

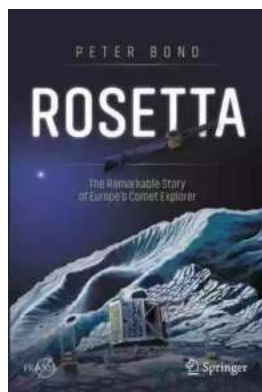
# The Remarkable Story Of Europe Comet Explorer Springer Praxis Books

Exploring the depths of our universe has always been a dream of humanity. The vastness of space and the mysteries it holds have captivated our imaginations for centuries. Over time, we have developed various technologies to observe and learn more about the cosmic wonders surrounding us.

One such significant achievement in space exploration is the Europe Comet Explorer, or ECE. The story behind this groundbreaking mission and the wealth of knowledge it has provided to the scientific community are nothing short of remarkable. In this article, we will delve into the fascinating details of the ECE and its contributions to our understanding of comets and the universe as a whole.

## The Genesis of Europe Comet Explorer

Developed as a joint effort between the European Space Agency (ESA) and the National Aeronautics and Space Administration (NASA), the ECE project commenced in 2010. Its primary objective was to study the composition, structure, and behavior of comets in order to gain insights into the formation of our solar system.



## Rosetta: The Remarkable Story of Europe's Comet Explorer (Springer Praxis Books)

by Peter Bond (1st ed. 2020 Edition, Kindle Edition)

★★★★★ 5 out of 5

Language : English

File size : 83074 KB

Text-to-Speech : Enabled

Enhanced typesetting : Enabled

Word Wise : Enabled

Print length : 419 pages  
Screen Reader : Supported



The nucleus of a comet holds valuable information about the early days of the universe. It is believed that comets, made up of ice, dust, and organic compounds, have remained unchanged since their formation. By analyzing their composition, scientists can unravel the history and conditions present during the birth of our solar system.

## **Design and Features**

The ECE was designed to be a highly advanced and versatile spacecraft capable of withstanding the harsh environment of space. It was equipped with state-of-the-art instruments that allowed for precise measurements and in-depth analysis of comets.

One of the most crucial components of the ECE was its imaging system. The high-resolution cameras mounted on the spacecraft captured breathtaking images of comets, providing scientists with detailed visuals of their surfaces and structures. These images unveiled the mesmerizing beauty hidden within these celestial bodies.

Another standout feature of the ECE was its spectrograph, which analyzed the light emitted by comets. By separating light into its constituent wavelengths, scientists could determine the presence of various elements and compounds within the cometary nucleus. This data played a vital role in understanding the composition and origins of comets.

## **The Adventure Begins: Comet Encounter**

After years of meticulous planning and development, the ECE finally embarked on its mission to explore a near-Earth comet. Its destination was a comet known as C/2015 G2, which posed a unique opportunity for scientists to gain new insights.

As the ECE approached C/2015 G2, its cameras captured stunning close-up images revealing the intricate details of the comet's surface features.

Spectroscopic data collected by the onboard instruments provided valuable information about the composition and molecular structures present on the comet.

## **Scientific Discoveries**

The data collected by the ECE not only expanded our understanding of comets but also provided insights into the formation and evolution of our solar system. Scientists discovered the presence of complex organic molecules on the comet's surface, reinforcing the theory that comets delivered the building blocks of life to Earth in its early stages.

Furthermore, the ECE's observations revealed the presence of subsurface ice on comets, challenging previous assumptions about their composition. This discovery shed light on the processes responsible for the formation and preservation of cometary ice over billions of years.

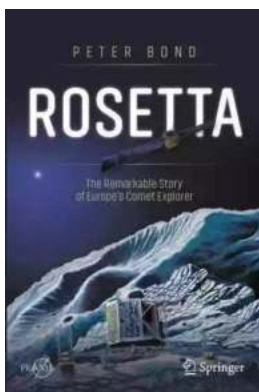
## **The Legacy of the ECE**

The groundbreaking research conducted by the ECE continues to impact our understanding of comets and the cosmos. The knowledge gained from its mission has not only expanded our scientific knowledge but has also paved the way for future space exploration endeavors.

The data collected by the ECE has been analyzed and cataloged in the form of the renowned book series titled "The Remarkable Story Of Europe Comet Explorer," published by Springer Praxis. This series delves into the intricate details of the mission and serves as a valuable resource for scientists and space enthusiasts alike.

Whether you are an aspiring astronaut or simply fascinated by the wonders of the universe, "The Remarkable Story Of Europe Comet Explorer" book series is a must-read. It offers a captivating narrative of human ingenuity, the quest for knowledge, and the boundless wonders of space.

The Europe Comet Explorer is an extraordinary milestone in space exploration. Its mission to study comets has provided unprecedented insights into the composition and formation of our solar system. The captivating images and data captured by the ECE have expanded our understanding of the cosmos and left an indelible mark on the scientific community. The legacy of the ECE lives on not only in our knowledge but also in the remarkable book series "The Remarkable Story Of Europe Comet Explorer." Through this series, the story of the ECE continues to inspire and educate future generations, reminding us of the boundless possibilities that lie beyond our planet.



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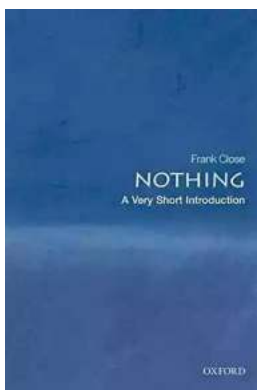


In 2014, Rosetta became the first mission to orbit a comet and to deploy a lander onto its surface. This is the story of ESA's pioneering comet explorer, following the mission from its initial inception to its historic touchdown.

Read along as the Rosetta orbiter and its lander, Philae, evolve over the years, overcoming early mission hurdles before embarking on their one-way, decade-long voyage to a comet. See how the saga then culminates with Rosetta and Philae at last unveiling their icy target and achieving an unprecedented touchdown on its surface.

Award-winning space writer Peter Bond takes us behind the scenes of this historic endeavor, sharing insights from the international team of scientists and engineers who made the mission possible, describing the remarkable technology that they created, and delving into the treasure trove of scientific discoveries that followed.

Recounting in vivid detail the inner workings of Rosetta, this book is a celebration of the mission that has left a lasting impact on planetary science and space exploration.



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