Record Nr. UNINA9910254590503321 Autore Minier Vincent Titolo Inventing a Space Mission: The Story of the Herschel Space Observatory // by Vincent Minier, Roger-Maurice Bonnet, Vincent Bontems, Thijs de Graauw, Matt Griffin, Frank Helmich, Göran Pilbratt, Sergio Volonte Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2017 3-319-60024-9 **ISBN** Edizione [1st ed. 2017.] 1 online resource (XII, 280 p. 91 illus., 69 illus. in color.) Descrizione fisica Collana ISSI Scientific Report Series; ; 14 520 Disciplina Soggetti Astronomy Technological innovations Solar system Knowledge management Aerospace engineering **Astronautics** Technology - Philosophy Astronomy, Observations and Techniques Innovation and Technology Management Space Physics **Knowledge Management** Aerospace Technology and Astronautics Philosophy of Technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto General Introduction -- Creating the Strategic Framework for Herschel -- Science Evolution -- Overview of the Mission -- Innovation in Technology and Management:- Introduction to Innovations within Herschel -- Silicon Carbide (SiC) Telescope: History of an Invention --Herschel Cryostat Customisation -- Far Infrared Bolometers and their

Competitive Technical Lineages -- Heterodyne Receivers: Recurrent Synergy Between Ground and Space -- Management Organisation --

## Conclusions. .

## Sommario/riassunto

This book describes prominent technological achievements within a very successful space science mission: the Herschel space observatory. Focusing on the various processes of innovation it offers an analysis and discussion of the social, technological and scientific context of the mission that paved the way to its development. It addresses the key question raised by these processes in our modern society, i.e.: how knowledge management of innovation set the conditions for inventing the future? In that respect the book is based on a transdisciplinary analysis of the programmatic complexity of Herschel, with inputs from space scientists, managers, philosophers, and engineers. This book is addressed to decision makers, not only in space science, but also in other industries and sciences using or building large machines. It is also addressed to space engineers and scientists as well as students in science and management.