**X-RAY**

**The Power of Roentgen Vision**

**Blower hall and Compression hall, World Heritage Site Völklinger Hütte**

**9 November 2025–16 August 2026**

**X-RAY** is the first ever exhibition dedicated to the phenomenon of X-rays and the wide-ranging cultural and artistic influence of X-ray vision. Following Wilhelm Conrad Röntgen’s discovery of X-rays in November 1895, news of this novel type of radiation and its ability to penetrate the invisible realm spread like wildfire, unleashing a storm of enthusiasm among physicists, doctors and the general public. Röntgen’s first act was to circulate a paper in five languages detailing his experimental apparatus, thereby enabling countless laboratories around the world – from Vienna and St Petersburg to Buenos Aires, Kolkata and Melbourne – to generate X-rays and X-ray images of objects. Röntgen’s discovery brought him fame overnight. Yet he relinquished any claim to patent rights, a decision that fuelled the spread of this seemingly magical form of radiation – and surely played a role in him being awarded in 1901 the first ever Nobel Prize in Physics.

Decades would pass before it was properly understood. Röntgen and some other scientists proposed that X-rays were longitudinal waves in luminiferous aether. In 1948, it was discovered that the sun emits X-radiation; and, in 2003, X-rays were observed in bolts of lightning.

The discovery of X-rays was the spectacular culmination of a quest to discover the realm of the invisible in the late 19th century. Speculative forays over preceding decades indicate a widespread fascination with this topic. A story by Kurd Laßwitz, for example, the father of German science fiction, tells of a private researcher who develops a substance called “Diaphot” that renders the body transparent. Similarly, the novel *Elektra*, published by Ludwig Hopf in 1892 under the pseudonym of Philander, features a country doctor and his celebrated wish: “If only there were a way to make people as transparent as jellyfish!”

It was in 1895, the year of Röntgen’s discovery, that Sigmund Freud coined the word “psychoanalysis” to describe the method by which he would plumb the realm of dreams and the unconscious. The same year saw the screening in Berlin of the first ever commercial film in the Bioscope format. Soon after, G. A. Smith’s short film *The X-Rays* (1897) made playful use of this magical form of radiation in a story of two lovers. Around the same time, microbiology discovered a hitherto unknown “life form”: the virus. From the very beginning, Eros, Thanatos, and techne (Ancient Greek for art, skill, craft) were all inextricably linked with X-ray vision.

**X-RAY** showcases a broad spectrum of X-ray technology and its many applications, including early laboratory apparatus and X-ray images, the Pedoscope shoe-fitting machine (introduced around 1920), and X-ray satellites such as eROSITA, which are used to explore galaxies and investigate dark matter in space. The central theme of the exhibition is the transillumination – whether close-up or from afar – of animate and inanimate matter. Exhibits include the “Transparent Human”, which was created at the end of the 1920s by the Deutsches Hygiene-Museum in Dresden. This iconic representation of X-ray vision provides a view of the complex structures within the human body.

Meanwhile, imaging techniques based on X-rays have steadily progressed, leading to the development of, for example, computer tomography (CT). In parallel, the ability to limit exposure to radiation during examination has improved immeasurably. And yet, whereas radiology is now routine in the medical sphere, artists around the world have retained their fascination with this phenomenon and have produced a host of works that use X-rays, incorporate X-ray images or harness the idea of X-ray vision.

The creative means employed in such works include original X-ray images, which are cropped, painted over, or modified, augmented and collaged with different materials and colours; digitally enlarged images that serve as templates for glass windows; and graphic simulations of the X-ray process. Similarly, radiological motifs are incorporated in paintings, sculptures and graphics. And skull X-rays feature as a motif in the vanitas genre along with skeletons and individual bones, both continuing in idiosyncratic fashion a long tradition of memento mori and danse macabre.

Used as a medium in the visual arts, X-ray images depart from a traditional, mimetic, realistic reproduction of reality. Instead, they deal in alienation, depriving their object of its three-dimensional spatiality, replacing it with a shadowy silhouette, and adding metaphorical depth by revealing hidden structures and the invisible. Emerging on the threshold to the 20th century, this medium will become a key feature of modern art.

