Measurements Performed With The Cms Detector Using Lhc Run Proton Proton

The Large Hadron Collider (LHC) is the world's largest and most powerful particle accelerator. It is located at CERN, the European Organization for Nuclear Research, in Geneva, Switzerland. The LHC accelerates protons to energies of 13 trillion electronvolts (TeV),and then collides them head-on. These collisions produce a shower of particles, which are detected by the CMS detector.

The CMS detector is one of the largest and most complex detectors ever built. It is cylindrical in shape, with a diameter of 15 meters and a length of 21 meters. It weighs 14,000 tons. The CMS detector is composed of several layers of different materials, each of which is designed to detect a different type of particle.

Top-Quark Pair Production Cross Sections and Calibration of the Top-Quark Monte-Carlo Mass: Measurements Performed with the CMS Detector Using LHC Run I Proton-Proton Collision Data (Springer Theses) by Baby Professor

4.2 out of 5

Language	: English
File size	: 13522 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 301 pages

The LHC has been in operation since 2010. During that time, the CMS detector has collected a vast amount of data, which has been used to make a number of important discoveries. These discoveries include the Higgs boson, the top quark, and the W and Z bosons.

Measurements Performed With The Cms Detector

The CMS detector has been used to perform a wide range of measurements. These measurements have helped us to understand the properties of the Higgs boson, the top quark, and the W and Z bosons. They have also helped us to learn more about the nature of dark matter and dark energy.

Some of the most important measurements performed with the CMS detector include:

* The discovery of the Higgs boson in 2012. The Higgs boson is a fundamental particle that is responsible for giving other particles their mass. * The measurement of the mass of the top quark in 2014. The top quark is the heaviest known particle. * The measurement of the properties of the W and Z bosons in 2015. The W and Z bosons are responsible for the weak force. * The search for dark matter and dark energy. Dark matter and dark energy are two of the most mysterious things in the universe.

The Future Of The Cms Detector

The CMS detector is currently undergoing a major upgrade. This upgrade will allow the detector to collect even more data and to make even more precise measurements. The upgraded CMS detector is expected to be operational in 2025.

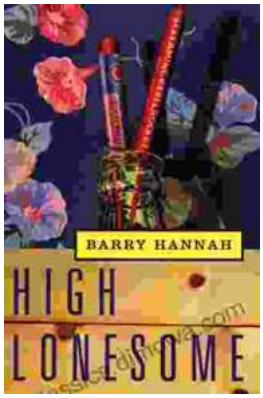
The future of the CMS detector is bright. The detector is expected to continue to play a major role in our understanding of the universe.

The CMS detector is a powerful tool that has been used to make a number of important discoveries. The detector is currently undergoing a major upgrade, which will allow it to collect even more data and to make even more precise measurements. The future of the CMS detector is bright. The detector is expected to continue to play a major role in our understanding of the universe.

Top-Quark Pair Production Cross Sections and Calibration of the Top-Quark Monte-Carlo Mass: Measurements Performed with the CMS Detector Using LHC Run I Proton-Proton Collision Data (Springer Theses) by Baby Professor

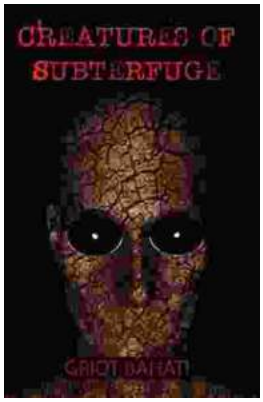
4.2 out of 5

Language	: English
File size	: 13522 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 301 pages



High Lonesome: A Literary Journey into the Heart of the American South

<p>Hannah weaves a intricate tapestry of relationships that explore the complexities of human connection. The protagonist, Cornelius Suttree, is a enigmatic figure...



Unravel the Secrets of the Supernatural Realm: "Creatures of Subterfuge: Books of Ascension"

Immerse Yourself in the Enigmatic World of the Supernatural Prepare to be captivated by "Creatures of Subterfuge: Books of Ascension,"...