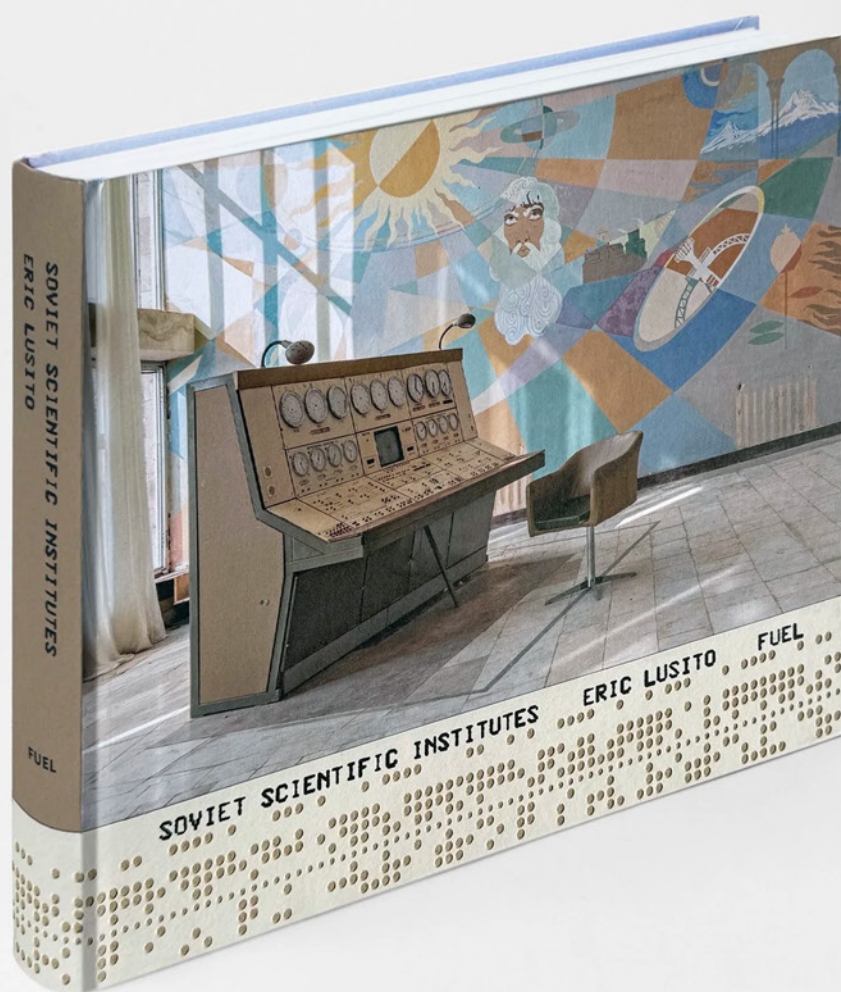




REVUE DE PRESSE



SONO PAZZI QUESTI

Negli anni 90, dopo il crollo dell'Unione Sovietica, molti istituti si sono trovati in difficoltà, la loro sofisticata tecnologia condannata all'estinzione. La perseveranza degli studiosi ha però permesso, sfidando ogni previsione (e la guerra), di proseguire la ricerca

Di Chiara Corridori
Foto di Eric Lusito



† L'Istituto di Scienza dei materiali dell'Accademia delle Scienze dell'Uzbekistan. Al suo interno, un Forno solare - uno dei due maggiori al mondo.
+ L'Osservatorio di Assy-Turgen, struttura di ricerca astronomica ad alta quota gestita dall'Istituto Astrofisico Fesenkov (FAI) tra le montagne Zailiyskiy Alatau, in Kazakistan.

Nell'autunno del 2021 il fotografo documentarista Eric Lusito si trova in Ucraina, alla ricerca d'ispirazione. «A Kharkiv ho incontrato uno scienziato che ha accettato di organizzare una visita al suo istituto. Un'opportunità che avrebbe potuto essere l'unica», dice, «a quella prima visita segue l'invito per accedere a un secondo sito scientifico e poi a un terzo e ad altri ancora. «Ho capito che c'era un universo da esplorare». La guerra, nel febbraio 2022, blocca tutto, ma non l'idea di poter creare un progetto fotografico sui resti di un'enorme infrastruttura scientifica statale presenti

anche in altre ex repubbliche e in Paesi satelliti della fu Unione Sovietica. Lusito viaggia quindi in Armenia, Georgia, Kazakistan, Lettonia, Romania, Ungheria e Uzbekistan. Ritrae siti misteriosi, spesso nel bel mezzo del nulla e raccoglie tutto in una monografia: *Soviet Scientific Institutes*, da poco uscita per FUEL. Tra gli scatti, l'Istituto di Ionosfera di Kharkiv, dall'antenna puntata verso il cielo, oggetto di fantasiose interpretazioni della popolazione locale, che a lungo l'ha immaginata un'arma capace di controllare il clima. E poi un centro di ricerca sui raggi cosmici, nelle remote

montagne armenie. Una torre di 45 metri, sede di un telescopio dell'Osservatorio dell'Istituto Astrofisico Fesenkov sull'altopiano kazako di Assy-Turgen. Il concentratore di energia solare tappezzato da 10700 specchi presso l'Istituto di Scienza dei Materiali, a 50 km dalla capitale uzbeka. Strutture maestose quanto cattedrali, sinonimo di potenza economica e inaccessibili all'epoca dell'URSS. «Ognuna di queste realtà porta con sé il peso di un'enorme ambizione. Paul Josephson, nel saggio contenuto nel libro, parla della "gigantomania" del regime. Come ho ottenuto l'ingresso nei siti? La mentalità so-

SCIENZIATI

prospettive, luce. Complice il riferimento a una tradizione di artisti quali Walker Evans, Bernd e Hilla Becher, Lynne Cohen e Simon Norfolk, il risultato è un equilibrio (perfetto) tra precisione documentaria ed emozione estetica. «Per me è un obiettivo costante. Certo, non lo raggiungi sempre, è una sorta di Santo Graal».

Radiotelescopi, acceleratori, stellarator da lui ritratti hanno spesso un nome - UTR-2, ESU-5, Uragan-3M - e l'aplomb di personaggi (fanta)scientifici, liberamente tratti da produzioni alla H.G. Wells o da Star Wars. «Sono oggetti unici, frutto di anni di riflessione, esperienza e passione. E perciò custodiscono e riflettono qualcosa delle persone che li hanno realizzati». Forse è questo il segreto del loro fascino. In un'era sempre più virtuale ricordano che la sorgente è il nostro ingegno. ■



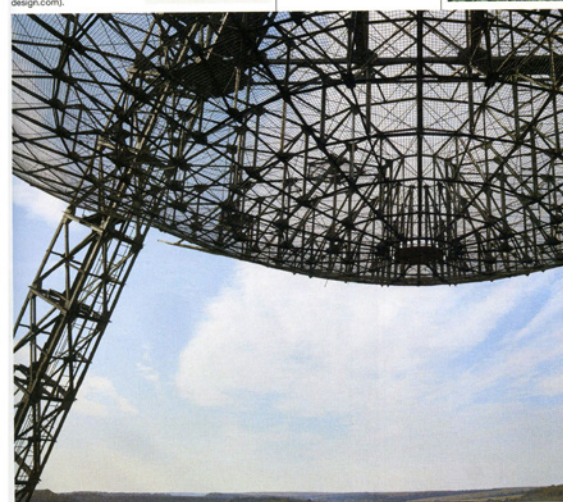
→ Eric Lusito, Soviet Scientific Institutes (pag. 208, €26.95, fuel-design.com).

→ L'Aragats Cosmic Ray Research Station, in Armenia, fondamentale per lo studio dei raggi cosmici, della fisica solare e dei fenomeni atmosferici estremi.



→ Budapest: Il Reattore di Ricerca (BRR), entrato in funzione nel 1959, è utilizzato dall'Agenzia Internazionale per l'Energia Atomica per formare gli ispettori della sicurezza nucleare.

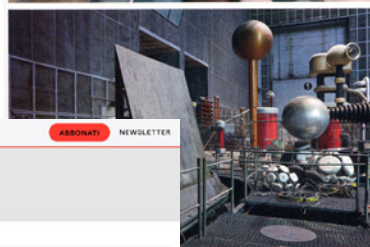
→ L'Istituto di Ionosfera del Politecnico di Kharkiv (NTU KHPI), in Ucraina, specializzato in fisica geospaziale con metodi radar.



Aura 142 Esquire N°50



↑ L'Istituto di ricerca in radiofisica di Orgov, in Armenia. Ospita il rivoluzionario Radiotelescopio Ottico ROT-54.
← L'Istituto di Tecnica Nucleare (INT) di Budapest, leader nella formazione nucleare in Ungheria.



← Un laboratorio dell'ICMET Craiova, in Romania, riferimento per ricerca e collaudo nel campo dell'ingegneria elettrica.

vietica si è notevolmente ridimensionata. Per entrare e scattare fotografie ci vuole l'autorizzazione di tutte le istituzioni. A volte la procedura è semplice, altre richiede settimane. In alcuni casi ho ricevuto dei rifiuti».

Le immagini restituiscono il fascino di un altro sospeso tra obsolescenza e modernità. Ad abitarlo pannelli di controllo eleganti come oggetti di modernariato, scatole metalliche per il rilevamento di raggi cosmici di al-lure miyazakiana, assorbitori d'onda simili a composizioni origami a forma di petalo. «Gli scienziati definiscono i dispositivi "installazioni", termine usato anche nell'arte contemporanea. E non a caso. Spesso io li ho percepiti come degli artworks». Di foto in foto, la tecnologia è avvolta da un'involontaria bellezza ed eleganza, che Lusito ha colto curando tagli,

STYLE NEWS SPORT CULTURA LIFESTYLE SHOPPING

Esquire



Dentro gli istituti scientifici perduti dell'URSS

DI CHIARA CORRADI

uire

N°50

2026



Ukraine uncovered

Photographs of scientific life in the invaded nation

Rare interaction Peter Higgs opens up in archival audio interview
Dark experience The Jewish physicist who worked for Nazi Germany
Feline follower How Ursula Le Guin popularized Schrödinger's cat



Feature: Culture, History and Society

physicsworld.com

Physics in Ukraine

The Ukrainian city of Kharkiv was a major target during the first days of the Russian invasion and, as the Russian army advances, it continues to face attacks by drones and missiles. But when he travelled to Kharkiv in November 2023, photographer **Eric Lusito** discovered a resilient community of scientists doing everything in their power to continue their research



Photo 1 Alexander Mats, pictured next to an electron microscope, at the Department of Solid State Physics and Condensed Matter, Kharkiv Institute of Physics and Technology, November 2023.

Kharkiv, Ukraine's second-largest city, has a long history as a world cradle of physics. The first experiments in the Soviet Union on nuclear fission were conducted there in the 1930s, and in 1932 the future Nobel-prize-winning physicist Lev Landau founded an influential school of theoretical physics in the city. Over the years, Kharkiv has been visited by influential scientists including Niels Bohr, Paul Dirac and Paul Ehrenfest.

Kharkiv is still home to many research institutes, but, located just 30 km from the Russian border, the city has been heavily damaged and suffered hundreds of casualties since the Russian invasion that began in February 2022. Recent advances made by the Russian forces have put the region under increased pressure, with thousands of civilians fleeing away from the border towards Kharkiv.

I first travelled to Kharkiv in November 2021 as part of a photography project documenting Soviet-era scientific

facilities. The Russian army was massing at the border, but I was nevertheless stunned when, having returned home to France, I heard the news of the invasion.

I considered abandoning my project, but I felt compelled to document what was happening and in November 2023, I returned to Kharkiv. Though the Ukrainian counter-offensive had pushed back the Russian forces, the city was nevertheless plunged into darkness, the streets deserted. The day after I arrived, explosions rang out in the city centre.

For two weeks, I photographed Kharkiv's scientific facilities, many of which had been destroyed or badly damaged since my previous visit. I also interviewed and photographed scientists who were continuing to perform their research despite the ongoing war. As the situation in Kharkiv becomes increasingly critical, the pictures I took stand as a record of the effects of the conflict on the people of Ukraine.

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physicsworld.com

Feature: Culture, History and Society

Department of Solid State Physics and Condensed Matter, Kharkiv Institute of Physics and Technology, November 2021 and November 2023

Even when I was there in 2021, visiting the old cryogenics laboratory of the Kharkiv Institute of Physics and Technology (KIPT) was like stepping back in time (see the cover of this issue). Founded in 1928 as the Ukrainian Physics and Technology Institute, KIPT is one of the oldest and largest physical science research institutes in Ukraine. New facilities have been built on the outskirts of the city, but the original buildings are still standing and, because of the historical value of the site, a project

is underway to convert them into a museum.

