

INDEX

- AAVSO, 200–201, 331, 332
- absolute magnitudes, 36
- Adams, John Couch, 156
- aetheria darkening, 138
- Alcock, George, 44, 185
- Algol, 325
 - aligning, 67
- Alpha Capricornids, 47
- altazimuth, 62, 65
- altitude, 67
- Amalthea, 111
- amateur astronomy, introduced, xvii, xviii
- Andromedids, 48, 49, 68
- Antoniadi, Eugenios, 112
- aphelic oppositions, 134
- aphelion, 134
- apo chromat, 60
- apparent magnitude, 36
- apparitions, of comets, 134, 135
- Arago, Francois, 156
- Ariel, 159
- ashen light, Venus, 152
- Association of Lunar and Planetary Observers, 331, 332
- Asteroids, 163–172
 - naming of, 165–166
- Astronomical League, 333
- astrophotography, 262
- Aurigids, 46
- Aurora, 28–33
- Auroral Data Center in the US, 29
- averted vision, 41
- azimuth, 67
- Baker, Lonny, xxii
- Barnard, E. E. 111, 181–182
- Beyer method, estimating comet brightness, 179
- Beyond the Observatory* (Shapley), 35
- big bang, 65
- binoculars, 57–59
- Bobrovnikoff method, estimating comet brightness, 178
- Bode, Johann, 163
- Bode's Law, 163–165
- Brahe, Tycho, 81
- Brasch, Klaus, 126
- Brashier, John, 60
- bright nebulae, 232–233
- Brooks, William, 182
- Burnham, Sherbourne Wesley, 193
- Callisto, 111, 119, 121
- Carrington, Christopher, 103
- Cassini spacecraft, 130
- Cassini, Giovanni, 81, 124
- Cassini's Division, 124, 125
- CCD technology, 275–280
- CCDs, for astrometry, 283
- Celestial Police, 163–164
- celestial equator, 8
- Central Bureau for Astronomical Telegrams, 120, 121, 186–187, 280
- Challis, James, 156
- Chapman, Clark, 170
- Chaucer, Geoffrey, 318
- chromosphere, 293
- Clark, Alvin, 60
- Clavius, Christopher, 82
- Collins, Peter, 158, 217
- Coma Berenicids, 50
- comets, 172–189, 294
 - Arend–Roland, 43
 - Biela, 49, 68
 - Bradfield, 69
 - Denning–Fujikawa, 181
 - Encke, 49, 175
 - Giacobini–Zinner, 48
 - Halley, 44, 46, 48, 55, 78, 175, 225
 - Hartley–IRAS, 175

