

Index

2002aa29, 363

Adams, J.C., 356
Albedo, 50, 112, 114, 115
Albedo, Bond, 118
Anthropocene, 92
Appleton, E., 172
Aristotle, 2
Assman, R., 156
Asteroids, 56, 296
ATP, 206
Autotrophs, 202

Barnard Star, 251
Barnard, E., 251
Bernal, J.D., 197
Blue Jets, 179
Brahe, T., 352
Brown dwarfs, 252, 253, 258, 261
Bruno, G., 2

Cambrian Explosion, 79
Carbon, 201
Carbon Dioxide, 56, 62, 65, 92
Carbonaceous Chondrites, 314
Cassini, G.D., 297
Chaos, 360
Chapman S., 165
Chlorophyll, 145
Chthonian Planet, 324
Clarke A.C., 111
Continuity Equation, 173
Copernicus, N., 3
Coreless Planets, 317
COROT mission, 272
Cruithne, 363

Cuvier, G., 85
Cyanobacteria, 73

Da Vinci, L., 115
Danjon, A., 117, 119, 143
DARWIN mission, 279, 281
Darwin, C., 85
Debris Disks, 343
Democritus, 2
Descartes, R., 337, 355
Dobson Unit, 157
Dobson, G., 157
Dubois J., 117

Early Earth, 62, 188
Earth

Asthenosphere, 41
Exosphere, 163, 189
Gamma Rays, 188
Infrared, 16, 137
Interior, 39
Ionosphere, 142, 171, 239
Lithosphere, 42
Mantle, 41, 60
Mesosphere, 160
Radioemission, 184, 239
Stratosphere, 156
Thermosphere, 162
Transmission Spectrum, 139
Ultraviolet, 75, 163, 164, 233
X-rays, 186

Earth Images

Apollo 17, 14
Apollo 8, 13
Blue Marble Next Generation, 16
EPOXI, 112
Infrared, 16

- Kaguya, 14
- Lunar Orbiter 1, 11
- Messenger, 20
- V2 Rocket, 10
- Earth-like Planets, 280, 302, 369
- Earthquakes, 39, 46
- Earthshine, 108, 136
- Enceladus, 317
- Energy
 - Chemical, 208
 - Nuclear, 61
 - Solar Light, 206
- Euler, L., 355
- Europa, 317
- Exoplanets
 - 2M1207-39b, 276
 - 51 Peg b, 252
 - Barnard Star, 251
 - Eccentricity, 305
 - Formalhaut b, 276
 - GJ 581e, 378
 - HD 149026b, 274
 - HD 189733b, 274, 323
 - HD 209458b, 177, 271, 274, 324
 - Mass, 302
 - Mass-Radius, 319
 - Metallicity, 305
 - PSR B1257 + 12, 266
- Exosphere, 50
- Extinction
 - Cretaceous, 87
 - Permian, 87

- Faint Sun Paradox, 62
- Fourier, J., 53
- Franklin, B., 45
- Fullerenes, 87

- GAIA mission, 258, 264
- Galactic Center, 31
- Galactic Habitable Zone, 234, 397
- Galilei, G., 116, 356
- Gauss, C.F., 172
- Geocorona, 163, 164
- Geosynchronous orbit, 110
- Giant Planets, 348
- Glint scattering, 128
- Global Warming, 161
- Gould Belt, 27
- Greenhouse effect, 52

- Habitable Zone, 226, 231, 232, 364, 366, 375, 378, 405
- Halley, E., 352
- Heaviside, O., 172
- Heterotrophs, 202
- Hill Sphere, 358
- Homochirality, 145
- Hot Earths, 308
- Hot Jupiters, 252, 265, 304, 399
- Hot Neptunes, 304
- HR Diagram, 229
- Hubble Space Telescope, 28
- Hydrogen Bond, 203

- Ice Ages, 90
- International Space Station, 164, 183
- Ionosphere
 - Chapman layers, 175
 - Radio transmission, 172

- Jeans, J., 339
- Jeffreys, H., 339
- Jupiter, 185

- KAM Theory, 357
- Kant, I., 337
- KEPLER mission, 272
- Kepler, J., 352
- Kuiper Belt, 298
- Kuiper, G., 338

- Lagrange, J.L., 355
- Lagrangian Points, 363
- Lambert
 - surface, 50
- Laplace, P., 338, 357
- Late Heavy Bombardment, 59, 362, 371, 404
- Leclerc, G.L., 339
- Leucippus, 2
- Leverrier, U., 356
- Life
 - Definition, 198
 - Intelligent, 10, 27
 - Origin, 59, 64, 204
 - Self-organization, 199
- Light Pollution, 238
- Local Bubble, 27
- Local Fluff, 27
- Lorenz, E.N., 357

