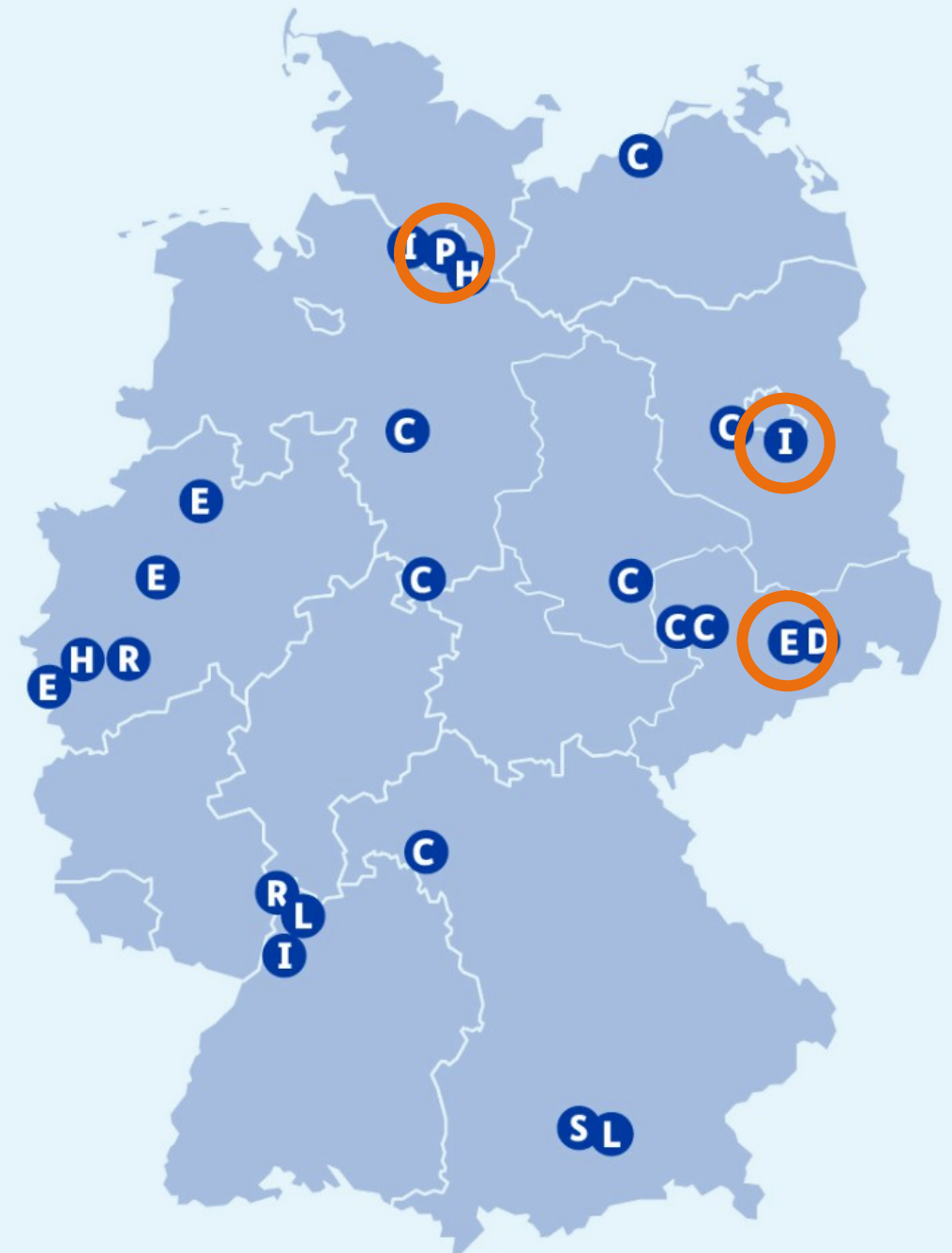
L **LEGEND-1000**, Max-Planck-Institut für Kernphysik (Heidelberg), Technische Universität München



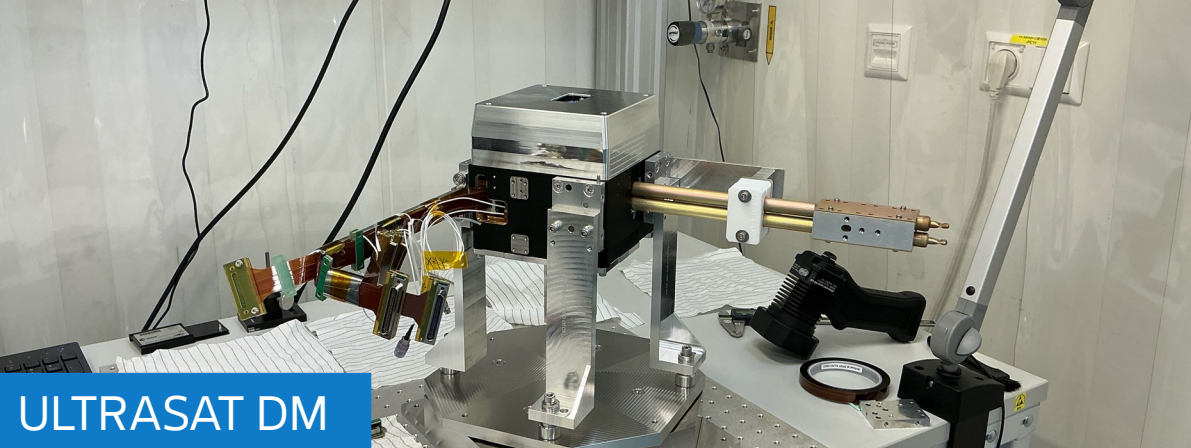
P **PETRA IV**, Deutsches Elektronen-Synchrotron (Hamburg)

R **RIDLOP**, GESIS - Leibniz-Institut für Sozialwissenschaften (Köln/Mannheim)

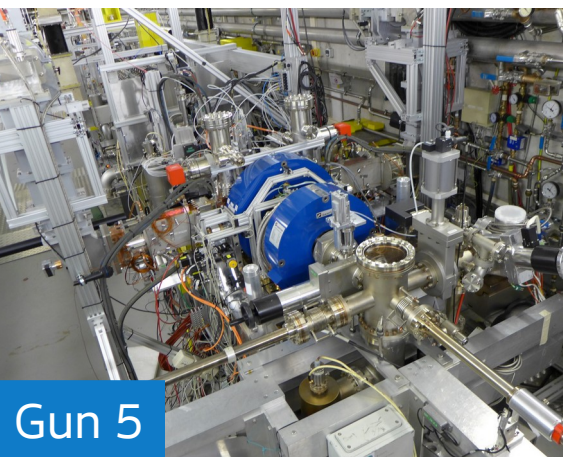
S **SLICES-DE**, Technische Universität München



There is a lot of progress



ULTRASAT DM



Gun 5



MST towers



IceCube mDOM

In summary:

- ULTRASAT camera makes great progress,
- ATLAS pre-production started,
- CTAO MST production has begun,
- Gun 5 meets requirements,
- IceCube mDOM production completed,
- many scientific results,
- and much more...

The progress made is truly remarkable, thank you very much for your commitment.

The images shown provide only a small glimpse into the numerous ongoing activities..

DZA and Einstein Telescope



A map of Germany is shown in dark grey. Three white circles are connected by white lines to form a triangle. The top circle is labeled 'DESY Zeuthen', the bottom-left circle is labeled 'TU Dresden', and the bottom-right circle is labeled 'DZA'.

DESY Zeuthen

TU Dresden

DZA

- **German Centre for Astrophysics (DZA)**
 - Successful evaluation
 - Will operate independently from 2026 onwards
- **Cooperation between DESY, DZA and TU Dresden**
 - Promotion of scientific development in eastern Germany
 - I am taking on an honorary professorship at TU Dresden
- **Einstein Telescope**
 - Very dynamic progress in Germany

Home office – pros and cons

Balancing flexibility, team spirit, and operational needs

Pros

- **Flexibility:** Better work-life balance and adaptability to personal/family needs.
- **Concentration:** Fewer interruptions, more efficient for writing, data analysis, coding, and administrative work.
- **Recruitment & retention:** Attractive for talent, especially younger researchers and international staff.
- **Sustainability:** Reduces commuting time and costs.
- **Resilience:** Proven during COVID; keeps operations running even in crisis situations.

