

Accounting for the astonishing developments in the field of *Extragalactic Astronomy and Cosmology*, this second edition has been updated and substantially expanded. Starting with the description of our home galaxy, the Milky Way, this cogently written textbook introduces the reader to the astronomy of galaxies, their structure, active galactic nuclei, evolution and large scale distribution in the Universe. After an extensive and thorough introduction to modern observational and theoretical cosmology, the focus turns to the formation of structures and astronomical objects in the early Universe. The basics of classical astronomy and stellar astrophysics needed for extragalactic astronomy are provided in the appendix.

The new edition incorporates some of the most spectacular results from new observatories like the Galaxy Evolution Explorer, Herschel, ALMA, WMAP and Planck, as well as new instruments and multi-wavelength campaigns which have expanded our understanding of the Universe and the objects populating it. This includes new views on the galaxy population in the nearby Universe, on elliptical galaxies, as well as a deeper view of the distant Universe approaching the dark ages, and an unprecedented view of the distant dusty Universe. Schneider also discusses the impressive support for the standard model of the Universe, which has been substantially strengthened by recent results, including baryon acoustic oscillations (an approach which has significantly matured over the years), results from the completed WMAP mission and from the first Planck results, which have confirmed and greatly improved on these findings, not least by measuring the gravitational lensing effect on the microwave background. Further, a new chapter focusing on galaxy evolution illustrates how well the observations of distant galaxies and their central supermassive black holes can be understood in a general framework of theoretical ideas, models, and numerical simulations.

Peter Schneider's *Extragalactic Astronomy and Cosmology* offers fundamental information on this fascinating subfield of astronomy, while leading readers to the forefront of astronomical research. But it seeks to accomplish this not only with extensive textual information and insights; the author's own passion for exploring the workings of the Universe, which can be seen in the text and the many supporting color illustrations, will further inspire the reader. While this book has grown out of introductory university courses on astronomy and astrophysics and includes a set of problems and solutions, it will not only benefit undergraduate students and lecturers; thanks to the comprehensive coverage of the field, even graduate students and researchers specializing in related fields will appreciate it as a valuable reference work.

From the reviews of the first edition:

"...Masterful blending of observation and theory; lucid exposition..." (D. E. Hogg, CHOICE, Vol. 44 (10), June, 2007)"

"Through the richness of the color illustrations and through the deep insight of the content, the book will most certainly lead the reader to the forefront of astronomical research in this very interesting and fascinating domain of astronomy. ... will not only be highly appreciated by undergraduate students in astronomy but also by graduate students and researchers involved in the field who will certainly appreciate its comprehensive coverage." (Emile Biémont, Physica Magazine, Vol. 29 (4), 2007)"

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1	Introduction and overview	1
1.1	Introduction	1
1.2	Overview	5
1.2.1	Our Milky Way as a galaxy	5
1.2.2	The world of galaxies	8
1.2.3	The Hubble expansion of the Universe	9
1.2.4	Active galaxies and starburst galaxies	10
1.2.5	Voids, clusters of galaxies, and dark matter	11
1.2.6	World models and the thermal history of the Universe	15
1.2.7	Structure formation and galaxy evolution	17
1.2.8	Cosmology as a triumph of the human mind	18
1.2.9	Astrophysics & Physics	18
1.3	The tools of extragalactic astronomy	19
1.3.1	Radio telescopes	20
1.3.2	Infrared telescopes	24
1.3.3	Optical telescopes	28
1.3.4	UV telescopes	34
1.3.5	X-ray telescopes	35
1.3.6	Gamma-ray telescopes	37
1.4	Surveys	40
1.5	Problems	42
2	The Milky Way as a galaxy	45
2.1	Galactic coordinates	45
2.2	Determination of distances within our Galaxy	46
2.2.1	Trigonometric parallax	47
2.2.2	Proper motions	48
2.2.3	Moving cluster parallax	48
2.2.4	Photometric distance; extinction and reddening	49
2.2.5	Spectroscopic distance	52
2.2.6	Distances of visual binary stars	53
2.2.7	Distances of pulsating stars	53
2.3	The structure of the Galaxy	54
2.3.1	The Galactic disk: Distribution of stars	55
2.3.2	The Galactic disk: chemical composition and age; supernovae	56
2.3.3	The Galactic disk: dust and gas	59
2.3.4	Cosmic rays	61
2.3.5	The Galactic bulge	64
2.3.6	The stellar halo	66
2.3.7	The gaseous halo	67
2.3.8	The distance to the Galactic center	69