When I returned in 2023, the corridors were silent, the heating was shut off and all the doors were closed. However, a few of the offices were still occupied by researchers in KIPT's Department of Solid State Physics and Condensed Matter (photo 1, opposite and photo 2, below top). During my visit, I also met students from the Kharkiv National University who were visiting with their teacher, Alexander Gapon (photo 3, below bottom). Their faculty had been damaged in the early days of the fighting, and they had moved lab classes to KIPT so that teaching could continue.

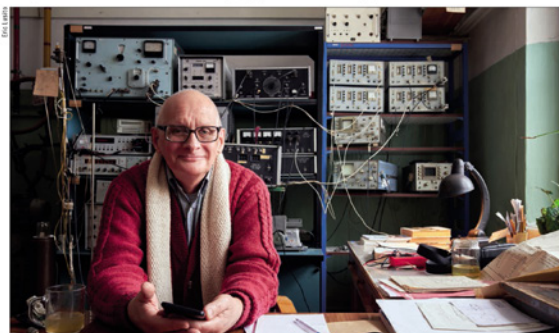


Photo 2 Vladimir Kioshko, ultrasound specialist at the Department of Solid State Physics and Condensed Matter, Kharkiv Institute of Physics and Technology, November 2023.



Photo 3 Alexander Gapon, Kharkiv National University, November 2023.

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Photo 4 The stellarator Uragan-2M at the Plasma Physics Institute, Kharkiv Institute of Physics and Technology.

Plasma Physics Institute, Kharkiv Institute of Physics and Technology, November 2023

The Plasma Physics Institute houses two huge stellarators for studying nuclear fusion. These machines confine plasma under high magnetic fields (photo 4, above), creating the hot, dense conditions necessary for nuclei to fuse. I met Igor Garkusha, the director of the institute, who showed me where the roof of the facility had been pierced by projectiles during the early days of the Russian invasion. Debris was still scattered everywhere and, in the room housing the stellarators, he held up a piece of shrapnel (photo 5, below). The roof played its protective role and the stellarators have not suffered any damage,

but with research temporarily halted, Garkusha worried that they were at risk of losing skills.

"I never thought the Russians would wage war on us because I have a lot of family and friends on the other side," Garkusha said. "I attended a nuclear fusion conference in London organized by the IAEA (International Atomic Energy Agency) in October. There were Russian scientists whom I've known for 20 or 30 years, and not one of them spoke to me."

Photo 6 Dormitories at the Kharkiv Institute of Physics and Technology, in the same neighbourhood as the Plasma Physics Institute.

Photo 5 Igor Garkusha holding a piece of shrapnel in the stellarator room of the Plasma Physics Institute, Kharkiv Institute of Physics and Technology.



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Photo 9 Ksenia Minakova, from the Kharkiv Polytechnic Institute, pictured with equipment recovered from the rubble of the laboratory.

Kharkiv Polytechnic Institute, November 2023

At around 5.30 a.m. on 19 August 2022 a missile struck a university building of the Kharkiv Polytechnic Institute (photo 10, below left). From 8 a.m., Ksenia Minakova, head of the optics and photonics laboratory, searched through the rubble for what could be salvaged. Much of the equipment had been destroyed, but she and her colleagues found some microscopes, welding equipment and computers. After a few days, heavier equipment such as vacuum pumps could be evacuated.

I met Minakova at the institute, where she showed me her small temporary laboratory (photo 9, above). Her research is dedicated to solar energy and improving heat dissipation in photovoltaic systems. To enable Minakova's team to continue working, Tulane University in the US, where they have collaborators, donated photovoltaic

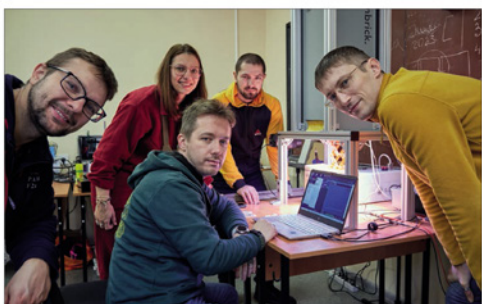
cells as well as a new 3D printer, screens, oscilloscopes and other equipment.

But what she was most grateful for was at the back of the room, where her team was huddled around a solar simulator donated by a Canadian company (photo 11, below right). "I explained to them what I needed and they came up with a technical solution for our laboratory and completely assembled a new installation for us from scratch. This equipment is worth \$60,000!" exclaimed Minakova.

In 2023 she was appointed ambassador of the Optica Foundation and a finalist for the L'Oréal-UNESCO "For Women in Science" prize. She has received several offers to work abroad. "I turned them down. My place is here, in Ukraine. If everyone leaves, who will take care of rebuilding our country?"

Photo 10 (Below left) the university building of the Kharkiv Polytechnic Institute that was destroyed on 19 August 2022.

Photo 11 (Below right) Ksenia Minakova and her colleagues around the solar simulator.



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Photo 7 Borys Grynyov, director of the Institute for Scintillation Materials, Kharkiv.



Photo 8 A technician processing alkali-halide scintillation crystals at the Institute for Scintillation Materials, Kharkiv.

The Institute for Scintillation Materials, Kharkiv, November 2023

"I can't complain: we get a lot of orders," says Borys Grynyov (photo 7, above), director of the Institute for Scintillation Materials. Scintillation crystals, which emit light when exposed to radiation, are a vital component of particle detectors, and even though some of its buildings have been destroyed, the institute continues to participate in CERN research programmes.

For several months at the beginning of the war, around 50 people – members of staff, and their families, lived in the basement of the facility. The teams were eventually able to move the equipment to better-protected rooms, which allowed the production of the scintillation crystals to resume (photo 8, above bottom).

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EVERYDAY SCIENCE | OPINION AND REVIEWS

Soviet institutes, Martian neighbours, Whovian science, stellar patterns and dystopian predictions: micro reviews of recent books

17 Jun 2026

🕒 Reading Time: 4 minutes

In the latest of our series of bite-sized reviews, *Physics World* editors give their verdicts on new science titles



Once colourful *Masters of Time* is a 1975 mosaic by Halyna Zubchenko and Hryhorii Prysheddko at the Institute of Cybernetics, Ukraine. (Photograph by Eric Lusito. Taken from [Soviet Scientific Institutes](#) by Eric Lusito, © FUEL Publishing 2026)

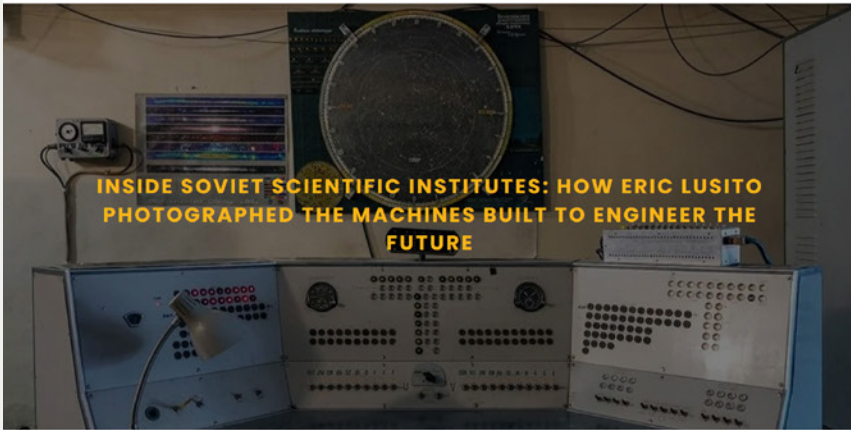
Soviet Scientific Institutes

By Eric Lusito

Photos of research facilities in the former Soviet Union and its satellite nations might not seem the most promising subject matter for a coffee-table book. But French photographer [Eric Lusito](#) has done just that with [Soviet Scientific Institutes](#), which contains more than 150 pictures from his travels across the former Soviet bloc. Unable to travel to Russia, Azerbaijan and Belarus, images from what Lusito calls the “authoritarian remnants” of the Soviet Union are absent. However, his photos across eight other countries depict the downfall of many once vibrant labs, from a rusty cosmic-ray telescope in Armenia to a defunct nuclear reactor in Georgia. The grim reality stands in contrast to the colourful 1970s mosaics in a Ukrainian cybernetics institute that seemed to herald a utopian future. **Matin Durrani**

- 2026 Fuel
- You can enjoy a selection of Eric Lusito’s photographs of physics labs in Ukraine in his 2024 feature for *Physics World*: [“Physics in Ukraine: scientific endeavour lives on despite the invasion”](#)





Welcome to this edition of [\(book spotlights\)](#). Today, we uncover the layers of *'Soviet Scientific Institutes,'* by [Eric Lusito](#) (published by [FUEL Design & Publishing](#)). We'd love to read your comments below about these insights and ideas behind the artist's work.

Soviet science left behind a strange afterlife.

Inside former Soviet scientific institutes, Eric Lusito found machines built for nuclear physics, radio astronomy, space research, and the dream of a technological future. Some of these places were once secret, some are still difficult to enter, and many are still connected to scientists who continue their work despite collapse, low salaries, and war. His book *Soviet Scientific Institutes* is about a world where science survived long after the empire that created it disappeared.

But the project is not only about the past.

It is also about access, trust, patience, and the difficult line between documentation and fantasy. Lusito speaks about entering sensitive sites, photographing scientists at work, avoiding the easy look of ruins, and shaping the book with FUEL into something closer to a cabinet of curiosities than a simple archive. What begins with extraordinary machines becomes a story about people who kept working inside history instead of leaving it behind.

This interview shows how to photograph places that already look visually powerful without letting the surface take over. Lusito's process offers a way to think about access, editing, sequencing, and restraint when the subject is already full of drama. It is not about making the world look stranger, but about understanding why it already is.



The Book

Soviet Scientific Institutes by Eric Lusito, published by FUEL, is a photographic journey through the hidden scientific world of the former Soviet Union. Across laboratories, observatories, nuclear research sites, control rooms, and vast experimental machines, Lusito documents places that were once built around secrecy, ambition, and the belief that science could shape the future.

The book shows a world suspended between history and survival. After the collapse of the Soviet Union, many institutes lost funding and fell into decline, but some scientists continued their work, often in difficult conditions and even during wartime. Rather than treating these places only as ruins, Lusito photographs them as living traces of a scientific dream that has not fully disappeared. (FUEL Design & Publishing, Amazon)



Starting point: Your project began in late 2021 when a scientist in Kharkiv showed you his laboratory. What was it about that first visit that made you think this could become a long-term project?

No, I had this opportunity and thought this would just be a one-off experience. It was my first trip abroad since the start of the pandemic, and I was travelling through Ukraine eager to find inspiration. I had absolutely no idea about this scientific world and I hadn't planned on staying in Kharkiv. But later the director called me again into his office. I wondered if I'd made a mistake during the visit, perhaps I hadn't followed the safety instructions properly. In short, I expected to have to explain myself. Instead, we discussed my impressions and then he asked me if I'd be interested in visiting another scientific site in the region. I jumped at the chance, of course. And would you believe it, the second director did the same. Even better, we went together to the third laboratory. It was at that moment that I realised there was a whole world to explore. I stayed in Kharkiv for a month and a half and met a scientific community that left a lasting impression on me.



Continuation: Your first book, *'After the Wall,'* documented abandoned Soviet military sites. How did working on that earlier project prepare you for photographing these scientific institutes?

Both are long-term projects, spanning several years and involving various countries. As I am now familiar with this part of the world, travelling alone around these countries was not particularly difficult. I learnt to communicate in Russian, which I used around 75 per cent of the time, and in English, which is spoken by the younger generation nowadays. The main differences are the presence of people and time constraints. At abandoned Soviet military bases, I could spend as much time photographing as I needed, waiting for the ideal light if necessary. During my time at research institutes, I was always accompanied by someone to guide and supervise me. And when an Armenian scientist invites you to share a glass of Armenian cognac, you simply can't refuse. Neither the second nor the third. What also made it easier for me was that I have a degree in physical instrumentation, which included courses in a wide range of scientific disciplines. I think it helped because the scientists noticed that I knew a little about their field of research, let's just say I wasn't completely out of the loop. It was a privilege to meet and talk with these scientists. I also realised that I couldn't have carried out this project when I was younger, as it required a certain level of maturity to grasp it.

Access: Many of these facilities were built in complete secrecy and are still not easy to enter. How did you get permission to photograph inside places like the nuclear research reactor in Georgia or the stellarator in Ukraine?

The reception I received varied greatly from country to country and institute to institute. Sometimes, obtaining permission was straightforward, while at other times it could take several weeks. For particularly sensitive sites, approval is required from scientists, the administration and, finally, the security services. I experienced rejections, of course, and some institutes remained closed to me, but overall I got what I was looking for, particularly in the field of nuclear physics. I am very grateful to all the scientists who agreed to take part.