Cons / Challenges

- **Coordination needed:** Requires clear agreements with group leaders and institute management
- **Reduced visibility:** Less spontaneous exchange, harder to stay “present” in daily campus life.
- **Team dynamics:** Risk of fragmentation or weaker institute cohesion if many staff are remote.
- **On-site requirements:** Some tasks (technical and infrastructure) demand physical presence.
- **Equity issues:** Not all roles are equally suited to home office, which leads to perceived inequalities.
- **Management effort:** Additional layer of coordination for supervisors to balance flexibility and operational needs.

Finances

RESEARCH TECHNOLOGY.

Liebenberg Retreat 2025

Stefan Klepser, Maria Krause

16.09.2025

Research Technology in a nutshell

4

groups

DV – Kai Leffhalm
EL – Marek Penno
ME – Dirk Naumann
DET – Steven Worm

2

workshops

EL1 – Markus Schade
ME1 – Anja Sandmann-Lemm

2

Apprenticeship workshop

EL2 – Laura Jakobeschky
ME2 – Lukas Schulz

>6

Projects

ULTRASAT
ATLAS-Upgrade (DLAB)
MST/SST, IceCube/ RNO-G
PITZ/ FLASHlab

1st

Priority

ULTRASAT & PITZ-GUN

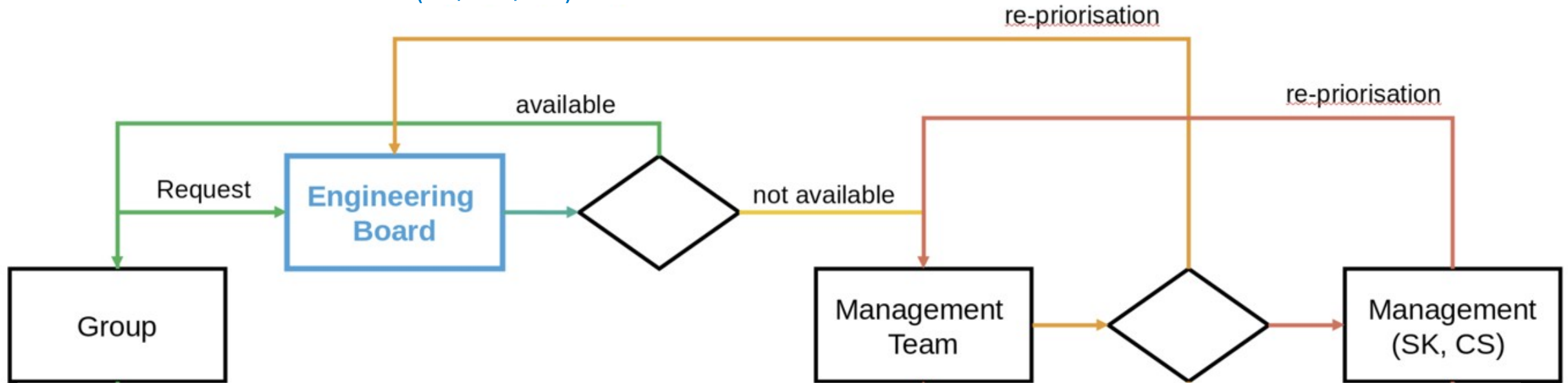
hundreds

Of different opinions

Organigram