340 Index

- comets (*cont.*)
 - Kohoutek, 174–175
 - Levy 1987a, 172–174
 - Levy 1987y, 69
 - Mrkos, 43
 - Okazaki-Levy-Rudenko, 173
 - Pons-Winnecke, 47, 182
 - Shoemaker-Levy 1, 280–281
 - Shoemaker-Levy 2, 280–281
 - Shoemaker-Levy 9, 121–123
 - Sorrells, 185
 - Swift-Tuttle, 45
 - Tempel, 321
 - Temple-Tuttle, 49
 - West, 175
 - White-Ortiz-Bolelli, 42
 - Wilson-Hubbard, 43
- Como, Perry, 43
- conjunction, 38
- constellations and asterisms
 - Aquila, 4, 7
 - Andromeda, 5, 6, 68
 - Argo, 6
 - Auriga, 37
 - Big Dipper, 3, 4, 5, 6, 35, 46, 47
 - Bootes, 5,
 - Carina, 6
 - Cassiopeia, xv, 4, 5, 6
 - Centaurus, 6
 - Cepheus, 5, 6, 40
 - Cetus, 5, 6, 98
 - Cygnus, 5
 - Draco, 9, 48
 - Equuleus, 328
 - Equuleus S, 328
 - Hercules, 2
 - Leo, 49
 - Little Dipper, xv, 5, 50
 - Lyra, 5
 - Nanette's River, 330
 - Northern Cross, 57
 - Orion, xv, 5, 6, 7, 98
 - Pegasus, 5
 - Perseus, 5, 7, 68
 - Pisces, 6
 - Pleiades, 41, 49
 - Sagittarius, 5, 7
 - Scorpius, 5, 7, 37
 - Seven Sisters, 41
 - Southern Cross, 6
 - Triangulum, 41
 - Ursa Major, xv
 - Ursa Minor, 5
 - Virgo, 5
 - Wendee's Ring, 327
 - Copernicus, Nicolaus, 81, 268
- Copernicus, 318
- Corporates, 138
- corona, 293
- coronagraph, 110
- craters on Mars, 139
- Cyrene, 81
- d'Arrest, Heinrich, 156
- Daniel, Zaccheus, 182
- Danjon, A., and lunar eclipses, 298
- dark nebulae, 232–233
- Davies, Sir John, 319
- declination, 8, 62
- deep sky objects, 41
 - 47 Tucanae, 239
 - Andromeda Galaxy, 7, 41, 66; *see also* M31
 - Blinking Planetary Nebula, 235, 244
 - Double Cluster in Perseus, 242
 - Hyades, 242
 - Hydra trio, 330
 - IC1396, 328
 - Lagoon Nebula, 226; *see also* M8
 - M1, 244
 - M3, 240
 - M4, 240
 - M6, 240
 - M7, 240
 - M8, 244
 - M11, 240
 - M13, 232, 240
 - M15, 242
 - M17, 244, 254, 329
 - M20, 244, 255
 - M22, 240
 - M27, 257
 - M31, 242, 329
 - M33, 244
 - M35, 239
 - M36, 239
 - M37, 239
 - M38, 239
 - M39, 240
 - M42, 234, 240
 - M44, 240
 - M45, 242
 - M51, 243, 329
 - M57, 240, 256
 - M74, 258
 - M78, 243
 - M79, 243
 - M81, 240
 - M82, 240
 - M84, 243
 - M86, 243
 - M87, 243
 - M94, 240

- Messier objects, 247–262
 Milky Way, 6–7, 35, 57
 NGC 253, 245
 NGC 1931, 328
 NGC 2237, 243
 NGC 2264, 243
 NGC 3621, 330
 NGC 4565, 244
 Omega Centauri, 240, 241
 Pleiades, 226
 Spindle Galaxy, xix, 67
 Whirlpool Galaxy, 236
 Deimos, 141–143
 Delta Aquarids, 44
 Delta Leonids, 46
 Delta Aquarids, Southern, 47
 Delta Aquarids, Northern, 47
 Denning, William, 181
 Dione, 129
 diurnal, 3
 Donne, John, 319
 double stars, xx, 313
 Draconids, 47, 48
 Dreyer, J. L. E., 226
 Duhalde, Oscar, 42, 222
- Earth, 7, 8, 34, 35, 36, 40, 43, 46, 49, 77, 80, 83, 113, 119, 121, 129
 Earth shadow, 77
 Earthshine, 77, 85, 93
 eclipses of the Moon, 296–301
 color changes, 297
 Danjon scale, 298
 photography, 299
 shadow contacts, 296, 298–299
 eclipses of the Sun, 288–295
 annular, 294–295
 Baily's Beads, 291
 chromosphere, 293
 corona, 293
 Diamond Ring, 291
 prominences, 292
 shadow bands, 291
 viewing safely, 288
 Edberg, Stephen J., xxii, 207–208, 221, 234, 268, 274
 Einstein Observatory, 201
 Eliot, T. S., 188
 elongation, 38
 Elysium, 138, 140
 emission nebulae, 233
 Enceladus, 129
 Encke, Johann, 124, 156–157
 Enright, Leo, 33, 143–149, 268, 273
 Equatorial mount, 62, 65, 107
 Equinox, 9
- Equuleus S, 328
 Eta Aquarids, 45, 46, 48
 Eta Carinae, 327
 Europa, 119, 111
 Evans, Rev. Robert, 217
 eyepieces, 61–62
- faculae, 101, 106, 107, 108
 filaments, solar, 110
 filar micrometer, 198
 film, developing and finishing, 272
 fireball report, 54
 fireballs, 54–55
 Fish, Tessa, 316
 Fish, Doug, 316
 Foucault, Leon, 63
- galaxies, *see* deep sky objects
 Galileo, 59, 63, 65, 101, 111, 123, 124, 319
 Galileo probe, 113
 Galle, Johann, 156
 Ganymede, 111, 119, 121
 Garnier, DeLisle, 74
 Gassendi, Pierre, 85, 124
 Gegenschein, 33–34
 Geminids, 44, 49, 50
 gibbous phase, 82
 globular clusters, 230
 Goodricke, John, 40, 194
 granule, solar, 104, 106, 110
 Great Red Spot, 113, 118
 Green Acres Day Camp, 317
 greenhouse effect, on Venus, 149
 Greenwich, 104
 Grimaldi, Francesco Maria, 83
Gulliver's Travels, 141
- Haas, Walter, xxii
 Hall, Asaph, 141
 halos, lunar and solar, 28, 29
 Harding, Karl, 164
 Hardy, Thomas, 295–296
 Heavenly G, 6
 Hellas, 139, 140
 Herschel, Caroline, 181
 Herschel, John, 226
 Herschel wedge, 100
 Herschel, William, 91, 111, 124, 154–155, 164, 181, 193, 226
 Hevelius, Johannes, 85
 Hill, Rik, 108
 Hipparchus, 4
 Hodgson, Ralph, 323
 Hopkins, Gerard Manley, 68, 321–322
 Houston, Walter Scott, 43
 Hubble Classification, 237

