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978-0-521-79141-0 - Supernovae and Gamma-Ray Bursts: The Greatest Explosions Since the Big Bang

Edited by Mario Livio, Nino Panagia and Kailash Sahu

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**SUPERNOVAE AND GAMMA-RAY BURSTS:
THE GREATEST EXPLOSIONS SINCE THE BIG BANG**

Recent observations have uncovered that gamma-ray bursts of relatively long durations are at cosmological distances in star-forming galaxies. The detection of X-Ray, optical, and radio afterglows to gamma-ray bursts has literally revolutionized the understanding of these enigmatic events. Since the dramatic discovery that the supernova SN 1998bw coincided in position and time with a gamma-ray burst, the possibility was raised that these two types of spectacular explosions are related. This timely volume presents articles by a host of world experts who gathered together for an international conference at the Space Telescope Science Institute. This was the first meeting in which the communities of supernova researchers and gamma-ray burst researchers were brought together to share ideas. The contributions review the mechanisms for these explosive events, the possible connections between them, and their relevance for cosmology. Both observations and theoretical developments are covered. This book will be an invaluable source of information for both active researchers and graduate students in this exciting area of research.

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Frontmatter

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The greatest explosions since the Big Bang

Proceedings of the Space Telescope Science Institute Symposium,
held in Baltimore, Maryland
May 3–6, 1999

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Contents

<i>Participants</i>	vii
<i>Preface</i>	x
Gamma-Ray Burst—Supernova relation	
<i>B. Paczyński</i>	1
Observations of Gamma-Ray Bursts	
<i>G. Fishman</i>	9
Fireballs	
<i>T. Piran</i>	17
Gamma ray mechanisms	
<i>M. Rees</i>	36
Prompt optical emission from gamma-ray bursts	
<i>R. Kehoe, C. Akerlof, R. Balsano, S. Barthelmy, J. Bloch, P. Butterworth,</i> <i>D. Casperon, T. Cline, S. Fletcher, F. Frontera, G. Gisler, J. Heise,</i> <i>J. Hills, K. Hurley, B. Lee, S. Marshall, T. McKay, A. Pawl, L. Piro,</i> <i>B. Priedhorsky, J. Szymanski, and J. Wren</i>	47
X-ray afterglows of gamma-ray bursts	
<i>L. Piro</i>	67
The first year of optical-IR observations of SN1998bw	
<i>I. Danziger, T. Augusteijn, J. Brewer, E. Cappellaro, V. Doublier,</i> <i>T. Galama, J. Gonzalez, O. Hainaut, B. Leibundgut, C. Lidman,</i> <i>P. Mazzali, K. Nomoto, F. Patat, J. Spyromilio, M. Turatto,</i> <i>J. Van Paradijs, P. Vreeswijk, and J. Walsh</i>	79
X-ray emission of Supernova 1998bw in the error box of GRB980425	
<i>E. Pian</i>	85
Direct analysis of spectra of Type Ic supernovae	
<i>D. Branch</i>	96
The interaction of supernovae and gamma-ray bursts with their surroundings	
<i>R. Chevalier</i>	110
Magnetars, Soft Gamma-ray Repeaters and Gamma-ray Bursts	
<i>A. Harding</i>	121
Super-luminous supernova remnants	
<i>Y.-H. Chu, C.-H. Chen, and S.-P. Lai</i>	131
The properties of hypernovae: SNe Ic 1998bw, 1997ef, and SN IIn 1997cy	
<i>K. Nomoto, P. Mazzali, T. Nakamura, K. Iwamoto, K. Maeda,</i> <i>T. Suzuki, M. Turatto, I. Danziger, and F. Patat</i>	144
Collapsars, Gamma-Ray Bursts, and Supernovae	
<i>S. Woosley, A. MacFadyen, and A. Heger</i>	171
Pre-Supernova evolution of massive stars	
<i>N. Panagia and G. Bono</i>	184

Cambridge University Press

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Edited by Mario Livio, Nino Panagia and Kailash Sahu

Frontmatter

[More information](#)

vi

Contents

Radio supernovae and GRB 980425 <i>K. Weiler, N. Panagia, R. Sramek, S. Van Dyk, M. Montes, and C. Lacey</i>	198
Models for Ia Supernovae and evolutionary effects <i>P. Höflich and I. Domínguez</i>	218
Deflagration to detonation <i>A. Khokhlov</i>	239
Universality in SN Iae and the Phillips relation <i>D. Arnett</i>	250
Abundance from supernovae <i>F.-K. Thielemann, F. Brachwitz, C. Freiburghaus, S. Rosswog, K. Iwamoto, T. Nakamura, K. Nomoto, H. Umeda, K. Langanke, G. Martínez-Pinedo, D. Dean, W. Hix, and M. Strayer</i>	258
SNe, GRBs, and the global properties of the Universe <i>B. Schmidt</i>	287
How good are SNe Ia as standard candles? <i>A. Sandage, G. Tammann, and A. Saha</i>	304
Type Ia Supernovae and their implications for cosmology <i>M. Livio</i>	334
Conference summary: Supernovae and Gamma Ray Bursts <i>J. Wheeler</i>	356

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978-0-521-79141-0 - Supernovae and Gamma-Ray Bursts: The Greatest Explosions Since the Big Bang

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Frontmatter

[More information](#)

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Frontmatter

[More information](#)

viii

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Frontmatter

[More information](#)

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ix

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Frontmatter

[More information](#)

Preface

The Space Telescope Science Institute Symposium on “The Greatest Explosions Since the Big Bang” took place during 3–6 May 1999. An attempt was made to bring together for the first time researchers working on supernovae and on gamma-ray bursts. We strongly feel that a symbiosis between these two groups is absolutely necessary for the understanding of these most energetic phenomena.

These proceedings represent a part of the invited talks that were presented at the symposium. 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
Mino Panagia
Kailash Sahu
*Space Telescope Science Institute
Baltimore, Maryland
May, 1999*