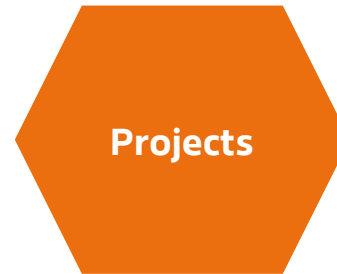
Projects @ DESY

How infrastructure resources (EL, ME, DV) are allocated



Current situation

Our projects



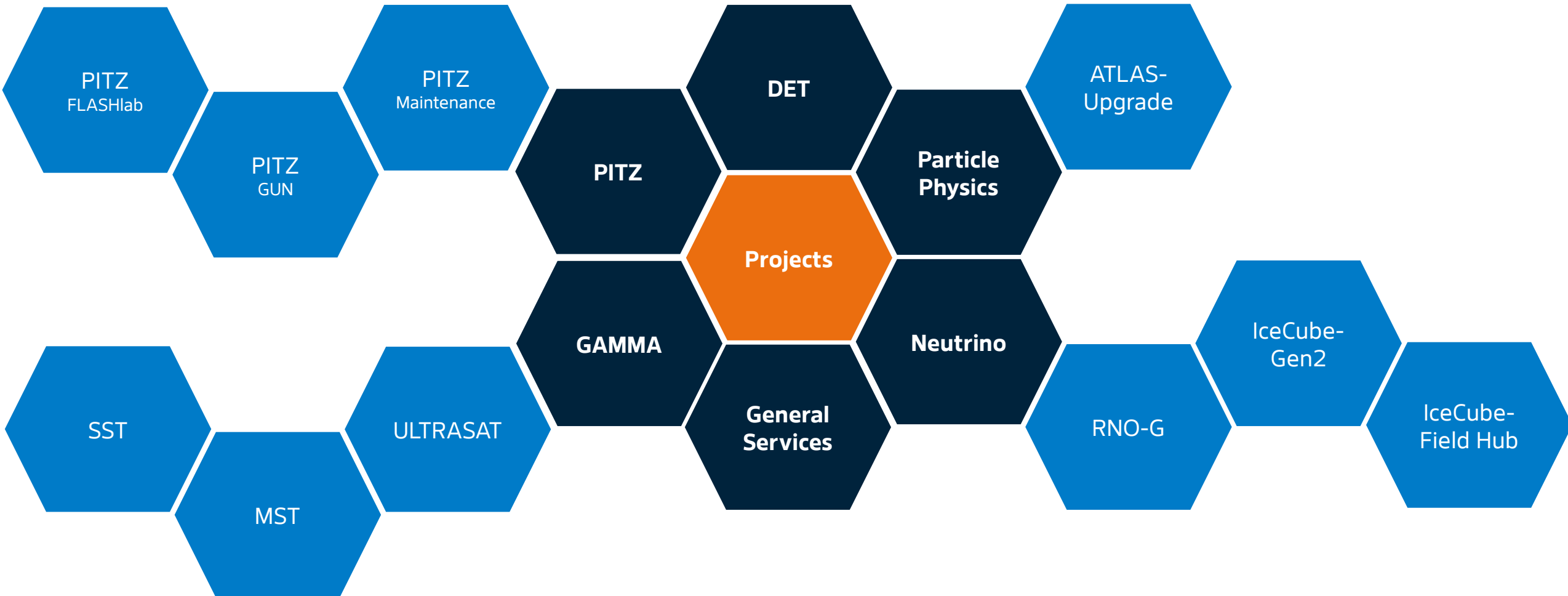
Current situation

Our projects



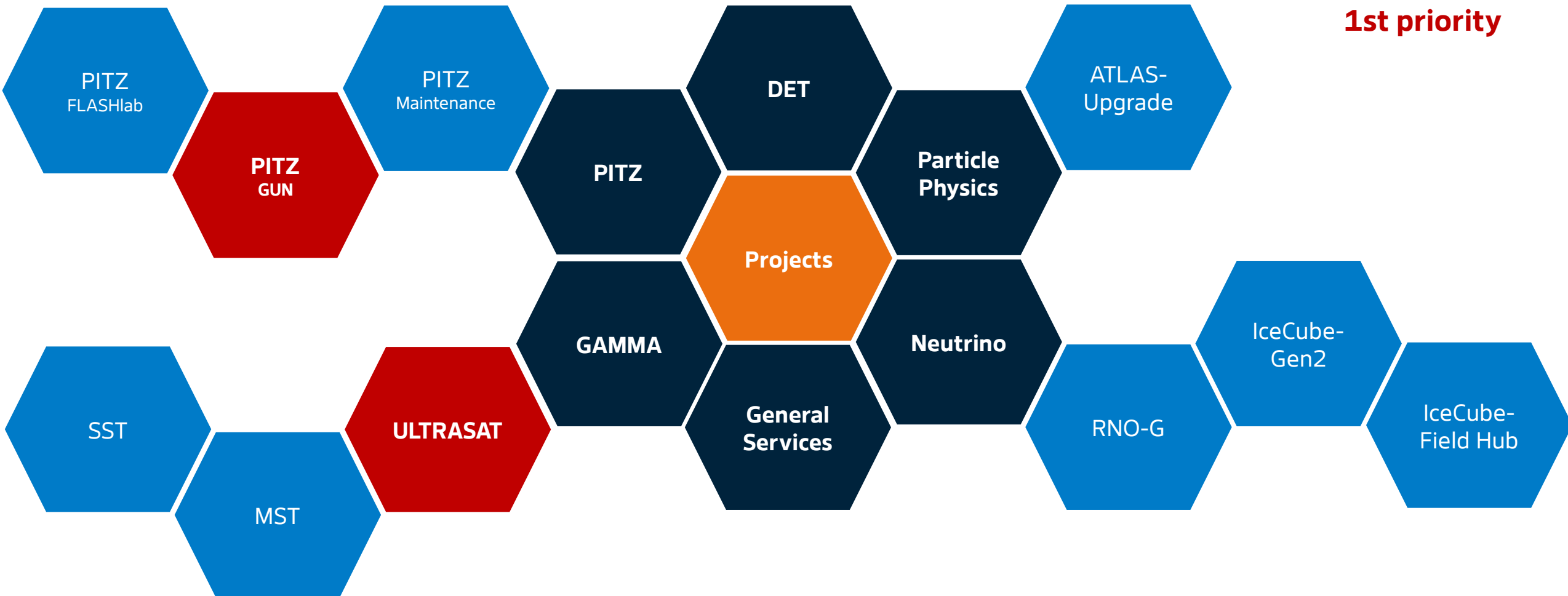
Current situation

Our projects



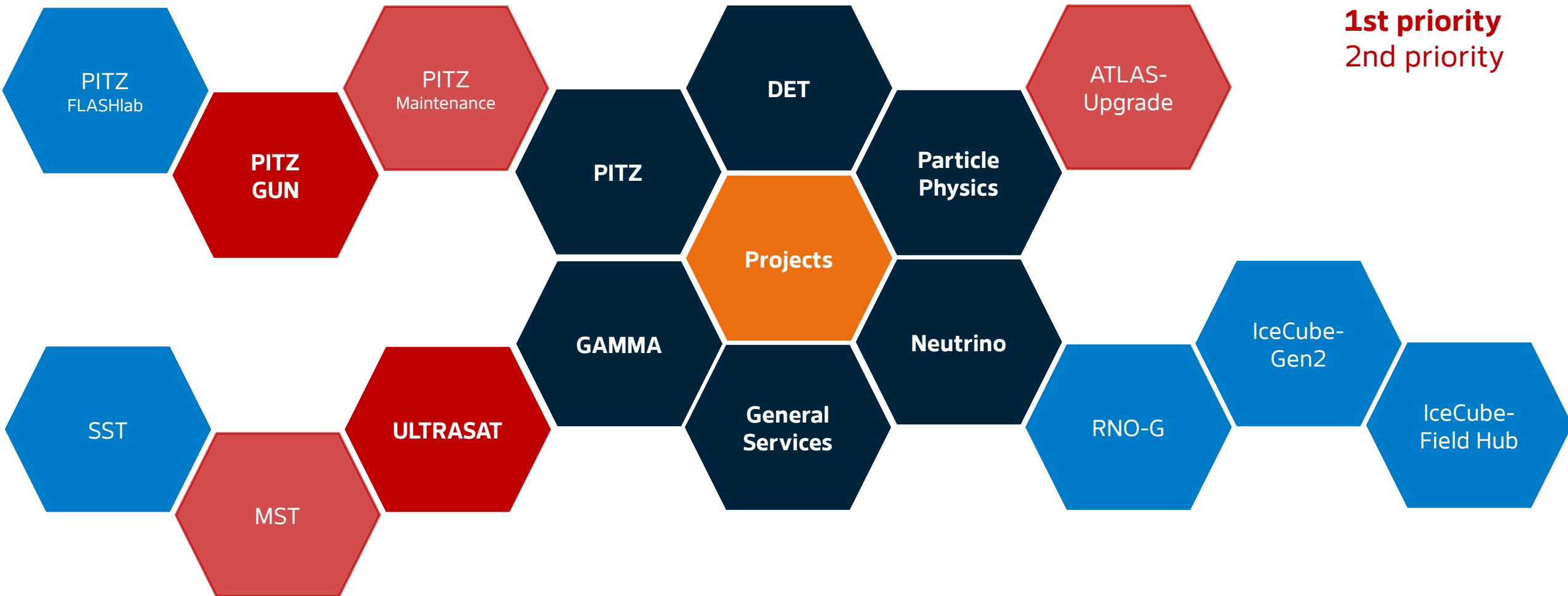
Current situation

Our projects



Current situation

Our projects



EL and ME – Employments planned, employments done

Recommendation from EnBo

Hired since last year

- 1 ZEW as agency worker („Leiharbeitskraft“)

Foreseen hires in 2025

- Jan Förster (01.10.2025, ZEW)
- Max Bünning (01.11.2025, EL)

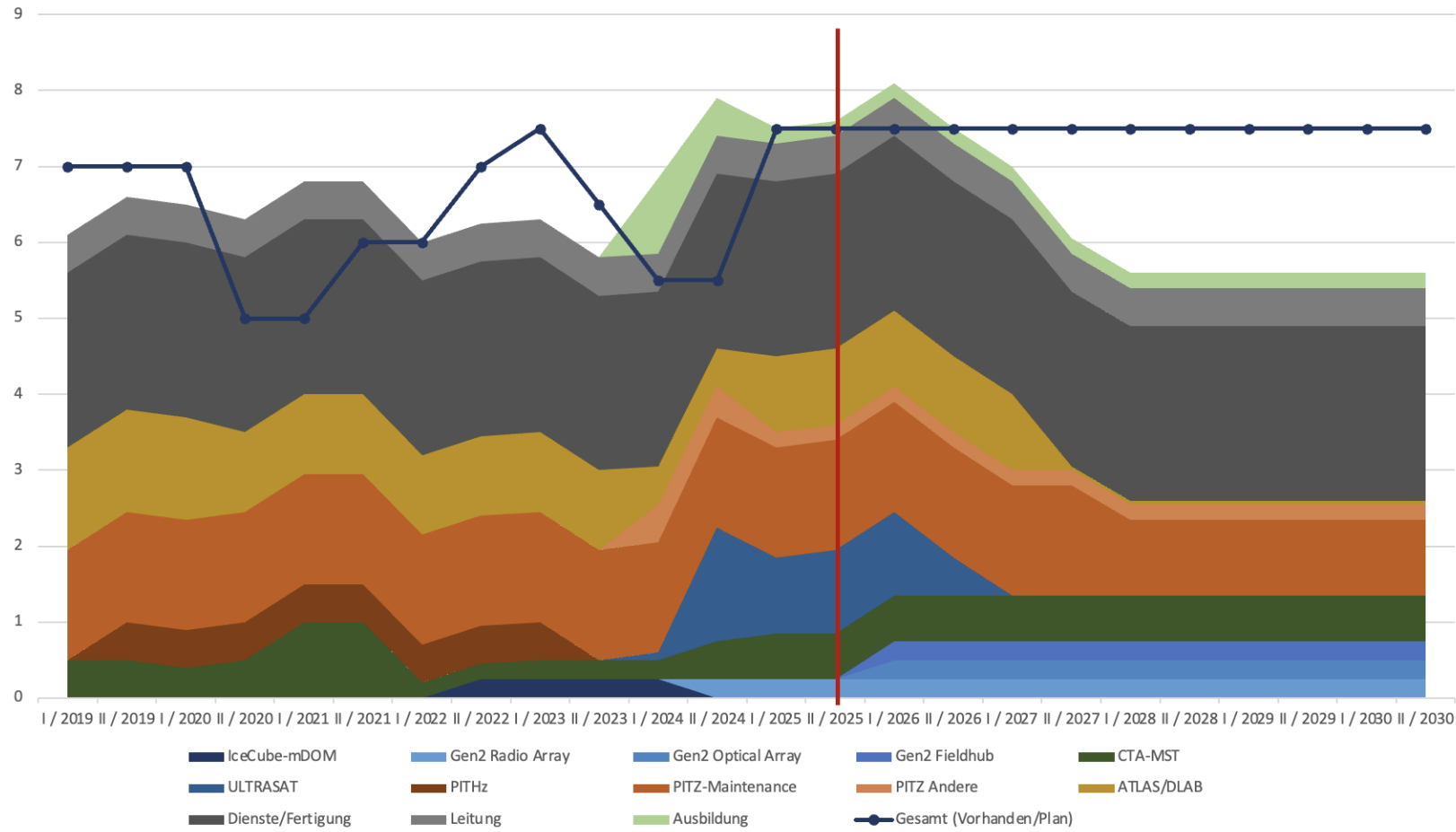
Situation

- All groups are suffering from the load of projects and lack of personnel
- Engineering board is open for discussion and acts like a round table of projects.
- Set-up of the engineering board: distribution of personnel to the projects according to their qualification (not about the person).
- Engineering personnel not only financed from the research technology groups but also from the requested (science) groups (e.g. systems engineer, electronics technician, firmware engineers, ...)