When artists begin, with Meret Oppenheim, to present skull X-rays as self-portrait, the renunciation of the familiar human image is complete. This rejection is in keeping with the idea that individual – or, indeed, supra-individual – identity is only disclosed beneath the surface.

Beyond the visual arts, a radiological aesthetic has left its impact on architecture, fashion, advertising, caricature and comics. In the works of literary authors such as Marcel Proust, Thomas Mann, Franz Kafka, Jirí Wolker, Durs Grünbein and many others, a reference to X-rays characteristically expresses a desire to penetrate life and everyday existence. Likewise, the idea of X-ray vision frames the narrative in a range of film and TV productions (Adventures of Superman, 1952; X: The Man with the X-ray Eyes, 1963; Smallville, 2001-2011; Superman Returns, 2006; Apples, 2020; etc.).

THE EXHIBITION SPACE AND ITS POSSIBILITIES

Set amidst the historic blower machines, the exhibition features an early X-ray laboratory, Wim Delvoye’s X-ray chapel, cinema booths with X-ray films, a catwalk with X-ray fashion, a shoe shop complete with a Pedoscope shoe-fitting machine and skeleton X-ray shoes, a model satellite hung from the lofty heights of the blower hall, and much more. The exhibition is aimed at the widest-possible audience and traces an arc from science to art, offering instructive and intriguing insights into this fascinating topic.

A BRIEF OVERVIEW OF THE EXHIBITION CHAPTERS

The exhibition begins with an introduction to the topic from a historical and physical viewpoint. The quest to reveal the invisible realm is illustrated by works from Leonardo da Vinci and a sequence of images especially created for the show by graphic novel author Jens Harder. This is followed by a presentation of the early days of X-ray research, around the year 1900, with a recreation of Wilhelm Conrad Röntgen’s laboratory. Whether in early film orrecorded music, Röntgen’s decision to afford open access to his discovery triggered a worldwide wave of enthusiasm for X-rays that would culminate in him being awarded the first ever Nobel Prize in Physics.

A section on radiology during the First World War highlights the significant role played by two-time Nobel Prize-winner Marie Curie in advancing the use of X-ray technology. In the 1920s, the “Transparent Human” in Dresden showcased this hitherto unknown transparency of the human body. Such transillumination of the body was mirrored by the transillumination of the soul in art and literature – not least in the works of Edvard Munch, Jirí Wolker, Thomas Mann and Frida Kahlo.

Following this chronological introduction, subsequent themes are dealt with diachronically across the coming century. In the small exhibition area, intimacy is a key theme, with a spotlight on the X-ray scanning of baggage and the human body. Elsewhere, religion and transgression are juxtaposed with gender themes. Here, the chief exhibit is a 10 x 5-metre chapel by Wim Delvoye (on loan from Mudam Luxembourg), which visitors can enter.

A large section is devoted to politics. This brings together political caricatures incorporating X-ray vision, documents of civil courage, and testimonies of subjection and resistance. The Third Reich and the GDR are featured, as is colonial and postcolonial South Africa. From the sphere of music, there is a story of political subversion from the former Soviet Union, where pirated recordings were pressed on old medical X-ray images – plus a record shop brimming with radiological inventiveness. The **X-RAY** concept workshop features is followed by X-ray topics from the fields of archaeology, cultural and art history, natural science and medicine.

The large exhibition area is framed by panoramas, up to 10 metres in length, presenting themes from nature and technology. This includes a section devoted to architecture, with a walk-through labyrinth of transparent brick walls, plus a catwalk featuring X-ray fashion and a shoe shop complete with Pedoscope shoe-fitting machines and current shoe creations.

Both the microscopic and macroscopic sciences are on show at the head of the large exhibition area. These range from materials research to space telescopes and the X-ray exploration of black holes and galaxies. The Compressor Hall presents selected works of modern and contemporary art dealing with the key themes of existence, identity, death and eternity. Meanwhile, the cinema in the Compressor Hall is showing powerful films that incorporate exemplarily the topic of X-rays and the society of transparency.

