

TABLE OF CONTENTS

(Titles of invited papers are given in capital letters)

Preface	xiii
Organizing Committees	xv
List of Participants	xvii
INTRODUCTORY LECTURE / Martin J.Rees	1

I. SURVEYS

QUASAR SURVEYS / Malcolm G.Smith	17
Counts of quasars at faint magnitudes : a new complete sample / G.Zamorani, V.Zitelli & B.Marano	33
Results from a faint QSO redshift survey / T.Shanks, R.Fong, B.J.Boyle & B.A.Peterson	37
Ultraviolet excess quasar candidates in large fields : a status report concerning the NGC 450 area /P/ E.Gosset, T.Surdej & J.P.Swings	45
QSO search by slitless spectroscopy /P/ A.Hoag	47
About the QSOs contained in the Cerro el Roble Survey and the density of UVX-QSOs in the SGP field /P/ L.E.Campusano	49
A new catalogue of quasi-stellar objects /P/ A.Hewitt & G.Burbidge	51
The Asiago catalogue of QSOs edition 1985 /P/ C.Barbieri, Y.Chu, S.Cristiani & A.Nota	53
The automatic detection of faint quasars from CFHT gress plates /P/ C.J.Keable & R.G.Clowes	55
Observations of QSOs and related objects with EFOSC, the ESO faint object spectrograph and camera /P/ S.D'odorico, S.Cristiani, R.G.Clowes & C.J.Keable	57
PKS 2005-489 : A very bright BL Lac object in a nearby galaxy /P/ J.V.Wall, I.J.Danziger, M.Pettini, R.S.Warwick & W.Wamsteker	59
Discussion on posters	61

II. CONTINUUM EMISSION

Compact continuum emission from violently variable quasars and BL Lac objects / Joel N.Bregman	65
X-ray to IR continua of optically selected quasars / Martin Elvis ..	73
Continuum monitoring of bright quasars / Esko Valtaoja	79
0.3 to 100 μ m continua of Seyfert 1 galaxies /P/ G.Fabbiano, M.Elvis,N.Carleton,S.P.Willner,A.Lawrence & M.J.Ward	85
Physical interpretations from quasar light curves - 3C 273 /P/ H.J.Smith & R.J.Angione	87
Variability in the optical continuum of Type 1 Seyfert nuclei /P/ H.R.de Ruiter & J.Lub	89
VLA observations of rapid variability in OJ 287 /P/ D.H.Roberts, J.W.Dreher & J.Lehar	91
Discussion on posters	93
 RADIO EMISSION FROM OPTICALLY SELECTED QUASARS /	
K.Kellermann,R.Sramek,D.Shaffer,R.Green & M.Schmidt	95
The radio emission from optically selected quasars / J.A.Peacock, L.Miller & A.R.G.Mead	103
A dependence between optical and radio luminosities of quasars after all ? /P/ J.Machalski	109
A statistical analysis of the radio properties of a large sample of 374 optically selected quasars /P/ Gopal-Krishna,H.Steppe,T.Ghosh & L.Saripalli	111
Radio and optical observations of "optically quiet quasars" /P/ W.D.Cotton, F.N.Owen & M.J.Mahoney	113
Resolved imaging and spectroscopy of QSOs /P/ P.Hickson & J.B.Hutchings	117
On the appearance of the host galaxies of quasars /P/ Smita Shanbhag & Ajit Kembhavi	121
CCD images of southern radio sources /P/ G.L.White, M.J.Batty & D.L.Jauncey	123
A CCD survey of BL Lac objects /P/ H.Kuhr & J.Fried	125
CCD observations of galaxies with radio jets /P/ I.Pérez-Fournon,L.Colina,P.Biermann & J.M.Marcaide	127
Environnement du noyau de 3C 120 /P/ G.Wlérick, A.Soubeyran, B.Servan, L.Renard, D.Horville, A.Bijaoui, G.Lelièvre & P.Bouchet	129
COMPACT RADIO STRUCTURE OF QUASARS / R.W.Porcas	131
 POLARIZATION DISTRIBUTIONS IN COMPACT RADIO SOURCES /	
D.H.Roberts & J.F.C.Wardle	141