Electronics workshop

EL1

Zeitprofil Elektronikwerkstatt (nach Projekten)



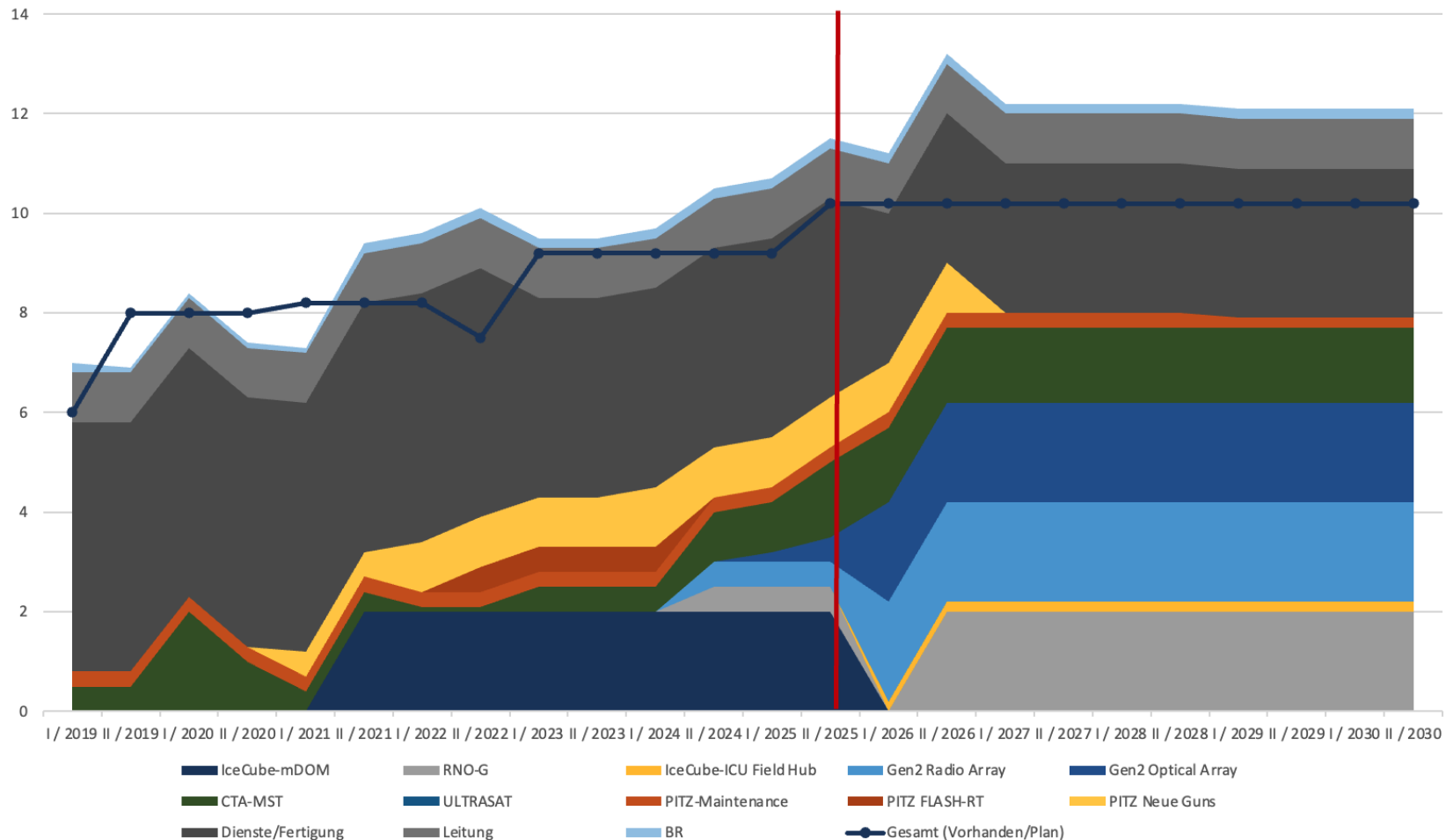
Analysis

- Many projects ongoing
- Different qualification required for various projects (specialists: SMD, bonding, aqua technique)
- In total: 7 FTE

Mechanical workshop

ME1

Zeitprofil Montage Mechanische Werkstatt (nach Projekten)



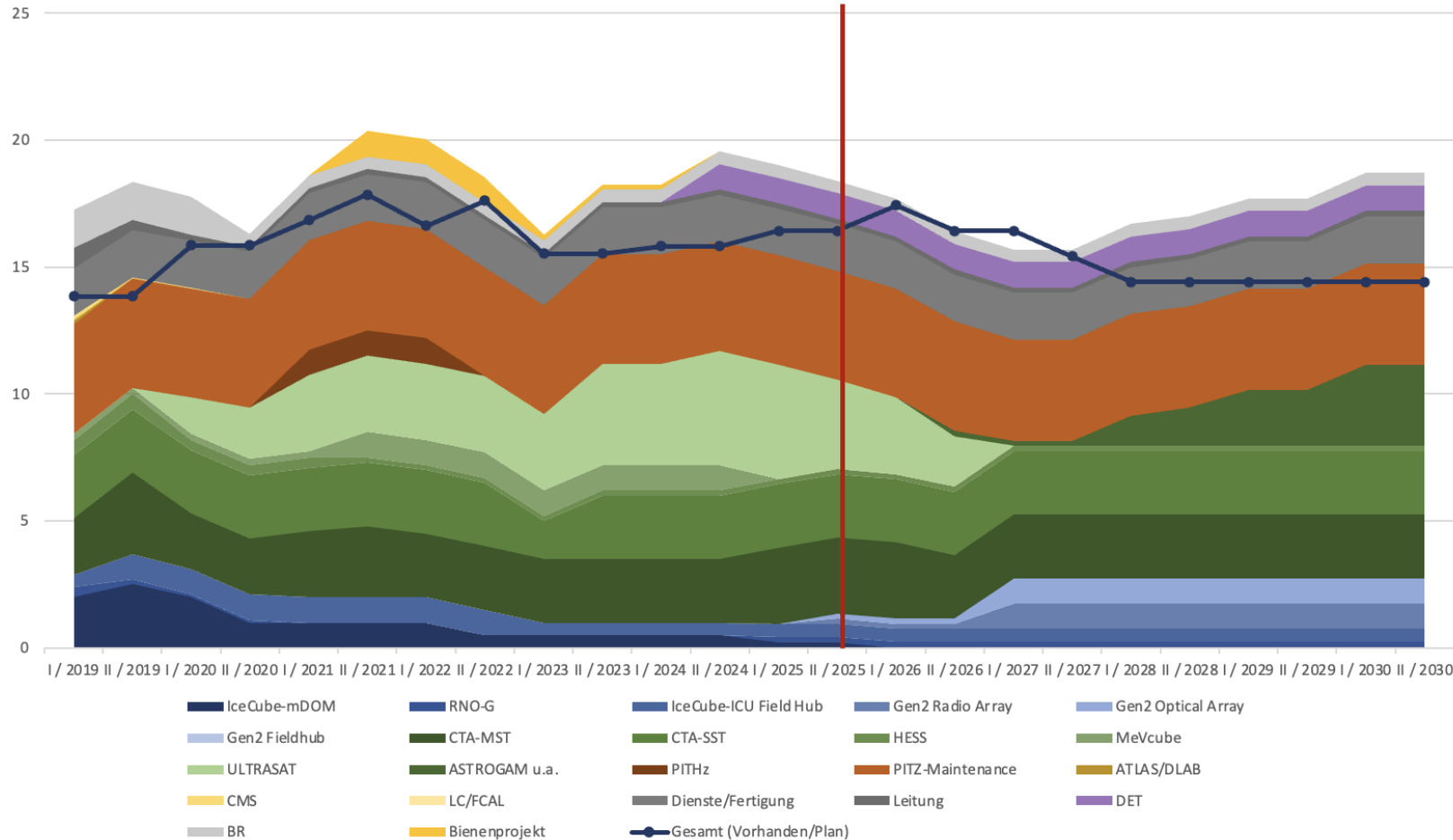
Analysis

- 1 Prolongation
- In total: 8.92 FTE
- Benefit from SEGRO hall personell (to be soon again there for MST pre-assembly)

