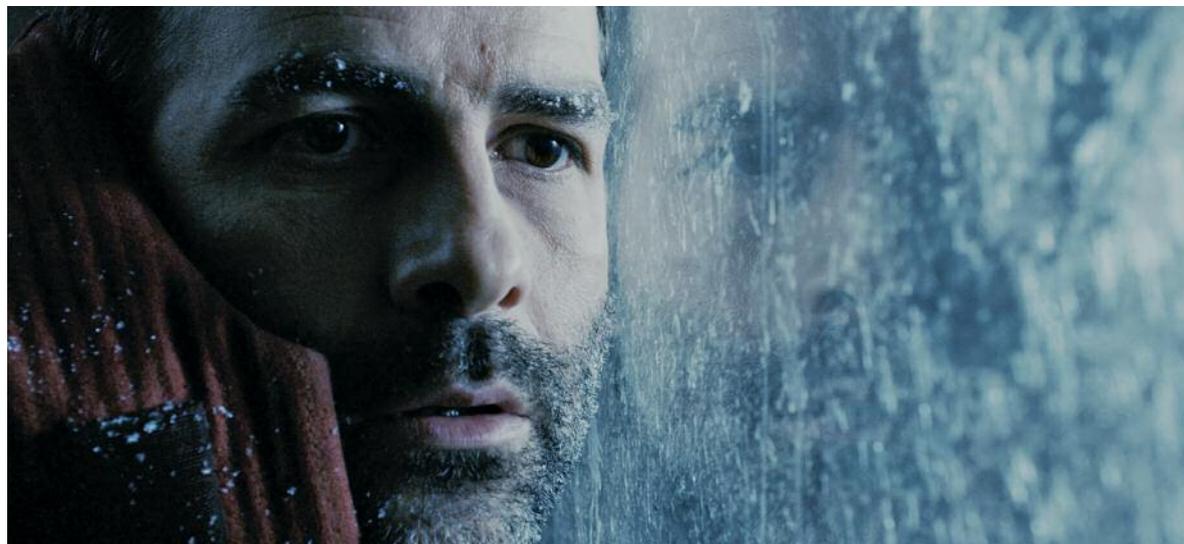


# Short Takes

David (Beat Marti) and his wife attempt to cheat death through cryogenic technology, but wake up hundreds of years later to find that something has gone terribly wrong in the science-fiction short *Kryo*.



## Future Shock

By Derek Stettler

The half-hour science-fiction short *Kryo* opens with a compelling 1980s-style VHS-quality promotional video for the Phoenix Life Extension Foundation, promising viewers that a world free of disease and death awaits if they undergo the company's cryogenic services. *Kryo* explores the potential consequences of accepting that promise through the story of David (Beat Marti), who chooses to be frozen alongside his terminally ill wife, Evelyn (Jana Klinge).

When they wake up from their "cryo-coffins" in the year 2403, David and Evelyn find themselves in a high-tech medical bay. Exploring their surroundings, they begin to realize that something has gone terribly wrong, and they find that they are all alone in an abandoned subterranean facility. As they search for answers, they discover a terrible truth about the mysterious Phoenix Foundation — and themselves.

*Kryo* was a thesis project at the Filmakademie Baden-Württemberg in Ludwigsburg, Germany, from which cinematographer Frederick Gomoll graduated in 2015. Although he had not previously worked with the cast or crew, Gomoll was a natural choice to serve as the short's director of photography. "I had shot numerous sci-fi-related projects during my studies," he recalls, "but nothing as fully realized as *Kryo*. I'm very proud of it."

Christoph Heimer, *Kryo*'s director and a fellow student at the film school, had seen Gomoll's work and reached out to him with a script about cryogenics. "I joined because I was so captivated by the story and the imaginable moods," says Gomoll. "The main idea was there, but it evolved a lot over time. It was a very good atmosphere between us all. Production designer Johanna Wagner and I had a lot of freedom to evolve ideas, and Christoph was very receptive."

