# Table of Contents

**Preface**  
R.A. Donahue and J.A. Bookbinder  
CD-ROM Directory: PREFACE  

**Cool Stars 10**  
A.K. Dupree  
CD-ROM Directory: WELCOME  

**Very Low Mass Stars and Extra-Solar Planets**  

Doppler Detection of Extrasolar Planets  
G.W. Marcy and R.P. Butler  
CD-ROM Directory: MARCYG1  

The Spectral Character of Giant Planets and Brown Dwarfs  
A. Burrows, M. Marley, W.B. Hubbard, D. Sudarsky, C. Sharp,  
J.I. Lunine, T. Guillot, D. Saumon, and R. Freedman  
CD-ROM Directory: BURROWA1  

Spectroscopy of Brown Dwarfs  
R. Rebolo  
CD-ROM Directory: REBOLOR1  

Model Atmospheres of Very Low Mass Stars and Brown Dwarfs  
F. Allard, D.R. Alexander, and P.H. Hauschildt  
CD-ROM Directory: ALLARDF1  

The Mass Function Below the Substellar Limit  
M. Mayor, S. Udry, and D. Queloz  
CD-ROM Directory: MAYORM1  

**Discussion Sessions I and II**  

Coronal Abundances: What are They?  
CD-ROM Directory: JORDANC1  

Mixing in Low-Mass Stars: The Lithium-Rotation Connection  
S. C. Balachandran, R.J. García López, R.P. Kraft, K.B. MacGregor,  
G. Barnes, E.L. Martín, and M. H. Pinsonneault  
CD-ROM Directory: BALACHS1  

**Activity Cycles Across the H–R Diagram**  

In Memoriam of P. Brendan Byrne  
J.G. Doyle  
CD-ROM Directory: BYRNEMEM  

Cyclic Magnetic Variations of the Sun  
Y.-M. Wang  
CD-ROM Directory: WANGY1  

Activity Cycles in Lower Main Sequence and Post Main Sequence Stars:  
The HK Project  
S.L. Baliunas, R.A. Donahue, W. Soon, and G.W. Henry  
CD-ROM Directory: BAliUNSe1  

Theoretical Basis of Stellar Activity Cycles  
A. Brandenburg  
CD-ROM Directory: BRANDEA1
Stars and Sun; Treasures and Threats
D.F. Gray
CD-ROM Directory: GRAYD1 ............................... 193

Non-Radiative Heating in “Flat Activity” Stars
S.H. Saar
CD-ROM Directory: SAARS1 .............................. 211

Long Term X-Ray Variability in Cool Stars
R.A. Stern
CD-ROM Directory: STERNR1 ............................. 223

Discussion Sessions III and IV ................................. 235

The ROSAT Field Sources - What are they?
J.-P. Caillault, C. Briceño, E.L. Martín, F. Palla, and R. Wichmann
CD-ROM Directory: CAILLAJ1 ............................ 237

Evolved Stars: What Happens to Activity Off the Main Sequence
K.G. Strassmeier, F.C. Fekel, D.F. Gray, A.P. Hatzes, J.H.M.M. Schmitt,
and S.K. Solanki
CD-ROM Directory: STRASSK1 ............................ 257

Helio- and Asteroseismology .................................. 273

Helioseismology: What are We Learning About the Sun?
J. Toomre
CD-ROM Directory: TOOMREJ1 ............................. 275

Observational Challenges in Asteroseismology
T.M. Brown
CD-ROM Directory: BROWNT1 ............................. 289

Solar-Like Oscillations: The Search Goes On
T.R. Bedding and H. Kjeldsen
CD-ROM Directory: BEDDINT1 ............................. 301

Stellar Oscillations in K Giant Stars
A.P. Hatzes and W.D. Cochran
CD-ROM Directory: HATZESA1 ............................ 311

High-Resolution Imaging of Stars and Their Environments .... 327

New Images of the Solar Corona
J.B. Gurman, B.J. Thompson, J.A. Newmark, and C.E. DeForest
CD-ROM Directory: GURMANJ1 ............................ 329

The Sun’s Magnetic Carpet
A.M. Title and C.J. Schrijver
CD-ROM Directory: TITLEA1 .............................. 345

IR Imaging of Circumstellar Environments
W.C. Danchi, P.G. Tuthill, M. Bester, E.A. Lipman, J.M. Monnier, and
C.H. Townes
CD-ROM Directory: DANCHIW1 ............................ 361

Surface Imaging by Microlensing
D.D. Sasselov
CD-ROM Directory: SASSELD1 ............................. 383

Imaging Spectroscopy of Betelgeuse in the Ultraviolet
H. Uitenbroek, A.K. Dupree, and R.L. Gilliland
CD-ROM Directory: UITENBH1 ............................. 393
## Stellar Coronae: Preparations for AXAF and XMM

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Results from Solar Coronal Spectroscopy (SOHO/SUMER)</td>
<td>411</td>
</tr>
<tr>
<td>G.A. Doschek</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: DOSCHEG1</td>
<td>413</td>
</tr>
<tr>
<td>New Results from the Coronal Diagnostic Spectrometer</td>
<td></td>
</tr>
<tr>
<td>H.E. Mason and C.D. Pike</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: MASONH1</td>
<td>431</td>
</tr>
<tr>
<td>Spectroscopy of Stellar Coronae</td>
<td></td>
</tr>
<tr>
<td>J.M. Laming</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: LAMINGJ1</td>
<td>447</td>
</tr>
<tr>
<td>Inference of Stellar Coronal Structure</td>
<td></td>
</tr>
<tr>
<td>J.H.M.M. Schmitt</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: SCHMITTJ1</td>
<td>463</td>
</tr>
<tr>
<td>Spectroscopic Preparation for AXAF and XMM</td>
<td></td>
</tr>
<tr>
<td>N.S. Brickhouse</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: BRICKHN1</td>
<td>487</td>
</tr>
<tr>
<td>Supersaturation in X-Ray Emission of Cluster Stars</td>
<td></td>
</tr>
<tr>
<td>S. Randich</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: RANDICS1</td>
<td>501</td>
</tr>
<tr>
<td>First Coronal Results from the SAX X-Ray Observatory</td>
<td></td>
</tr>
<tr>
<td>F. Favata</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: FAVATAF1</td>
<td>511</td>
</tr>
<tr>
<td>Studying New Problems in Stellar Coronal Physics with AXAF and XMM</td>
<td></td>
</tr>
<tr>
<td>J.L. Linsky and M. Gagné</td>
<td></td>
</tr>
<tr>
<td>CD-ROM Directory: LINSKYJ1</td>
<td>527</td>
</tr>
</tbody>
</table>