Electronics

EL

Zeitprofil Elektronikentwicklung (nach Projekten)

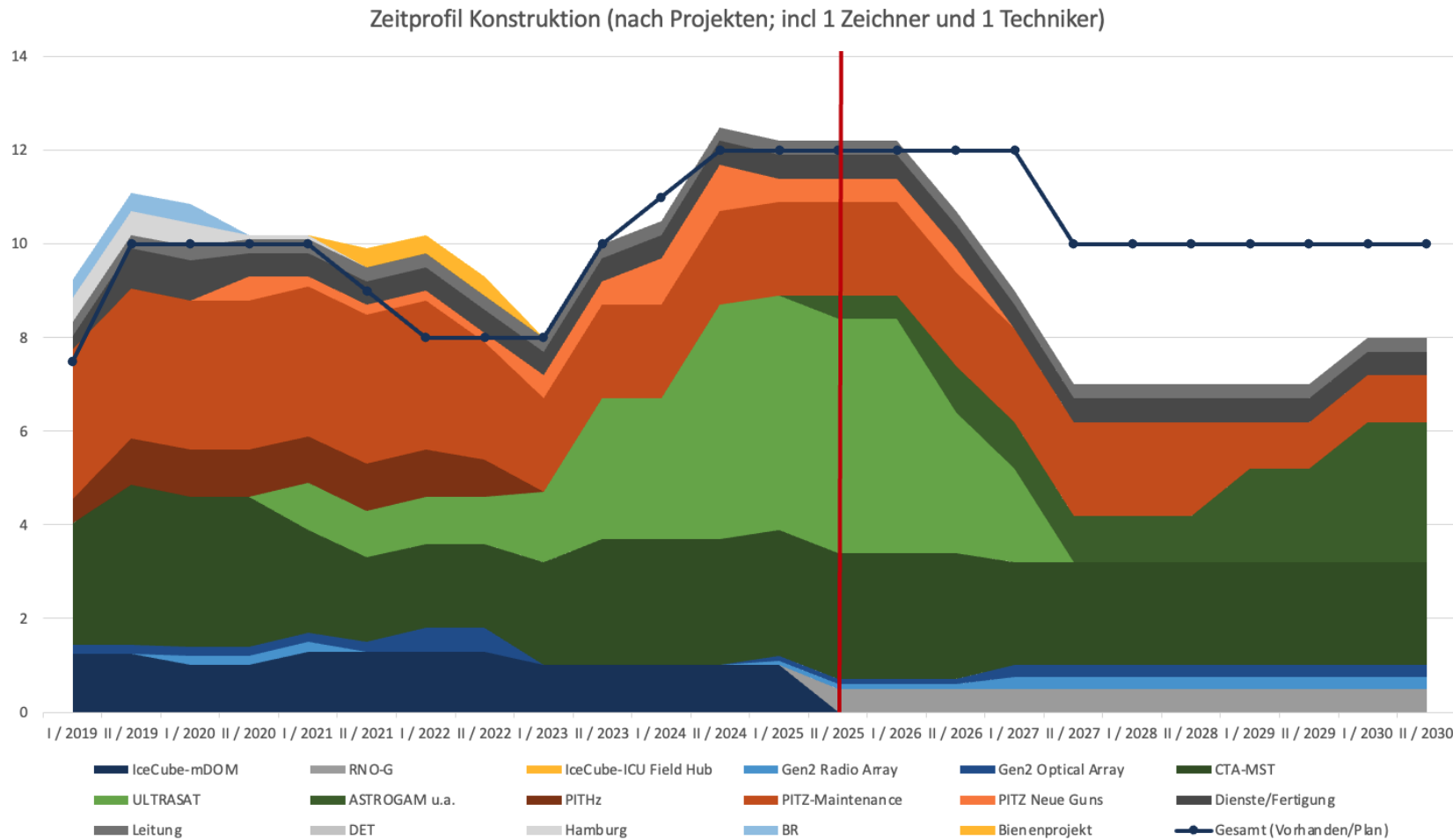


Analysis

- High request on ULTRASAT
- Key positions in other projects, e.g. MST/SST/PITZ
- Support of MST by new hired person (Max Bünning)
- In total: 17.75 FTE

Mechanics

ME



Analysis

- Persons on parental leave are back in total 11.77 FTE
- High request on personell for ULTRASAT
- Shortage in other projects: MST, PITZ, IceCube
- 2 prolongations

Campus Development

CAMPUS DEVELOPMENT DESY ZEUTHEN

A beacon of science in Brandenburg

- with moderate to high renovation needs
- and insufficient space.

Some thoughts from me



HELMHOLTZ





A place for everyone

Space requirements plan: Additional space requirement 2500 m²

(campus now: ~12000 m²)

Approved by the State of Brandenburg on 05.09.23

Space for

- Administration
- Students lab
- Knowledge forum
- Laboratories, offices, workshops

Workshop(s) on **requirements** after the summer break.



The foundation council requests a campus development plan by summer 2026

16. September 2025



A place for technology development

Electronic workshop

- on top of the mechanical workshop
- 2.3 M€ funding available, 1.4 M€ missing, To be taken from the **mandatory renovation funds** in PoF V

Detector lab in the hall

- New initiative for a **detector lab at DESY** with the aim of submitting an application for strategic investments (> €15 million) in PoF V

Achievements of the Campus Group

- **New large building constructed (SDMC + canteen)**
- **Renovation of seminar rooms**
- **Redesign of outdoor areas**
- **Occupation of two neighboring buildings**
- **New large production site in Bohnsdorf**
- **Integration of complex infrastructures:**
 - New cleanrooms
 - Two large CNC milling machines
 - Fish laboratory
 - Cold aisle enclosure in server rooms
 - Container-based interim solutions.
- **Management of large relocations and moves** across campus.
- **Development of an energy concept** for sustainable operations.
- **Setup of a Quantum Lab.**
- **Renovation of entrance areas** (currently underway).
- **Investment volume:** approx. €30 million implemented within a short time – by a team of only 18 people



Ground Floor

First Floor



16. September 2025

Liebenberg retreat

[illegible][illegible]

Opening of the campus



Preisverleihung Mathe-Olympiade

The campus reopens

Events in 2025

Review of March to August

Konferenzen, Meetings und Workshops

- PITZ Collaboration Meeting
- CTAO: ACS Workshop
- Quantum Workshop
- IceCube Upgrade Workshop
- ARD ST3 Meeting
- CTAO DPPS General Meeting
- Workshop „Kritisch Denken Lernen“
- Quantum Computers And Art: How and Why
- CTAO: INDIGO IAM Community Workshop & Technical Hackathon
- Workshop DESY & Ligeti Zentrum

Committee meetings

- Directorate meeting in Zeuthen, 20 March
- CTAO ERIC Admin. and Finance Committee, 26–27 March
- APC & PRC, 7–9 April
- Scientific Council, 26–27 May
- Foundation Council, 10–11 June

Internal events

- Diversity Day
- Campus Day
- Farewell ceremony for trainees
- Meeting of senior staff
- Onboarding
- Seminars
- Town hall meeting