Now, I can give you more details. While in Kharkiv, I collaborated with the French Institute to organise an exhibition of my photographs of scientific sites. The aim was to draw attention to this heritage and history. Thanks to this exhibition project, I was able to gain access to a number of institutes. It was the director of one of these institutes who introduced me to the Institute of Plasmas and its stellarators, which are nuclear fusion facilities. It is one of the most fascinating places I have ever visited. It was in December 2021, and a few weeks later the site was shelled by the Russian army.

As the war continued, my project seemed insignificant, and I didn't look at my photographs for months. It was only when it became clear that Putin had failed in his plan to quickly annex Ukraine that I took the time to review my work again. I felt it was a promising start, and it would be a shame to stop there. If I couldn't continue in Ukraine, perhaps I could try other countries with a shared history instead. Initially, I wasn't too sure, but it turned out to be a good idea. I started in Georgia first. I tried to meet the director of the institute in person, even if it took a few attempts. I introduced myself, showed him my photos from the project and asked for permission. He replied, "Oh, you met the physicists from Kharkiv? I studied there!" This created a connection and made him willing to help. However, his consent alone was not enough. I also needed clearance from the nuclear safety administration. The process took two weeks, but they finally granted me exceptional official approval. The same people later refused to provide a second entry permit, though. This visit convinced me to continue with this project in other countries of the former Soviet bloc. As you can see, it has all been a gradual process.



Visual approach: Reviewers describe your images as combining documentary honesty with cinematic composition. How do you decide where to put the camera when the room itself looks almost like a movie set? And how do you photograph something as huge and strange as the radio telescope UTR-2 or the 1950 proton accelerator without it sliding into science fiction?

These facilities brought back memories of the comic books I read as a child, such as *Blake and Mortimer* by Edgar P. Jacobs and *Tintin* by Hergé. Having reread them, their imagery certainly served as a visual reference. I wanted to capture the edge of science fact, where it turns into fiction. I follow my inner voice and try to take the photograph that will eventually give me satisfaction. I want the photograph to accurately reflect the feelings and emotions experienced in that place. I previously worked with a 4x5" large-format camera, but for this project I used a digital camera to take photos more quickly. However, I still work slowly with a tripod to ensure my images are properly framed. I like to have plenty of time for this, but that was not always possible.

Documentary line: What makes one scientific interior feel like a strong documentary photograph rather than just an amazing-looking room?

It is documentary when a photograph can provide insights into history, technology or science. If it looks amazing, all the better.

Editing out: What kinds of images did you cut because they felt too close to science-fiction fantasy or Cold War cliché?

First, I wanted to avoid the "urban" industrial ruin or Chernobyl-style aesthetic. As I wanted to photograph authentic facilities, it was inevitable that they would show signs of decay since they were created decades ago. Scientists are well aware of this and hope that readers will look beyond the surface and take an interest in their history and research. Then, and this may seem to contradict what I've just said, I wanted to avoid overly contemporary spaces, as there's nothing more boring than a room full of laptops. Lastly, I didn't want to limit myself only to fantastical-looking places. In my opinion, that would have seemed too far-fetched and detached from real life. The goal is to find the sweet spot and then stretch the limits.





Influence: You have mentioned Bernd and Hilla Becher as early inspirations. Their work was very systematic, photographing the same type of industrial structure again and again. Did that idea of a series or a typology shape how you built this project?

I am a self-taught photographer and when I studied the history of photography, discovering their work was a big shock. In France, we've long been influenced by the humanist style, as seen in the work of Cartier-Bresson, Doisneau or Riboud, but I was immediately drawn to the famous Düsseldorf School. Becher's typological series are well known, but I particularly appreciate their work on composition. Industrial objects are photographed in such a way that the images turn into abstractions. Now, that doesn't mean I copy their approach. First, I work in colour, which is a key element for me. For Soviet Scientific Institutes, I was determined to find places that were all different, so I didn't want to make a typology. What I've created is not a series, but rather a collection, as a kind of cabinet of curiosities. The beauty of these sites lies in their uniqueness, not their similarities.

Wartime: You returned to Kharkiv in 2022 during the Russian invasion to photograph scientists still working there. How did that change what you were looking for with your camera?

I left Kharkiv in December 2021. The Russian army had begun to amass troops near the border, but the inhabitants didn't seem particularly concerned, even though Kharkiv is only 30 km from Russia. As I said, the Ukrainian scientific community made a deep impression on me. So, when the full-scale invasion began, I was extremely sad and angry. Thankfully, the internet hadn't been cut off yet, and I was able to chat with several scientists. After the initial shock, I received messages such as "The resistance is organising. We're fighting, and we'll win!", while all the military experts on television were predicting Ukraine's defeat. I believe Ukraine has been underestimated for far too long. I wanted to go back and join the resistance. However, when Ukraine set up the International Legion, it was made clear that they only needed experienced soldiers, not civilians. There were also plenty of Ukrainian volunteers for territorial defence. These may have just been excuses, though, as I was also scared to go because of the intensity of the war, and I finally pursued my project in other countries instead. In autumn 2022, the Ukrainian Armed Forces launched a counter-offensive, liberating Kherson and the Kharkiv region, including the Braude Observatory, where the UTR-2 radio telescope is located and which I had visited earlier. Once I learned that the area was open to civilians, I decided to return to Kharkiv. My aim was to document the situation of scientists during the war, which was, indeed, a different approach. Unfortunately, it was not possible to see all the people I had met two years ago again. Nevertheless, I felt that I was in the right place and that, with my camera, I could help. This work has been covered in scientific publications such as Science and Physics World, among others. Then, for the book, the publisher selected some of those photographs. Scientists in these countries have experienced hardships that are difficult for us to imagine. Sadly, war is yet another adversity that they are forced to endure.



The people: Some scientists stayed at their institutes through the collapse of the Soviet Union, earning almost nothing. Did you feel pressure to show the human story behind the machines, or did you trust the objects to tell that story on their own?

As it was a personal project, I didn't feel under any pressure. I'm interested in this techno-scientific world and how it has evolved over time. As you said, some places seem unreal, like something from a science fiction film. A research institute isn't as busy as a factory, and you can find spaces filled with strange machines and no one around. This contributes to the ambience. However, the human element is crucial, which is why I wanted to portray some researchers in their working environment. In the 1990s, scientific institutes faced a catastrophic financial crisis. Staff numbers were dramatically reduced, resulting in a brain drain. While their situation has improved since then, it is still far from satisfactory. I have met young scientists who, after ten years of study, earn less than a waiter. Yet despite everything, they are passionate people who continue to contribute to the advancement of science. We will all benefit from their work, even if we don't realise it.

People vs. machines: When did you decide an institute needed a scientist in the frame, and when was the machinery enough on its own?

It depends on the context, the size of the facilities, and whether people want to be photographed or not. I've tried directing people, but it doesn't work because they don't act naturally. What I prefer is photographing people at their workplace. I only take a few photos. It's a habit from my film photography years, when every shot came at a cost. I like it when photography becomes a kind of ritual, as it creates a connection with the subject. Then I show the person the photo I've taken and ask if they're satisfied with it. If not, we do it again. For this project, I've always used natural light, even in dark conditions, and shot with a wide-angle lens. Of course, this means there are constraints, but it gives a visual unity.

Sequencing: The book moves across Armenia, Georgia, Hungary, Kazakhstan, Latvia, Romania, Ukraine, and Uzbekistan. How did you decide the order of the photographs, given that the locations and machines are all so different from each other?

You know, with this project spanning several years, I had lots of images running through my head. Working on a dummy helped me organise my thoughts and bring the project to a proper completion. However, I was not satisfied, so I printed a copy to get some feedback. I was fortunate enough to receive [Martin Parr's](#) comments in Arles in July 2024. At that time, I was considering using lots of archive photos and documents in the book. For my research, I spent several days consulting a Soviet archive fund held in Paris. I also returned to Ukraine at the end of 2024 to consult recently discovered archives that had been transferred from Kharkiv to Lviv. I finally presented the project to Damon and Stephen at FUEL. They were very responsive and enthusiastic. Although I thought I already had a large selection of photos, they pushed me to show them more. Then, they constructed the sequence in collaboration with me. They are renowned for their design skills, so I had confidence in their choices. The institutes are first sorted alphabetically by country, then in chronological order and finally according to visual criteria. Of the archives that I thought were important, we eventually only retained a few black-and-white scientific images at the beginning and end of the book. I'm thrilled with the result.



Archive images: In the end, the archive material was almost entirely removed from the book. What could your photographs do that the archive images could not?

Well, other people had already given me negative feedback about the archive images. However, it was whilst working with FUEL that I realised my photographs formed a complete and coherent whole that could be made into a 200-page book. The archive images had become an outside source that was interfering with my work. Although I had spent a lot of time on them, I actually felt a sense of relief when the editors removed them all. A photo book is not an encyclopaedia.

To discover more about this intriguing body of work and how you can acquire your own copy, you can find and purchase the book here. ([FUEL Design & Publishing](#), [Amazon](#))

Eric Lusito

Eric Lusito is a French documentary-style photographer working on long-term personal projects. Self-taught, he was influenced early by Bernd and Hilla Becher and Otto Dix, and became interested in the former Soviet bloc after watching the fall of the Berlin Wall on television as a child.

In the early 2000s, Lusito began travelling through former communist countries, searching for once-hidden military sites that later became the basis for his book *After the Wall: Traces of the Soviet Empire*, published by Dewi Lewis in 2009. His photographs have been exhibited internationally and are held in public collections including FRAC Bretagne, Kyosato Museum of Photographic Arts, MuCEM, and Nait de la Photo.

His latest book, *Soviet Scientific Institutes*, published by FUEL in 2026, grew from a visit to a laboratory in Kharkiv at the end of 2021. The project expanded across several former Soviet countries and explores the scientific facilities, machines, and people that remain connected to this history. ([Website](#), [Instagram](#), [Facebook](#))

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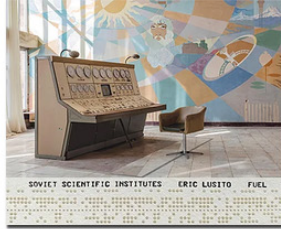
FUEL Design & Publishing is a London-based graphic design and publishing company founded by Damon Murray and Stephen Sorrell. Their work spans publishing, design, visual culture, photography, architecture, archives, and overlooked cultural histories.

Through a carefully curated catalogue of books, FUEL has become known for publications that combine strong visual material with thoughtful editing and distinctive design. Their books often explore unusual, forgotten, or rarely seen subjects, turning them into engaging visual records for a wide audience. ([Website](#), [Instagram](#), [Facebook](#), [X](#))



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Eric Lusito: Soviet Scientific Institutes

By Eric Lusito

Publisher: FUEL

Publication date: May 2026

Print length: 208 pages

Language: English

Price Range: 

Eric Lusito: Soviet Scientific Institutes opens a portal into a hidden world where ambition, secrecy, and science intersect. In this striking volume, Eric Lusito documents Soviet-era research facilities across former republics of the USSR, revealing spaces that feel equal parts laboratory, cathedral, and science fiction set. Gigantic control panels, towering telescopes, and enigmatic machinery populate his images, evoking a surreal, almost fantastical vision of Cold War-era ambition. Yet behind the theatrical scale lies a history of real human effort, secrecy, and scientific pursuit.

The institutes Lusito captures were once central to Soviet visions of technological utopia. Science was promoted as a tool to accelerate modernization, replace religious authority, and secure global supremacy. "Big science" projects often involved thousands of researchers working in total secrecy, pursuing cosmic ray experiments, radar installations, and other endeavors that blurred the line between experimentation and militarization. With the fall of the USSR, many of these facilities fell into decay, abandoned yet still brimming with relics of past ingenuity. Some, however, continue to operate, as scientists navigate new political and technological landscapes, adapting old machinery to modern research—even amid ongoing geopolitical tension.

Lusito's lens captures these spaces with precision and wonder, highlighting the unintentional beauty of complex machinery and the quiet persistence of knowledge in the face of abandonment. From a cosmic ray research station perched in the Armenian mountains to one of the world's largest radars in Ukraine—rumored locally to be a climate-altering weapon—his photographs combine documentary rigor with cinematic composition. The book itself, featuring a tactile laser-cut cover referencing punched paper tape from early Soviet computers, mirrors the material and historical ingenuity of the sites it depicts.

Soviet Scientific Institutes is more than a photographic record; it is a meditation on ambition, decay, and human curiosity. Lusito invites viewers to contemplate the intersections of technology, secrecy, and aesthetics, offering a rare glimpse into a hidden epoch of scientific exploration that continues to resonate today.





