
CONTENTS

	Preface	xv
	List of Participants	xvii
1.	STARS IN THE INFRARED : RESULTS FROM IRAS	1
	<i>H.J.G.L.M. LAMERS - L.B.F.M. WATERS</i>	
	Discussion	29
	POSTERS	31
	Radial Velocity and Compton Effect in Two A-Type Stars from Red Spectra	33
	<i>M. Missana</i>	
	Far-IR Observations : An Important Information for Determining the Wind Structure of WR Stars	36
	<i>T. Nugis</i>	
	IRAS in the α -Persei Open Cluster Region	38
	<i>E. Trullols - C. Jordi - G. Rossello</i>	
	Hot Dust and Mass Loss in Post-AGB Binaries	40
	<i>L.B.F.M. Waters - N.R. Trams - C. Waelkens</i>	
	The IRAS Images of Eta and AG Carinae	45
	<i>A.R. Marenzi - M. Ranieri - R. Viotti - G.B. Baratta</i>	
	Poster Discussion	47
2.	WHAT IS EXPECTED FROM ISO ?	51
	<i>J.P. BALUTEAU</i>	
	Discussion	67
3.	NEW INFRARED INSTRUMENTATION	69
	<i>S. BENSAMMAR</i>	
	POSTERS:	81
	Projects in IR Spectroscopy at 3.6 m CFHT	83
	<i>J.G. Cuby - J. Baudrand - J.P. Lemonnier P. Felenbok</i>	
	Poster Discussion	85

viii	Contents	
4.	HIGH RESOLUTION ATOMIC SPECTROSCOPY IN THE INFRARED AND ITS APPLICATION TO ASTROPHYSICS	87
	<i>S. JOHANSSON</i>	
	Discussion	101
	POSTERS	103
	IR Line Radiation : A Program for Interpolating Atomic Collision Data	105
	<i>A. Burgess - M.C. Chidichimo - H.E. Mason J.A. Tully</i>	
	New Identifications of Highly-Excited Fe I Lines Around 4 μm in Cool Stars	107
	<i>S. Johansson - M. Rosberg - F. Hamann</i>	
	Poster Discussion	111
5.	SPECTROSCOPY OF EARLY - TYPE STARS	113
	<i>C. JASCHEK</i>	
	Discussion	123
	POSTERS	125
	Search for the Hydrogen Signature in Near Infrared Wolf Rayet Spectra	127
	<i>Y. Andriillat - J.M. Vreux</i>	
	The Near IR Spectra of the Be Stars	129
	<i>L. Denizman</i>	
	The Spectra of the Interacting Binaries (I)	132
	<i>L. Denizman - M. Hack - M. Jaschek - C. Jaschek</i>	
	The Spectra of the Interacting Binaries (II)	135
	<i>L. Denizman - M. Hack - B. Cester - V. Keskin</i>	
	Jets from Wolf-Rayet Stars ?	138
	<i>P.R. Eenens</i>	
	Wolf-Rayet Wind Velocities from Infrared He I Lines	140
	<i>P.R. Eenens - P.M. Williams</i>	

Contents	ix
Near Infrared Spectra of Yellow Supergiants in the Magellanic Clouds	142
<i>L. Mantegazza</i>	
The Flux Distribution of CP2 and Normal Stars	144
<i>F. Leone - F.A. Catalano</i>	
Poster Discussion	147
POSTERS	
The Behavior of P7 in Be, Ae and Shell Type Stars	149
<i>Y. Andrillat - M. Jaschek - C. Jaschek</i>	
The 2 μm Spectrum of the Possible Brown Dwarf Binary GL473AB	151
<i>T.J. Davidge - P.C. Boeshaar</i>	
HD 50138, A Mild B e Stars	153
<i>C. Jaschek - L. Houziaux - M. Jaschek - Y. Andrillat</i>	
A - Type Shell Stars in the Near Infrared	155
<i>M. Jaschek - C. Jaschek - Y. Andrillat</i>	
The Infrared Spectrum of the Oxygen-Rich Wolf-Rayet Star ST3	158
<i>P.R. Eenens - P.M. Williams</i>	
Evidence in the Near IR for the Cool Giant Companion of the Be Star KX And	160
<i>M. Floquet - A.M. Hubert</i>	
Photometric and Spectroscopic Observations of Some Galactic B e Stars	163
<i>A.S. Miroshnichenko</i>	
6. SPECTROSCOPY OF LATE TYPE STARS	165
<i>U.F. JØRGENSEN</i>	
Discussion	185
POSTERS	187
New Identifications of Highly-Excited Fe I Lines Around 4μm in Cool Stars	189
<i>S. Johansson - G. Nave - R.C.M. Learner A.P. Thorne</i>	

