TABLE OF CONTENTS

PREFACE	IX
W. DAVID ARNETT / Nuclear Reactions and Neutrinos in Stellar Evolution	1
Abstracts of Short Communications Presented after Paper by Arnett	
HAROLD C. GRABOSKE, Jr, and HUGH E. DEWITT / Screening	
Factors in Late Stellar Evolution	15
DAVID N. SCHRAMM / The Explosive r-Process	17
JEAN AUDOUZE / Hot CNO–Ne Cycles	18
Discussion Following Paper by Arnett	19
R. KIPPENHAHN / Circulation and Mixing	20
Abstract of Short Communication Presented after Paper by Kippenhahn	
A. V. TUTUKOV / On the Mixing of the Matter in Semiconvective	
Regions of Massive Stars	41
Discussion Following Paper by Kippenhahn	42
N. J. WOOLF / Non-Explosive Mass Loss	43
Abstracts of Short Communications Presented after Paper by Woolf	
ANNA ŻYTKOW / Mass Ejection by Radiation Pressure	54
G. S. BISNOVATYI-KOGAN / Stellar Envelopes at Supercritical	
Luminosity	56
Discussion Following Paper by Woolf	57
ICKO IBEN, Jr. / Review of IAU Symposium No. 59 on Stellar Instability and	
Evolution, Canberra, August 1973	59
Discussion Following Paper by Iben	61
B. PACZYŃSKI / Evolution of Stars with $M \leq 8M_{\odot}$	62
Abstract of Short Communication Presented after Paper by Paczyński	
S. TSURUTA and A. G. W. CAMERON / The URCA Process in	
Convective Cores	70
Discussion Following Paper by Paczyński	71
A. G. MASSEVITCH and A. V. TUTUKOV / Evolution of Stars with $M \ge 8M_{\odot}$	73
Abstracts of Short Communications Presented after Paper by Massevitch	
M. GABRIEL, S. REFSDAL, and H. RITTER / Stability Properties of	
Stars with Central He Burning	93
G. BARBARO, G. BERTELLI, C. CHIOSI, and E. NASI / The Effect of	
Changing the Initial Chemical Composition on the Evolution of a	
20 M _☉ Star	95
L. YUNGELSON and A. V. TUTUKOV / Evolution of Massive Close	
Binaries	96

M. KUMSIASHVILY / On the Evolutionary Stage of V448 Cyg	98
O. B. DLUZHNEVSKAYA and A. E. PISKUNOFF / The Investigation of	
Open Clusters by Means of Theoretical HR-Diagrams	99
A. E. PISKUNOFF / Integral Parameters and the Total Mass of	
Open Clusters	100
YU. FRANTSMAN and E. POPOVA / Mass Loss from Stars and the	
Location of Blue Supergiants in the HR Diagram	101
C. CHIOSI and E. NASI / Supergiant Stars as Chemical Composition	
Indicators	102
Discussion after Paper by Massevitch	103
DAIICHIRO SUGIMOTO and KEN-ICHI NOMOTO / Mixing Between the Core	
and the Envelope in Stars with Deep Convection Zones	105
Abstracts of Short Communications Presented after the Paper by Sugimoto	
U. UUS / Evolutionary Abundance Changes in the Envelopes of	
Moderate Mass Red Supergiants	122
IJULIANA CHRISTY-SACKMANN, RICHARD L. SMITH, and	
KEITH H. DESPAIN / Surface Abundances Resulting from Deep	
Mixing	123
PETER P. EGGLETON / Mixing in Stars	125
C. BARBARO and N. DALLAPORTA / Interpretation of Carbon Stars	127
Discussion after Paper by Sugimoto	128
V. S. IMSHENNIK and D. K. NADYOZHIN / Presupernovae	130
Abstracts of Short Communications Presented after the Paper by Nadyozhin	
J. P. OSTRIKER and P. BODENHEIMER / Do Pulsars Make Supernovae?	149
W. DAVID ARNETT / Evolution of Massive Stars from Helium Burning	
to the Start of Neutronization	150
D. KOESTER / On the Final Fate of Differentially Rotating	
Degenerate Configurations	151
G. S. BISNOVATYI-KOGAN / The Explosion of a Rotating Magnetized	
Star as a Supernova	152
JAMES R. WILSON / Iron Core Collapse in 10 to 30 M_{\odot} Stars and the	
Effect of μ Neutrinos	153
Discussion after Paper by Nadyozhin	154
JOHN FAULKNER / The Theory of Novae and Nova-Like Systems	155
Abstract of Short Communication Presented after Paper by Faulkner	
OSMI VILHU / Possible Progenitors of Some Nova-Like Variables	168
Discussion after Paper by Faulkner	171
E. R. MUSTEL / Observational Data on Novae and Supernovae	172
Abstracts of Short Communications Presented after Paper by Mustel	
M. F. MCCARTHY S.J. / Early Photographic Observations of Red and	
Infrared Features in the Spectrum of SN 1972e	185
J. TREMKO / The Reliability of Photometric and Spectroscopic Data of	
Novae	187