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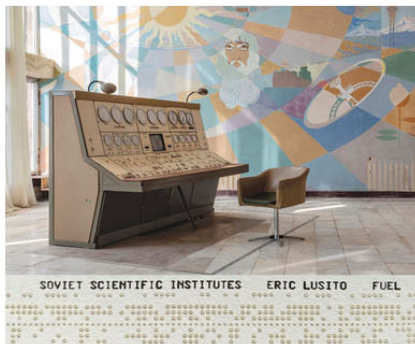
Existential philosophy with Jell-O: A recipe for readers

Among the new books being recommended by the staff at MIT Press Bookstore in Kendall Square are a compendium of big thinkers, a guide to making foods that wiggle, photo essays from Soviet science, a novel and a children's book about a talking pencil.

We asked the staff at the MIT Press Bookstore for some recent book recommendations. Head over to 314 Main St. in Kendall Square to continue the conversation.

“[Soviet Scientific Institutes](#),” by Eric Lusito. FUEL Publishing, 2026.

Photographer Eric Lusito trekked to over 20 scientific institutes across the former Soviet bloc, and the resultant small-format photo book is a record of ruin and of resilience, of beautiful murals trumpeting the triumph of science rising above disused mechanical hulks, and a record of scientific work continuing through years of tremendous upheaval. Scientists and technicians continue working at some of these facilities, and Lusito includes their images and stories, along with brief historical descriptions of each facility. — **recommended by Rebecca**



The cover for “Soviet Scientific Institutes.”



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RADIOPHYSICS RESEARCH INSTITUTE
National Body Of Standardisation And Metrology
YEREVAN, ARMENIA

PICTURE: ERIC LUSITO
WORDS: ISAAK LEWIS-SMITH

In late 2021, photographer Eric Lusito went looking for inspiration and found it in Kharkiv, Ukraine. Just 25 miles from the Russian border, he stumbled on some of the Soviet Union's magnificent scientific centres, many of which still stood – just about – like secular temples from an era of state-sponsored technological utopian ideals.

The whirling radars, dusty cabinets and lab-coated scientists oozed drama and reminded Lusito of the torch-lit fictional spy stories he gawped at under his duvet as a child. Sadly, though, this unfolding project was torn apart when the Russian tanks rolled towards Ukraine's border.

"I left in December 2021, and my new acquaintances sent me news of how terrible it was," Lusito says. "I knew the Ukrainians would fight back, but would they be able to hold out? As the war continued, my project seemed insignificant – I didn't look at my photographs for months. It was only later, when it became clear that Putin had failed in his plan to quickly annex Ukraine, that I took some time to review my work. If I wasn't able to continue in Ukraine, then perhaps I could find some other countries with a shared history."

For the past four years, he has travelled from Kazakhstan, Hungary and Romania to Georgia and Uzbekistan, in search of more of these dilapidated edifices in tribute to the scientists who worked in them. Now published in his new book, 'Soviet Scientific Institutions', one of the most memorable images was taken at the Radiophysics Research Institute, a complex deep in the Armenian mountains, housing a colossal radio telescope measuring 54 metres in diameter.

"This is the control desk in the control room of the telescope," notes Lusito. "Led by the Armenian physicist and engineer Paris Herouni, its design started in 1975, with construction taking place between 1981 and 1985. The resulting telescope was unique in combining both optical and radio capabilities in one instrument, and in this room, Herouni's team were the first to record a powerful radio flare from Eta Geminorum, a red giant star 380 light-years away."

"I was alone in the room when I took it – a rare moment on my trip – and this image came to visualise the close border between scientific fact and science fiction."

"A scientist once explained to me that a big physics facility resembles the course of human life. After birth comes a learning period of 10 to 20 years, followed by a long period of maturity, when the facility is at its best. This is inevitably followed by a decline in its scientific value, which is the normal process of the technological cycle."

"For me, this photo is the 20th century colliding with the 21st. But that doesn't mean it's all over. After all, there are still vinyl enthusiasts, aren't there?"

'Soviet Scientific Institutions' is published next month by FUEL

Témoignage exclusif : En Ukraine, le radiotélescope de Kharkiv mutilé par la guerre



LE CHERCHEUR UKRAÏNENNE SIDORTCHOUK DÉCOUVRE DES ANTENNES ENDOMMAGÉES PAR LES TIRS RUSSÉS. © ERIC LUSITO

Situé sur la ligne de front de l'invasion russe en Ukraine, le grand radiotélescope de Kharkiv a été en partie détruit par les combats. Le photographe [Éric Lusito](#) a pu s'y rendre en novembre 2023, accompagné d'astronomes. Il nous livre son témoignage.

« Surtout il ne faudra pas s'écarter des chemins, la majeure partie du territoire n'est pas déminée et est très dangereuse. » Avant de partir pour le radiotélescope UTR-2, à 65 km de Kharkiv, en Ukraine, Evgueni me rappelle les consignes. La région a été dévastée par la guerre. Evgueni est étudiant et prépare son doctorat à l'Institut de Radioastronomie de Kharkiv. Je l'avais rencontré fin 2021, quelques semaines avant l'offensive russe, et nous sommes restés en contact. Il m'avait accompagné une première fois au radiotélescope afin que je le photographie. Cet instrument atypique — tout un réseau d'antennes aux formes étranges — est un fleuron de l'astronomie mondiale. Grâce à lui, les astronomes étudiaient les émissions radio des planètes géantes, du Soleil et de nombreux objets de la Galaxie. Certains espéraient même détecter la signature d'exoplanètes gazeuses avec.

Premier voyage après le retrait des Russes

Après avoir été interdite par les combats qui s'y déroulaient, depuis peu, la zone du radiotélescope est accessible aux civils. Mais les transports en commun ne sont pas encore rétablis. « Je n'y suis pas encore allé depuis la guerre, confie Evgueni. Pouvez-vous m'aider pour l'essence ? Vous comprenez, nos salaires ont été divisés par deux et l'essence a tellement augmenté que je n'utilise plus ma voiture. » Les 20 litres de carburant nécessaires coûtent plus cher que de traverser toute l'Ukraine en train jusqu'à Kharkiv. Sa voiture est aussi propre que la ville malgré la guerre. C'est une fierté et aussi un point d'honneur des habitants et des autorités. Plus nous avançons, plus les destructions sont nombreuses. À Pyatikhatki, au nord de la ville, nous prenons Sacha. Son immeuble, comme tous les autres de son quartier, est criblé d'impacts et chaque fenêtre est recouverte de contreplaqué.

Nous avons à peine le temps de faire connaissance que nous nous arrêtons un peu plus loin pour récupérer notre guide, le chercheur Mikhail Sidortchouk. Notre équipe est au complet et nous roulons maintenant vers le sud-est, en direction de la ville d'Izium. Plusieurs checkpoints jalonnent notre trajet. Interdit de s'arrêter au bord de la route : des pancartes écrites à la main signalent la présence de mines. Au fur et à mesure que l'on s'approche du Donbass, les véhicules militaires sont de plus en plus présents. « Ils vont au front. » Nous discutons du conflit. « Mon meilleur ami a été tué à Bakhmout », confie Sacha. « Tous mes cousins sont à la guerre, raconte Evgueni. L'un d'eux a disparu l'année dernière. Il est très probablement décédé, mais son corps n'a jamais été retrouvé. L'armée a accepté de ne pas m'enrôler afin que je termine mon doctorat. »

Un site astronomique classé trésor national

Au bout d'une heure, notre chauffeur quitte la route en pleine campagne et s'engage dans un chemin boueux. Nous arrivons à destination sans qu'aucun panneau n'indique le radiotélescope. L'emplacement a été choisi pour être loin des interférences engendrées par les villes. Construit dans les années 1960 à l'initiative de l'académicien Sémon Braude et inauguré en 1970, l'UTR-2 (Radiotélescope ukrainien en forme de T, deuxième modification) est encore aujourd'hui le plus grand radiotélescope du monde pour l'étude des émissions radio à basses fréquences (de 8 à 33 MHz), un domaine difficile à observer à cause des perturbations causées par l'atmosphère terrestre. En 2001, il a été classé « Trésor national d'Ukraine ».



Mikhail Sidortchouk, de l'Institut de radioastronomie, est notre guide sur le site du radiotélescope ukrainien UTR-2. Ici, un entonnoir détruit. © ERIC LUSITO

Il impressionne par ses dimensions et sa forme originale. Il est constitué d'un réseau de 2 040 antennes, ou dipôles. Chacune, de 8 m de long et 3,5 m de haut, ressemble à une paire de cages métalliques surélevées sur une tige. L'ensemble, réparti sur 15 hectares, forme un T géant. Deux tunnels rassemblent les kilomètres de câbles qui alimentent les antennes et transmettent leurs précieux signaux vers le centre de contrôle : l'observatoire astronomique Braude.

Les scientifiques analysent les signaux radio provenant de l'espace, plus particulièrement ceux du Soleil, les éclairs d'orages sur Saturne, les pulsars et autres corps célestes. Le 24 février 2022, jour de l'invasion, ils étaient censés aider la mission américaine Juno à étudier Jupiter. Un bataillon de l'armée russe a occupé l'observatoire dès le lendemain, l'utilisant comme base militaire pendant six mois, jusqu'à la contre-offensive des forces armées ukrainiennes de l'automne 2022.



Le bâtiment principal de l'observatoire est orné des portraits de Galilée, Copernic, Newton, Einstein... Et une citation de Lénine : « L'esprit humain a découvert beaucoup de choses étranges dans la nature et en découvrira encore davantage, augmentant ainsi son pouvoir sur elle. » © ERIC LUSITO

L'allée boisée menant à l'observatoire Braude se termine devant un monument recouvert d'une mosaïque effritée : un scientifique écoutant des ondes du cosmos entouré par les douze signes du zodiaque. Sur sa gauche, la « formule de Hawking » sur la température du rayonnement émis par un trou noir, nommée en l'honneur du physicien anglais Stephen Hawking qui l'a découverte en 1974. Le bâtiment principal de l'observatoire, lui, est orné des portraits de Galilée, Copernic, Newton, Einstein... Et une citation de Lénine : « L'esprit humain a découvert beaucoup de choses étranges dans la nature et en découvrira encore davantage, augmentant ainsi son pouvoir sur elle. »

Des choses étranges, il y en a ici, c'est certain. Un an après la reprise du site par l'armée ukrainienne, les stigmates de l'occupation russe sont toujours vivaces. Sur la porte d'entrée, il est encore écrit à la craie blanche « attention mines ». Mikhail m'emmène sous la charpente. Un obus d'artillerie a soufflé la toiture et fait s'écrouler une partie du plafond et la dalle du premier étage jusqu'au rez-de-chaussée. L'Académie des sciences d'Ukraine a financé le bâchage provisoire du toit, terminé cet automne 2023. Il s'arrête devant le trou béant recouvert de planches. « Regarde, une fleur a réussi à pousser ici. La nature est merveilleuse ! »



Dans l'escalier principal trône un tableau de la première sortie dans l'espace en 1965 par le cosmonaute Alexei Leonov, réminiscence de l'importance de Kharkiv dans le programme spatial soviétique. © ERIC LUSITO





La bibliothèque de l'observatoire Stroude est dévastée comme toutes les autres pièces. © Eric Lucido

Nous rejoignons les autres à l'étage et commençons l'exploration : chambres, cuisine, bibliothèque, salle de réunion... C'est ici que les scientifiques vivaient et recevaient leurs homologues étrangers, même si les visites étaient plus rares depuis 2014 et le début de la guerre dans le Donbass. L'intérieur est dévasté. Nous descendons par l'escalier principal où trône un tableau de la première sortie dans l'espace en 1965 par le cosmonaute Alexei Leonov, réminiscence de l'importance de Kharkiv dans le programme spatial soviétique.



Emballages de rechange du combat de l'armée russe. © Eric Lucido

Les fenêtres obturées, le rez-de-chaussée est plongé dans l'obscurité et nous progressons à la lumière de lampes torches dans un fatras d'appareils électroniques éventrés. L'espace est rempli par soixante récepteurs à tubes, chacun pesant 50 kg. Du matériel analogique trop lourd et encombrant pour être volé, à l'inverse de tous les ordinateurs et du matériel scientifique récent. « Moi qui croyais que les Russes étaient un peuple cultivé, se désole Mikhail. Je travaille ici depuis 45 ans. Nous n'avions dérangé personne et personne ne nous avait dérangés... »



Au sous-sol, des matelas volés dans le voisinage maintenant à même le sol. © Eric Lucido



Le panneau de contrôle de l'observatoire « disparu » sous les blocs de béton effondrés. © Eric Lucido

Le panneau de contrôle des antennes, parfait décor d'un film de science-fiction rétrofuturiste, est enseveli sous des blocs de béton. Une échelle sous une trappe permet d'accéder aux tunnels. Dans un dédale de câbles, des matelas volés dans le voisinage moisissent à même le sol jonché d'emballages de rations de combat et d'objets divers laissés par les soldats. Sur les murs, nous déchiffrons des messages érotiques tel que « les dieux ne feront pas pour nous ce que nous devons faire nous-mêmes ». Personne ne souhaite s'attarder et nous quittons cette ambiance glauque.