- Lovelock, J., 70
- Lucretius, 2
- Lyot, B., 277

- M Stars, 231
- Magnetosphere, 180
- Mars, 326
- Maul, A., 8
- Maxwell, J.C., 338
- Mercator, G., 5
- Mercury, 316, 405
- Mesosphere, 50, 160
- Metallicity, 235, 305, 392, 397
- Methane, 62
- Methane Clathrates, 78, 84
- Methanogenesis, 208
- Milankovitch, M., 90
- Milky Way, 30, 234, 395
- Moon, 20, 56, 319, 410, 412
- Moulton, F., 339

- Neptune, 348, 356
- Newton, I., 23, 352, 355

- Ocean Planets, 312
- Oort Cloud, 299
- Oparin, A.I., 64
- Opposition effect, 118
- Orion Nebula, 341
- Oxygen, 73
- Ozone, 75, 156, 159

- Pale Blue Dot, 112, 135, 142
- Pale Red Dot, 142
- Photoevaporation, 348, 406
- Photography, 7
- Photosynthesis, 206
- Phytoplankton, 220
- Planetary-mass objects, 258
- Plankton blooms, 108
- Plasmasphere, 182
- Plate Tectonics, 46, 311
- Plenitude Principle, 2
- Poincaré, N., 357
- Polar Mesospheric Clouds, 161
- Polarization, 143, 145
- Potocnik, H., 111
- Protoplanetary Disks, 343
- Pulsar planets, 252, 266
- Purple Earth, 221

- Radiation Belts, 181
- Radioactivity, 44, 54
- Rayleigh Number, 42
- Rayleigh scattering, 51, 135, 140
- Reber, G., 184
- Red Dwarfs, 392
- Red Edge, 145, 214
- Red Giant, 95, 96, 313
- Red Sprites, 179
- RedOx, 205
- Resonances, 404
- Rocky Moons, 318

- Sagan, C., 25, 94
- Sarpi, P., 116
- Satellite orbits, 110
- Shadow hiding, 119
- Silicon, 201
- Snowball Earth, 122
- Solar Wind, 156
- Solar Analogs, 399
- Solar Siblings, 395
- Solar System, 21, 291
 - Albedo, 139
 - Nebular Theory, 337
 - Protoplanet Theory, 339
- Spacecrafts
 - AIM, 161
 - Apollo 11, 14
 - Apollo 14, 14
 - Apollo 16, 164
 - Apollo 17, 14
 - Apollo 8, 13
 - Cassini, 25, 317
 - CLUSTER, 182
 - Galileo, 20, 135, 164
 - GCRO, 188
 - Kaguya, 14
 - Mars Express, 137, 217
 - Mars Global Surveyor, 135, 137
 - Mars Reconnaissance Orbiter, 163
 - Messenger, 112, 131
 - SeaWiFS, 216
 - TIMED, 161, 176
 - TIROS, 18
 - Venus Express, 112, 217
- Spitzer Space Telescope, 341
- Stars
 - 47 UMa, 381
 - 55 Cancri, 380
 - Beta Pictoris, 315, 343
 - Centauri, 25, 231
 - Epsilon Eridani, 27

- Formalhaut, 276
- Gliese 876, 378
- HD 114762, 252
- HD 160691, 381
- HD 40307, 382
- HD 69830, 346, 381
- HR 8799, 276
- Tau Ceti, 27
- Upsilon Andromeda, 379
- Stellar Encounters, 403
- Stevens, A.W., 8
- Stratosphere, 50
- Strutt, R.J., 165
- Sun
 - Energy Generation, 61
 - Flares, 399
 - Mass, 393
 - Mass Loss, 61
 - Rotation, 399
 - Solitude, 393
- Super-Earths, 265, 311
- Super-Mercuries, 315
- Supercontinents, 77, 80
- Supernova, 27, 235

- T Tauri Stars, 343
- Terrestrial Planets, 348, 374

- Thermodynamic Disequilibrium, 200
- Thermosphere, 50, 162
- Thompson, W., 43
- Tidal Heating, 231, 318
- Tidal Locking, 231
- Tikhov, G.A., 135
- Titan, 317
- Titius-Bode Law, 292
- Tournachon, G.F., 8
- TPF mission, 281

- Ultraviolet, 75, 234
- Uranus, 348

- V-2 Rockets, 10, 172
- Van de Kamp, P., 251
- Venus, 46, 94, 122, 234

- Wallace, A., 86
- Water, 41, 203, 205
- Wegener, A., 45
- Wright, W., 8

- Zodiacal Light, 297