

# UKRAINE UPDATE.



Update on DESY Ukraine Activities

Martin Sandhop  
DESY, 24.07.2025

Welcome Ukrainian participants at DESY  
Summer Student Program

**HELMHOLTZ**



- EURIZON Closing Event in Brussels, March 2025:
- Many Ukrainian EURIZON fellows present their projects that could be realised
- Stakeholders from EC and REA could see which positive impact the many grants and fellowships have:
- → Support measures have tremendously contributed to sustaining science, and scientific life in Ukraine over the past two years
- → Second, there is a clear need to carry on with specific measures for Ukraine: (1) to revert brain drain, (2) to foster joint EU-Ukraine science and technology cooperation, (3) to strengthen the integration of EU and Ukraine RIs ecosystems

[Recommendations](#) handed out to EC



*Signe Ratso, Deputy Director, DG Research and Innovation, RTD, at EURIZON event 28.032025*



# EURIZON Fellowship Program for Ukraine

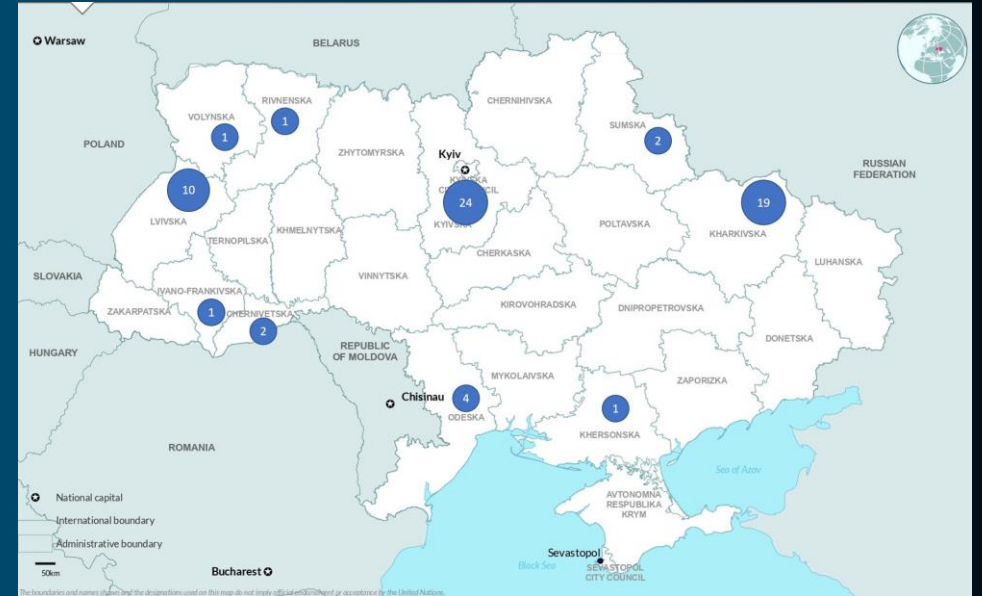
One of EU's most prominent flagships in the EU-Ukraine support – coordinated by DESY

EURIZON Fellowship Program: EU allocates €4.5 million for 324 Ukrainian scientists (europa.eu)

**No brain drain:** grants go directly to scientists in Ukraine

Strengthening **ties to partners from EU:** European partners = involved, without taking grants

Also: 9 fellowships for young Ukrainian RI managers:  
take part in EMMRI Executive Master in Management of RIs;  
Milano-Bicocca  
→ capacity building of Ukraine's research infrastructure ecosystem





## Few Examples of funded research projects:

### Social and cultural innovation:

**Improving professional communication on biosecurity and biohazard management in medicine, pharmacy and biotechnology:** National Technical University of Ukraine Igor Sikorsky Kyiv Polytechnic Institute (NTUU KPI) + Medical faculty, Riga Stradiņš University, Department of Internal diseases, Riga East University Hospital

### PSE:

**Dosimetric material based on doped lithium triborate glass and pyroceramics for medical applications in radiation therapy:** O.G. Vlokh Institute of Physical Optics of the Ministry of Education and Science of Ukraine (L'viv) + Universität Bayreuth Physikalisches Institut; Institute of Physics of the Polish Academy of Sciences