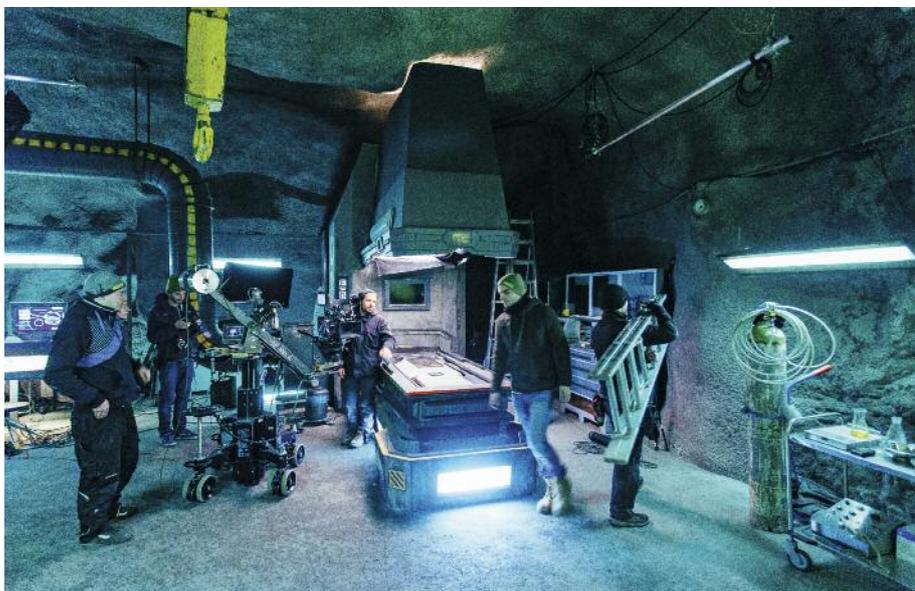
Producer Christian Schega rounded out the team members who graduated with *Kryo* as their thesis. The screenplay was written by Arend Remmers.

Coincidentally, just prior to joining the *Kryo* production, Gomoll had finished shooting *Call of Immortality*, a documentary about cryogenics that took him to locations in Germany, Russia and Hong Kong. Asked whether he drew inspiration for *Kryo*'s look from the real-life cryogenic facilities he had visited, the cinematographer laughs. "No," he says. "There was nothing sci-fi about them!"

Instead, Gomoll found himself most influenced by the science-fiction films he watched with *Kryo*'s production team during the six months of prep. In particular, he cites *Event Horizon* (AC Aug. '97), *Moon* (AC July '09), *Cargo* (2009), *Prometheus* (AC July '12) and *Alien* (AC Aug. '79) as significant inspirations. "I learned a lot about the art of scaring the viewer by doing slow dolly shots and keeping things hidden in darkness," he reveals. "I wanted to achieve a claustrophobic atmosphere, and these films did that extremely well."

Pulling double duty as *Kryo*'s cinematographer and camera operator, Gomoll contributed to the short's palpable sense of atmosphere with precise camera movement; a focus on details through close-ups; steam, smoke, snow and ice effects; and the use of "almost every lighting technology out there: LED, HMI, tungsten, fluorescent and monitor screens," he says. To cement the story's futuristic look, Gomoll collaborated closely with Wagner to integrate LED strips, fluorescent panels, warning lights and display screens into the production's sets.

The ability to shoot in real locations — including a decommissioned 1980s Cold War-era military bunker near Dresden and an active stone quarry — also helped immensely, and sub-freezing temperatures during the winter shoot allowed visible breath vapors to be shot practically on set. "For a long time, we discussed building



Top: David wakes from his cryo-coffin and is greeted by his wife, Evelyn (Jana Klinge). Middle: Marti and Klinge rehearse a scene, while director Christoph Heimer (second from left) observes. Bottom: The crew prepares the medical-bay set.

up the underground facility in a studio," Gomoll remembers. "But it was too expensive, so we looked for real locations."

Used as an armory storage facility during the Cold War, the bunker provided an inherently subterranean feel courtesy of its long tunnels and massive steel door, which remains operational and was put to prominent use in the film. The filmmakers did share an early concern about the location, however. "It was owned by a motorcycle gang, and it was not so easy to get familiar with these people," Gomoll recounts. "On the location-scout days, we had to drink vodka and Jägermeister with them. But in the end, they welcomed us to shoot the movie on their property." Once the production had approval, the art department worked for nearly two months, building and preparing the sets within the bunker.

Apart from limited access to electricity and the sub-freezing temperatures, Gomoll says the greatest difficulty he faced in the bunker stemmed from the location's white walls. "We had them everywhere in the bunker," he recalls. "Therefore, the entire infirmary set was painted dark gray, but the corridors were too big for that, so I tried to light with backlight and flashlights as much as I could to make it moody."