Impossible d'accéder aux antennes : le terrain est miné

Nous sortons de l'observatoire, soulagés de respirer de l'air frais, d'autant que le soleil commence à apparaître. Mikhail part inspecter les antennes proches. Plusieurs ont été mitraillées, l'une d'elles gît à terre. Les alentours de l'observatoire sont sécurisés, mais malgré la libération il y a plus d'un an, la majeure partie du territoire de 15 ha n'est pas encore déminée. Cela empêche le personnel de l'Institut de contrôler l'état des 2 040 antennes pour évaluer le montant des réparations, et de continuer leur entretien contre la corrosion.

Evgueni résume la situation : « Des travaux mineurs de restauration sont lentement réalisés. Il est impossible de faire plus, tout est miné et il y a beaucoup d'obus non explosés. Il n'y a pas d'électricité, pas de déminage. Les sapeurs sont tous au front. Le bâtiment principal est inutilisable, ; il devra très probablement être démolit et reconstruit. Il ne sert à rien de restaurer le radiotélescope tel qu'il était : on veut le moderniser, mais seulement après la guerre. Et la fin de celle-ci n'est pas encore en vue. »



Sur le site du GURT-2, la majeure partie du territoire de 15 hectares n'est pas déminée. Par accident, Mikhail, Evgueni et Sacha restent sur les traces laissées par un tracteur. © Eric Lucido



Mikhail au milieu des antennes du nouveau Radiotélescope ukrainien géant, ou GURT. Sur les 275 antennes construites, entre 30 et 50 seraient encore en état de fonctionner. © Eric Lucido

Un peu plus loin se trouve un petit champ d'antennes différentes, celles du GURT (Radio Télescope ukrainien géant), le nouveau projet de l'Institut. Avec les 2 500 antennes prévues il offrirait une sensibilité jusqu'à dix fois supérieure à l'UTR-2 avec un fonctionnement plus simple. Sur les 275 antennes construites, entre 30 et 50 seraient encore en état de fonctionner d'après Evgueni. À l'avenir, le site ukrainien pourrait rejoindre le réseau européen de radiotélescopes basses fréquences Lofar. Les chercheurs collaborent depuis presque trente ans avec leurs homologues de l'Observatoire de Paris. Celui-ci leur permet aujourd'hui de travailler à distance avec le nouveau radiotélescope [NenuFAR de Nançay](#) dans le Cher, dont les Ukrainiens ont contribué à la définition.

« Merci de ne pas nous oublier. »

Nous marchons sur les traces laissées par un tracteur le long des antennes de l'UTR-2 alignées en rangs d'oignons jusqu'à rejoindre le chemin boueux. Défense de s'écarter. De simples rubans accrochés aux arbres signalent la présence d'obus non explosés. Nous arrivons au corps de garde qu'une petite équipe rénove dans un confort rudimentaire. En face gisent les carcasses des véhicules de l'Institut, dont une Lada Niva blanche avec la lettre Z peinte dessus. À côté, un entrepôt avec du matériel scientifique a servi de dépôt de munitions. Un obus a tout fait exploser. Les rayons de fin d'après-midi illuminent la ferraille calcinée comme s'ils ravivaient l'incendie. Dans la région, le soleil se couche avant 16 h. Il est temps de rentrer. Evgueni me dépose dans le centre obscurci de Kharkiv : « Merci de ne pas nous oublier. »



La petite équipe qui travaille à la rénovation de l'observatoire le fait dans un confort rudimentaire. © Eric Lucido

Ruimte

Zwaar gehavend, maar niet geknakt



Een jaar nadat de site van de T-vormige radiotelescoop UTR-2 werd overgenomen door het Oekraïense leger zijn de littekens van de Russische bezetting nog levendig.

Openingsbeeld © Eric Lusito

'Dwaal vooral niet van de paden af, want het grootste deel van het gebied is niet ontmijnd en erg gevaarlijk.' Onderzoeker Mikhail Sidorchuk leidt fotograaf Eric Lusito rond op de locatie waar tot voor kort de UTR-2 in vol ornaat pronkte. De Oekraïense T-vormige radiotelescoop nabij Kharkiv is nog steeds de grootste radiotelescoop ter wereld voor het bestuderen van laagfrequente radiostraling van 8 tot 33 MHz.

De telescoop wordt gevormd door een netwerk van 2.040 antennes of dipolen. Elke antenne, 8 meter lang en 3,5 meter hoog, lijkt op een paar metalen kooien die op een staaf zijn geplaatst. De hele structuur, verspreid over vijftien hectare, vormt een reusachtige letter T. De kostbare signalen bereikten tot voor kort het controlecentrum, het Braude Radio Astronomy Observatory.

Op 24 februari 2022, de dag van de invasie van Rusland in buurland Oekraïne, moesten de onderzoekers helpen bij de Juno-missie van de NASA om Jupiter te bestuderen. Een bataljon van het Russische leger bezette het observatorium de volgende dag en gebruikte het zes maanden lang als militaire basis tot het tegenoffensief van de Oekraïense strijdkrachten in de herfst van 2022.

Een jaar nadat de site werd overgenomen door het Oekraïense leger zijn de littekens van de Russische bezetting nog levendig. Het dak van het observatorium werd weggeblazen, het interieur werd verwoest alsof er een natuurramp heeft plaatsgevonden, apparatuur werd gestolen of vernield. De meeste van de 250 personeelsleden werken op afstand, ongeveer honderd zijn verhuisd naar andere regio's in Oekraïne en enkele tientallen verblijven in het buitenland. De servers werden in maart 2022 overgebracht naar Polen.

Toch hebben de overgebleven medewerkers sinds de bevrijding van het instituut het dak van het hoofdgebouw opgelapt en een zonne-energiecentrale geïnstalleerd. Het observatorium heeft onlangs zijn eerste waarnemingen gedaan sinds de Russische invasie.

Sidorchuk inspecteert de kapotgeschoten antennes. Doordat het grootste deel van het antennengebied nog niet ontmijnd is, kan het personeel van het instituut de staat van de antennes niet controleren en de kosten van reparatie inschatten.

In de twee jaar sinds de Russische invasie hebben Oekraïense onderzoekers een zware prijs betaald. Volgens het ministerie van Onderwijs en Wetenschap van het land waren op 1 september 2023 meer dan zevenhonderd laboratoria en onderzoekscomplexen beschadigd of vernietigd. Het ministerie schat dat de wederopbouw 1,1 miljard euro zal kosten.

Het verlies aan mensen is aantoonbaar nog groter. Naar schatting zijn meer dan negentig Oekraïense wetenschappers gedood. Meer dan zesduizend – ruwweg een op de zeven – zijn in het buitenland en bijna 40 procent is ontheemd.

Nele De Meyer
Meer artikels van deze auteur

Meer over de volgende onderwerpen:

Ruimte **Radio-observatorium**

Gepubliceerd op:
16 mei 2024

Dit artikel delen op:



'SOVIET SCIENTIFIC INSTITUTES' BY PHOTOGRAPHER ERIC LUSITO

Art, art featured

THE LABORATORIES REMAIN LONG AFTER THE IDEOLOGY THAT BUILT THEM DISAPPEARED. ACROSS THE FORMER SOVIET REPUBLICS, VAST SCIENTIFIC INSTITUTES—RADAR ARRAYS, OBSERVATORIES, RESEARCH CENTRES AND CONTROL ROOMS. THEY CONTINUE TO STAND IN VARYING STATES OF DECAY AND OPERATION, MONUMENTS TO A SYSTEM THAT ONCE TREATED SCIENCE AS BOTH POLITICAL INSTRUMENT AND UTOPIAN IDEAL.

IN *SOVIET SCIENTIFIC INSTITUTES*, PHOTOGRAPHER ERIC LUSITO DOCUMENTS THESE STRANGE, OFTEN INACCESSIBLE SPACES WITH A RESTRAINED EYE FOR THEIR SCALE, THEATRICALITY AND LINGERING SENSE OF PURPOSE.



Lusito's photographs move through a landscape of analogue machinery and monumental architecture: cavernous halls filled with blinking consoles, telescopes pointed toward distant galaxies, and mysterious experimental devices that seem drawn from the speculative worlds of Jules Verne or H. G. Wells. Yet these are not imagined futures, but the remains of an enormous state-sponsored scientific infrastructure developed during the Cold War, when the Soviet Union positioned scientific achievement at the centre of its national identity.



Many of these institutes collapsed into neglect after the fall of the U.S.S.R., their funding withdrawn and their technologies rendered obsolete almost overnight. Lusito's images capture the melancholy grandeur of these abandoned ambitions, but the book is equally interested in survival. Some facilities continue to operate despite political upheaval and chronic underfunding, maintained by researchers who adapted to the post-Soviet world rather than abandoning their work entirely.



Among the sites Lusito visits are a cosmic ray research centre high in the Armenian mountains and one of the world's largest radar arrays in Ukraine, a structure so immense that locals reportedly believe it to be a climate-altering weapon. The photographs are accompanied by an introduction from historian Paul Josephson, who places the institutes within the broader history of Soviet technological ambition and its distinctive visual culture of oversized machinery, austere modernism and heroic industrial scale.

What emerges is not simply a study of decay, but a portrait of a vanished worldview still embedded in physical form. *Soviet Scientific Institutes* records the afterlife of Soviet futurism: a world of machines built to engineer the future, now suspended somewhere between obsolescence and endurance.

Soviet Scientific Institutes, by Eric Lusito, FUEL Publishing



Soviet scientific institutes

15 juin 2026 — par Jean-Luc Amand Fournier dans RECENSIONS D'OUVRAGES



Soviet scientific institutes
Eric Lusito
Fuel Publishing
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37 euros
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Non ce n'est pas du braille mais des bandes perforées informatiques. Voilà des touches en relief que parcourent nos doigts qui glissent sur cette couverture de livre. Au-dessus, une photo, ce n'est pas un piano mais une salle de contrôle d'un de ces instituts.

L'odyssée d'un monde en ruine mais qui vit encore.

Non, ce n'est pas de la science-fiction, ce sont bien des photographies du présent, celles d'Éric Lusito.

Quatre années de voyages, d'allers-retours dans ce qui fut un empire disparu, à travers l'ancien bloc soviétique : Arménie, Ouzbékistan, Kazakhstan, Géorgie, Lettonie, Roumanie, Hongrie et bien sûr, et surtout l'Ukraine. Un archipel d'instituts scientifiques, de laboratoires, de machines étranges, parfois à l'abandon, agonisants ou maintenus en vie par des savants obstinés.

Des installations dressées dans des paysages grandioses, immenses, semi-désertiques : montagnes, forêts, steppes, griffées par des enchevêtrements métalliques incompréhensibles. D'immenses entrelacs de ferrailles, de métal, des forêts d'antennes qui sont en réalité des outils de recherche. Parfois, on pourrait croire à des œuvres de land art, à des sculptures contemporaines. Quelques arcs de Bernar Venet, quelques plaques en équilibre instable de Richard Serra, mais surtout les entrelacs d'acier de Mark Di Suvero. Mais non, ce sont des instruments scientifiques.

Et là, au milieu de tout ce métal, paissent des vaches, et puis là encore un chien solitaire, et ailleurs une vieille voiture verte venue d'un autre temps.

À l'intérieur on dirait un capharnaüm, mais tout est bien à sa place. Un décor de sculptures colorées, des boutons partout, des tuyaux rouges, jaunes, bleus, verts, des téléphones d'un autre âge. Le royaume d'un docteur Folamour. Nous sommes chez Kubrick, ou chez Jules Verne avec le savant fou Thomas Roch.

Mais attention, ici et là, un portrait de Lénine, et puis des portraits d'Igor Kurchatov, le père du programme nucléaire soviétique. L'histoire passée nous interpelle et pourtant nous sommes bien dans le présent. Le passé n'est pas passé.

Le temps semble comprimé, aplati, replié. Sous les portraits des fondateurs, sous les affiches soviétiques défraîchies, quelques scientifiques poursuivent leur tâche. Derniers habitants d'un monde disparu. Des professeurs Tournesol en chair et en os.

À travers ce livre et ces photographies, entre des tempêtes de neige et la chaleur des réactions thermonucléaires, entre l'observation des rayons cosmiques et celle de phénomènes invisibles, entre les laboratoires et la chaleur des fours solaires, Éric Lusito nous amène dans un voyage singulier. Dans le domaine du rêve, d'une certaine mélancolie mais aussi dans la dureté du monde actuel. Un voyage où l'utopie technique – ou la folie diront certains – continue de battre dans les décombres de l'histoire.

