

Contents

Introduction	
<i>Karl-Ludwig Klein</i>	1
<hr/>	
Part I Energy Release and Magnetic Reconnection	
<hr/>	
Magnetic Reconnection on the Sun and in the Earth's Magnetosphere	
<i>Manfred Scholer</i>	9
Magnetic 3-D Configurations of Energy Release in Solar Flares	
<i>Bojan Vršnak</i>	28
Theoretical Models of Magnetic Configurations Relevant to Energy Release	
<i>Yihua Yan</i>	48
The Energy Release Process in Solar Flares; Constraints from TRACE Observations	
<i>Lyndsay Fletcher, Harry P. Warren</i>	58
Radio Diagnostics of Flare Energy Release	
<i>Arnold O. Benz</i>	80
Signature of Energy Release and Particle Acceleration Observed by the Nobeyama Radioheliograph	
<i>Kiyoto Shibasaki</i>	96
How Well Do We Understand Magnetic Reconnection?	
<i>Dieter Biskamp</i>	109
<hr/>	
Part II Energetic Particles at and from the Sun	
<hr/>	
What Can Be Learned About Competing Acceleration Models from Multiwavelength Observations?	
<i>Nicole Vilmer, Alexander L. MacKinnon</i>	127

**Transport of Energy from the Corona to the Chromosphere
During Flares**

Petr Heinzel, Marian Karlický 161

On the Origin of Solar Energetic Particle Events

Säm Krucker 179

Acceleration and Propagation of Solar Energetic Particles

Wolfgang Dröge 193

Particle Acceleration by Magnetic Reconnection

Yuri E. Litvinenko 213

Particle Acceleration Processes in Cosmic Plasmas

Reinhard Schlickeiser 230

Part III Aspects of Current Research

**Recent Progress in Understanding Energy Conversion
and Particle Acceleration in the Solar Corona**

Bernhard Kliem, Alec MacKinnon, Gérard Trottet, Tim Bastian 263

Solar Observations at Submillimeter Wavelengths

Pierre Kaufmann 294

Index 315

Energy Conversion and Particle Acceleration in the
Solar Corona

Klein, K.-L. (Ed.)

2003, X, 319 p., Hardcover

ISBN: 978-3-540-00275-8