### Health:

**Biomolecular interactions of amyloids:** modulating effects of polyphenols; V.N. Karazin Kharkiv National University + AAU Energy, Faculty of Engineering and Science, Esbjerg Energy Section, Bioenergy and Bioproducts, Esbjerg, Denmark

List of awarded research projects per Thematic Area

Research thematic area	ID	Title of the research project	Affiliation Institute of Principal Investigator	Ukrainian region	Number of team members supported (including the PI)	Duration of the project in months	Budget of the research project*
1-DATA, COMPUTING & DIGITAL RIS	213	Investigating the use of AI methods for diagnostics and prognosis of chronic musculoskeletal disorders	Kyiv National University of Construction and Architecture	Kyiv region	5	6	EUR 39,000.00
1-DATA, COMPUTING & DIGITAL RIS	278	Research and development of Ukrainian ground network of navigational aids for increasing the safety of civil aviation	National Aviation University	Kyiv region	3	12	EUR 46,800.00
1-DATA, COMPUTING & DIGITAL RIS	401	Application of Langevin Dynamics with Simulated Annealing for Nonconvex Stochastic Optimization in Machine Learning	National Science Center "Kharkiv Institute of Physics and Technology"	Kharkiv region	3	12	EUR 46,800.00
1-DATA, COMPUTING & DIGITAL RIS	522	Stimulating the development of the de-occupied territories through investment and innovation instruments within the framework of the European Union	Kherson State University	Kherson region	4	12	EUR 62,400.00
1-DATA, COMPUTING & DIGITAL RIS	747	Computational Intelligence in Predictive Modelling of Mechanical Responses of Human Blood Vessels Affected by Atherosclerotic Plaque	National Technical University Kharkiv Polytechnic Institute	Kharkiv region	5	12	EUR 78,000.00
2-ENERGY	27	Heat pumps: the experience of Poland and projection of expansion in Ukraine	Institute for Economics and Forecasting, UNAS	Kyiv region	4	6	EUR 31,200.00
2-ENERGY	29	Thermal management for next-generation high-performance microelectronics with two-phase flows of complex fluids	Odesa National University of Technology	Odesa region	5	12	EUR 78,000.00
2-ENERGY	41	Increasing the Energy Efficiency and Safety of Plastics Thermal Processing using Numerical Simulation	National Aerospace University "Kharkiv Aviation Institute"	Kharkiv region	5	12	EUR 78,000.00
2-ENERGY	88	Heat transport and Interfacial	V.N. Karazin Kharkiv	Kharkiv	5	12	EUR

# One EMMRI example

- Example:
- One from 9 EMMRI (Executive Master in Management of Research Infrastructures) graduates and EURIZON fellows is now elected as member of Scientific Committee of the National Council for Science and Technology Development of Ukraine
- Her project: Formation of the Blue Economy national node (UKRMARI)
- Aim: “activation of maritime research in Ukraine based on the mobilization of scientific, technical and resource potentials of the maritime research institutions”



# DESY travel to Kyiv 1-2 October 2024

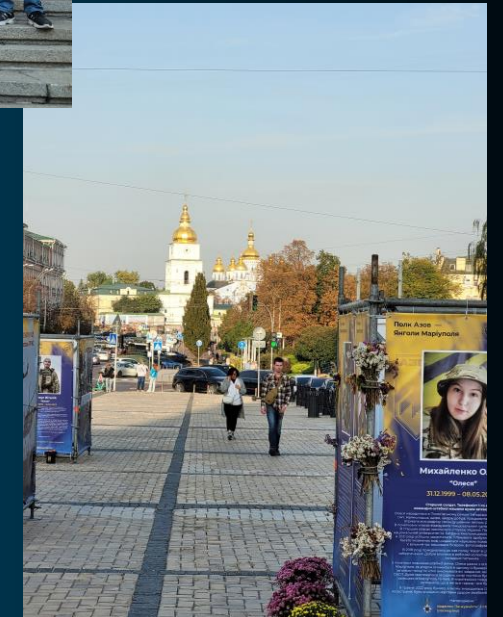
DESY delegation: Helmut Dosch, Christian Stegmann, Martin Sandhop, Sergii Fomin

Discussion meeting with students of Physics Faculty of Taras Shevchenko University, and EURIZON fellows

→ great thanks to Olena Pastoven!