2.4	Kinematics of the Galaxy	70
2.4.1	Determination of the velocity of the Sun	71
2.4.2	The rotation curve of the Galaxy	73
2.4.3	The gravitational potential of the Galaxy	77
2.5	The Galactic microlensing effect: The quest for compact dark matter	77
2.5.1	The gravitational lensing effect I	78
2.5.2	Galactic microlensing effect	81
2.5.3	Surveys and results	84
2.5.4	Variations and extensions	87
2.6	The Galactic center	89
2.6.1	Where is the Galactic center?	89
2.6.2	The central star cluster	91
2.6.3	A black hole in the center of the Milky Way	92
2.6.4	The proper motion of Sgr A*	93
2.6.5	Flares from the Galactic center	95
2.6.6	Hypervelocity stars in the Galaxy	97
2.7	Problems	100
3	The world of galaxies	101
3.1	Classification	102
3.1.1	Morphological classification: The Hubble sequence	103
3.1.2	Other types of galaxies	103
3.1.3	The bimodal color distribution of galaxies	105
3.2	Elliptical Galaxies	108
3.2.1	Classification	108
3.2.2	Brightness profile	108
3.2.3	Composition of elliptical galaxies	110
3.2.4	Dynamics of elliptical galaxies	111
3.2.5	Indicators of a complex evolution	114
3.3	Spiral galaxies	116
3.3.1	Trends in the sequence of spirals	116
3.3.2	Brightness profile	117
3.3.3	The Schmidt–Kennicutt law of star formation	120
3.3.4	Rotation curves and dark matter	122
3.3.5	Stellar populations and gas fraction	124
3.3.6	Spiral structure	125
3.3.7	Halo gas in spirals	126
3.4	Scaling relations	127
3.4.1	The Tully–Fisher relation	128
3.4.2	The Faber–Jackson relation	130
3.4.3	The fundamental plane	130
3.4.4	D_n - σ relation	132
3.4.5	Summary: Properties of galaxies on the Hubble sequence	132
3.5	Population synthesis	133
3.5.1	Model assumptions	133
3.5.2	Evolutionary tracks in the HRD; integrated spectrum	134
3.5.3	Color evolution	135
3.5.4	Star formation history and galaxy colors	135
3.5.5	Metallicity, dust, and HII regions	136
3.5.6	The spectra of galaxies	137
3.5.7	Summary	138
3.6	The population of luminous galaxies	139

