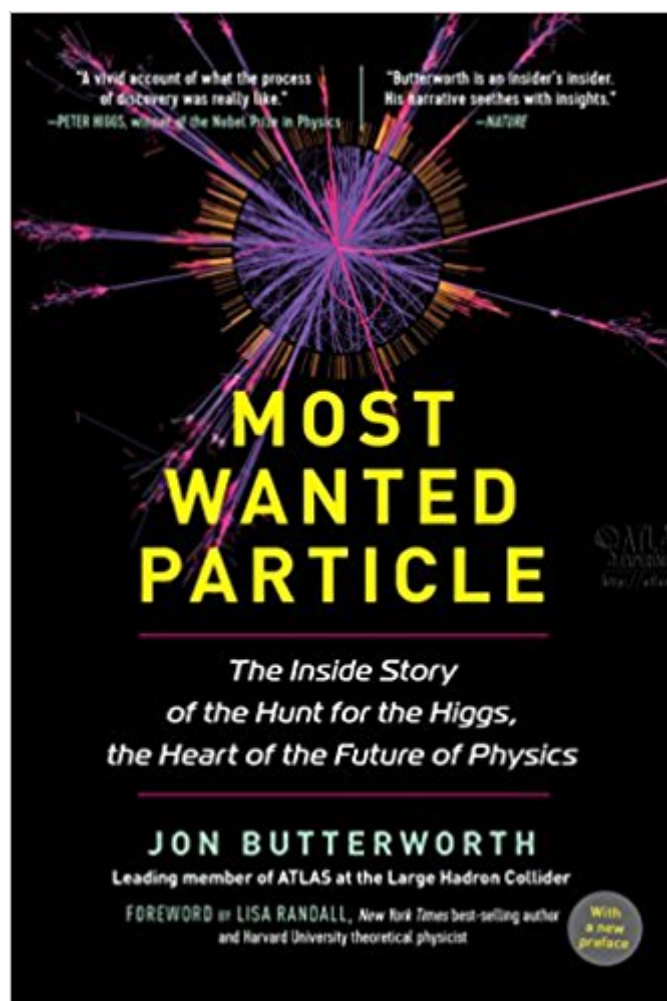


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# Most Wanted Particle: The Inside Story Of The Hunt For The Higgs, The Heart Of The Future Of Physics



## Synopsis

Now in paperback: the vivid account of what the process of discovery was really like for an insider. • "Peter Higgs: Particle physics as we know it depends on the Higgs boson: It's the missing link between the birth of our universe as a sea of tiny, massless particles and the tangible world we live in today. But for more than 50 years, scientists wondered: Does it exist? Physicist Jon Butterworth was at the frontlines of the hunt for the Higgs at CERN's Large Hadron Collider perhaps the most ambitious experiment in history. In *Most Wanted Particle*, he gives us the first inside account of that uncertain time, when an entire field hinged on a single particle, and life at the cutting edge of science meant media scrutiny, late-night pub debates, dispiriting false starts in the face of intense pressure, and countless hours at the collider itself. As Butterworth explains, our first glimpse of the elusive Higgs brings us a giant step closer to understanding the universe and points the way to an entirely new kind of physics.

## Book Information

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## Customer Reviews

I have no physics background, unless you count watching "The Big Bang Theory" regularly, but I found this book to be written in a manner that I could grasp the essentials even though I might not understand everything that is discussed. There is enough human interest information about the individuals involved in the scientific search for the Higgs boson to keep the reader interested and involved in the drama of the event.

This is a very enjoyable book that describes how the existence of a fundamental subatomic particle predicted decades ago was verified experimentally in 2012. The author does a great job of describing how mountains of data were analyzed statistically, and the reader need not be a physicist or mathematician to follow his train of thought. The book gives the reader a very insightful look into how physics research is actually done in the real world, i.e., by teams of people collaborating, and very effectively celebrates this methodology.

If you are looking for a good primer on Particle Physics, this is probably not the right book. For that I'd recommend something like "Quarks and Gluons: A Century of Particle Charges" by M. Y. Han. It's a short and simple introduction to Particle Physics basics. This book does offer plenty such information along the way, but its greater offerings are the experiences of a Particle Physicist who took part in some of the greatest milestones in the field, all chronicled delightfully by a very humble author whose lofty participation is recounted quite affably - from the disappointing setbacks of software and hardware problems, through the dicey navigation of political funding and public perception, to the exciting confirmations of data bumps at specific energy levels indicating discovery. I do envy this man's experiences; not only for his role in what might turn out to be the most important discovery in Physics, but for his front-row seat to the life-altering technological changes over the past few decades that played an integral part in - and in some cases emerged from - the efforts of CERN as it grew from a noble endeavor of international cooperation to the massive vanguard of humanity's cutting-edge frontier in our understanding of nature we regard it as today. This man was one of the pioneering global villagers before we even had a term for that; and a better man to relay such a life to the public I cannot think of. If I had to describe the book in a phrase, I'd say Bill Bryson-cum-Particle Physicist.

Lots of great background on the journey to the Higgs discovery. If you are interested in particle physics, the Higgs, CERN, the LHC, and some of the people involved, from an insiders point of view, you will enjoy reading this. Well worth your time! Enjoy the journey!

Mr. Butterworth gives an engaging account of the development of the LHC particle accelerator and captures the complex and huge nature of the undertaking. His descriptions of some of the theory behind the discoveries at CERN and other labs is very approachable if you have a semester of college physics. This is global science at it's best and is similar to what I see in my work as a medical device R&D engineer - research is now a global process with the advent of collaboration

using the Internet and inexpensive phone communication. And the development of very high power particle microscopes like the LHC led to the World Wide Web being invented at CERN and commercialized with the aid of Al Gore. Every dollar we spend on such fundamental research as at Fermi Lab, which is working on neutrino research now, and at CERN are amplified many times over in our economic activities and in the lives of people worldwide.

This is an okay book if you really want to know about the day to day stuff that constitutes a scientists life, but much of the text is not actually all that relevant to the Higgs boson discovery or even the LHC. You do, however, get a good deal of background on the life of a scientist working on the project, which is probably not what you bought this book for. You'll get lots of stories about how the analytical codes were developed or how press events took place or how "pure" science of this type is often unfairly criticized by politicians, the media and public alike. There is a lot of anecdotal text which would be good if those anecdotes were interesting or amusing (case in point the detailed discussion of attending a conference as presented in 3.4). Mostly they are just discussions of routine day-to-day occurrences. If you want a book that stays more on the path of what the LHC does and the significance of the Higgs then there are much better books out there.

Well written and lively account of the Higgs boson discovery by a member of one of the research teams. The discussions of the physics involved and the goals of the LHC are accurate well presented. Perhaps a wee bit too much personal revelation, but not overdone. Highly recommended to anyone interested in what's going on in fundamental physics. Refreshing absence of common garbage about string theory and multiverses.

although for me required real effort to read ( and a summary in " American Scientist " ) thought this among the best of several books concerning recent developments in physics for amateurs

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