Treffen der Senior*innen



APC-Meeting



Campus-Tag



Verabschiedung H. Dosch

Events in 2025

Review of March to August

promotion of young talent

- Future Day
- Teacher training
- IHK examination Training
- 21 years of understanding physics
- Network meeting GenaU school laboratory network
- Holiday camp
- Summer school for students
- School laboratory operation
- DESY tours
- Cloud chamber workshops

Public events

- Public evening lecture, 20 May
„Boten aus dem Weltall“
- Long Night of Economics, 20 June
- 650 years of Zeuthen, 12 July

External organisers

- Fontane Circle
- Annual General Meeting ADW

Lange Nacht der Wirtschaft



16. September 2025



650 Jahre Zeuthen



21 Jahre physik.begreifen

Events in 2025

Outlook until the end of 2025

Conferences, meetings and committees

- AP/PP Workshop
- ATLAS GridKa Cloud Meeting
- CTAO Construction Meeting
- CHEPH Day (120 Persons, Externe)
- CTAO Council Meeting
- PITZ Coll. Meeting

Public, DESY tours, young talent

- Visits Fontane District
- Education Fair
- Practical Training Day
- International Cosmic Day ICD
- Physics Camp
- DESY Tours, Student Laboratory, CosmicLab

Internal events

- Liebenberg retreat
- Parent information
- Internal training Care for relatives
- Trainee camp
- DESY Day
- Onboarding, seminars
- Annual financial statements Works meeting

Visits

- MdB Florian Oest (yesterday)

Israel

DESY Condemns Terror Against Israel

Statement by the DESY-Direktorate

DESY has diverse connections with Israeli scientists and partner institutions in Israel. We mourn with our Israeli friends and colleagues for the victims and share their concerns. We stand firmly by their side.

Our thoughts are with those in our community who are personally affected due to family members or other close ties. If you or someone you know needs support, please reach out to the counseling services on campus.

We are particularly worried about the hostages being held by Hamas. Our earnest hope is for their immediate and safe release.

The DESY Directorate, October 2023

Recurring questions

- How long can we remain silent in view of the humanitarian catastrophe in Gaza?
- Should cooperation with Israeli institutions be reconsidered if they support the war directly or indirectly?
- What can we do to support displaced scientists from Gaza and Palestinian researchers more broadly?

[Events](#)
[Annual Lectures](#)

President of the Academy Issues Warning: Addressing the Humanitarian Crisis in Gaza and Securing the Release of Hostages – A National Moral Imperative

14/07/2025



Professor David Harel, President of the Israel Academy of Sciences and Humanities, issues this warning: **We cannot remain silent in the face of the terrible humanitarian crisis in the Gaza Strip, which threatens the lives and health of hundreds of thousands of human beings.**

I see it as a professional and moral duty to express a position on this matter, when medical data and expert opinions show evidence of extreme humanitarian distress. The prolonged fighting in the Strip since October 2023 has caused the deaths of tens of thousands of people, a great many of them children and women. Data from international agencies point to the collapse of the health system and absence of essential medicines, extreme shortage of clean drinking water due to destruction of water and sewage infrastructure, acute malnutrition among thousands of children and deterioration in their health condition, lack of access to fuel and electricity needed to operate life-saving medical equipment and water purification facilities, severe damage to the ability to treat chronic patients, premature infants, the wounded, and more. Additionally, direct hits on civilians have been reported when they arrive to receive medical services and humanitarian aid.

<https://www.academy.ac.il/News/NewsItem.aspx?nodeId=837&id=3227>

SESAME



Frank Lehner, DESY

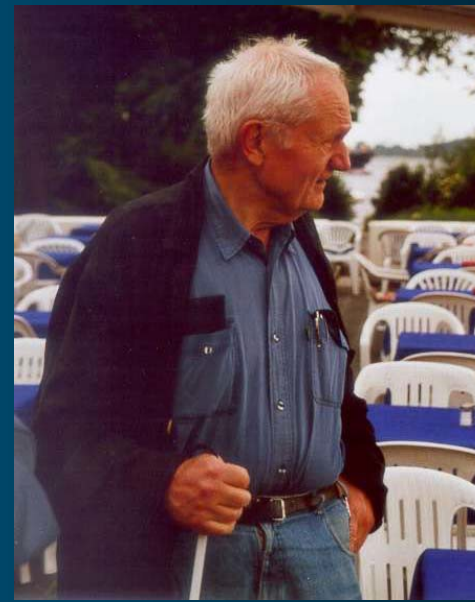
What is SESAME?

- A light source (the only one) in the Middle East!
- established 2003, it is a cooperative venture by scientists and governments of the region set up on the model of CERN although it has very different scientific aims
- international organization under the auspices of UNESCO: "a quintessential science for peace project" – Science diplomacy!
- Opened in 2017 as user facility granting access to international academic and industrial communities.
- Members should be from the region, observer countries from Europe Americas, Asia



SESAME

- Germany was instrumental from the very beginning — through the donation of BESSY I — and has remained a committed supporter throughout the further evolution
- Germany has “observer seat” in SESAME Council mandated by German Ministry to DESY since 2016
- DESY very committed to support and coordinate efforts
- DESY hosts international SESAME Council Meeting at DESY on 1-2 July 2025 together with several satellite meetings



1929-
2013

Gustav Adolf Voss (DESY) watching the container ship with BESSY I leaving the Hamburg harbor in 2002 on its way to Aqaba, Jordan



1924-
2025

Herwig Schopper (DESY-CERN) played a major role to make SESAME a UNESCO project. He was chair of the SESAME Council over many years. He died in the age of 101 just recently.

DESY support to SESAME - 3 Examples

1

Helmholtz-SESAME soft x-ray beamline HESEB

- Design, build and install state-of-the-art beamline for soft x-rays
- DESY coordinator of Helmholtz consortium
- DESY as „steward“ of beamline



2

Meetings / workshops

- Germany-SESAME support & networking meeting
- Coordinate joint activities
- Discuss new initiatives
- Last meeting Mo, 30.6.2025 at DESY



16. September 2025

Liebenberg retreat

3

Cybersecurity@SESAME

- Computer systems at SESAME also vulnerable to
- Strengthen cyber security as part of a European network
- WE Heraeus funded project
- Cyber security



52

SESAME Council Meeting – 1-2 July 2025 at DESY



SESAME Council Meeting 2025 at DESY

Attended by delegates from (among others): Israel, Palestine
(online), Iran (online)

16. September 2025

Liebigstrasse 15

Satellite Meetings at DESY

Two satellite meetings – organized by DESY:

- SESAME-Germany Supporter Meeting – 30 June 2025
 - with representatives from BMFTR, Helmholtz, Universities and Max-Planck
 - discussed, e.g., Max-Planck Initiative for a German/European Palestinian Analytics Lab at SESAME
- SESAME Life Science Meeting – 3 July 2025
 - with representatives from SESAME, EMBL, Israel, Türkiye
 - ideas for a new small angle x-ray scattering beamline BioSAXS for life science (suggested by Israeli researchers)



SESAME-Germany supporter Meeting



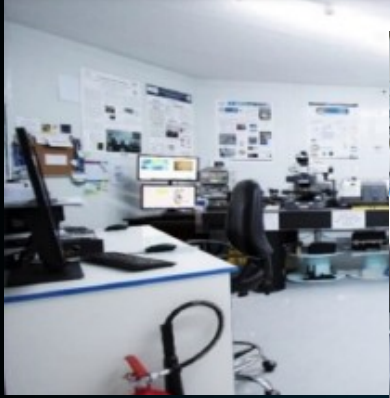
SESAME Life Science Meeting

Executive summary of the workshop “Life Science Perspectives at SESAME” – held on 3 July 2025 at DESY, Hamburg

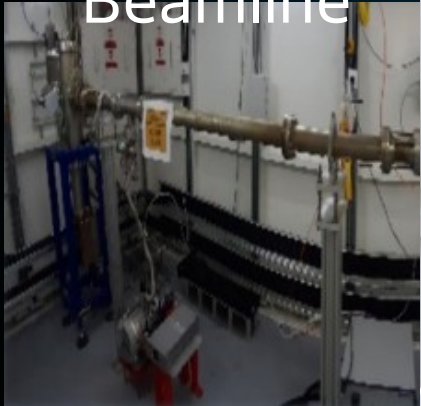
The international research center SESAME (www.sesame.org.jo) has the potential to become a pivotal center for life sciences and biomaterials research across the region. In the context of a broader life science ambition a workshop was recently organized at DESY in Hamburg to bring together leading researchers and potential users, technical experts, and stakeholders from SESAME Members and Observers. The goal of the workshop was to collectively explore and promote life science related research opportunities at the facility. The workshop was co-funded by the German Federal Research Ministry BMFTR and took place as a satellite meeting to the 46. SESAME Council Meeting (1.-2. July 2025 at DESY).