Éric Lusito possède cette capacité de nous montrer les soubresauts d'un monde qui s'éteint sans mourir.



Eric Lusito Fuel Publishing Photographie



Views Aperture



Former glories



Eric Lusito
Fuel Publishing

THESE colourful photos capture the remains of what was once a constellation of Soviet scientific megaprojects, all intentionally designed by the state to replace religious objects of worship.

Eric Lusito gained access to many of these sites for his new book, *Soviet Scientific Institutes*. Starting in Ukraine, he spent four years travelling across the former Soviet Union, liaising with scientists and visiting locations that had remained shuttered since the fall of the USSR. "I was drawn to their mysterious beauty, their history and to the way they had evolved over time," he says.

While many of the sites were in disrepair, some were frozen in time, like the control room for the Orgov Radio-Optical Telescope in Armenia (top, far left), designed by a Soviet scientist in the 1970s.

At their peak, thousands of scientists poured through these institutions, clocking in on machines like the attendance board at the Institute of Radiophysics and Electronics in Kharkiv, Ukraine (bottom, far left), where scientists produced lightning-like bolts of energy, to learn how to protect the country's first unified grid system. A Soviet-era mural, of a hand grasping a lightning bolt, is on the rear wall.

Others were doing fundamental science, such as in the MAKETANI experiment in Armenia's Aragats Cosmic Ray Research Station (bottom, near left), which measured high-energy particles that fall through the sky and settle on the snowy peaks of Mount Aragats. ■

Alex Wilkins

ART AND CULTURE • PHOTOGRAPHY

New book, 'Soviet Scientific Institutes', captures the afterlife of a society dedicated to discovery

Photographer Eric Lusito's new monograph captures the strange experimental facilities and laboratories scattered across the countries left behind by the USSR

By Jonathan Bell | Published April 10, 2026 in [News](#)



Soviet Scientific Institutes, Eric Lusito, Fuel Publishing
(Image credit: Fuel Publishing)

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Newsletter

The twin fascinations of fallen Empire and urban exploration collide in photographer Eric Lusito's new book, *Soviet Scientific Institutes*. A visual essay chronicling the catastrophic decline in funding and research in the post-Soviet era, Lusito's camera takes us on a fascinating tour of the faded relics of communism's utopian and authoritarian grip on the country's scientific endeavours.



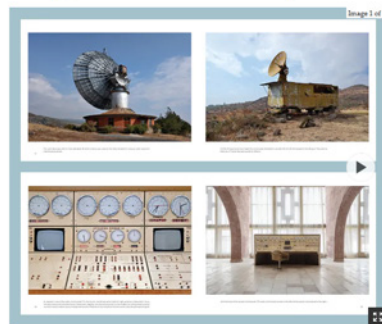
An image from Soviet Scientific Institutes
(Image credit: Eric Lusito)

An introduction by history professor Paul Josephson frames these images in context, chronicling how the focus on science became one of the driving philosophical and economic forces behind the Soviet Union's national identity. This was coupled with the distinctive aesthetic qualities of the era's analogue technology, bombastic scale and a commonplace incorporation of vivid elements of art and design.



An image from Soviet Scientific Institutes
(Image credit: Eric Lusito)

There's an obvious retro-tinged delight in these images, along with poignant *schadenfreude* at the combination of misplaced optimism and downright mystery that underpins the relationship between these places with Cold War militarism. Whole communities were dedicated to such 'Big Science' projects, often closed off from the rest of society.



(Image credit: Fuel Publishing)
Spreads from Soviet Scientific Institutes

Lusito's journey took him around the sites that still exist in the USSR's former republics and satellites (access in Russia being somewhat difficult). Despite the obvious decay and apparent obsolescence, some of these facilities are still very much in operation.

Facilities visited include a cosmic ray research centre located deep in the Armenian mountains and a vast radar array in Ukraine, apparently 'believed to be a climate-altering weapon' by local residents.



An image from Soviet Scientific Institutes
(Image credit: Eric Lusito)

Soviet Scientific Institutes, Eric Lusito, £26.95, Fuel Publishing, [Fuel-Design.com](#), [@FuelPublishing](#)★



Inside the empty palaces of the faded Soviet scientific dream

Photographs of iron curtain research labs reveal the depth of communist ambition – and the fatal flaw buried within it

SADIE HARPER



Surface stations at the Aragats Cosmic Ray Research Station on Mount Aragats, Armenia. Image: Soviet Scientific Institutes, by Eric Lusito/FUEL Publishing

1 JULY 2026 12:00 AM

EUROFILE NEWS AND OPINION
WORLD BIG PICTURE RUSSIA
SCIENCE UKRAINE
VLADIMIR PUTIN



On June 24, the war in Ukraine that Vladimir Putin believed would last 72 hours hit the 1,567-day mark, the same duration as the first world war. The resilience of the invaded (backed by western intelligence and hardware) has been a major factor in Russia's failure, but so too have been hubris, corruption and incompetence in the ranks of the invader. Anyone who picks up a copy of the remarkable book *Soviet Scientific Institutes* by Eric Lusito will understand exactly how things went wrong.

Lusito, a French photographer who has been travelling in the former Soviet bloc since the 2000s, spent nearly five years taking pictures of research stations across the iron curtain states – from Ukraine to Uzbekistan, from central Budapest to the remote foothills of Almaty, Kazakhstan. State-run and seen first as a path to rapid economic modernisation, then as the means to power the atomic and space races against the US, they were astounding in their scope.



The Standard Research Reactor (SRR) built in 1957 at the Andronikashvili Institute of Physics in Tbilisi, Georgia.

The control room for the BCT-54/2.6 Radio Optical Telescope in Orbi, Armenia.



The high-voltage laboratory at the National Institute for Research, Development and Testing in Electrical Engineering in Odessa, Romania.

All images: Soviet Scientific Institutes, by Eric Lusito. Courtesy of FUEL Publishing



Suggested Reading
Locked up and written off: The prison photos of Jane Evelyn Atwood
BY SADIE HARPER

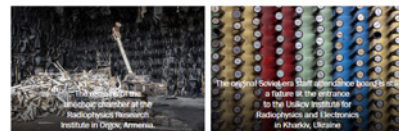
Oddly beautiful constructivist projects rose, complete with impossible-looking machines, brightly coloured control panels, gleaming tiles and dials, huge murals celebrating the power of workers united in the pursuit of progress (the inscription on one reads: "Shine like a guiding star, living union of science and labour! Glory to Soviet Science!"). They were staffed by armies in white coats or hard hats – by the time the bloc collapsed, it employed 1.3 million scientific specialists; one-third of the world's engineers and one-quarter of its physicists.

But as science and tech historian Paul Josephson makes clear in his introduction, ruin was built in, too. He writes: "Empty corridors and solitary researchers in many of the photos reveal another side to the story: a mere 35 years after the fall of communism, the rusty equipment and peeling paint hint at the fragility of socialist science. It was planned, funded and controlled from above, and this meant that scientists were denied the autonomy needed to adjust quickly to any crisis."



Suggested Reading
A blue world hangs in the balance
BY SADIE HARPER

Since the fall of communism, he adds, "The sciences in Russia and the other nations of the former Soviet Union have fallen into disarray. Budgets have dried up, bills remain unpaid, workers are let go. The photographs capture the squalor of abandoned science: lonely instruments in otherwise empty rooms, tired walls adorned with messages and portraits from a past era."



All images: Soviet Scientific Institutes, by Eric Lusito. Courtesy of FUEL Publishing

There is only a smattering of human life in the vast sites captured by Lusito, but the faded glory of these alien spaces is somehow shot through with humanity. They remind me of the moment in the great monologist Spalding Gray's *Swimming to Cambodia* (1987), when he describes meeting a US Navy officer who tells him: "The Russians are stupid people; they're backwards. You know on their ships, they don't even have electrical intercoms? They still speak through tubes?"

Gray continues: "Suddenly, I had this enormous fondness for the Russian navy, for all of Mother Russia. The thought of these men, like innocent children, speaking through empty toilet paper rolls, empty paper towel rolls, where you can still hear doubt, confusion, brotherly love, ambivalence, all those human tones, coming through the tube."

Soviet Scientific Institutes by Eric Lusito is published by Fuel.
fuel-design.com/publishing/soviet-scientific-institutes/
Sadie Harper is a journalist from Connecticut



HISTORIA

Neuvostoliitossa rakennettiin massiivisia tiedehärveleitä – Tältä ne näyttävät yli 30 v romahduksen jälkeen

Valokuvaaja Eric Lusito on julkaissut kirjan, johon hän on valokuvannut Neuvostoliiton aikaisia tieteellisiä rakennelmia. Kuvat näyttävät, mitä tiedehankkeista on jäljellä tänä päivänä.



Tieteelliset rakenteet. Vasemmalla on ROT-54-radioteleskoopin ohjaushuone ja oikealla on AZT-20 teleskooppi. KUVA: SOVIET SCIENTIFIC INSTITUTES, BY ERIC LUSITO, FUEL PUBLISHING

Neuvostoliitossa ihannoitiin tiedettä. Jopa niin paljon, että sen toivottiin korvaavan uskonnon. Tieteen avulla valtio pyrki kehittämään maasta nykyaikaisen.

5.6.2026 07:34



Kristiina Suojanen





ВИДАННЯ

Науковий літопис мовою об'єктива



Ерік ЛЮСИТО під час презентації

У Харківській державній науковій бібліотеці ім. В. Короленка відбулася презентація книжки французького фотографа і дослідника архітектури Еріка ЛЮСИТО *Soviet Scientific Institutes (FUEL Publishing, Велика Британія)*.

Це масштабне фотографічне дослідження наукових інститутів колишнього СРСР — їхньої архітектури, історії та сучасного життя. До книжки увійшли розповіді про 22 наукові заклади з восьми країн — колишніх республік Союзу, а також численні ілюстрації.

Десять із представлених у книжці наукових закладів розташовані в Харкові. Серед них — Національний науковий центр «Харківський фізико-технічний інститут», Інститут радіофізики та електроніки ім. О.Я. Усикова НАН України, Інститут радіоастрономії НАН України, Фізико-технічний інститут низьких температур імені Б.І. Веркіна НАН України, Інститут скінтіляційних матеріалів НАН України та інші наукові центри міста. Таке широке представлення харківських наукових інституцій є

свідченням виняткової ролі Харкова в історії світової науки.

Під час презентації книжки в науковій бібліотеці ім. В. Короленка Ерік Люсіто розповів, як з'явилась ідея показати ці наукові об'єкти і яке враження справили на нього відкриття, які він зробив при цьому.

— Ще зовсім недавно, — зазначив майстер, — в Європі мало що знали про науковий світ України. Поінформованість населення навіть європейських країн була дуже незначною. Насправді ми відкрили й продовжуємо відкривати для себе могутні джерела технологій, які стали надбанням світу: тут здійснено розщеплення атомного ядра (друге у світі й перше на теренах Союзу), тут створюють надстійкі матеріали й виняткові системи управління космічними апаратами... Обмін інформацією та ідеями між науковцями — це ключ до суспільного прогресу, і ця книжка ще раз підтверджує давно усталену істину.

Трохи про автора. Ерік Люсіто вперше відвідав харківські наукові установи наприкінці 2021 року. У

жовтні 2023-го він знову повернувся до міста, щоб зафіксувати, яких наслідків завдали російські загарбники науковим центрам і повідомити про це міжнародну спільноту.

Майстра фотооб'єктива вразили дії російських агресорів: розповідає, що навіть прагнув записатися до іноземного легіону, щоб допомогти Україні зупинити варварський наступ і відкинути ворогів з української землі. Однак до війська його не взяли. Натомість пояснили, що своїми документальними розповідями він теж робить велику справу, сприяє обізнаності громадськості всього світу про те, що відбувається в Україні, і так допомагає згуртувати зусилля для її підтримки.

Коментуючи розповідь автора книжки та побачені світлинні, директорка Харківського планетарію Галина Желєзняк подякувала Еріку Люсіто за його дуже важливу просвітницьку роботу, спрямовану на розширення знань про наукові досягнення у світі й зокрема в Україні.

Ерік розповів, що, приїхавши знову до Харкова у 2023 році, він побачив горде незламне місто: попри нові руїни й постійні загрози робота наукових установ не припиняється, і такий приклад стійкості харків'ян і загалом українців його надихає й окрилює.

Книжка *Soviet Scientific Institutes* уже привернула увагу міжнародних медіа та наукової спільноти (вперше її побачили в Парижі). Публікації про неї з'явилися у провідних світових виданнях, зокрема в *The Guardian* та *New Scientist*. Окрім того, цей проєкт зацікавив представників багатьох наукових установ можливостями нового співробітництва. Автор стверджує, що нині вже є нові плани з розширення цієї тематики.

