

Contents

INTRODUCTION <i>The Story of the Universe in 100 Stars</i>	1
1. HIKOBOSHI The Cowherd and the Heavenly Weaver Girl	5
2. 2MASS J18082002-5104378 B Catching Sight of the Big Bang	8
3. 34 TAURI The Planet That Was Once a Star	11
4. ALCYONE Georg von Peurbach and the Start of a Revolution	13
5. FREISTETTER'S STAR Can You Buy a Star's Name?	16
6. HR0001 Mrs. Hoffleit Counts the Stars	19
7. VEGA Underrated Dust	21
8. RASALHAGUE Confounded Astrologers	24
9. TXS 0506+056 Ice Cube Astronomy	27
10. π^1 GRUIS A Simmering Giant	30
11. B CASSIOPEIAE A Dogma Blows Up	33
12. ACRUX One Star, Too Many Names	35
13. 51 PEGASI The Answer to a Thousand-Year-Old Question	37
14. 61 CYGNI Killer of the Crystal Spheres	40
15. BPS CS 22948-0093 A Cosmic Shortage of Lithium	43
16. 62 ORIONIS Caroline Herschel Emerges from Her Brother's Shadow	46

17. ANTARES Fluff in the Superbubble	49
18. HAIRY STARS Portents of Death and Messengers from the Past	51
19. HD 142 Our Bright Astronomers Frequently Generate Killer Mnemonics	53
20. SIDERA MEDICEA Not Stars, But Still Revolutionary	56
21. HD 10180 Lots of Numbers, Lots of Planets	58
22. TEIDE 1 A Star Gone Wrong	61
23. ALDEBARAN Rendezvous in the Distant Future	64
24. WISE 0855-0714 All Alone in the Universe	66
25. WOLF 359 The Battle for Earth	69
26. SN 1990O Dark Energy—an Unsolved Puzzle	72
27. ALGOL The Demon Star	75
28. POLARIS One of Many	77
29. TYC 278-748-1 The Asteroids' Shadow	80
30. SS LEPORIS To the Roche Limit	83
31. L1448-IRS2E Star Under Construction	85
32. NEMESIS The Sun's Invisible Escort	87
33. NAVI An Astronaut's Prank	90
34. 14 HERCULIS Heavy Metal Stars	92
35. ALPHA CAPRICORNI The Wellspring of Shooting Stars	95
36. ANWAR AL FARKADAIN The End of the Night	98
37. SIRIUS B The Future of the Sun	100
38. IOTA CARINAE The Cosmic Eye Needs Glasses	103

39. SUN The Lengthy Search for the Astronomical Unit	106
40. NOMAD1 0856-0015072 Pluto's Belated Revenge	109
41. Z CHAMAELEONTIS Too Soon for Black Dwarfs	112
42. HD 162826 The Sun's Long-Lost Sibling?	114
43. 40 CANCRI A Rejuvenating Collision	117
44. 171 PUPPIS A The Birthplace of Gold and Silver	119
45. ALPHA ANTLIAE The Sky's Toolbox	122
46. W75N(B)-VLA2 A Baby Star Loses Mass	125
47. HIP 13044 A Case for Astro-Archaeology	128
48. KIC 4150611 We Need More Syzygies!	130
49. DELTA CEPHEI Henrietta Swan Leavitt's Wonderful Stars	132
50. THE STAR OF BETHLEHEM A Messiah's Status Symbol	135
51. ARCTURUS The Speed of Rainbows	138
52. GAMMA DRACONIS And Yet It Moves!	141
53. MERAK Bears in the Big Dipper	144
54. GS0416200054 Creative Roads to Discovery	147
55. PSR B1919+21 Smashed and on Its Last Legs	150
56. CANOPUS Blinding Brightness	153
57. ETA CARINAE A Leak in the Hull	155
58. ALPHECCA A Colorless Jewel in the Celestial Crown	157
59. BARNARD'S STAR A Controversial Fast Bowler	159
60. DENEK Cecilia Payne Fathoms the Stars	162

61. BETA PICTORIS Visions of an Alien World	165
62. 72 TAURI The Star That Made Einstein's Name	168
63. V1 The Most Important Star in the Universe	171
64. KEPLER-1 Bright Sun, Dark World	174
65. HD 209458 The Star with an Evaporating Planet	177
66. PROXIMA CENTAURI The Star Next Door	179
67. NGS Killed by Laser	182
68. M87* The Invisible Made Visible	184
69. KIC 11145123 The Roundest Star in the Universe	187
70. THE MORNING STAR Light-Bringer in Disguise	190
71. OGLE-2003-BLG-235/MOA-2003-BLG-53 Starry Spectacles	192
72. ORION SOURCE I A Rather Salty Star	195
73. LICH A Dead Star's Phantom Planets	197
74. S0-102 The Star Gazing into the Abyss	200
75. GRB 010119 Quantum Gravity and Planck Stars	202
76. SCHOLZ'S STAR A Near Miss in the Stone Age	205
77. ICARUS The Light of the Most Distant Star	207
78. SIRIUS The Flood-Bringer's Dawn	209
79. V1364 CYGNI In Search of Dark Matter	212
80. KIC 8462852 The Rise and Fall of an Alien Civilization	215
81. STAR 23 The Riddle of the Sky Disk	218
82. SN 2008ha The Sky Belongs to Everyone	221
83. SPICA Climate Change and Celestial Mechanics	223

84. FELIS Celestial Ex-Cat	226
85. WASP-12 Wet Asphalt in Space	228
86. ULAS J1342+0928 Shining a Light into the Cosmic Dark Age	230
87. SANDULEAK -69 202 The Long-Awaited	233
88. 3C 58 Star Full of Quarks	236
89. CoRoT-7 Home of the Super-Earth	239
90. CYGNUS X-1 The Black Hole's Bright Light	242
91. THE GREEN STAR It's Black and White	245
92. GLIESE 710 A Close Encounter in the Distant Future	247
93. GRB 080319B The Biggest Explosions in the Universe	249
94. GW150914 Gravity's Light	252
95. R136a1 The Monster in the Tarantula Nebula	255
96. TRAPPIST-1 The Perpetual Discovery of the Second Earth	257
97. P CYGNI A Question of Distance	260
98. OUTCAST Through the Milky Way at Hyperspeed	262
99. S MONOCEROTIS The Spiral Galaxy in the Christmas Tree	264
100. ZETA OPHIUCHI Cosmic Rays and Climate Change	267
AFTERWORD <i>More Stories About the Universe</i>	271
<i>Acknowledgments</i>	273
<i>Further Reading</i>	275
<i>Image Credits</i>	283
<i>Index</i>	285
<i>About the Author</i>	294