Results from a monitoring program of low frequency variable sources / L.Padrielli, R.Fanti, A.Ficarra, L.Gregorini & F.Mantovani ...	149
Evolution of the compact radio source 3C 345 /P/ J.Biretta, M.Cohen & R.Moore	157
Observations of 3C 273 with high north-south resolution /P/ M.Cohen, J.Biretta, R.Schaal & G.Comoretto L.Baath & G.Nicholson	159
Superluminal motion in the quasar 3C 279 /P/ S.C.Unwin	161
New superluminal quasars /P/ T.J.Pearson, P.D.Barthel, A.C.S.Readhead & C.R.Lawrence	163
The nuclear jets in 3C 309.1 and 3C 380 /P/ P.N.Wilkinson, A.J.Kus, T.J.Pearson, A.C.S.Readhead & T.J.Cornwell	165
Search for superluminal motion in the weak cores of extended quasars /P/ J.A.Zensus & R.W.Porcas	167
High resolution VLBI observations of the nuclei of bright galaxies and quasars at 327 MHz /P/ S.Ananthakrishnan & V.K.Kulkarni	169
Monitoring of BL Lac objects at 327 MHz /P/ Hari Om Vats, S.S.Degaonkar, P.K.Manoharan & S.Ananthakrishnan	171
THE EXTENDED RADIO STRUCTURE OF QUASARS / Frazer N.Owen	173
The radio morphology of quasars at high redshift / P.D.Barthel	181
PKS 0812+020 : a quasar interacting with its environment /P/ F.Ghigo, L.Rudnick, P.Weinger, S.Wyckoff, M.Spinrad & K.Johnston	185
The core and halo structure of the quasar 4C 18.68 /P/ A.C.Gower & J.B.Hutchings	187
The extended radio structures of quasars and radio galaxies /P/ J.P.Leahy, P.W.Stephens & T.W.B.Muxlow	189
The peculiar radio structure of quasar 1320+299 /P/ T.J.Cornwell, D.J.Saikia, P.Shastri, L.Feretti, G.Giovannini, P.Parma & C.J.Salter	191
Radio properties of a 'quarter Jansky sample' of extragalactic sources, defined at 408 MHz /P/ Gopal-Krishna, L.Saripalli, D.J.Saikia & R.A.Sramek	193
Absorption lines and the radio structure of quasars /P/ G.Swarup, D.J.Saikia, M.Beltrametti, R.P.Sinha & C.J.Salter	195
B2 quasars and relativistic motion / H.R.de Ruiter, A.Rogora & L.Padrielli	197
WSRT observations of core-dominated radio sources / A.G.de Bruyn & R.T.Schilizzi	203
Redshift distributions of steep and flat-spectrum radio quasars and relativistic beaming / V.K.Kapahi & V.K.Kulkarni	207
Radio jet and lobe of 3C 273 / R.J.Davis	211
Radio structure and the IR-UV spectra of quasars /P/ B.J.Wills & D.Wills	215

High resolution VLA observations of core-dominated quasars /P/ C.P.O'Dea, R.Barvainis & P.Challis	217
A study of one-sided radio quasars /P/ D.J.Saikia, P.Shastri, T.J.Cornwell & C.J.Salter	219
General discussion on relativistic beaming /	221
RESULTS FROM X-RAY SATELLITES / G.Zamorani	223
The medium sensitivity survey and the X-ray selected quasar sample / I.M.Gioia,T.Maccacaro,R.Schild,J.Stocke & J.Danziger	233
RADIO INDUCED X-RAY EMISSION IN RADIO QUASARS / Ajit Kembhavi	239
The X-ray properties of high redshift quasi-stellar objects / S.F.Anderson & B.Margin	247
X-ray studies of Seyfert galaxies and quasars / C.R.Canizares, G.A.Kriss, J.Kruper & C.M.Urry	253
The diverse soft X-ray slopes of QSOs /P/ B.Wilkes & M.Elvis	261
A statistical study of the relationship between X-ray, optical and radio luminosity for a sample of QSOs /P/ D.M.Worrall, P.Giommi, H.Tananbaum & G.Zamorani	263
X-ray selected BL Lac objects : time variability and X-ray spectrum /P/ D.Maccagni, P.Barr, B.Garilli, I.M.Gioia, P.Giommi, T.Maccacaro & R.Schild	265
X-ray bursting activity in the BL Lac object PKS 2155-304 /P/ D.Maccagni, L.Chiappetti, L.Maraschi, D.Molteni, M.Morini, R.Giacconi & A.Treves & A.Wolter	267
Rapid X-ray variability in active galactic nuclei /P/ P.Barr, R.Mushotzky, P.Giommi, J.Clavel & W.Wamsteker	269
X-ray intensity variations in BL Lac sources H2155-304 & PKS 0548-322 /P/ P.C.Agrawal, K.P.Singh & G.R.Riegler	273
The X-ray jet in 3C 273 /P/ D.E.Harris & C.P.Stern	275