The workshop resulted in a strong consensus and recommendation to **build a state-of-the-art, undulator-based BioSAXS beamline, to be complemented with an on-site sample preparation and characterization laboratory.**

SESAME – five standard techniques available



IR
Beamline



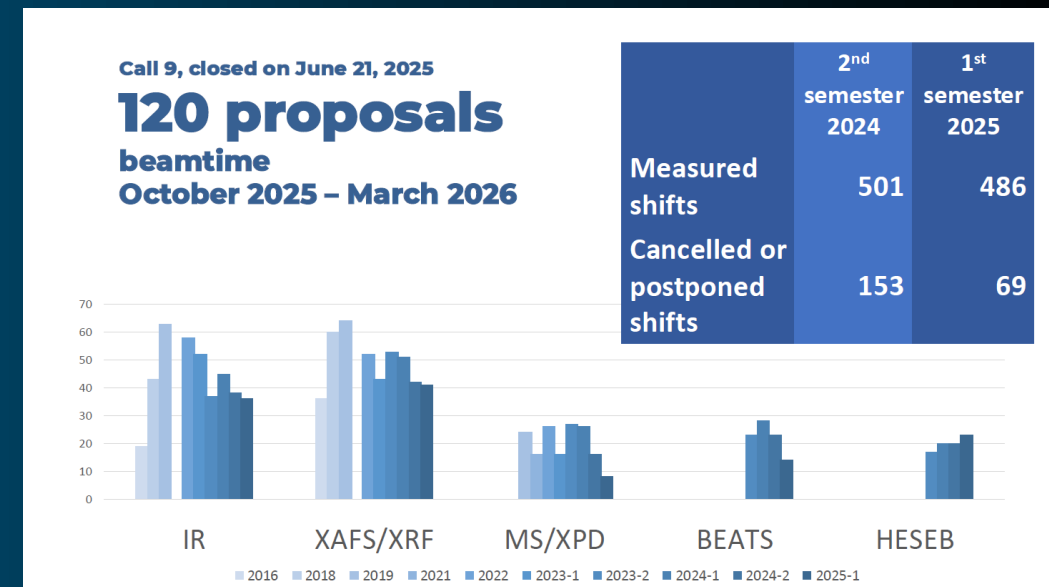
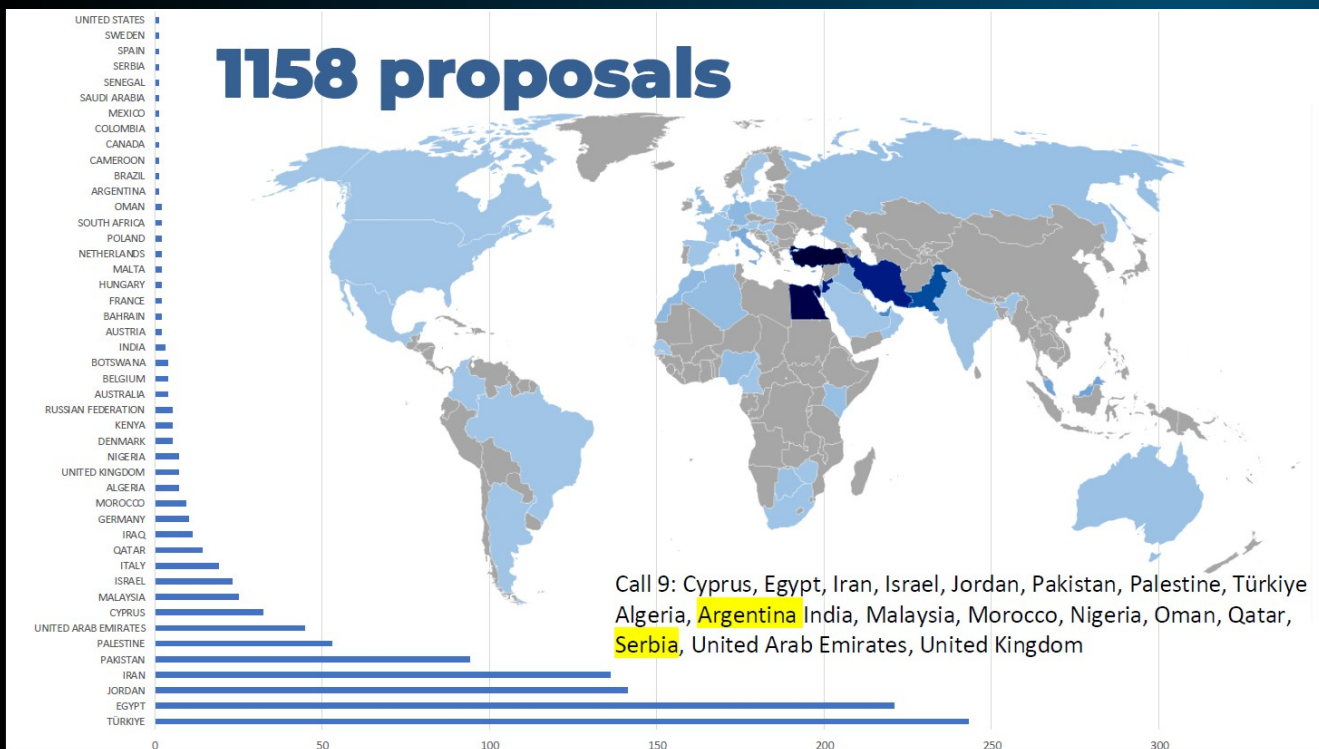
MS/XRD
Beamline



BEATS XRT
Beamline



SESAME beamtime proposals



Last round of proposals: 120

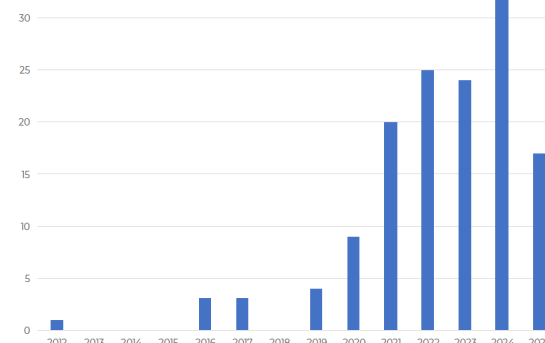
Total Proposals since 2017: 1158

Publications

145

peer-review publications until June 2025

- Average scientific impact factor > 5
- 20% of publications have IF > 7



16. September 2025

Liebenberg retreat

Journal of Pharmaceutical and Biomedical Analysis

Investigating the molecular structure of placenta and plasma in pre-eclampsia by infrared microspectroscopy

Lina A. Dahabiyeh^{1,2}, Randa S.H. Mansour³, Shawqi S. Saleh¹, Ghani Kamel^{4,5}

ACS MATERIALS LETTERS

Robust Barium Phosphonate Metal–Organic Frameworks Synthesized under Aqueous Conditions

Khalifa A. Salmeia¹, Simone Delabella², Danbarudhar Parida², Terry J. Frankcombe, Akel T. Afaneh, Kyle E. Cordora, Bassem Ab-Mayhalony, Shanyu Zhao, Romain Cuvier, Ali Marashdeh, Bernhard Spingler, Ruggiero Frison, and Antonia Neels³

SESAME in a region rich of cultural heritage



Examples

Courtesy: HE Mahnke,
Berlin

Papyrus scrolls (in collaboration with Egyptian Museum Berlin, FU Berlin)

- Contrast and color reconstruction through tomography
- Important studies, as many papyrus scrolls are located in the region
- Now done on „real“ Elephantine papyri in May 2025 – brought from Berlin to Amman and back