x	Contents	
7.	DUST FORMATION AND EVOLUTION IN CIRCUMSTELLAR MEDIA	193
	<i>J.P. J. LAFON</i>	
	Discussion	209
	POSTERS	211
	Electric Effects on Cometary Grains	213
	<i>J.P. J. Lafon - Ph. Lamy - C. Bouzinaç</i>	
8.	THE INFRARED SOLAR SPECTRUM	215
	<i>N. GREVESSE - A.J. SAUVAL</i>	
	Discussion	235
9.	SYMBIOTIC STARS AND RELATED OBJECTS	237
	<i>M. HACK</i>	
	Discussion	253
	POSTERS	255
	Preliminary Results from Near - Infrared Observations of Pu Vulpeculae in 1989-1990	257
	<i>Y. Andrillat - L. Houziaux</i>	
	Poster Discussion	259
	POSTERS	
	The Infrared Spectrum of the Carbon Symbiotic Star AS 210	261
	<i>P. Stee - M. Friedjung - S. Bensammar - J. Chauville - N. Letourneur</i>	
	Infrared Photometry of R For	263
	<i>D. Barthes - Th. Le Bertre - M.O. Mennessier</i>	
	Abundance Ratio C/O in the Atmospheres of Carbon Stars	265
	<i>I. Eglitis</i>	
	New Near Infrared Spectroscopy of Symbiotic Stars	273
	<i>R. Viotti - A. Damini Neto - G.B. Baratta</i>	

Contents	xi
10. STELLAR PHOTOMETRY AND SPECTROPHOTOMETRY IN THE INFRARED	275
<i>R.F. WING</i>	
Discussion	295
POSTERS	297
Infrared Sources in the Galactic Plane : Models and Observations	299
<i>R.A. Ruelas-Mayorga</i>	
The Effect of H ⁻ Opacity on Stellar Energy Distribution in the Infrared	301
<i>R.F. Wing</i>	
Infrared Spectroscopy and Photometry of Nova PW Vul 1984	305
<i>P.M. Williams - A.J. Longmore - T.R. Geballe</i>	
J, H, K Observations of λ Boo Candidates	307
<i>M. Gerbaldi</i>	
Poster Discussion	311
POSTERS	
Eight-Color Photometry and Polarimetry of Ae/Be Herbig Stars at Observatory Assy	313
<i>K.G. Dzakusheva - K.S. Kuratov - D.B. Mukanov - Yu.K. Bergner - A.A. Krivsov - A.S. Miroshnichenko - R.V. Yudin - N. Yu. Yutanov</i>	
Near - Infrared Colors of Red (Sub) Dwarfs	316
<i>L. Labhardt</i>	
Infrared (JHKLM) Photometry of Bright Southern Beta Cephei Variables	319
<i>C. Sterken</i>	
The Near-Infrared Spectrum of Eta Carinae	322
<i>R. Viotti - G.B. Baratta - A. Damineli-Neto - F. Xavier de Araujo</i>	

xii	Contents	
11.	STELLAR VARIABILITY IN THE INFRARED	325
	A. EVANS	
	Discussion	341
	POSTERS	343
	Energy Distributions and Photometric Variability of New Herbig-Ae Stars	345
	<i>E. Bogaert - C. Waelkens</i>	
	Variability of the Dust Around the Wolf-Rayet Star HD 192641	351
	<i>P.M. Williams - K.A. Van der Hucht - M. Tapia - J.J. Caldwell - D.M. Anthony - A. Fitzsimmons - E.S. Conlon</i>	
	Near IR Spectroscopy of Nova V842 Cen 86	353
	<i>R. Wichmann - J. Krautter - K. Kawara - R.E. Williams</i>	
	Poster Discussion	355
	POSTERS	
	The Near IR Variability of Magnetic CP Stars	357
	<i>F.A. Catalano - R. Kroll - F. Leone</i>	
	On the IR Properties of the LBVs : Wra 751, AG Car and HR Car	359
	<i>D. de Winter - M.R. Perez - P.S. The</i>	
	Search for CO (1-0) Emission in R CrB with Large Infrared Excesses	361
	<i>N.Kameswara Rao - L.A. Nyman - K. Nandy - L. Houziaux</i>	
12.	CIRCUMSTELLAR MATERIAL IN MAIN-SEQUENCE STARS	363
	H.H.: AUMANN	
	Discussion ¹	379
	POSTERS	381
	Possible Lack of Circumstellar Matter Around Nearby Am and Ap Stars	383
	<i>E. Antonello</i>	

Contents	xiii
M.S.C. Stars and their Intermediates in the Near and Far Infrared	385
<i>P.S. Chen - H. Gao - M.X. Bao - Y.K. Chen</i>	
Correlation between the Paschen Emission Lines and Hα of Be Stars	388
<i>J. Zorec - A. Garcia</i>	
Poster Discussion	391
POSTERS	
Indications of Bipolar Flow in the Envelope of the Symbiotic Nova Pu Vul	395
<i>M. Friedjung - S. Bensammar - J. Chauville - N. Letourneur</i>	
The Photometric Variations of IRAS 15194-5115 (=IRSV 1519 - 5115) in the Infrared	398
<i>T. Le Bertre - N. Epchtein</i>	
Polarization and Iras Far-Infrared Colour Index of the Young Stellar Objects. Evolutionary Aspect.	400
<i>R.V. Yudin</i>	
Author Index	405