342 Index

- Hubble, Edwin, 237
 Hubble Space Telescope, xix, 64, 65, 118
 Hunter, Tim, 36, 227, 231, 243
 Huygens, Christiaan, 123, 124, 325
 Hyblaean Extension, 138
 hydrogen alpha filters, 110
 Hyperion, 129
 hypersensitizing, 271
- Iapetus, 129, 130
 IAPPP (photometry), 332
 Ikeya, Kaoru, 182
Index Catalogue, 226
 Ingalls, Albert, 63
 International Dark Sky Association, 332
 International Halley Watch, 275
 International Astronomical Union, 120, 121,
 186–187, 280
 International Occultation Timing
 Association, 331
 Io, 65, 111, 119, 199
 Iota Aquarids, Northern, 48
 Iota Aquarids, Southern, 47
- Jedicke, Peter, xxii, 26, 222
 Jones, Albert, 222
 Jorgensen, Carl, xx, 328
 Jovian satellites, 119
 Jupiter, xviii, xx, xxi, 36, 40, 57, 59, 60, 65,
 70, 110–123, 135
 belts, 113, 114, 116
 bridges, 113–114
 comet impacts, 119–123
 drawing of, 115–117
 festoons, 113, 114, 116
 Jovian day, 113
 meridian transits, 117
 moons of, 111
 polar regions, 114
 zones, 113, 114
- Kappa Cygnids, 48
 Kepler, Johannes, 82, 101
 Kirsch, Gottfried, 180
 Kitt Peak National Observatory, 65, 77, 86,
 87
 Koenig, Dean, 257
 Kuiper airborne observatory, 65
 Kuiper, Gerard, 132
- Lagoon Nebula, 42
 Large Magellanic Cloud, 220, 236
 Larson, Steve, 276
 latitude, 3
 Leonids, 49
 LeVerrier, U. J. J., 156–157
- Levy, David, 31, 78, 79, 102, 120
 longitude, 3
 Lorenz, Paul, xxii
 Lowell Observatory, 59
 Lowell, Percival, 131, 132, 133, 143, 157
 lunar occultations, 301–304
 lunar brightness scale, 89
 lunar transient phenomena, 92–93
 lunar features, drawing, 86–89
 lunar height measurement, 95
 Lyrids, 46
- Macdonald Observatory, 132
 Machholz, Donald, 184
 MacKenzie, Norman, xxii
 magnitude, 4, 36, 50–51
 magnitude scale, 51
 Manly, Peter, 64
 Mariner 4, to Mars, 132
 Mariner 2, to Venus, 149–150
 Mars, xx, 35, 36, 57, 69, 131–148, 295,
 310
 atmospheric changes, 137, 140–141
 canals, 131, 132
 drawing of, 135–136
 dust storms, 137, 140
 seasonal changes, 137
 secular changes, 136
 surface features, 137–140
- Marsden, Brian, 120
 Martian calendar, 137
 Martians, 132, 133
 Masefield, John, 28
 Mattei, Janet, 200
 Mattei, Michael, 133, 134
 Meade Instruments, 65, 312
 measuring engines, 282
 Meier, Rolf, 185
 Mercury, 35, 36, 38, 101, 153–154
 Messier, Charles, 70, 225, 318
 Messier hunting, 245
 Messier objects, 247–262
 meteor report, visual, 53
 meteor showers, 44–55
 observing, xvii
 meteorite, 44
 meteoroid, 44
 meteors, 43, 44, 314
 observing, 50–55
 Meudon Observatory, 59
 Millman, Peter, 53, 54
 Milton, John, 320
 Mimas, 129
 Miranda, 159
 Monocerotids, 49
 Montanari, Geminiano, 40