Fragile archaeological vitreous materials (glass, faience, Egyptian blue)

- Protocols now developed at SESAME to enable 3D imaging of objects from sub-mm to cm scale to study raw materials, production, and degradation
- High-resolution phase-contrast tomography reveals manufacturing techniques, corrosion microstructures, and mechanical fragility of complex artifacts
- Combined imaging and spectroscopy (SXCT + XRF + XANES) provides structural and chemical insight into Southwest Asian cultural heritage



Mixture carbon and 3.5 % galena
(PbS, kohol)

Absorption-edge sensitive tomography Pb_3O_4 and HgS

Gonca Dardeniz,

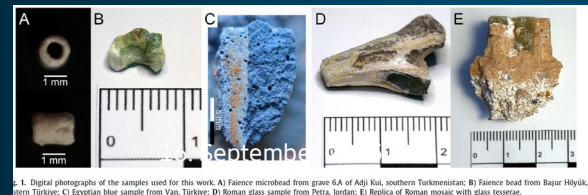
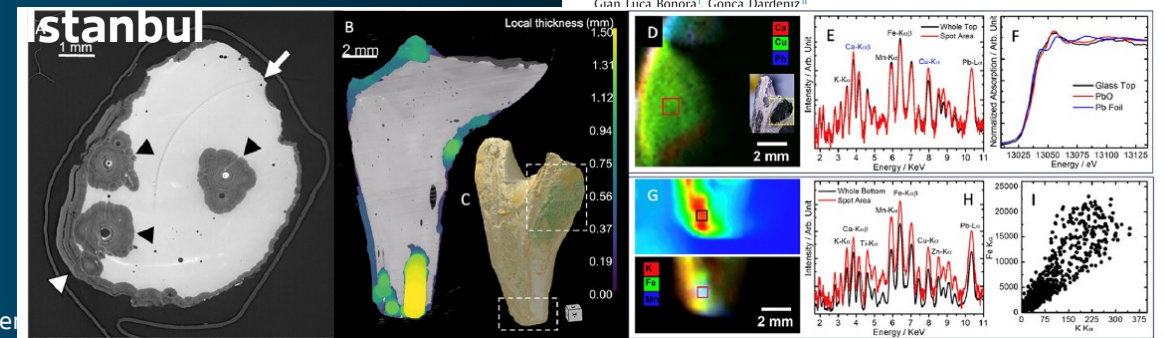
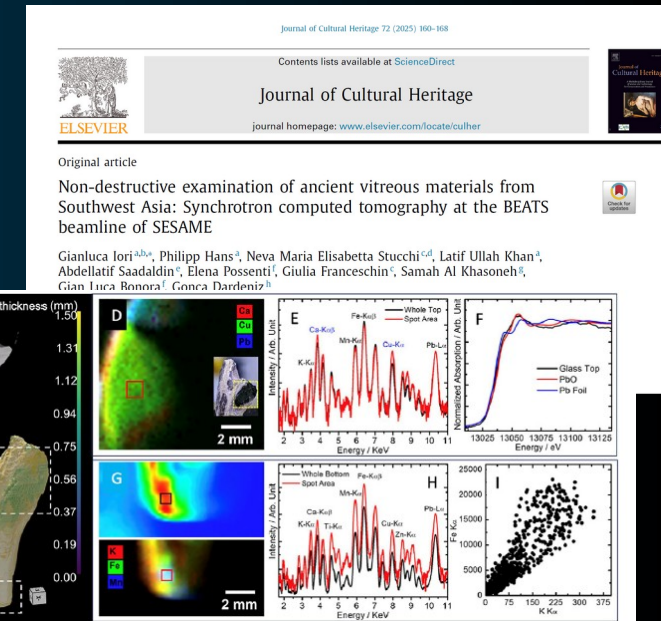


Fig. 1. Digital photographs of the samples used for this work. A) Faience microhead from grave 6A of Adji Kul, southern Turkmenistan; B) Faience bead from Bayır Höyük, near Hama, Syria; C) Egyptian blue sample from Van, Turkey; D) Roman glass sample from Petra, Jordan; E) Replica of Roman mosaic with glass tesserae.



Cultural Heritage Workshop – 3-4 December 2024

Bridging Natural Sciences, German Institutions and Cultural Heritage in the Middle East
Workshop held at SESAME and in Jordan Museum focused on German actors: ~60 participants



Strengthening of networks and partnerships around SESAME

Promotion of training opportunities at SESAME

Concrete projects identified (copper scroll)

Commitment to foster interdisciplinary collaboration and increase engagement of the cultural heritage community with SESAME's analytical methods and infrastructure

Program, Talks on <https://events.hifis.net/event/1993/>

**BRIDGING NATURAL SCIENCES,
GERMAN INSTITUTIONS AND
CULTURAL HERITAGE IN THE
MIDDLE EAST**

3 - 4 December 2024, at SESAME in Allan, Jordan,
and in Amman, Jordan

SUMMARY REPORT OF THE WORKSHOP

Organizers: Deutsches Elektronen-Synchrotron (DESY),
Helmholtz-Zentrum Dresden-Rossendorf (HZDR), and
SESAME.



Proceedings:
DESY-PROC-2025-01
ISBN 978-3-945931-55-4
DOI:10.3204/PUBDB-2025-01075

SESAME - Conclusions

- **SESAME – research center unique in the Middle East**
- **SESAME unique in terms of governance as international organization**
 - **Members are states in the Middle East, observers are from Europe, Americas, Asia**
- **SESAME has essential analytical capabilities / modern and state-of the art beamline technologies – regional center of excellence**
- **However, SESAME faces currently enormous challenges that threaten the existence and future of the laboratory**

Backup

Neue Bewirtschaftungsrichtlinie

Anwendung im Überblick

Externe	Dauer	Bewirtung	Anlass	
< 50%	< 4h	Keine Bewirtung	Ohne Dritte	Besprechung Veranstaltung
		Annehmlichkeiten Nur für Externe	Mit Dritten	
< 50%	≥ 4 h	Annehmlichkeiten alkoholfreie Getränke, Gebäck und Snacks	Mit Dritten	Besprechung Veranstaltung
≥ 50%	egal			
≥ 50%	egal	Lunch Dinner	Mit Dritten	Geschäftssessen Besprechung Veranstaltung

Neue Bewirtschaftungsrichtlinie

Anwendung im Überblick

Externe	Dauer	Beispiele	Bewirtung
< 50%	< 4h	Diversity Day, Gesundheitstag, Frauentag, ...	Lösung noch offen
		Seminare	
		Vorstellungsgespräche, Firmenbesprechungen	Annehmlichkeiten nur für Externe
< 50%	≥ 4 h	Gruppenklausuren z.B. Liebenberg-Klausur Campus-Tag	Lösung noch offen
		Außerordentliche Arbeitseinsätze z.B. Lange Nacht, TdoT, ICD, ...	Annehmlichkeiten für aktiv Mitarbeitende
		Fortbildungen, Vorstellungsgespräche Interne Netzwerktreffen z.B. Phd's, Postdocs, Azubis,...	Annehmlichkeiten für Externe und Interne
≥ 50%	egal	Firmenbesprechungen, einzelne Gäste DESY-Senior*innen, Nachbar*innen Fortbildung/Workshop für Externe Lehrkräfte, Masterclass, e-Learning, Hard-/Software-Schulungen...	Annehmlichkeiten für Externe und Interne nach Angemessenheit laut 4.1.2
≥ 50%	egal	Seminargast Kooperationspartner Gremien	Genehmigung Bereichsleitung Prüfung Workshopkonto

Wichtig zu wissen

Diese Gesetze, Regularien und Workflows sind zu beachten

Bewertungsrichtlinie

- Hier nachzulesen: [DESY-Bewertungsrichtlinie](#)

Anlagen zur Abrechnung (wie bisher)

- Grund der Bewirtung
- Liste der Teilnehmenden inkl. zugehörige Einrichtung

Bestellung, Prüfung und Abrechnung (wie bisher)

- über conference-zeuthen@desy.de bzw. gruppensekretariat-zeuthen@desy.de

Ausnahmen

- wenn DIR-Beschluss vorliegt (Sommerschule, Sonderveranstaltungen, ...)