3.7	Chemical evolution of galaxies	142
3.8	Black holes in the centers of galaxies	144
3.8.1	The search for supermassive black holes	144
3.8.2	Examples for SMBHs in galaxies	145
3.8.3	Correlation between SMBH mass and galaxy properties	146
3.9	Extragalactic distance determination	148
3.9.1	Distance of the LMC	150
3.9.2	The Cepheid distance	151
3.9.3	Tip of the Red Giant Branch	152
3.9.4	Supernovae Type Ia	152
3.9.5	Secondary distance indicators	153
3.9.6	The Hubble Constant	154
3.10	Luminosity function of galaxies	155
3.10.1	The Schechter luminosity function	155
3.10.2	More accurate luminosity and mass functions	157
3.11	Galaxies as gravitational lenses	158
3.11.1	The gravitational lens effect—Part II	158
3.11.2	Simple models	160
3.11.3	Examples for gravitational lenses	162
3.11.4	Applications of the lens effect	166
3.12	Problems	170
4	Cosmology I: Homogeneous isotropic world models	173
4.1	Introduction and fundamental observations	173
4.1.1	Fundamental cosmological observations	174
4.1.2	Simple conclusions	174
4.2	An expanding universe	177
4.2.1	Newtonian cosmology	177
4.2.2	Kinematics of the Universe	177
4.2.3	Dynamics of the expansion	178
4.2.4	Modifications due to General Relativity	179
4.2.5	The components of matter in the Universe	180
4.2.6	“Derivation” of the expansion equation	181
4.2.7	Discussion of the expansion equations	182
4.3	Consequences of the Friedmann expansion	183
4.3.1	The necessity of a Big Bang	184
4.3.2	Redshift	186
4.3.3	Distances in cosmology	188
4.3.4	Special case: The Einstein–de Sitter model	190
4.3.5	Summary	191
4.4	Thermal history of the Universe	192
4.4.1	The Standard Model of particle physics	193
4.4.2	Expansion in the radiation-dominated phase	194
4.4.3	Decoupling of neutrinos	194
4.4.4	Pair annihilation	195
4.4.5	Primordial nucleosynthesis	196
4.4.6	WIMPs as dark matter particles	199
4.4.7	Recombination	201
4.4.8	Summary	204

4.5	Achievements and problems of the standard model	204
4.5.1	Achievements	204
4.5.2	Problems of the standard model	205
4.5.3	Extension of the standard model: inflation	207
4.6	Problems	209
5	Active galactic nuclei	211
5.1	Introduction	212
5.1.1	Brief history of AGNs	212
5.1.2	Fundamental properties of quasars	215
5.1.3	AGNs as radio sources: synchrotron radiation	215
5.1.4	Broad emission lines	218
5.1.5	Quasar demographics	218
5.2	AGN zoology	219
5.2.1	QSOs	221
5.2.2	Seyfert galaxies	222
5.2.3	LINERs	222
5.2.4	Radio galaxies	222
5.2.5	OVVs	222
5.2.6	BL Lac objects	222
5.3	The central engine: a black hole	224
5.3.1	Why a black hole?	224
5.3.2	Accretion	225
5.3.3	Superluminal motion	227
5.3.4	Further arguments for SMBHs	229
5.3.5	A first mass estimate for the SMBH: the Eddington luminosity	230
5.4	Components of an AGN	233
5.4.1	The IR, optical, and UV-continuum	233
5.4.2	The broad emission lines	238
5.4.3	Narrow emission lines	243
5.4.4	X-ray emission	244
5.4.5	The host galaxy	247
5.4.6	The black hole mass in AGNs	248
5.5	Family relations of AGNs	252
5.5.1	Unified models	252
5.5.2	Beaming	255
5.5.3	Beaming on large scales	256
5.5.4	Jets at higher frequencies	256
5.5.5	Unified models—summary	261
5.5.6	Tidal disruption events	262
5.6	Properties of the AGN population	263
5.6.1	The K-correction	263
5.6.2	The luminosity function of QSOs	264
5.7	Quasar absorption lines	268
5.8	Problems	271
6	Clusters and groups of galaxies	273
6.1	The Local Group	275
6.1.1	Phenomenology	275
6.1.2	Mass estimate	276
6.1.3	Other components of the Local Group	278

