

C O N T E N T S

<i>Preface</i>	3
I. INTRODUCTION	
V.A. AMBARTSUMIAN: Introduction	9
Discussion	21
II. OBSERVATIONS AND THEIR INTERPRETATION	
1. W.W. MORGAN, N.R. WALBORN and J.W. TAPSCOTT: An Optical Form Morphology of Seyfert Galaxies	27
Discussion	41
2. H. SPINRAD: The Stellar Content and Evolution of Galaxy Nuclei	45
Discussion	73
3. W.L.W. SARGENT: The Optical Line and Contin- uous Spectra of Radio Galaxies, Compact Galaxies and Seyfert Galaxies	81
Discussion	III

4. E.M. BURBIDGE: Optical Spectra of Quasi-Stellar Objects	121
Discussion	147
5. D.E. OSTERBROCK: Physical Conditions in the Active Nuclei of Galaxies and Quasi-Stellar Objects Deduced from Line Spectra	151
Discussion	187
6. W.H. McCREA: Absorption Redshifts in QSOs	189
Discussion	191
7. F.J. Low: Infrared Emission of Galaxies	195
Discussion	209
8. K.I. KELLERMANN: Compact Radio Sources in the Nuclei of Galaxies	217
Discussion	235
9. H. VAN DER LAAN: Expansion Models of Eruptions in Quasars and Radio Galaxies	245
Discussion	267
10. A.R. SANDAGE: Optical Properties of Nuclei	271
Discussion	311
11. J.H. OORT: Composition and Activity of the Nucleus of Our Galaxy, and Comparison with M 31	321
Discussion	345
12. E.M. BURBIDGE and W.L.W. SARGENT: Velocity Dispersions and Discrepant Redshifts in Groups of Galaxies	351
Discussion	379

13. M. SCHMIDT: Space Distribution and Luminosity Functions of Quasi-Stellar Objects	387
14. M. SCHMIDT: Space Densities and Time Scales of Seyfert Galaxies, Radio Galaxies and Quasi-Stellar Objects	395
15. E.E. SALPETER: Quasar Statistics for Lemaître Cosmologies	399
Discussion of the three preceding papers	403

III. THEORY

1. G.R. BURBIDGE: Theoretical Considerations Regarding Non-Thermal Emission and Ejection of Matter from Galactic Nuclei	411
Discussion	435
2. L. SPITZER: Dynamical Evolution of Dense Spherical Star Systems	443
Discussion	473
3. L. WOLTJER: Massive Rotators in Galactic Nuclei	477
4. P. MORRISON and A. CAVALIERE: Spinars - A Progress Report	485
5. W.A. FOWLER: Rotation and Pulsation Periods for Pulsar Models of Quasars	511
Discussion of the three preceding papers	515
6. D. LYNDEN-BELL: Formation and Evolution of Bright Black Holes	527

7. J. WHEELER: Mechanism for Jets	539
Discussion of the two preceding papers	569
8. F. HOYLE: On the Nature of Compact Objects . .	583
Discussion	593

IV. OBSERVATIONAL COSMOLOGY AND GALAXY EVOLUTION

1. A.R. SANDAGE: The Age of the Galaxies and Globular Clusters: Problems of Finding the Hubble Constant and Deceleration Parameter . .	601
Discussion	623
2. M.J. REES: The Evolution of Radio Sources . .	633
Discussion	653
3. F. HOYLE: The Curious Mystery of $\log N - \log S$	655
Discussion	661
4. H. FRIEDMAN: X-Ray Background Radiation . .	669
Discussion	693
5. P. MORRISON: Two Diffuse Background Radiation Fields	699
Discussion	707

V. SUMMARIES

1. E.M. BURBIDGE: Summary of Observational Results	713
Discussion	733

2. L. WOLTJER: Summary from the Theoretical Point of View	741
Discussion	755
CONCLUSIONS	765
SUGGESTIONS FOR FUTURE WORK	773
NAME INDEX	777
SUBJECT INDEX	789