N. DALLAPORTA / On the Frequencies of Type I and Type II	
Supernovae	189
KYOJI NARIAI / Contracting Envelopes of Novae after Outbursts	191
MALINA POPOVA / On the Peculiarities of the Star Listed as Nova	
Aurigae 1960-64 (KR Aur)	192
M. FRIEDJUNG / Evidence for Continued Ejection Models of Novae	194
PETR HARMANEC / A Note on the Possible Evolutionary Status of the Recurrent Nova T CrB	195
Discussion after Paper by Mustel	196
A. A. BOYARCHUK / The Chemical Composition of Late Type Stars	198
Abstracts of Short Communications Presented after Paper by Boyarchuk	170
E. M. DROBYSHEVSKI / Abundances in Ap Stars; Result of Magnetic	
Binary Evolution	206
E. KRÜGEL / Helium Abundance from Radio Recombination Lines	208
Discussion after Paper by Boyarchuk	209
G. E. LANGER, ROBERT P. KRAFT, and KURT S. ANDERSON / FG Sagittae:	
The s-Process Episode (Abstract)	210
Abstract of Short Communication Presented after Paper by Kraft	
IJULIANA CHRISTY-SACKMANN and KEITH H. DESPAIN /	
Deciphering FG Sagittae	211
Discussion after Paper by Kraft	212
C. R. O'DELL / Nuclei of Planetary Nebulae	213
Discussion after Paper by O'Dell	220
s. c. VILA / White Dwarfs	222
Abstracts of Short Communications Presented after Paper by Vila	
E. V. CHUBARIAN, G. S. SAHAKIAN, and D. M. SEDRAKIAN / The	
Sources of Energy in White Dwarfs	231
UMBERTO DE ANGELIS / Degenerate Dwarfs with Liquefying Cores	232
J. E. HESSER, B. M. LASKER, and P. S. OSMER / Evidence for g -Mode	
Oscillations in the Peculiar Blue Variable CD -42°14462	234
C. MÖLLENHOFF and R. KIPPENHAHN / Circulation in Differentially	
Rotating White Dwarfs	235
Discussion after Paper by Vila	236
I. IBEN / Horizontal Branch Stars (Edited Version of I. Iben's Remarks)	237
Abstracts of Short Communications Presented after Remarks by Iben	
A. G. DAVIS PHILIP / Four-Color Observations of Blue Horizontal-	
Branch Stars	238
R. M. RUSSEV / On the Behaviour of Globular Cluster Red Giants in	
the Colar-Magnitude Diagram	240
K. STEPIEN / Photometric Behaviour of Field RR Lyrae Stars	244
WILLIAM A. FOWLER / What SNU? The Case of the Missing Solar Neutrinos	245
Abstracts of Short Communications Presented after Paper by Fowler	
CARLA ROUSE / The Interior Structure of the Sun as Gleaned from	

TABLE OF CONTENTS

the Various Explanations of the Null Solar Neutrino Experiment	
Results	249
K. J. FRICKE / Effect of Magnetic Field on Solar Neutrino Flux	250
R. C. SMITH / Praesepe: No Evidence for Solar Mixing	251
WILLIAM A. FOWLER / A Listener's Digest of IAU Symposium No. 64 on	
Gravitational Radiation and Gravitational Collapse	252
GENERAL DISCUSSION	254
M. SCHWARZSCHILD / Concluding Remarks	256
CUDIFICATION DAY	
SUBJECT INDEX	259
OBJECT INDEX	262
OBJECT INDEX	262
AUTHOR INDEX	264
TO AMOR AND BA	∠04