

M. Gruntman, *Blazing the Trail. The Early History of Spacecraft and Rocketry*, AIAA, Reston, Va., 2004; http://astronauticsnow.com/blazingthetrail/

Fig.17.4. Launch of the first French technological satellite A-1, *Astérix*, by the *Diamant-A* rocket on 26 November 1965 at Hammaguir. On that day, France became the third nation that placed a satellite in Earth orbit by a national space launcher. Photo courtesy of Centre National d'Études Spatiales, France.

## **Blazing the Trail**

## The Early History of Spacecraft and Rocketry

## Mike Gruntman

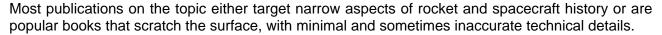
**AIAA, Reston, Va., 2004**ISBN 156347705X; 978-1563477058 **505 pages with 340 figures** 

Index: 2750+ entries, including 650 individuals

This book presents the fascinating story of the events that paved the way to space. It introduces the reader to the history of early rocketry and the subsequent developments which led into the space age. People of various nations and from various lands contributed to the breakthrough to space, and the book takes the reader to far away places on five continents.

This world-encompassing view of the realization of the space age reflects the author's truly unique personal experience, a life journey from a child growing on the Tyuratam launch base in the 1950s and early 1960s, to an accomplished space physicist and engineer to the founding director of a major U.S. nationally

recognized program in space engineering in the heart of the American space industry.



This book bridges the gap. It is a one-stop source of numerous technical details usually unavailable in popular publications. The details are not overbearing and anyone interested in rocketry and space exploration will navigate through the book without difficulty. The book also includes many quotes to give readers a flavor of how the participants viewed the developments. There are 340 figures and photographs, many appearing for the first time.

## **Table of contents**

- Preface
- Foreword
- Humble Beginnings
- Rocket Proliferation The First Wave
- Under Rocket Fire in India
- The Congreve Rocket
- Rockets Come to America
- First American Rockets
- Rocket Proliferation The Second Wave
- Public Imagination on Fire

- Great Pioneers
- The First Modern Rocket
- JATO and Beyond
- Building the Foundation
- Road to Sputnik
- Gateways to Heaven
- The Breakthrough
- Opening the Skies
- · Joining the Club
- The First Thousand Years

Book details (including index and reviews) at: http://astronauticsnow.com/blazingthetrail/

Blazing the Trail
The Early History
of Spacecraft and Rocketry

Mike Gruntman

About the author. Dr. Mike Gruntman is professor of astronautics at the University of Southern California. Accomplished physicist, Mike is actively involved in research and development programs in space science

and space technology. He has authored and co-authored nearly 300 publications, including 4 books.