- Moon
 - diurnal effect, 80
 - far side, 74, 80
 - libration, 80, 85, 96
 - Lunar Incognita, 96
 - lunar map, 75
 - lunar meteor search, 74
 - maria, 82
 - observing, 313, 86–97, 323
 - phases, 74
 - photographing, 89–92
 - terminator, 74, 76, 80, 81, 82, 83, 84, 88, 96
 - thin cheese, 83
- Moon, specific features
 - Albategnius, 80
 - Alphonsus, 81, 82, 86, 92, 93, 97
 - Alpine Valley, 81
 - Alps, 81
 - Apennines, 81, 84, 86
 - Archimedes, 81, 84, 85, 86
 - Aristarchus, 82, 85, 89, 92, 93
 - Aristillus, 81, 84
 - Aristoteles, 80, 93
 - Atlai Scarp, 79
 - Autolycus, 81, 84
 - Bailly, 96
 - Billy, 85
 - Bruno, 92
 - Burckhardt, 78, 84
 - Calippus, 84, 93
 - Cassini's bright spot, 81, 94
 - Catharina, 84
 - Caucasus Mountains, 80, 84
 - Cavalerius, 83
 - Clavius, 81, 82, 85, 94
 - Cleomedes, 78, 84, 94
 - Cobra's Head, 82, 85, 93
 - Colombo, 84
 - Copernicus, 81, 82, 84, 85, 86
 - Cyrillus, 79, 84
 - Davy, 121
 - Deslandres, 81, 85
 - Dionysus, 84
 - Drygalski, 96
 - Eratosthenes, 81, 85, 94
 - Eudoxus, 80
 - Fabricius, 84
 - Fracastorius, 79, 84, 94
 - Furnerius, 83
 - Gassendi, 82, 85, 94
 - Gauss, 83
 - Geminus, 78 84
 - Ghost craters, 78
 - Grimaldi, 83, 85, 92
 - Haemus Mountains, 80, 84
 - Hahn, 83
 - Halley, 80
 - Hansteen, 85
 - Hausen, 96
 - Hell, 81
 - Heraclides Promontories, 82, 84, 85
 - Herodotus, 82, 93
 - Hevelius, 83, 85
 - Hipparchus, 80
 - Horrocks, 80
 - Humboldt, 77, 83
 - Janssen, 79, 84
 - Jura Mountains, 82, 85
 - Kepler, 82, 84, 94
 - Lambert, 81, 94
 - Langrenus, 83
 - Lansberg, 82
 - Laplace Promontories, 82, 85
 - Licetus, 84
 - Linné, 84, 94
 - Manilius, 94
 - Mare Crisium, 77, 78, 83, 84, 94
 - Mare Fecunditatis, 78, 79, 82, 83
 - Mare Frigoris, 82
 - Mare Humboldtianum, 77, 83
 - Mare Humorum, 82
 - Mare Imbrium, 81, 82, 84, 85
 - Mare Nectaris, 79, 80
 - Mare Nubium, 85
 - Mare Serenitatis, 79, 80, 84
 - Mare Spumans, 82
 - Mare Tranquilitatis, 84
 - Mare Undarum, 82
 - Mare Vaporium, 80
 - Maurolycus, 80
 - Menelaus, 80, 84
 - Messala, 78, 84
 - Metius, 84
 - Newton, 96
 - Oceanus Procellarum, 82, 86
 - Patavius, 78, 83
 - Picard, 78, 94
 - Piccolomini, 79, 84
 - Pico, 81, 94
 - Pierce, 78, 94
 - Piton, 80, 84, 94
 - Plato, 81, 82, 86, 92, 94
 - Plinius, 84
 - Posidonius, 94
 - Proclus, 78, 94
 - Ptolemy, 81
 - Pyrenees Mountains, 84
 - Pythagoras, 83, 85
 - Pytheas, 81
 - Rhaeticus, 85
 - Riccioli, 85, 94
 - Riphaes Range, 82, 85