III. SPECTRAL LINE STUDIES

A SURVEY OF QSO EMISSION LINES / Beverley J.Wills	279
Studies of narrow emission lines in AGNs / Alexei V. Filippenko	289
THEORETICAL STUDIES OF THE LINE EMISSION SPECTRUM / S.Collin-Souffrin	295
GAS DYNAMICS AND FORMATION OF THE BROAD LINE REGION OF QSOs / Judith J.Perry	307
BROAD ABSORPTION LINE QSOs / David A.Turnshek	317

Emission-line kinematics as a probe of the central engine in QSOs / Amri Wandel	331
Photoionization models and low ionization lines in AGN /P/ M.Joly ..	337
High densities in QSO and Seyfert broad-line clouds /P/ R.C.Puettter ..	341
Spectrophotometry of 3C 232 and 3C 249.1 /P/ D.Dultzin-Hacyan	343
On the [OIII] emission of PG 1501+106 /P/ G.M.Van Heerde	345
FUV and optical spectrophotometry of X-ray selected Seyferts /P/ J.T.Clarke, S.Bowyer & M.Grewing	347
Variability of emission lines in quasar spectra /P/ P.M.Gondhalekar, P.O'Brien & R.Wilson	349
A detailed study of the CIV 1550 line profile and adjacent spectral features in NGC 4151 from 1978 up to 1983 /P/ J.Clavel, A.Altamore, A.Boksenberg, G.E.Bromage, A.Elvius, D.Pelat, C.Perola, M.V.Penston, M.A.J.Snijders & M.H.Ulrich	351
Recurrent outbursts in the broad line region of NGC 1566 /P/ D.M.Alloin	353
Discussion on posters	356

IV. PRIME MOVERS, MODELS AND MECHANISMS

BLACK HOLE MODELS OF QUASARS / R.D.Blandford	359
VARIABILITY AND INSTABILITIES OF ACCRETION DISKS / M.A.Abramowicz, J.P.Lasota & C.Xu	371
THE ELECTRON-POSITRON CAULDRON AND THE FORMATION OF THE HARD RADIATION OF QUASARS AND AGN / N.S.Kardashev, I.D.Novikov & B.E.Stern	383
The revived Penrose process can power the central engine in active galactic nuclei / S.M.Wagh & N.Dadhich	395
Wind-type flows in quasars / A.Ferrari & E.Trussoni	399
A shock model for quasars and active galactic nuclei / I.Pérez-Fournon & P.Biermann	405
Transport of radiation and energetic particles in accretion flows /P/ R.Cowsik & M.A.Lee	407
Models of steady thick accretion discs around a Schwarzschild hole /P/ M.R.Anderson	409
Accretion disk flares /P/ P.A.Sturrock & W.Yang	411
Decollimation of a jet due to spacetime curvature /P/ R.C.Kapoor ...	413
Models for extragalactic radio sources /P/ W.Kundt	415
Some constraints on quasar progenitors and quasar evolution /P/ C.Sivaram	417

Stimulated Raman scattering in active galactic nuclei /P/ V.Krishan & P.J.Wiita	419
A novel interpretation of the cosmic conspiracy in AGNs /P/ C.S.Coleman	421
Discussion on posters	424

