

Preface

This book is one of two volumes meant to capture, to the extent practical, the scientific legacy of the Cassini-Huygens prime mission, a landmark in the history of planetary exploration. As the most ambitious and interdisciplinary planetary exploration mission flown to date, it has extended our knowledge of the Saturn system to levels of detail at least an order of magnitude beyond that gained from all previous missions to Saturn.

Nestled in the brilliant light of the new and deep understanding of the Saturn planetary system is the shiny nugget that is the spectacularly successful collaboration of individuals, organizations and governments in the achievement of Cassini-Huygens. In some ways the partnerships formed and lessons learned may be the most enduring legacy of Cassini-Huygens. The broad, international coalition that is Cassini-Huygens is now conducting the Cassini Equinox Mission and planning the Cassini Solstice Mission, and in a major expansion of those fruitful efforts, has extended the collaboration to the study of new flagship missions to both Jupiter and Saturn. Such ventures have and will continue to enrich us all, and evoke a very optimistic vision of the future of international collaboration in planetary exploration.

The two volumes in the series *Saturn from Cassini-Huygens* and *Titan from Cassini-Huygens* are the direct products of the efforts of over 200 authors and co-authors. Though each book has a different set of three editors, the group of six editors for the two volumes has worked together through every step of the process to ensure that these two volumes are a set. The books are scholarly works accessible at a graduate-student level that capture the approximate state of knowledge of the Saturn system after the first 4 years of Cassini's tenure in Saturn orbit. The topics covered in each volume range from the state of knowledge of Saturn and Titan before Cassini-Huygens to the ongoing planning for a return to the system with vastly more capable spacecraft.

In something of a departure from the norm for works such as these, we have included an appendix in each of the books featuring the people of Cassini-Huygens who are truly responsible for its success – the people behind the scientific scenes who ensure that everything works as flawlessly as it has. We dedicate the Cassini-Huygens volumes to them and to those who started the journey with us but could not finish it. We hope that all who read the books will share in the new knowledge and gain a deeper appreciation for the tireless efforts of those who made possible its attainment.

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