6.2	Optical cluster searches	279
6.2.1	The Abell catalog	279
6.2.2	Morphological classification of clusters	282
6.2.3	Galaxy groups	282
6.2.4	Modern optical cluster catalogs	283
6.3	Light distribution and cluster dynamics	286
6.3.1	Spatial distribution of galaxies	286
6.3.2	Dynamical mass of clusters	289
6.3.3	Additional remarks on cluster dynamics	290
6.3.4	Intergalactic stars in clusters of galaxies	291
6.4	Hot gas in galaxy clusters	293
6.4.1	General properties of the X-ray radiation	293
6.4.2	Models of the X-ray emission	296
6.4.3	Cooling “flows”	300
6.4.4	The Sunyaev–Zeldovich effect	306
6.4.5	X-ray and SZ catalogs of clusters	309
6.4.6	Radio relics	310
6.5	Scaling relations for clusters of galaxies	311
6.5.1	Mass-temperature relation	312
6.5.2	Mass-velocity dispersion relation	313
6.5.3	Mass-luminosity relation	313
6.5.4	The Y -parameter	314
6.5.5	Redshift dependence of scaling relations	315
6.5.6	Near-infrared luminosity as mass indicator	316
6.6	Clusters of galaxies as gravitational lenses	317
6.6.1	Luminous arcs	317
6.6.2	The weak gravitational lens effect	322
6.7	The galaxy population in clusters	329
6.7.1	Luminosity function of cluster galaxies	329
6.7.2	The morphology-density relation	330
6.8	Evolutionary effects	335
6.9	Problems	339
7	Cosmology II: Inhomogeneities in the Universe	341
7.1	Introduction	341
7.2	Gravitational instability	342
7.2.1	Overview	342
7.2.2	Linear perturbation theory	343
7.2.3	Peculiar velocities	346
7.3	Description of density fluctuations	347
7.3.1	Correlation functions	348
7.3.2	The power spectrum	350
7.4	Evolution of density fluctuations	350
7.4.1	The initial power spectrum	350
7.4.2	Growth of density perturbations and the transfer function	351
7.4.3	The baryonic density fluctuations	354
7.5	Non-linear structure evolution	357
7.5.1	Model of spherical collapse	357
7.5.2	Number density of dark matter halos	359
7.5.3	Numerical simulations of structure formation	361

7.6	Properties of dark matter halos	366
7.6.1	Profile of dark matter halos	367
7.6.2	The shape and spin of halos	372
7.6.3	The bias of dark matter halos	374
7.7	Weak gravitational lensing studies of dark matter halos	375
7.7.1	Massive clusters	376
7.7.2	Galaxy-galaxy lensing	376
7.7.3	Interpretation: The halo model	378
7.7.4	Masses of groups and clusters	380
7.8	The substructure of halos	381
7.9	Origin of the density fluctuations	387
7.10	Problems	388
8	Cosmology III: The cosmological parameters	391
8.1	Redshift surveys of galaxies	392
8.1.1	Introduction	392
8.1.2	Redshift surveys	392
8.1.3	Determination of the power spectrum	394
8.1.4	Baryonic acoustic oscillations	397
8.1.5	Effect of peculiar velocities	399
8.1.6	Projected correlation function	401
8.1.7	Angular correlations of galaxies	405
8.1.8	Cosmic peculiar velocities	406
8.2	Cosmological parameters from clusters of galaxies	408
8.2.1	Cluster abundance	408
8.2.2	Mass-to-light ratio	412
8.2.3	Baryon content	413
8.2.4	The LSS of clusters of galaxies	413
8.3	High-redshift supernovae and the cosmological constant	414
8.3.1	Observing SNe Ia at high redshifts	414
8.3.2	Results	415
8.3.3	Discussion	417
8.4	Cosmic shear	419
8.5	Origin of the Lyman- α forest	423
8.5.1	The homogeneous intergalactic medium	423
8.5.2	Phenomenology of the Ly α forest	424
8.5.3	Models of the Lyman- α forest	425
8.5.4	The Ly α forest as cosmological tool	427
8.6	Angular fluctuations of the CMB	429
8.6.1	Origin of the anisotropy: Overview	429
8.6.2	Description of the CMB anisotropy	431
8.6.3	The fluctuation spectrum	431
8.6.4	Observations of the CMB anisotropy	434
8.6.5	WMAP: Precision measurements of the CMB anisotropy	438
8.6.6	From WMAP to Planck	441
8.7	Cosmological parameters	445
8.7.1	The standard cosmological model from CMB measurements	445
8.7.2	Consistency and discrepancies with other measurements	448
8.7.3	Extensions of the standard model	450
8.7.4	Cosmic harmony	453
8.8	Dark energy: Cosmological constant, or something else?	455
8.9	Problems	458