Meeting at the Bogolyubov Institute of Theoretical Physics  
Visit at the Presidium of National Academy of Sciences of Ukraine NASU

Discussion with relevant stakeholders, like Olga Polotska, Director of National Research Foundation of Ukraine NRFU, and Prof. Oleksandra Antoniuk, Chair of Scientific Committee Council of Ukraine for Science and Technology Development





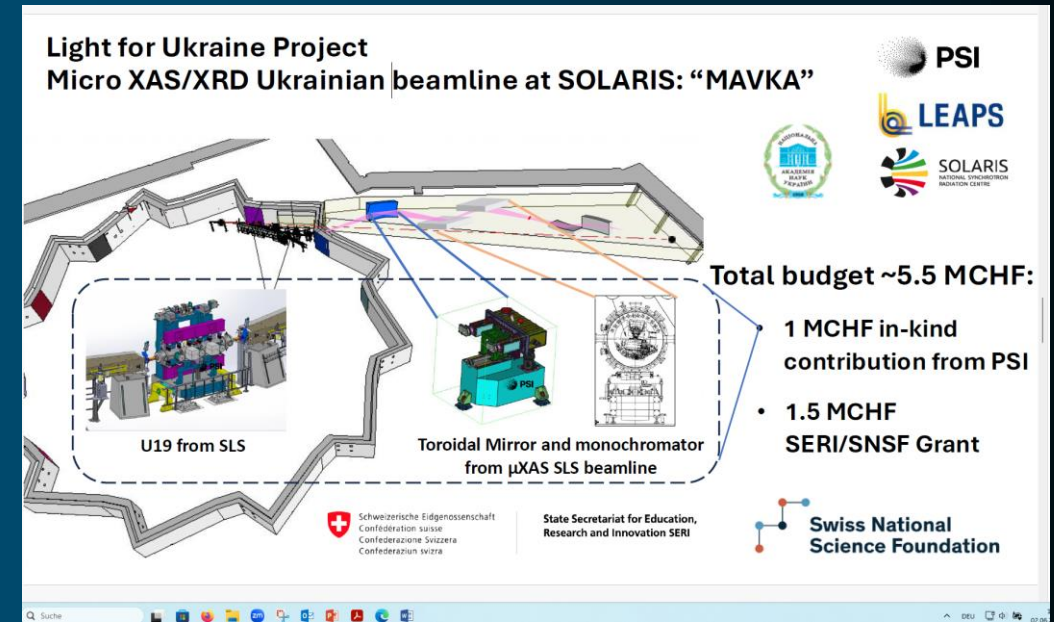
# Ukrainian participants at RÅC Summer Schools

- Young PhD students from Ukrainian institutions are specifically welcome at RÅC Summer Schools
- At RÅC-2024 in Poland: **5 fellows from Ukraine:** Taras Shevchenko University, Karazin Kharkiv National University; Kharkiv Polytechnic Institute; Kurdyumov Institute for Metal Physics of the NASU; Frantsevich Institute for Problems of Materials Science NASU
- RÅC-2025: 24-31 AUG 2025, Tallinn, Estonia <https://www.rac-school.org/>
- RÅC-2026: Sweden will be host; Ukrainian applicants welcome, call open ~March 2026

