



# Absolute Zero

2 x 60



International

# Absolute Zero

2x60

---

CONTACT

**Tom Koch, Director**  
**WGBH International**  
One Guest Street  
Boston, MA 02135 USA

TEL 617-300-3893  
FAX 617-779-7900

tom\_koch@wgbh.org  
wgbhinternational.org

*Absolute Zero* is a two-hour science adventure story about a remarkable group of pioneers whose goal was to reach the ultimate extreme of cold: absolute zero. The documentary is a unique blend of science, cultural history and adventure, exploring key concepts, significant individuals and events in the field of low-temperature physics as well as the enormous impact that the mastery of cold has had on society through technologies such as air conditioning, refrigeration and liquefied gases.

*Absolute Zero* examines the struggles of philosophers, scientists and engineers over four centuries as they attempted to understand the nature of cold, explore its deepest reaches, create the “cold technologies” that have transformed society and seek a deeper understanding of matter itself. Absolute zero became the Holy Grail of low temperature physicists who wanted to find out what happened as the temperature plunged into domains unlike those of the rest of the physical world. Near absolute zero, they entered a strange quantum world where electricity flowed freely without resistance and fluids defied gravity.

Based largely on Tom Shachtman’s acclaimed book, *Absolute Zero and the Conquest of Cold*, the epic story follows a trail of eccentric characters ranging from a 17th century court magician whose alchemy brought air conditioning to Westminster Abbey to the original Captain Birdseye who invented frozen food.

Produced by British Emmy Award winner David Dugan, in collaboration with Meredith Burch of Meridian Productions, the film illuminates the very human process of science by focusing on fascinating characters, both familiar—Einstein, Fahrenheit and Galileo—and neglected—Boyle, Dewar and Onnes.

“*Absolute Zero* is guided by an international team of renowned scientists, researchers, educators and historians of science,” says Executive Producer Meredith Burch. “It chronicles the major discoveries over four centuries of research that have produced stunning scientific insights and applications which have truly revolutionized the world we live in.”

0703008

---

CREDITS

*Executive Producer:* Meredith Burch

*Director and Producer:* David Dugan

Based on the book: *Absolute Zero and the Conquest of Cold* by Tom Shachtman

A film by Meridian/Windfall Productions in collaboration with the University of Oregon and Twin Cities Public Television for BBC, PBS, ARTE

Photo Credit: Courtesy of Meridian/Windfall Productions