344 Index

- Moon, specific features (*cont.*)
 - Sabine, 84
 - Scheiner, 82
 - Schickard, 82, 94
 - Schroter's Valley, 82
 - Seleucus, 83
 - Sea of Tranquility, 79, 84
 - Short, 96
 - Sinus Iridium, 82, 85, 94
 - Sinus Medii, 80, 85
 - Spitzbergen Mountains, 81, 84
 - Stevens, 83
 - Straight Range, 82
 - Straight Wall, 80, 81
 - Taruntius, 79, 84, 94
 - Teneriffe Mountains, 82
 - Theophilus, 79, 80, 83, 84, 86, 94
 - Timocharis, 94
 - Tycho, 81, 83, 84, 86, 94
 - Vendelinus, 78, 83
 - Walter, 81
 - Wargentin, 82, 85
 - Zagut, 94
- Morgan, William, 7
- Morris method, estimating comet brightness, 179
- Mount Jennings Observatory, 132
- mounts, 62
- Mt. Wilson Observatory, 65
- Muscular Dystrophy Association, 315
- mutual eclipse, 119
- mutual occultation, 119
- Nagler eyepiece, 229
- Nanette's River, 330
- National Research Council of Canada, 29
- National Oceanic and Atmospheric Administration, 29
- NDSOS (Deep Sky), 332
- nebulae, 41, 155–156, 160
 - discovery, 320
- Neptune, mythological god, 5
- neutron star song, 222
- New General Catalogue*, 226
- Newton, Isaac, 61
- Newton, 91
- Newtonian reflectors, 61
- northern lights, 29–33
- Nova Cygni, 42, 43
- novae, 42, 43
- Nye, Derald, 168
- O'Meara, Stephen James, 115, 127, 138, 158–159
- Oberon, 159
- observational astronomy, introduced, xvii
- observations, recording of, 67–71
- Observing Variable Stars* (Levy), 174
- occultations, by Moon, 73
- Olbers, Heinrich, 164
- Oostdyk, Charles, 221
- opposition, 35, 134, 135
- Orion Nebula, 41, 192; see M42
- Orionids, 45, 48
- Palomar Mountain, 119
- parallax, 36
- Paris Observatory, 6, 70, 78, 156
- Parker, Don, 128, 142
- parsec, 36
- Peltier, Leslie, 7, 182
- penumbra, solar, 104, 105, 107, 108
- Penzias, Arno, 65
- perihelic oppositions, 134
- perihelion, 134
- Perseids, 44, 45, 47, 50, 52
- Phaethon, asteroid, 50
- Phobos, 133, 141–143, 295
- Phoebe, 129, 130–131
- photoelectric photometry, 97
- Photometer, 170
- photometrist, 97
- photometry, 170–172
- photosphere, of Sun, 110
- Piazzi, Giuseppe, 164
- Pickering, William, 156
- Pioneer 11 spacecraft, 125
- Piscids, Northern, 48
- Piscids, Southern, 48
- planetary nebulae, 235–236
- Planetary Science Institute, 225
- planets, 34
 - in daylight, 38
- Pluto, 65, 132, 157–158, 160–161
- Pogson, Norman, 4
- polar regions, Mars, 139–140
- Pope Urban VIII, 59
- pore, solar, 104, 106
- Porter, Russell, 63
- prominences, solar, 110, 293
- Ptolemy, Claudius, 193
- Pulkovo Observatory, 64
- Pythagorus, 83
- Quandrantids, 44, 45
- quasar 3C-273, 216, 238
- radio astronomy, 65
- Rape of the Lock, The* (Pope), 159
- reciprocity failure, 264
- reflection nebulae, 233
- retrograde motion, 35
 - of Mars, 143–149