9	The Universe at high redshift	459
9.1	Galaxies at high redshift	460
9.1.1	Lyman-break galaxies (LBGs)	461
9.1.2	Photometric redshift	466
9.1.3	Other few-band selection techniques	468
9.2	Deep views of the Universe	470
9.2.1	Hubble Deep Fields	470
9.2.2	Deep fields in other wavebands	473
9.2.3	Natural telescopes	475
9.2.4	Towards the dark ages	477
9.3	New types of galaxies	481
9.3.1	Starburst galaxies	481
9.3.2	Extremely Red Objects (EROs)	484
9.3.3	Dusty star-forming galaxies	486
9.3.4	Damped Lyman-alpha systems	493
9.3.5	Lyman-alpha blobs	495
9.4	Properties of galaxies at high redshift	496
9.4.1	Demography of high-redshift galaxies	496
9.4.2	The color-magnitude distribution	499
9.4.3	The size and shape of high-redshift galaxies	499
9.4.4	The interstellar medium	503
9.5	Background radiation at smaller wavelengths	504
9.5.1	The IR background	505
9.5.2	Limits on the extragalactic background light from γ -ray blazars	506
9.5.3	The X-ray background	508
9.6	The cosmic star-formation history	510
9.6.1	Indicators of star formation	511
9.6.2	Redshift dependence of the star formation: The Madau diagram	512
9.6.3	Summary: High-redshift galaxies	515
9.7	Gamma-ray bursts	516
10	Galaxy evolution	521
10.1	Introduction and overview	522
10.2	Gas in dark matter halos	525
10.2.1	The infall of gas during halo collapse	525
10.2.2	Cooling of gas	526
10.3	Reionization of the Universe	528
10.3.1	The first stars	529
10.3.2	The reionization process	531
10.3.3	Observational probes of reionization	534
10.4	The formation of disk galaxies	536
10.4.1	The contraction of gas in halos	536
10.4.2	The formation of galactic disks	537
10.4.3	Dynamical effects in disks	538
10.4.4	Feedback processes	539
10.4.5	The formation and evolution of supermassive black holes	540
10.4.6	Cosmic downsizing	541
10.5	Formation of elliptical galaxies	541
10.5.1	Merging of halos and their galaxies	542
10.5.2	Black hole binaries	547
10.5.3	Environmental effects on galaxy properties	551

10.6	Evolution of the galaxy population: Numerical simulations	552
10.6.1	Numerical methods	553
10.6.2	Results	556
10.7	Evolution of the galaxy population: Semi-analytic models	562
10.7.1	Method for semi-analytic modeling	562
10.7.2	Results from semi-analytic models	566
11	Outlook	573
11.1	Continuous progress	573
11.2	New facilities	575
11.3	Challenges	579
A	The electromagnetic radiation field	583
A.1	Parameters of the radiation field	583
A.2	Radiative transfer	583
A.3	Blackbody radiation	584
A.4	The magnitude scale	586
A.4.1	Apparent magnitude	586
A.4.2	Filters and colors	586
A.4.3	Absolute magnitude	587
A.4.4	Bolometric parameters	588
B	Properties of stars	589
B.1	The parameters of stars	589
B.2	Spectral class, luminosity class, and the Hertzsprung–Russell diagram	589
B.3	Structure and evolution of stars	591
C	Units and constants	595
D	Recommended literature	597
D.1	General textbooks	597
D.2	More specific literature	597
D.3	Review articles, current literature, and journals	598
E	Acronyms used	599
F	Solutions to problems	603
Index		615