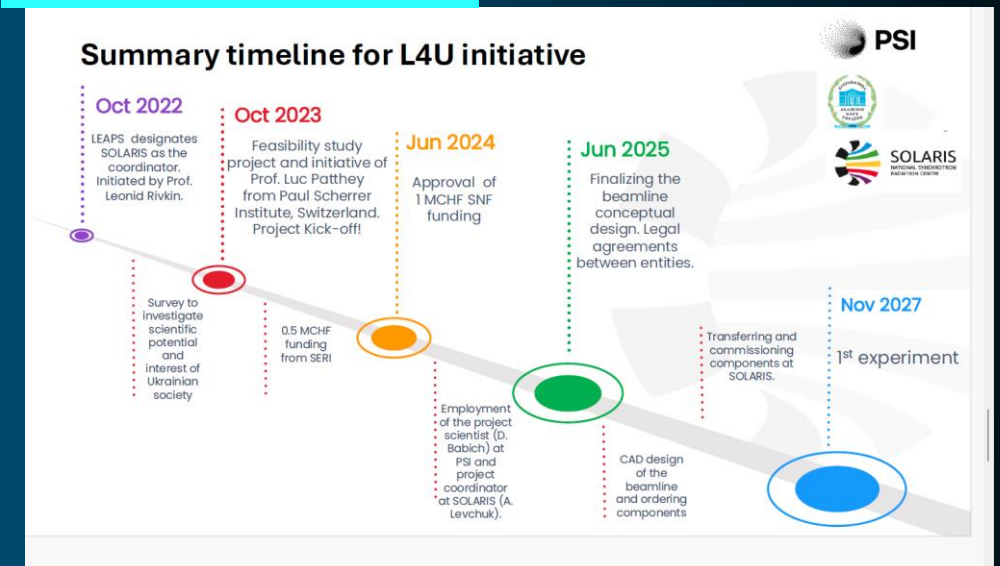


# Ukraine Beamline @ SOLARIS

- Ukraine Beamline @ SOLARIS: status of project and German contribution?
- Initiated from LEAPS – „Light for Ukraine“
- Swiss PSI-Institute plus Polish SOLARIS Synchrotron (Kraków) together with National Academy of Sciences of Ukraine (NASU)
- German contribution? Very much requested!
- DESY is engaged, trying to find funding:
- **DESY initiates a (Helmholtz) proposal** together with interested Helmholtz centres, defining scientific-technical contribution



Slides by PSI





# EU projects after EURIZON

## RIFF : CSA-action – DESY is participant

„Research Infrastructures for the Future of Ukraine“: starting Sept. 2025, Kick-off in Brno at coordinator Masaryk University

*RIFF will deliver “Roadmap for Recovery and Enhancement of RIs in Ukraine” using both (1) bottom-up approach with an open call for proposals, robust training, awareness raising and dissemination strategy towards potential applicants, rooted in a network of eight partners in Ukraine; and (2) top-down approach with a robust consultation process involving a broad range of stakeholders from the government, policymakers and the scientific community.*

**RIA-action foreseen in HORIZON-INFRA-2026-DEV-01-05: Research infrastructures as accelerators of the integration of Ukraine in the European Research Area**  
(draft currently developed)

→ allowing **scientific-technical collaborative activities EU-Ukraine along research infrastructures**, following EURIZON-Recommendations

### DESCRIPTION OF THE ACTION (PART A)

## COVER PAGE

*Part A of the Description of the Action (DoA) must be completed directly on the Portal Grant Preparation screens.*

PROJECT	
Grant Preparation (General Information screen) — Enter the info.	
Project number:	101215656
Project name:	Research Infrastructures for the Future of Ukraine: Roadmap for Sustained Growth and Recovery
Project acronym:	RIFF
Call:	HORIZON-INFRA-2024-DEV-02
Topic:	HORIZON-INFRA-2024-DEV-02-01
Type of action:	HORIZON-CSA
Service:	REA/C/04
Project starting date:	fixed date: 1 September 2025
Project duration:	36 months



Recommendations of the EURIZON project  
<https://www.eurizon-project.eu/>, April 2025

**General aims:**

- Strengthening Research Infrastructures (RI) Ecosystem in Ukraine
- Maintaining infrastructures in Ukraine to survive
- Prevent brain drain of Ukrainian scientists

1) Joint EU-Ukrainian Science cooperation projects (Scientific-technical cooperation)

- Allow for Dedicated EU-Ukrainian research projects along large-scale facilities, in various research areas
- Set up bilateral partnerships/tutorship among Ukrainian Research Infrastructures and European RI laboratories
- Strengthen joint knowledge transfer about modern techniques, equipment and instruments at research infrastructures

## 2) Individual support to Ukrainian Scientists

- Continuation of Fellowship programme(s), allowing direct support to individual scientists in Ukraine
- Grants to allow Ukrainian scientists to attend international summer schools, workshops and conferences
- Financial support to publish science results
- **Training:** set up training schemes and staff exchange programs at various levels, including management of research infrastructures (contribution to capacity building of Ukrainian RIs, adjusting management skills to EU standard)
- Establish joint co-tutorships for PhD students in Ukraine, together with EU-partners, including access to facilities to carry out scientific experiments