V. COSMOLOGICAL STUDIES, CLUSTERING, ISOTROPY ETC

EVOLUTION OF THE LUMINOSITY FUNCTION / Richard F.Green	429
Do quasars evolve over cosmological time scales ? / E.J.Wampler & D.Ponz	439
CLUSTERING, ISOTROPY, AND REDSHIFT CUTOFF / P.S.Osmer	447
The statistics of radio galaxies and quasars at high redshift / J.A.Peacock & J.S.Dunlop	455
NONCOSMOLOGICAL REDSHIFTS / Jayant V.Narlikar	463
QUASAR PAIRS / P.A.Shaver	475
The association of galaxy clusters with moderately-high-redshift quasars / H.K.C.Yee & R.F.Green	481
Constraints on the cosmological evolution of AGNs from X-ray data /P/.L.Danese, G.De Zotti,G.Fasano & A.Franceschini	489
BL Lac objects as an evolutionary population /P/ A.Cavaliere, E.Giallongo & F.Vagnetti	491
Complete quasar samples and comparative cosmology /P/ I.E.Segal	493
Determination of the large-scale and super-large-scale structure by means of the space distribution of quasars /P/ Y.Y.Zhou, D.P.Fang, Z.G.Deng & X.T.He	495
Cosmological implication of the emission line redshift distribution of quasars /P/ Y.Y.Zhou,Y.Gao,Z.G.Deng & H.J.Dai	497
Pairing, clustering, optical variability and gravitational lensing in a sample of about 150 flat-spectrum radio-selected QSOs /P/ D.Wills & B.J.Wills	499
Quasars in the Virgo cluster region /P/ X.T.He, M.G.Smith, R.D.Cannon, J.A.Peacock, J.B.Oke & C.D.Impey	501
A survey of quasar clustering; initial results at the SGP /P/ M.J.Drinkwater	503
Quasar clustering around the Sculptor region /P/ D.Kunth & W.L.W.Sargent	505
Inflationary universe models and clustering of quasar red shifts /P/ C.Sivaram	509
On the concentration of high redshift quasars in the region of M33 /P/ V.K.Kapahi	511

Discussion on posters	513
 VI. QUASARS AS PROBES OF THE INTERVENING MEDIUM	
 GRAVITATIONAL LENSES : OBSERVATIONS / Bernard F.Burke 517	
GRAVITATIONAL LENSING - MODELS / Ramesh Narayan 529	
Gravitationally lensed quasars as cosmological probes : the uniqueness problem /P/ M.Birkinshaw	539
'Missing image' in gravitational lens systems /P/ D.Narasimha, K.Subramanian & S.M.Chitre	541
Gravitational lenses as probes of the distribution of dark matter in the universe /P/ R.Cowsik & P.Ghosh	545
Observations of close pairs of faint blue objects : towards mirage or reality /P/ H.Reboul, A.M.Fringant & C.Vanderriest	547
Optical brightness monitoring of the twin QSO Q0957+561 A,B /P/ R.Schild	549
A close look at Q 2237+0305 /P/ J.A.Tyson	551
Discussion on posters	553
QSO ABSORPTION LINES : HEAVY ELEMENTS AND LYMAN - α CLOUDS / Bruce A.Peterson 555	
The evolution of intergalactic Hydrogen clouds : confusion resolved / H.S.Murdoch,R.W.Hunstead,M.Pettini & J.C.Blades	563
Absorption spectrum of the z=3.78 QSO 2000-330 at high resolution /P/ R.W.Hunstead,H.S.Murdoch,J.C.Blades & M.Pettini ..	569
High resolution spectroscopy of absorption lines in the Z=1.7 BL Lac object 0215+015 /P/ J.C.Blades, R.W.Hunstead, H.S.Murdoch & M.Pettini	571
A search for QSOs in the fields of nearby galaxies /P/ A.S.Pocock, M.V.Penston, M.Pettini & J.C.Blades	573
Gas in cosmic voids /P/ P.M.Gondhalekar & N.Brosch	575
Discussion on posters	577
SUMMARY : FUTURE PROSPECTS / L.Woltjer	579
 Subject Index	585
Object Index	599
Author Index	603