To establish a flickering-light effect after the facility's computer systems are damaged, Gomoll turned to Philips Showline Nitro 510 LED strobes. In addition, arrays of Trilux LED and T5 and T8 fluorescent tube lamps were placed within the set at various positions to emulate a real facility. "Trilux sponsored us with many LED fixtures, which were normally [used] in buildings," the cinematographer says. "The LED lamps came with their own housings in different oval and rectangular shapes. We had dimmable electronic ballasts for the [fluorescent] tubes with a self-built dimmer board. The rest of the conventional lights were controlled by a GrandMA [lighting console] via DMX. With all these lamps as practicals in the background, we had a good basic setup to establish a futuristic look." The cinematographer notes his appreciation for the work of gaffer Johannes Reichau, as well as the contributions of 1st AC Dino von Wintersdorff.

When additional lighting was required, Gomoll keyed the actors with TheLight Velvet Light 1 units fitted with



**Top:** Evelyn and David explore the facility. **Middle:** The crew readies a scene inside the tunnels of the bunker. **Bottom:** The production prepares an exterior greenscreen set.

DoPChoice Snapgrids. “I’d never worked with these lamps before,” Gomoll notes, “but from now on, I will have them on all of my productions.” He expresses gratitude to Sean Goossen and LiteGear, who “provided a big package of LED ribbons.”

To help ensure the creative team shared a common vision for *Kryo*’s mood and style, Gomoll helped create a 60-page “bible” for the short, complete with reference images from influential films, explanations of intent, concept art, storyboards, set diagrams, and even previsualized shots that the cinematographer had created in FrameForge Previz Studio. He explains, “Every room and corridor had its own story, lighting and colors. It was essential to have a common thinking between the production designer, cinematographer and director. Our bible was very helpful.”

*Kryo* was shot almost entirely on an Arri Alexa Plus camera in 16:9 HD. Gomoll captured Log C ProRes 4:4:4:4 files to SxS cards, and cropped the footage in post for a final 2.39:1 aspect ratio. The cinematographer had hoped to shoot anamorphic, but the cost was prohibitive, so instead he opted to pair the Alexa with ArriZeiss Ultra Prime lenses ranging from 12mm — used for surveillance-camera shots — to 135mm, as well as a 60mm ArriZeiss macro lens. He was very happy with the results, and notes that the Ultra Primes’ integrated Lens Data System was a great help for the visual-effects team. *Kryo*’s intro sequence — presented in “old VHS style,” Gomoll describes — was shot with a Sony CineAlta PMW-F5. ➤



Top: Cinematographer Frederick Gomoll captures a POV shot from inside the cryo-coffin.  
Middle: The crew preps a scene in which David wakes from his cryogenic slumber.  
Bottom, from left: Gomoll, 1st AC Dino von Wintersdorff, prop artist Melanie Peter and key grip Jonas Neitzel test a POV shot.

While visual effects were an integral part of the movie, Gomoll strove to achieve as much of the look in-camera as possible. Accordingly, all of the screens seen in the short — with the one exception of a wall-sized hexagonal screen — displayed motion graphics live on set, complementing Gomoll's lighting and giving the actors a real image with which to interact. The vast majority of these graphics were in fact created by Heimer, who, Gomoll notes, is a talented visual-effects artist in his own right.

Out of the production's 12 shooting days, two took place at a studio — located at the film school — for greenscreen and set-extension work, including CG-heavy shots of a cavernous subterranean gallery that stores thousands of cryo-coffins. In the studio, the art department built a section of the bridge that connects one end of the cavern to a control center in the middle. The visual-effects team, which consisted of film students, then created the rest of the environment, using The Foundry's Nuke for compositing and Maxon's Cinema 4D for 3D modeling.

Final color grading for the project was performed in Assimilate Scratch by colorist Peter Hacker. Gomoll notes that Hacker — a freelance colorist and former Filmakademie Baden-Wurtemberg student — did a superb job and that he had complete trust in the colorist to achieve the desired look. "The grade was performed in full HD and the final deliverables were in ProRes, H.264 for Internet and a DCP for festivals," Gomoll says. As the cinematographer was not available to attend the grading sessions, he contributed his input to the colorist and director remotely.

Gomoll cites *Kryo* as an exciting opportunity to play with science-fiction elements that he loves. Indeed, with a story that offered everything from cryogenics and robotics to cloning and artificial intelligence, about the only tropes the project didn't explore were aliens and spaceships. "Next time!" Gomoll concludes with a laugh.

To watch the trailer for *Kryo*, visit [vimeo.com/frederickgomoll/kryo](https://vimeo.com/frederickgomoll/kryo). ●