- Rhea, 129
- Riccioli, Joannes Baptista, 85, 124, 192
- right ascension, 8, 62
- Rima Tenuis, 139
- Roche, Jerry, 316
- Roche, Andrew, 316
- Rosenbaum, Gary, 224
- Royal Astronomical Society of Canada, 333
- Rudenko, Michael, 158
- safe sun, 37, 101, 266
- Sagan, Carl, 92
- saros cycle, 289–290
- satellites, artificial, 34
- Saturn, 2, 7, 36, 123–131, 324–325
 - drawing of, 126–127
 - equatorial belt, 125, 129
 - intensity estimates, 127–129
 - moons, 129
 - polar region, 125
 - rings, 112, 124–125
 - temperate region, 125
 - zones, 125, 129
- Schiaparelli, 131
- Schwabe, Heinrich, 101, 103
- scintillation, 112
- seeing, 112
 - scale, 112
- Seki, T stomu, 182
- Shakespeare, William, 318–319
- Shapley, Harlow, 35, 37
- Shelton, Ian, 221
- Shklovskii, Iosef, 133
- Shoemaker, Carolyn, xv, 119, 120, 276
- Shoemaker, Gene, xxi, 119–120; 280
- Shurz, Carl, 314
- Sidgwick method, estimating comet brightness, 177–178
- Sigma 2816, Cepheus triple, 195, 328
- Sigma 2819, Cepheus double, 195, 328
- Sigma Leonids, 46
- Simpson, Clifford, 43
- Skiff, Brian, 77
- skyscope, 123
- Skyward*, Montreal newsletter, 126
- Small Magellanic Cloud, 202, 236
- Smith, Brad, 197
- Socratic method, of teaching, 310
- solar disk drawing, 106–109
- solar eclipse, 110
- solar flare, 104, 106
- solar observations, report form, 105
- Solis Lacus, 137
- Sorrells, William, 185
- southern lights, 29–33
- spectral types, 37
- spectroscope, 37
- Spenser, Edmund, 318
- Springfield mount, 64
- star charts, 9–25
- star clusters, 41
- star color, 2, 37
- Stars
 - 47 Ursae Majoris, 326
 - Albireo, 57, 192
 - Alcor, 191–192
 - Aldebaran, 51
 - Algol, 40, 194
 - Alkaid, 46
 - Alpha Pegasi, 51
 - Alpha Ursae Majoris, 51
 - Altair, 5, 36, 51
 - Antares, 5, 36, 37
 - Arcturus – 5, 37
 - Beta Bootis, 51
 - Beta Ursae Majoris, 50
 - Betelgeuse, 6, 48, 203
 - Canopus, 6
 - Capella, 37, 46, 51, 98
 - Castor, 49, 193
 - Delta Cephei, 40
 - Deneb, 5, 36
 - double, 313
 - Epsilon Cephei, 40
 - Epsilon Geminorum, 51
 - Fomalhaut, 47
 - Gamma Leonis, 51
 - Gamma Ursae Majoris, 5, 51
 - Gamma Ursae Minoris, 51
 - Kochab, 50
 - Mira, 202
 - Mizar, 35, 47, 191–192
 - Nu Sagittarii, first double star, 192–193
 - Polaris, 4
 - Procyon, 51
 - R Coronae Borealis, 207
 - Regulus, 51
 - Sigma 2816, 195, 328
 - Sigma 2819, 195, 328
 - Sirius, 51
 - Spica, 5, 36, 37
 - SS Cygni, 201, 206
 - Sun, 36, 37, 38, 44, 59, 65, 75, 77, 81, 83, 87, 99, 113, 119; selenographic colongitude on Moon, 96
 - T Tauri, 207
 - Thuban, 9
 - TV Corvi, 223–225
 - Vega, 5, 9, 36, 37, 44, 46, 51
 - Zeta Cephei, 40
 - Stein, Larry, xxii
 - Stellafane, 64