Анатолій БІДА,
фахівець відділу науково-інформаційного забезпечення інноваційних процесів
ХДНБ ім. В. Короленка

STRONG WORDS

PHOTOGRAPHY



SOVIET SCIENTIFIC INSTITUTIONS

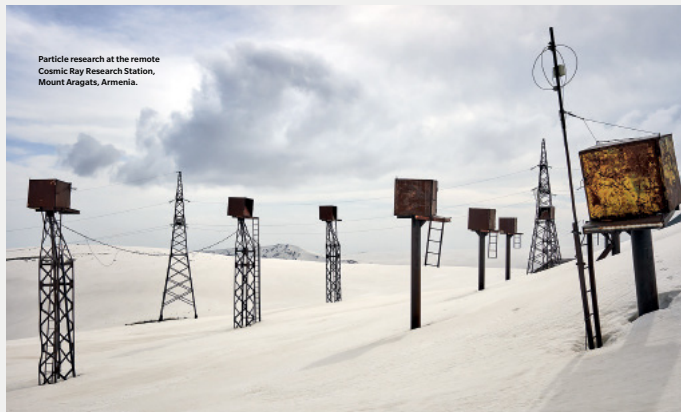
by ERIC LUSITO
Fuel, £26.95

The history of the Soviet Union is in part a history of its relationship with science. Desperate to modernise, it needed science to accelerate, change and promote its international importance, by competing militarily, in space and in atomic science, which led to its elevating scientists and grandiose projects across the Soviet world. After the USSR collapsed, however, budgets dwindled, talent migrated and the ability to keep these often gigantic facilities running faded. Although dilapidated and antiquated, many are still open for business or have been reconditioned to press them back into service. Almost all, however, radiate a sense of power, whether from the tile murals that speak of colossal revolutionary effort, or the vast analogue control panels that restrained who knows what daunting currents or processes. And without exception, all speak of an eerie sci-fi vision of a future that never came.

Part of the main test hall at Romania's High Voltage Laboratory at Craiova, an "internationally recognised centre of excellence."



Particle research at the remote Cosmic Ray Research Station, Mount Aragats, Armenia.



The 45-metre tower holding "the largest telescope in Kazakhstan", built in 1947 by "a workforce of Japanese prisoners."



The control room at the High Power Laboratory, also at Craiova, Romania. "Critical in developing equipment for the functioning and safety of the national electrical energy system."

ICMET Craiova, validat ca parte a patrimoniului științific și tehnologic european

Există recunoașteri care se măsoară în premii, în indicatori bibliometrici sau în clasamente internaționale. Și există recunoașteri mai discrete, dar poate mai profunde, care certifică faptul că o instituție face parte din istoria științei. Incluziunea Institutului Național de Cercetare-Dezvoltare și Încercări pentru Electrotehnică – ICMET Craiova – în volumul *Soviet Scientific Institutes*, realizat de cercetătorul și fotograful francez Eric Lusito, aparține acestei categorii. Nu este doar prezența într-o carte de fotografie și documentare, ci o recunoaștere a faptului că infrastructura construită la Craiova reprezintă o parte valoroasă a patrimoniului științific și tehnologic european.

Alexandru Batali



În paginile volumului, ce poate fi achiziționat pe [Libris.ro \(https://www.libris.ro/carte-engleza/soviet-scientific-institutes-eric-lusito/45740485\)](https://www.libris.ro/carte-engleza/soviet-scientific-institutes-eric-lusito/45740485), ICMET Craiova apare alături de numai alte câteva zeci de institute de cercetare din Europa Centrală și de Est, selectate pentru valoarea lor istorică, arhitecturală și științifică. Dintre instituțiile din România, doar două au fost incluse.

Această selecție spune mai mult decât ar putea sugera la prima vedere. Ea confirmă că laboratoarele, instalațiile și infrastructurile dezvoltate de-a lungul deceniilor la Craiova depășesc dimensiunea unor simple facilități de încercări. Ele reprezintă mărturia unei continuități instituționale rare: aceea a unui institut care a reușit să rămână relevant de-a lungul mai multor generații tehnologice.

O istorie a științei spusă prin laboratoare

Eric Lusito este fotograf documentar și cercetător francez, cunoscut pentru proiectele sale dedicate patrimoniului științific și tehnologic al Europei de Est. Proiectul lui Eric Lusito s-a concentrat asupra institutelor de cercetare construite în perioada postbelică, dar s-a născut într-un context cu totul diferit. Fotograful francez și-a propus inițial să documenteze institutele științifice din Harkov, Ucraina. Însă invazia rusă din 2022 l-a determinat să extindă cercetarea în mai multe state din Europa Centrală și de Est. România a intrat astfel pe harta proiectului în 2023. În final volumul a ajuns să reunească 22 de institute de cercetare din opt state, prezentând pentru fiecare contextul înființării,

principalele contribuții științifice și situația actuală.

„Cartea mea relatează o parte din istoria științifică a acestei regiuni”, explică autorul. Deși România nu a făcut parte niciodată din Uniunea Sovietică, influența exercitată de Moscova asupra dezvoltării cercetării în primele decenii postbelice este incontestabilă. Ulterior însă, institutele românești au evoluat într-o direcție proprie, integrând tehnologii occidentale și dezvoltând competențe care le-au permis să rămână relevante până astăzi.

Tocmai această suprapunere de epoci tehnologice l-a interesat pe Eric Lusito. Mai mult decât istoria instituțională, însă, autorul caută atmosfera acestor spații de cercetare. „Aceste locuri au adesea o atmosferă unică, situată undeva între știință, arhitectură și science-fiction.”

De ce ICMET?

Răspunsul vine chiar din observațiile autorului. „ICMET Craiova este un exemplu remarcabil în acest sens. Instalațiile sale au o putere vizuală izbitoare și o prezență aproape cinematografică care m-a captivat imediat.”

Dincolo de valoarea estetică, această aporie vorbește despre dimensiunea infrastructurilor dezvoltate la Craiova și despre caracterul lor unic în peisajul european al cercetării aplicate. Laboratoarele de înaltă tensiune, instalațiile de mare putere și echipamentele dezvoltate de-a lungul a peste șapte decenii nu reprezintă doar o moștenire tehnologică. Ele continuă să deservească activitatea de cercetare, încercările pentru industrie și dezvoltarea unor noi soluții pentru sistemele energetice.

Această continuitate este probabil cel mai important argument al includerii ICMET în volum. Nu este vorba despre conservarea unei relice industriale, ci despre un organism de cercetare care și-a păstrat relevanța tehnologică, adaptându-se permanent la noile cerințe ale economiei și ale sistemului energetic.

Patrimoniu viu, nu muzeu tehnologic

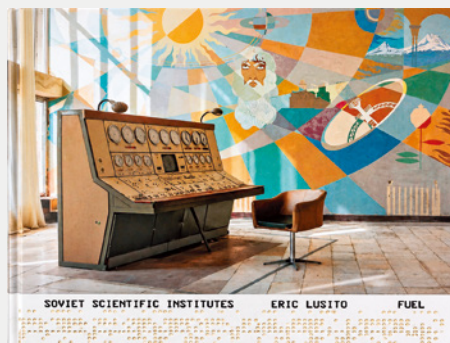
Există o tendință firească de a asocia infrastructurile construite în urmă cu

câteva decenii cu ideea de patrimoniu istoric. În cazul ICMET, însă, patrimoniul și cercetarea de frontieră coexistă. Institutul continuă să dezvolte proiecte în domeniul echipamentelor electroenergetice, al tehnologiilor pentru hidrogen, al materialelor avansate, al încercărilor la înaltă tensiune și al soluțiilor destinate tranziției energetice. În paralel, infrastructurile istorice sunt modernizate și utilizate pentru activități de cercetare și servicii tehnologice solicitate de industrie.

Această combinație dintre tradiție și modernizare transformă ICMET într-un reper rar întâlnit: o instituție în care memoria tehnologică nu este conservată în vitrine, ci produce în continuare cunoaștere.

Recunoașterea vine din continuitate

La finalul colaborării, Eric Lusito ține să sublinieze că imaginile publicate în volum nu ar fi fost posibile fără implicarea oamenilor din institut. El mulțumește conducerei pentru deschiderea față de proiect și echipelor de cercetare pentru sprijinul oferit pe parcursul documentării, aprecind disponibilitatea acestora de a facilita accesul în laboratoare și de a crea condițiile necesare realizării fotografiilor. Este un gest de politețe, dar și o observație importantă: patrimoniul științific nu înseamnă doar clădiri și instalații, ci și



comunitățile care le mențin funcționale și le transmit dintr-o generație în alta.

Deși în prezent competitivitatea cercetării este evaluată aproape exclusiv prin indicatori de performanță, includerea ICMET Craiova într-o lucrare internațională dedicată marilor institute de cercetare oferă o perspectivă diferită. Ea arată că valoarea unei instituții se măsoară și prin capacitatea de a traversa epoci tehnologice, de a se reinventa și de a

rămâne relevantă.

Din această perspectivă, prezența ICMET în *Soviet Scientific Institutes* nu reprezintă doar o apariție editorială. Este confirmarea că unul dintre cele mai importante institute românești de cercetare a devenit parte a unei istorii europene a infrastructurilor științifice. Lărgind perspectiva, descoperim că România deține încă locuri în care trecutul și viitorul cercetării coexistă sub același acoperiș. ■

Mai mult decât o infrastructură de încercări: un reper european

Înființat în urmă cu peste cinci decenii, ICMET Craiova a evoluat odată cu transformările sistemului energetic românesc, devenind unul dintre cele mai importante centre europene dedicate încercărilor și cercetării în electrotehnică și electroenergetică. Laboratoarele sale de înaltă tensiune și de mare putere, dezvoltate și modernizate succesiv de-a lungul timpului, permit efectuarea unor teste complexe pentru echipamente destinate producției, transportului și distribuției energiei electrice, infrastructuri esențiale pentru siguranța și reziliența rețelelor energetice.

Dar ICMET înseamnă mai mult decât infrastructură experimentală. Institutul a reușit să transforme competențele acumulate în proiecte de cercetare cu aplicabilitate directă în industrie, participând la dezvoltarea de tehnologii pentru echipamente electroenergetice, materiale avansate, sisteme inteligente de monitorizare și diagnostic, compatibilitate electromagnetice, securitate cibernetică a infrastructurilor critice și, în ultimii ani, soluții dedicate economiei hidrogenului și tranziției energetice.

Această continuitate este unul dintre cele mai valoroase atuuiri ale institutului. În timp ce multe infrastructuri de cercetare construite în a doua jumătate a secolului trecut au rămas simple mărturi ale unei



epoci tehnologice, ICMET a continuat să investească în modernizare, acreditare și integrare în proiecte europene, păstrând active laboratoare care servesc atât cercetării, cât și industriei.

Privite prin această lentilă, instalațiile fotografiate de Eric Lusito capătă o semnificație diferită. Ele nu impresionează doar prin dimensiune sau expresivitate arhitecturală, ci prin faptul că reprezintă infrastructuri vii, utilizate zilnic pentru dezvoltarea și validarea unor tehnologii care răspund provocărilor actuale ale sectorului energetic.

De aceea, includerea ICMET în *Soviet Scientific Institutes* poate fi interpretată ca o recunoaștere a unei duble identități: aceea de martor al istoriei cercetării europene și, în același timp, de actor activ în construirea viitorului acesteia.



A SHATTERED WINDOW TO THE RADIO SKY

Amid Russian attacks, Ukrainian astronomers fight to salvage a unique observatory

14 JUN 2024 • 8:00 AM ET • BY ERIC LUSITO

Mykhailo Sidorchuk, a researcher at the Institute for Radio Astronomy stands behind a damaged antenna of the Giant Ukrainian Radio Telescope. ERIC LUSITO

In November 2023, photographer Eric Lusito made a rare visit to the Braude Radio Astronomy Observatory near Kharkiv, Ukraine, once one of the nation's flagship scientific facilities. Since his visit, the Kharkiv region, which was partly occupied by Russian forces in 2022 but liberated later that year, has again faced a renewed Russian assault. As of this writing, military specialists say that effort has stalled. Here is Lusito's account of his visit.

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BEFORE I GET INTO HIS CAR in downtown Kharkiv, Ukraine's second largest city, Yehsen Varykivskyi lays out the rules for my visit to the Braude Radio Astronomy Observatory, about 75 kilometers away. I must be always accompanied by a staff member. I must follow safety rules. "Above all," Varykivskyi says firmly, "don't stray from the path."

Although Ukrainian forces have liberated the site from Russian occupation, unexploded

ammunition and shells remain scattered across its grounds. Varykivskyi, a recently

minted Ph.D. at the Kharkiv Institute of Radio Astronomy (IRA), hands me my visitor's

pass, a letter signed by the director of IRA, which operates the observatory.

