

PHYSICS TODAY

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Ernest Lawrence's BRILLIANT FAILURE

**Machine learning
meets quantum physics**

**Architectures for
quantum computers**

**Crystallizing
white dwarfs**

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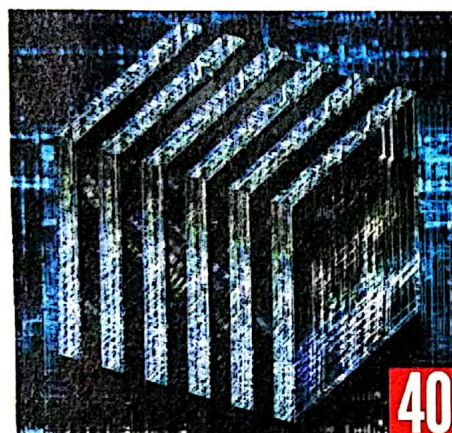
FEATURES



32 Ernest Lawrence's brilliant failure

Joshua Roebke

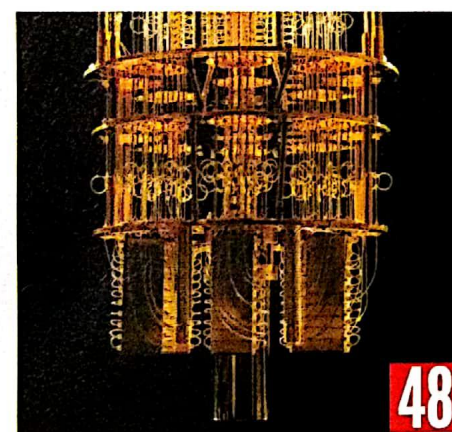
Lawrence, the creator of the cyclotron, also tried to bring the first color TV to American consumers. The story of his efforts reveals how the history of television was connected to physics and the military.



40 A systems perspective of quantum computing

Anne Matsuura, Sonika Johri, and Justin Hogaboam

Quantum architects, with knowledge of both physics and computer engineering, are key to developing scalable quantum computers.



48 Machine learning meets quantum physics

Sankar Das Sarma, Dong-Ling Deng, and Lu-Ming Duan

The marriage of the two fields may give birth to a new research frontier that could transform them both.

56 Nuclear physics in *Reviews of Modern Physics*

George Bertsch, Witold Nazarewicz, and Achim Richter

Throughout its 90-year history, the journal has elucidated all the major advances in the science of the densest phases of matter.



ON THE COVER: Ernest Lawrence (1901–58) was awarded the 1939 Nobel Prize in Physics for his development of the cyclotron. But in the 1950s, Lawrence thought he would be remembered for another achievement: the development of color television. On **page 32**, Joshua Roebke explores the birth, growth, and eventual failure of Lawrence's television company. (Photo © 2010 The Regents of the University of California, Lawrence Berkeley National Laboratory.)

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**PHYSICS
TODAY
ONLINE**

www.physicstoday.org



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▶ Physics in Africa

Launched in 2010, the African Physical Society has struggled to gain momentum as a force for the physical sciences on the continent. In a commentary, South African physicist Nithaya Chetty encourages the society to simplify its structure and focus on adding value to existing programs rather than replicating efforts. physicstoday.org/Mar2019b



▶ The UK and Star Wars

Despite its public support at the time, the British government had serious doubts about the US Strategic Defense Initiative, recently declassified documents show. Historian Aaron Bateman highlights the opposing approaches of the US and UK in integrating science and technology into national security policymaking. physicstoday.org/Mar2019c

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DEPARTMENTS

8 From the editor

10 Readers' forum

Commentary: Unity of physics perhaps not as grand as once thought — *Sankar Das Sarma* • Letters

14 Search & discovery

White dwarfs crystallize as they cool • Boosting the resolution of neutron backscattering spectroscopy • Spin excitations in a cavity hop coherently over long distances • Measurements of elusive mineral could explain mantle discontinuity



24 Issues & events

Exoplanet research evolves with statistical and technological advances • DOE uranium contract raises fairness concerns

58 Books

The perils of not thinking ahead — *Matthew Stanley* • Writing the record of scientific knowledge — *Matthew Hale* • A bird's-eye overview of gravitational-wave astronomy — *Emanuele Berti* • New books & media



64 New products

Focus on test, measurement, and data acquisition

67 Obituaries

Peter George Oliver Freund

70 Quick study

The Planet Nine hypothesis — *Michael E. Brown*

72 Back scatter

NIST's stone wall

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