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Edited by Mario Livio, Keith Noll and Massimo Stiavelli

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A DECADE OF *HUBBLE SPACE TELESCOPE* SCIENCE

The *Hubble Space Telescope* has made some of the most dramatic discoveries in the history of astronomy. From its vantage point 600 km above the Earth, *Hubble* is able to capture images and spectra that would be difficult or impossible to obtain from the ground. This volume represents some of the most important scientific achievements of the *Hubble Space Telescope* in its first decade of operation. Written by world experts, the book covers topics ranging from our own solar system to cosmology. Chapters describe cutting-edge discoveries in the study of Mars and Jupiter, of stellar birth and death, of star clusters, of the interstellar medium, of our own Milky Way galaxy and of other galaxies, of supermassive black holes, and of the determination of cosmological parameters, including the age and ultimate fate of our universe. This is an indispensable collection of review articles for researchers and graduate students.

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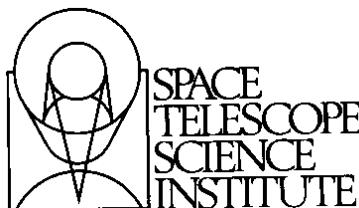
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A decade of *Hubble Space Telescope* science

Proceedings of the
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April 11–14, 2000

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Preface

The Space Telescope Science Institute Symposium on “A Decade of HST Science” took place during 11–14 April 2000.

There is no doubt that the *Hubble Space Telescope (HST)* in its first decade of operation has had a profound impact on astronomical research. But *HST* did much more than that. It literally brought a glimpse of the wonders of the universe into millions of homes worldwide, thereby inspiring an unprecedented public curiosity and interest in science.

HST has seen farther and sharper than any optical/UV/IR telescope before it. Unlike astronomical experiments that were dedicated to a single, very specific goal, *HST*’s achievements are generally not of the type of singular discoveries. More often, *HST* has taken what were existing hints and suspicions from ground-based observations and has turned them into certainty.

In other cases, the level of detail that *HST* has provided forced theorists to re-think previous broad-brush models, and to construct new ones that would be consistent with the superior emerging data. In a few instances, the availability of *HST*’s razor-sharp vision at critical events provided unique insights into individual phenomena.

These proceedings represent a part of the invited talks that were presented at the symposium, in order of presentation. We thank the contributing authors for preparing their papers.

We thank Sharon Toolan of ST ScI for her help in preparing this volume for publication.

Mario Livio, Keith Noll, Massimo Stiavelli
Space Telescope Science Institute
Baltimore, Maryland
April, 2000