Fields of dreams

As the car follows a wooded path, we can see the UTR-2's network of 2040 dipole antennas, laid out like a giant letter T across fields of grass. Each 1-ton dipole is an 8-metre-long metal barrel, raised by a rod 3.5 metres off the ground. They look like empty cages for giant birds.

The antennas have enabled scientists to detect radio signals emitted during magnetic storms on the Sun, document the meteoric bursts from dead stellar cinders called pulsars, and discover the fine detail of lightning strikes on Saturn.

On 24 February 2022, the day of the Russian invasion, the army was tuned in to Jupiter to complement observations by NASA's Juno mission. A Russian battalion occupied the observatory the following day. Within 1 month, the soldiers had expelled employees and turned the observatory into a military base.

Off to the side in a small field is the observatory's future: the first 275 antennas of the Giant Ukrainian Radio Telescope (GURT), which began operations in 2015. Plans call for GURT to have 2500 antennas, and it is expected to be up to 10 times more sensitive than the UTR-2 and simpler to operate.

At the moment, however, Vasylyuk says just 30 to 50 of GURT's antennas are undamaged. Still, the month before our visit, scientists were able to use GURT to conduct observations, thanks to a solar power plant installed through a Polish fundraising effort. The rest of the observatory remains without electricity.



Before the war, data were collected from the telescope in this room (left image, pictured in 2021). But bombing and destruction (second image) have rendered the telescope inoperable. [see story](#)

Science gone dark

With half of its windows boarded up with plywood, the observatory's main building looks as if it has been devastated by both a hurricane and a flood. Liberating forces found the main entrance booby trapped with grenades, and the words "caution mines" are etched in white chalk on the door.

We climb to its temporary roof, funded by the National Academy of Sciences (NAS) of Ukraine, which covers a hole blasted by an artillery shell. Sidorchuk notices a fragile flower growing in a precarious spot below the roof. "Nature is wonderful!" he exclaims, smiling for the first time.

We descend a staircase, past a painting of Alexei Leonov, the Soviet cosmonaut who performed the first spacewalk in 1968. It's dark and we use flashlights to make our way past shattered electronic equipment too heavy to steal. Sidorchuk says Russian soldiers looted computers, as well as the precious digital receivers that record telescope data.



It is a portrait of the Soviet cosmonaut Alexei Leonov, the Soviet cosmonaut who performed the first spacewalk in 1968. [see story](#)

A tripod leads us into the core of the telescope, the cable tunnels, where Russian soldiers took refuge. Mattresses lie molding on the floor, which is littered with packs of combat rations and antenna amplifiers. On the walls we can decipher unsettling Russian messages: "The gods will not do for us what we must do ourselves." No one wants to stay any longer in this gloomy atmosphere.

We exit, relieved to find fresh air and sunshine outside. Sidorchuk goes off to inspect a few UTR-2 antennas that have been shot up. One lies on the ground, as if executed. The area around the observatory is secure, but some 80% of its 140 hectare grounds must still be cleared of mines and munitions. Vasylyuk believes the main building will need to be demolished. "There's no point in restoring it as it was," he says. "We want to modernize it, but only after the war. And the end of the war is not yet in view."

We follow tractor tracks along the rows of UTR-2 antennas back to our car at a guardhouse. Ribbons hang from trees, indicating the presence of unexploded shells. Wrecked vehicles surround the guardhouse, including a white Lada Niva car with a painted letter Z, a symbol of Russian militarism. A nearby bunker once housed scientific equipment, but Russian soldiers began to use it as an ammunition depot, and a shell blew it up. The late afternoon sun illuminates the charred scrap metal, as if reviving the fire.

It's getting late and Vasylyuk is reluctant to drive in the dark, says it's time to go. He drops me off at the open house in the deserted center of Kharkiv. "Thank you," he says, "for not forgetting us."



The observatory, used as a military base, is still littered with Russian combat rations packs. [see story](#)

Hope for the future

It will cost about \$4 million to repair the UTR-2 and GURT, IRA Director Vyacheslav Zakharov recently told me. So far, the institute has received \$150,000, mostly from NAS. War time demands mean most of Ukraine's science budget will be spent on applied research, says Yuriiy Shulga, CEO of the Ukrainian Science Club, a think tank that promotes education and science reform. "Today both science and education heavily depend on foreign funds and international cooperation," she says.

Still, many foreign scientists believe the observatory has a future among its peers. Evgeniy Okladin, an astrophysicist at Arizona State University who was born in Ukraine, hopes GURT could be capable of detecting radio emissions from exoplanets with magnetic fields—perhaps even small, rocky planets in the habitable zones of their stars. One challenge will be filtering radio signals from the host star, she says. "We simply don't know enough about the stellar emission at low frequencies to rule out any detection coming from the star rather than a planet," she says. "But we are getting there."

GURT might also be able to trace how clouds of hydrogen in the distant universe absorbed light, first from the big bang itself, and then, a few hundred million years later, from the first stars and galaxies. It could enable radio astronomers to "dive back into the dark ages" of the universe and complete the missing timeline between the big bang and the emergence of the first stars, says Emma Chapman, an astronomer at the University of Nottingham.

Philippe Zarka, director of research at the Paris Observatory and an IRA collaborator since 1994, says that, when completed, GURT could join LOFAR, a European network of low-frequency radio telescopes. With colleagues from Poland and the Netherlands, Zarka helped IRA submit a €1.5 million upgrading plan to Horizon Europe, one of the European Union's research funding programs. But in February, IRA learned the proposal was rejected.

"The referee gave the project a low rating, taking into account the high risk due to the location," Zakharov says. "This assessment is probably relevant," he concedes, especially in light of Russia's recent renewed effort to advance on the Kharkiv region.

But Ukrainians won't give up on restoring their flagship radio astronomy facility, Zakharov says. "Scientific infrastructure will be where there are scientists," he says. "And the people of Kharkiv showed that they are not ready to abandon their city."

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ABOUT THE AUTHOR

Eric Lipton

Author



Scienza e tecnologia in Unione Sovietica

LETTERATURA 28 Aprile 2026

U

n nuovo volume fotografico porta sotto i riflettori il sogno tecnologico dell'URSS attraverso gli scatti del fotografo francese Eric Lusito. L'opera analizza il legame tra scienza e potere nelle ex repubbliche socialiste.

CONDIVIDI 

L'ascesa e il declino dell'[Unione Sovietica](#), raccontati da una prospettiva originale: le immagini di ciò che sopravvive del suo grandioso apparato scientifico. È questo il focus di un nuovo libro fotografico, intitolato *Soviet Scientific Institutes* (nell'immagine in apertura un dettaglio della copertina). Pubblicata lo scorso 16 aprile dalla casa editrice britannica [FUEL](#), l'opera nasce dall'approfondito lavoro documentario svolto dal fotografo francese **Eric Lusito**.

Gli scatti suggestivi raccolti nelle oltre 200 pagine del volume documentano la parabola di molte infrastrutture – un tempo *top secret* – disseminate in tutto il vasto "impero" sovietico. Attraversando località remote di nazioni come l'Armenia e l'Uzbekistan, il libro passa in rassegna istituti grandi e piccoli che resistono al passare del tempo, dopo che per molti anni sono stati il simbolo della [sfida tecnologica sovietica](#) al blocco occidentale.

UN VIAGGIO FOTOGRAFICO TRA GLI ISTITUTI SCIENTIFICI DELL'URSS

Il volume ruota attorno al primo resoconto fotografico dedicato ai centri di ricerca sovietici, un tempo inaccessibili al pubblico. L'indagine visiva di Lusito evidenzia anzitutto la passione per i progetti scientifici grandiosi che ha caratterizzato la politica di **Mosca** a partire dal 1945 e per tutto il periodo della [Guerra Fredda](#). Ancora oggi, gli istituti catturati dall'obiettivo del fotografo appaiono come complessi dalle dimensioni fuori scala, progettati per accogliere migliaia di ricercatori.

Sotto l'aspetto visivo, l'opera restituisce l'anima più vera di questi spazi, portando all'attenzione del lettore contemporaneo il loro ruolo di "templi" dedicati al "culto" della scienza. Lo stridente contrasto tra i [mosaici costruttivisti](#), i macchinari ormai obsoleti e il degrado in cui versano molte delle strutture stimola inoltre una riflessione profonda su cosa ha significato la fine dell'impero sovietico.

L'ESTETICA E LA FUNZIONALITÀ DEI LABORATORI SCIENTIFICI SOVIETICI

Uno dei capitoli più interessanti del libro è quello dedicato all'[Ucraina](#), che all'epoca passò nel giro di pochi anni dall'essere l'epicentro delle purghe di Stalin a diventare un polo scientifico strategico per tutta l'URSS. Gli scatti di Lusito e le didascalie a corredo descrivono l'incredibile impegno profuso dai ricercatori contemporanei, che continuano a operare ancora oggi in molte di queste strutture, lavorando anche durante i bombardamenti pur di portare avanti i loro studi.

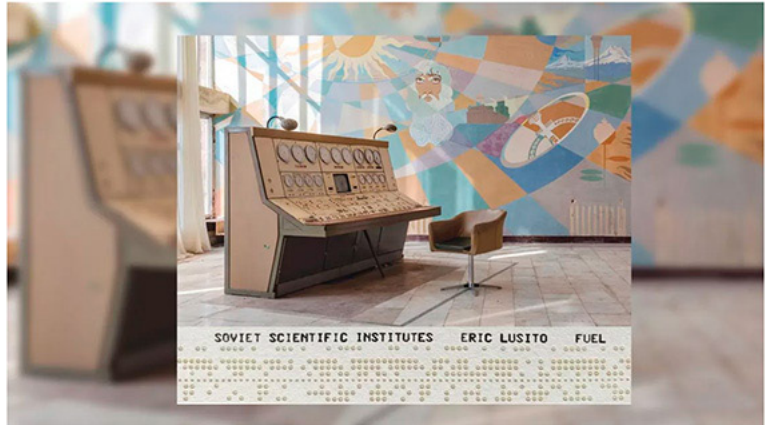
Introdotta da una prefazione curata da **Paul Josephson**, professore emerito di storia presso il Colby College e tra i massimi esperti mondiali di storia della scienza sovietica e russa, il libro *Soviet Scientific Institutes* offre un'importante testimonianza storica in merito al sogno tecnologico bolscevico. L'indagine visiva condotta a quasi quarant'anni di distanza dallo sgretolamento dell'URSS racconta una storia di segretezza e smisurata ambizione, mostrando il ruolo cardine della scienza nel definire l'identità di un intero sistema geopolitico.



Un photographe au pays des Soviets

Le photographe Eric Lusito, spécialiste de l'ancien bloc soviétique, rencontre en 2021 un scientifique ukrainien qui lui fait découvrir son laboratoire. Inspiré, il décide alors de documenter les vestiges de la grande science de l'époque soviétique.

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Eric Lusito explore les vestiges des instituts scientifiques soviétiques, témoins d'une époque où la recherche servait un idéal communiste aujourd'hui révolu. (Photo FUEL)

Par **Thierry Meneau**
Publié le 26 août 2026 à 10:00

Le propos. Rappelez-vous l'expérience électrostatique du Palais de la Découverte. Cette grande salle parsemée de tubes, tourbillons, sphères, guidant l'électricité. Vous souvenez-vous de cette ambiance de laboratoire suranné qui y régnait ? C'est ce que vous retrouverez dans « Soviet Scientific Institutes » d'Eric Lusito. Le photographe a parcouru l'ex-bloc soviétique pour y photographier les instituts scientifiques et laboratoires qui ont fait la renommée de la recherche russe avant l'effondrement du bloc soviétique.

On est plongé dans une époque révolue fortement marquée par le parti communiste. Rien de numérique, tout y est analogique. Les boutons sont partout, les cadrans ont des aiguilles parfois tombées, les antennes des radiotélescopes rouillent inlassablement attaquées par le froid en Roumanie, en Ukraine. On imagine encore les hommes en blouse blanche s'affairant devant les consoles.

L'esthétique soviétique est sur les affiches, sur les fresques et dans les salles de contrôle. Elle se mêle à la complexité des appareils pour rappeler que les chercheurs de l'époque oeuvraient à un idéal qui en faisait des héros du récit communiste.

Ces friches nous ramènent finalement à la guerre en cours entre la Russie et l'Ukraine. Poutine vit probablement encore dans le mythe de ces instituts en délabrement.

LIRE AUSSI :

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LIVRE PHOTO

- Soviet Scientific Institutes
- d'Eric Lusito, FUEL, 208 pages, 37 euros.

Les Echos

LE LIVRE DU JOUR

Un photographe au pays des Soviets

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