346 Index

- Stevens, Janet, 333
- Struve, Otto, 193
- Struve, Wilhelm, 193
- Sun, 34, 35, 97–110, 324
 - dangers, 99–101
 - observing of, 99–110
 - prominences, 292
 - safe observing of, 99–101, 152, 312
- Sunspots, 37, 39, 99, 101, 123
 - counting, 103–105
 - cycle, 103
 - maximum, 103
 - minimum, 99, 103
 - umbrae, 104
- supernova remnants, 237
- supernovae, 216–218
- Swift, Jonathan, 141, 172
- Syrtis Major, 138, 139
- Tau Herculids, 46
- Taurids, Northern, 49
- Taurids, Southern, 48
- Telescopes
 - advanced, 65–67
 - Catadioptric, 61
 - choosing one, 55–57
 - compound system, 55, 61
 - Dobsonian, 56
 - electronic, 66–67
 - garden, 64
 - making one, 62–64
 - mounts, 56
 - reflector, 55, 56, 61, 110, 112, 114
 - refractor, 55, 56, 59–60, 61, 88, 99, 101, 112, 119, 132
 - Schmidt–Cassegrain, 61
 - types, 59–61
- Tennyson, Alfred, 43, 320–321
- Tethys, 129
- Tharsis, 138, 140
- Titan, 124, 129–130
- Titania, 159
- Tithonus, 137
- Titius–Bode's Law, 163–165
- Tombaugh, Clyde, 132, 197, 157–158, 225, 325
- Tombaugh–Smith seeing scale, 196–197
- Trifid Nebula, 42
- Tucker, Scott, 42, 119
- Tuthill, Roger, 182, 270
- TV Corvi, 325
- Umbriel, 159
- uncertainty principle, 280
- Uranus, 154–155, 158–159
 - discovery, 320
- Ursa Major Stream, 227
- Ursids, 50
- US Naval Observatory, 141
- V Hydriæ, variable star, 325–326
- Valis Marineris, 138
- variable stars, xx, 40, 293
- Venus, 25, 36, 38, 40, 57, 59, 101, 123, 149–152, 311
 - greenhouse effect, 149
 - observing, 312
 - transits of, 152
- Vigil, Nanette, 312
- Vogel, H. 194
- Voroncov–Velyaminov classification, 235
- Voyager, 113, 121, 127, 129
- Vulcan, 103
- Wallach-Levy, Wendee, xv, 31, 98, 187, 225, 315
- Warner, H. H., 182
- Wells, Orson, 132
- Wendee's Ring, 327
- Wendee's Star, 326–327
- Westfall, John, xxii
- Wilde, Oscar, 318
- Williams, Arthur S., 118
- Williamson, Isabel K., xix, 52
- Wilson, Stewart, 43
- Wilson, Robert, 65
- Wolf, R., 103
- Wordsworth, William, 320
- Yerkes Observatory, 7, 59, 64
- Zeus, 111
- Zigel, Felix, 141
- zodiacal band, 34
- zodiacal light, 33–34