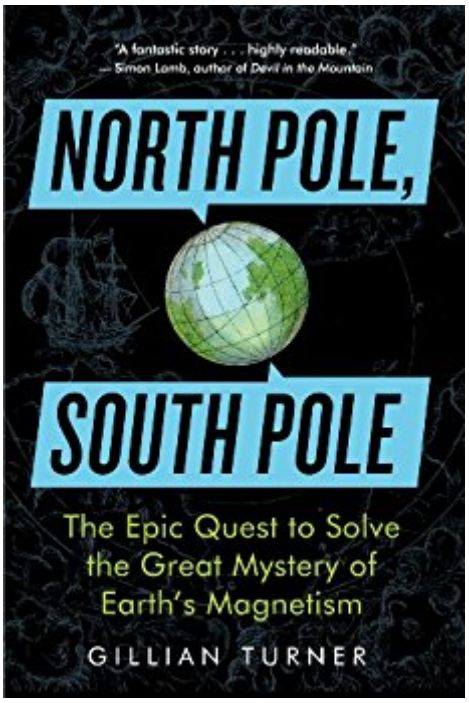
North Pole, South Pole: The Epic Quest To Solve The Great Mystery Of EarthÃ¢â‚¬â„¢s Magnetism



Synopsis

Why do compass needles point northÃ¢â ¬â •but not quite north? What guides the migration of birds, whales, and fish across the worldÃ¢â ¬â„¢s oceans? How is Earth able to sustain life under an onslaught of solar wind and cosmic radiation? For centuries, the worldÃ¢â ¬â„¢s great scientists have grappled with these questions, all rooted in the same phenomenonÃ¢â ¬â •EarthÃ¢â ¬â„¢s magnetism.Over 2,000 years after the invention of the compass, Einstein called the source of EarthÃ¢â ¬â„¢s magnetic field one of greatest unsolved mysteries of physics. Here, for the first time, is the complete history of the quest to understand EarthÃ¢â ¬â„¢s magnetismÃ¢â ¬â •from the ancient GreeksÃ¢â ¬â„¢ fascination with lodestone, to the geological discovery that the North Pole has not always been in the NorthÃ¢â ¬â •and to the astonishing modern conclusions that finally revealed the true source.Richly illustrated and skillfully told, North Pole, South Pole unfolds the human story behind the science: that of the inquisitive, persevering, and often dissenting thinkers who unlocked the secrets at our planetÃ¢â ¬â„¢s core.

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Customer Reviews

North Pole South Pole: The Epic Quest to Solve the Great Mystery of Earth’s Magnetism is a very well researched and written historical account. Ramifications of the research are clearly presented

and the reader is lead by eager expectation of what will be presented next. Anecdotes of researchers lives lighten the reading and difficult mathematical concepts are presented in a casual manner without equations so that readers can easily go and look up the detailed maths involved if they are so inspired. The book leads into the subject of plate tectonics which itself is a whole other story. As a creationist, this reviewer is dissapointed that it does not discuss free decay models of the earths magnetic field and that it assumes that radio-isotopic dating ramifications on the field of the earth are not questionable, however, it will be exceptionally valuable to any creationist wishing to study the subject. Anyone studying physics or geology should read this book to help them convey their studies to a wider audience in a captivating manner.

Very well interpreted on the periodical inversion of poles in the earth history. Computer simulation is the solution to understand it

This book follows a historical timeline to explain how the current view of the source of Earth's magnetic field came about. I really enjoyed the first half of the book for weaving together the contributions of so many big names in science, and how they made contributions to this field and others. The initial problem statement of needing to explain the Earth's magnetic field comes from explorers seeing the effects of declination, and their measurements varying with time was a very interesting perspective. I also had a very fundamental curiosity about why compass needles need to be balanced for the Northern vs Southern hemispheres, and what mechanics were involved in generating the flip of the polarity of Earth's magnetic field. Both of these questions were answered in the book.If the book has any fault, I think that that the final chapters felt a bit rushed, and that we would benefit from some further explanation, especially as the scientists get to computer modelling in the early 1990's. In general, I thought the book was very entertaining, engaging and informative. I'm off to order another copy for my Dad for Father's Day.

Great reading material. Nice mix of history and science

Absolutely fascinating history and subject matter. Reads like a novel. Couldn't put it down..

In this fascinating book, the author recounts humanity's quest to understand the nature of and mechanism behind the earth's magnetic field. Spanning the millennia from ancient Greek times to the twenty first century, a captivating journey unfolds as the reader is guided through the maze of

problems and challenges involved in deciphering this complicated matter. In this journey, we meet philosophers, explorers, tinkerers and scientists of various disciplines taking measurements, performing experiments and hypothesizing on this fascinating phenomenon. Along the way, we learn, among others things, how electricity and magnetism were discovered and developed, how the internal structure of the earth was uncovered, how the concept of continental drift came about and how pole reversals were finally accepted as real.The author, a senior lecturer in physics and geophysics, is certainly well-qualified to write such a book. She writes in a clear, friendly, lively and captivating prose. Consequently, anyone can enjoy this work and learn a great deal; I certainly did. But because of the many scientific explanations, some of which being a bit involved, science buffs may be those who would appreciate this book the most.

Gillian Turner, wrote an accessible and enjoyable account of how we figured the earth's magnetic field. Turner explains the history, the personalities and the politics of the times. She uses clear visuals to illustrate her points. It is evident that Turner really knows the material because all her explanations are clear. This is Turner's first book and I look forward to reading more of her work in the future. I recommend this book for anyone interested in the history of science.

PLEASE RATE THIS REVIEW!North pole, south pole is a nice little story about how scientists across the furthest edges of history have wondered about the earth and its properties. Turner explains in "easy" language the theories of various times, but also dives into the personal situation of all people involved. It is probably a bit more fun to read if you know something about electromagnetism, but this is in no way compulsory.Do note that this is a long story on a quite specific subject - it is not a 3 minute introduction into the earth's magnetic field. I'd say it makes for a great work to read in the holidays.

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