A-Z OF THE PARTICIPANTS (Work in progress)

Michael Apted (1941, UK) Renate Bertlmann (1943, AT) Cris Bierrenbach (1964, BR) Christoph Brech (1964, DE) Claude Cahun (1894-1954, FR) Jaume Collet-Serra (1974, ESP) Roger Corman (1926-2024, US) Marie Curie (1867-1934, PL) Wim Delvoye (1965, BE) Thomas Demand (1964, DE) Agnes Denes (1931, HU) David Fincher (1962, US) Jean Paul Gaultier (1952, FR) Isa Genzken (1948, DE) Gilbert & George (1943, IT)/(1942, UK) Andreas Greiner (1979, DE) Barbara Hammer (1948-2019, US) John Heartfield (1891-1968, DE) Iris van Herpen (1984, NL) Voluspa Jarpa (1971, CL) Frida Kahlo (1907-1954, MEX) William Kentridge (1955, ZA) Jürgen Klauke (1943, DE) Shahram Khosravi (1966, IRN) Hans Kupelwieser (1948, AU) Lynn Hershman Leeson (1941, US) Rosie Leventon (1946, UK) Danica Lundy (1991, CA) LuYang (1984, CN) Thomas Mann (1875-1955, DE) Remy Markowitsch (1957, CH) Alix Marie (1989, FR) Noelle Mason (1977, US) Ahmed Mater (1979, SAU) Ana Mendieta (1948-1985, CU) Ludwig Mies van der Rohe (1886-1969, DE) Edvard Munch (1863-1944, NO) Meret Oppenheim (1913-1985, DE) Sir Eduardo Paolozzi (1924-2005, SCO/UK) Walid Raad (1967, LBN) Arie van’t Riet (1947, NL) Marija Teresa Rozanskaite (1933-2007, LT) Katharina Sieverding (1941, CZ) Tavares Strachan (1979, BHS) Olivier Theyskens (1977, NL) Nick Veasey (1962, UK) Paul Verhoeven (1938, NL) Ziquan Wang (1993, CN) William Wegman (1943, US) Horst Widmann (1938, AT) Jiri Wolker (1900-1924, CZ) Adam Zyglis (1982, US)

CATALOGUE

The catalogue to **X-RAY**, edited by Ralf Beil and Thomas Zaunschirm, is published in German and English by Sandstein Verlag, located in Dresden. Alongside essays by Ralf Beil, Beatriz Colomina, Ernst-Peter Fischer, Shahram Khosravi, Matthis Krischel, Thomas Zaunschirm and other authors, this richly illustrated work comprises introductory texts, commentaries on exhibits from throughout the exhibition, and a selection of literary and philosophical source texts from 1895 to the present day.

BACKGROUND INFORMATION TO THE EXHIBITION

**X-RAY** is based on a curatorial studies seminar given by curator Dr Ralf Beil at the World Heritage Site Völklinger Hütte in the winter semester of 2020. It also draws upon a number of research works on X-ray art, complete with an extensive catalogue, written by Viennese art historian Prof. Thomas Zaunschirm. As well as meeting the highest scholarly standards, the exhibition also features images and insights that will surprise and delight the media and general public alike.

Large parts of the Völklingen Ironworks were constructed around the time of the discovery of X-rays or since then. At one time, it even had its very own X-ray bunker for testing materials. With its atmospheric Blower hall – a veritable engine room of modernity – and the adjoining Compression Hall, the World Heritage Site Völklinger Hütte offers an ideal setting for the presentation of a highly original “narrative” around the topic of X-rays and their significance for art, culture, medicine and intellectual history.

The opening of **X-RAY** is on 8 November 2025, exactly 130 years after the first generation of X-rays by Wilhelm Conrad Röntgen.

**X-RAY** continues in original manner a series of bold thematic exhibitions that have helped forge the reputation of the World Cultural Heritage Site Völklingen Ironworks – with its five programmatic pillars of INDUSTRY, CULTURE, HISTORY, ART and NATURE – as an exceptional showcase for contemporary culture. This includes, in particular, the triad of major exhibitions: **THE WORLD OF MUSIC VIDEO** (2022), **THE GERMAN CINEMA** (2023/2024) and **THE TRUE SIZE OF AFRICA** (2024/2025).

This extremely elaborate exhibition has been made possible by, in particular, funds from the Saartoto lottery company as well as generous “Leuchtturm” funding from Saarland’s Ministry of Economic Affairs, Innovation, Digital and Energy.