1. Record Nr. UNINA9910482316103321 Noort Olivier van <1558 or 1559-1627.> Autore Titolo Beschryvinghe vande voyagie om den geheelen werelt cloot, ghedaen door Olivier van Noort van Utrecht, generael over vier schepe, door de Strate Magellanes, langhs de custen van Cica, Cili ende Peru, om den gantschen aerden cloot om te zeylen, ende door de Moluckes wederom thuys te comen te zeyl ghegaen van Rotterdam den 2 July 1598 ende den Generael met het schip Mauritius is alleen weder ghekeert in Aug. 1601 .. [[electronic resource]] Pubbl/distr/stampa Amsterdam,: Cornelis Claesz, 1602 Descrizione fisica Online resource (4° obl) Lingua di pubblicazione Olandese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Reproduction of original in Koninklijke Bibliotheek, Nationale

bibliotheek van Nederland.

Record Nr. UNINA9910746971303321 Autore Weisend J. G **Titolo** Superfluid: How a Quantum Fluid Revolutionized Modern Science / / by J. G. Weisend II Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2023 **ISBN** 9783031426520 3031426525 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (154 pages) 536.7 Disciplina 530.42 Soggetti Thermodynamics Science - History Technology History Quantum statistics Heat engineering Heat - Transmission Mass transfer **Physics** History of Science History of Technology Quantum Fluids and Solids Engineering Thermodynamics, Heat and Mass Transfer Applied and Technical Physics

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di contenuto

Chapter 1. Introduction -- Chapter 2. A Brief Tour of Cold -- Chapter 3. Discovery -- Chapter 4. Explaining He II: Quantum Mechanics and the Two-Fluid Model -- Chapter 5. What If You Had a Bucket? -- Chapter 6. Moving Heat -- Chapter 7. Transport in strongly ionized plasma across magnetic field -- Chapter 8. Early Applications -- Chapter 9. The Fabulous 80s: Tore Supra, IRAS and CEBAF -- Chapter

Can You Paddle a Canoe in He II? – Engineering Studies -- Chapter
Colliders: Super, Large and Otherwise -- Chapter 12. ILC, TESLA, &
SRF Everywhere -- Chapter 13. A Superfluid Space Odyssey -- Chapter
High Field Magnets -- Chapter 15. The Other Superfluid -- Chapter
The Future.

## Sommario/riassunto

Unless you are a specialist or watch a lot of obscure YouTube videos you have probably never heard of He II or superfluid helium. This substance, a unique liquid form of the element helium, is produced and used in multi-ton quantities to enable much of modern science. Altogether, He II is at the heart of more than a dozen large scale scientific facilities world-wide representing an investment of tens of billions of dollars. It cools the magnets and cavities that contain and accelerate the particle beams at the Large Hadron Collider and is also used in accelerators for the study of rare isotopes and nuclear astrophysics. This little known liquid is, in reality, one of the enabling technologies of the future. A manifestation of quantum mechanics, He II exhibits amazing behaviors. It can flow up the side of a container against gravity, it can move through small openings without friction, and it can transfer heat extremely efficiently via a mechanism not seen elsewhere in nature. This book tells the story of He II. It describes the discovery of the fluid, the observation and understanding of its behavior, the development of underlying theory and the evolution of He II from a laboratory curiosity to an industrial-scale coolant. The current and possible future applications of He II are described. Like all science and engineering, the story of He II is a human story and the role that personalities, politics, communication, cooperation and competition play in the development of He II is captured here as well. World-famous physicists such as Lev Landau, Richard Feynman, Peter Kapitza and Kurt Mendelssohn are key players in the story, while secret police from two different countries have a walk-on role. This work is meant for the general reader. Without assuming any expertise in physics, engineering or mathematics, it illuminates for the general public a little-known area of science and engineering and shows why it matters. As it turns out, it' s also a good story.