Preface

Since its launch in 1990 the Hubble Space Telescope has made major contributions to all areas of astronomy and astrophysics. These range from the study of nearby planets, the processes of star and planet formation, the stellar and interstellar components of galaxies, the discovery that most, if not all, galactic nuclei harbor a massive black hole that profoundly affects their evolution, to the realisation that the universe as a whole is undergoing acceleration as a result of a yet unknown form of “dark energy”.

European astronomers have made significant contributions to projects that have led to unprecedented progress in our understanding. However, the impact of HST goes beyond these direct contributions and continues to shape the key questions that need to be addressed not only with HST but with other space and ground based observatories. In addition Hubble has had an important role on the performance and productivity of several European facilities, such as the VLT or XMM-Newton, and in the near future it will benefit from the synergy with Herschel and ALMA.

The primary aim of this symposium, the 41st in ESLAB series of the European Space Agency, was to review the key contribution that HST has made in all areas of astronomy and emphasise their impact on European astronomical research. The symposium took place from 29 May to 1 June 2007 at the European Space Research and Technology Centre in Noordwijk, the Netherlands, and this book contains the proceedings of the oral and poster papers that were presented and discussed during the meeting.

The publication of this book took longer than anticipated, since obtaining the individual contributions from some very busy colleagues proved harder than we thought. However, we gladly decided to wait for them, as the purpose of this volume is to offer a broad perspective of the advancements made possible by the HST over its almost two decades of operation, rather than portraying just the most recent discoveries. We are fortunate that this volume sees the light right at the time when a new HST, fully refurbished and upgraded after Servicing Mission 4, becomes available to the European and world-wide astronomical community to answer some of the many still open questions.

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