### 3) Equipment

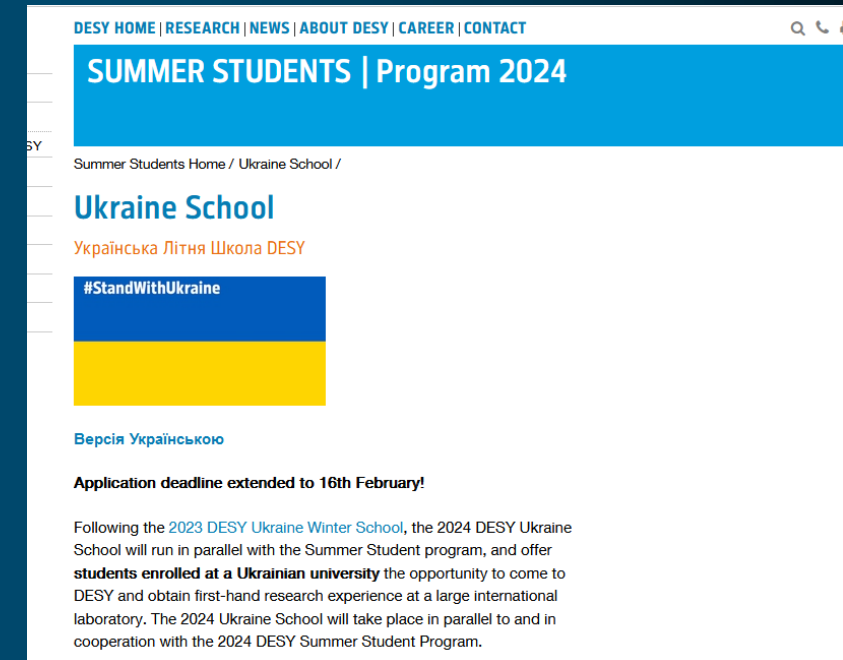
- Support donations of equipment of RI from EU laboratories to Ukrainian laboratories

Examples of ongoing/ intended joint S&T efforts:

- Support the set-up of a Ukrainian beamline for Ukrainian users at the synchrotron SOLARIS in Kraków, Poland, following the respective "Light for Ukraine" LEAPS initiative
- Joint development with Ukrainian laboratories of novel detectors and methods for Heavy Ion experiments at the FAIR accelerator center in Darmstadt, Germany
- R&D on instrumentation for the Ukrainian neutron source at KPI Kharkiv

# DESY Ukraine Winter & Summer Schools

- DESY-Ukraine Summer School 2024: 8 weeks during July – September 2024
- **14 students from various parts of Ukraine:** Kharkiv National University; L'viv Ivan Franko National University; Taras Shevchenko University Kyiv; Kyiv Polytechnical University; Kyiv Mohyla Academy
- 12 females, 2 males: **difficult for male students and scientists to cross the border**
- DESY Ukraine Winter School already in January – March 2023
- Covers projects in **all research areas at DESY**, complemented by a lecture series on the physics fundamentals of that research”
- **DESY-Ukraine Summer School 2025:** ~10 participants in Hamburg, 2 participants in Zeuthen



# Science in Ukraine – a conversation @TTBSC 2024

DESY active in **Science Diplomacy** for Ukraine:

Prominent **Ukrainian speakers at the Transatlantic Big Science Conferences** 2022 in Washington, D.C, and in 2024 in Berlin

President of the National Academy of Science of Ukraine Anatoly

Zagorodny explains the difficult situation of science in Ukraine

Round table “Supporting the science system in Ukraine”

**Priority issues:**

- preservation of **personnel potential**
- restoration of **damaged and destroyed infrastructure** of scientific institutions
- **reproduction of protected areas** affected by hostilities
- provision of institutes with **modern equipment**
- **access** to international research infrastructures
- establishing cooperation with the **new generation of the Ukrainian scientific diaspora**

To be continued at next Transatlantic Conference!



*Jürgen Mlynek, Chairman of the Board of Directors, Wilhelm and Else Heraeus Foundation, and Anatoly Zagorodny, President of NASU – 27 June 2024, TTBSC 2024, Berlin*



Thank you!