LUniverse_int_12.15.05.qxd 12/19/05 12:29 PM Page 167

INDEX

A

Absolute zero, electrospheres at, 118
Acceleration, 40, 43, 54, 67
  artificial gravitational field, 49
  due to gravity, 43-46, 56
Andromeda, 93
Artificial gravitational fields, 47-51, 57
Atomic explosions, 33
Atomic model, 63, 111-124
  current model, 111, 124
  laws of physics, 117-118
  Origo and, 114-115, 122-123
  transient energy and electrosphere, 115-121, 124
Atomic nucleus. *See* Nucleus

B

Big bang theory, 94
Black hole, 101-108
  matter at speed of light, 105
  Origo and, 102, 104
Blue shift, 86, 93, 98
Bohr, Niels, 113
Bursters, 33

C

Cavendish experiment, 155-156
Closed loop theory of universe, 10-11
Compressed Origo, 129
Copernicus, Nicolaus, 146-147
Corpuscular property of light, 61, 81-84, 98
Curvature of "space-time", 41-43

D

Day, 23
Diffraction box experiment, 84-85
Doppler effect, 85, 93, 98
Doppler shifts, 85-88

E

Einstein, Albert, x, 19, 41, 63, 79, 148
Electricity, predictions about, 151-153
Electromagnetic spectrum, 53, 74
Electromagnetism, Maxwell's laws, 112
Electrons
  atomic structure and, 111, 112, 119, 124
  nature of, 121

LUniverse_int_12.15.05.qxd 12/19/05 12:29 PM Page 168

Electrosphere, 115-118, 120, 124, 131
Empty space, 13-15, 18, 19, 22, 53, 63, 65, 68
Energy
  forms of, 71
  generation of light, 71-73
  inertia, 53-55, 57
  kinetic energy, 19
  in magnetic field, 129-131
  Origo, 18-21
  transient energy, 115-121
Energy structures, 29
Equilibrium, 54, 57
Ether, 63
Events, 4-7, 22

F

"Fabric of space-time", 41
Faraday, Michael, 147-148
Field propulsion, 55, 141, 153
First event theory of universe, 9-10
First law of thermodynamics, 72
Future (time period), 6-7

G

Galaxies, 34, 83, 87-88, 93, 96
Galilei, Galileo, 147
Gases
  electrospheres, 119
  gravitational bond between nuclei, 117
General theory of relativity, x, 41
Governing laws of the universe, 16, 22
Gravitational Challenge, 155-156
Gravitational field, 43-46
  black holes, 101-108
  light and, 90-92, 106
  of nucleus, 114-115
Gravitational lensing, 91-92
Gravitational waves, 52-53
Gravitons, 52, 57
Gravity, 39-41, 46
  acceleration due to, 43-46, 56
  artificial gravitational fields, 47-51
  Gravitational Challenge, 155-156
  Origo and, 42, 52, 56

H

Hubble, Edwin P., 85, 93, 149
Hydrogen atom, atomic structure, 111, 124

I

Inertia, 53-55, 57
Infinite motion, 20, 27
Infinite time, 13-14
Instance of Origo, 75

K

Kinetic energy, 19

L

Laws of physics, 16, 22, 34, 117-118
Light, 97-98
  age of universe, 94
  black holes, 101-108
  classical experiments with, 77-90
  corpuscular property of, 61, 81-84, 98

LUniverse_int_12.15.05.qxd 12/19/05 12:29 PM Page 169

Light continued
darkness of night sky, 95-96
diffraction box experiment, 84-85
Doppler shifts, 85-88, 93-94
frequency of, 73-74, 97
generation of, 70-73
gravitational field and, 90-92, 106
Michelson-Morley experiment, 79-81, 97, 148
motion of, 74-77
nature of, 61-62, 71
Origo and, 69-70, 73-74, 75, 81, 82, 84, 88, 97-98, 103, 107
packets, 82
photons, 61, 81, 83, 84, 97, 98
propagation of, 62-70, 74-75, 97
red-shift communication system, 89-90
speed limit for, 106
speed of, 28, 62-63, 65, 70, 92, 97, 108
wave nature of, 61, 79-81
Liquids, gravitational bond between nuclei, 117
Logic, 7-8, 16, 22

M

Magnetic field, 130
attraction between north and south pole, 138-139
generation of, 131-135
repulsion between north poles, 135-137
Magnetic field continued
repulsion between south poles, 137
transient energy and, 131-135, 137, 138-139, 142
Magnetic monopoles, 140, 142
Magnets, 129-142
attraction in, 138-139
magnetic monopoles, 140, 142
repulsion in, 135-137
Matter
above the speed of light, 106-107
composition of, 129
destruction of, 29
as energy structures, 29
formation of, 28, 29-30, 34, 68-69
in galaxies, 94
motion of Origo through, 122-123, 124
Origo and, 29, 34, 122-123, 124
at speed of light, 105
Maxwell, James Clerk, 113
Maxwell's laws of electromagnetism, 112
Michelson-Morley experiment, 79-81, 97, 148
Monopoles, 140, 142
Moon, 57, 98, 108
Motion, 19
infinite motion, 20, 27
of light, 74-77
Newton's second law of motion, 54
Origo, 18-21

LUniverse_int_12.15.05.qxd 12/19/05 12:29 PM Page 170

N

Neutron star, 123
Newton, Sir Isaac, x, 54, 143, 147
Newton's second law of motion, 54
North poles (of magnet), repulsion between, 135-137
Nuclear fission, 33
Nuclear fusion, propulsion system powered by, 49
Nucleus
  atomic structure and, 111, 117-118, 124
  gravitational field of, 114-115
  transient energy, 115

O

Origo, 18-21, 22-23, 27, 34, 44, 122
  atomic model and, 114-115, 116, 122-123
  atomic nucleus and, 114
  black hole and, 102, 104
  compressed Origo, 129
  density of, 69
  Doppler shifts, 86
  as fabric of the universe, 41-42
  gravitational field and, 43-46
  gravity and, 42, 52, 56
  instance of, 75
  inward and outward forces, 30-33, 34, 35, 43, 44
  light and, 69-70, 73-74, 75, 81, 82, 84, 88, 97-98, 103, 107
  magnetism and, 129
  matter and, 29, 34, 122-123, 124
Origo continued
  motion of through matter, 122-123, 124
  movement of, 32, 122-123, 124
  as "space-time", 41, 56
  transient energy and, 115-119

P

Packets of light, 82
Particles, light as, 61, 81-84
Past (time period), 5, 6
Photons, 61, 81, 83, 84, 97, 98
Physics, laws of, 16, 22, 27, 34, 117-118
Pound, Robert, 88
Pre-universe, 12, 18, 19, 22, 27
Present (time period), 5, 6
Propulsion systems
  with artificial gravitational fields, 47-51
  predictions about, 153

Q

Quantum entanglement, 90
Quantum theory, x, 149

R

Rebka, Glen, 88
Red shift, 86, 89, 93, 94, 98
Red-shift communication system, 89-90
Repulsion, in magnets, 135-137
Roemer, Olaus, 62

S

Second law of motion, 54
Slipher, Vesto M., 85, 149

LUniverse_int_12.15.05.qxd 12/19/05 12:29 PM Page 171

Solids, gravitational bond between nuclei, 117-118
South poles (of magnet), repulsion between, 137
Space, 53
  empty space, 13-15, 18, 19, 22, 53, 63, 65, 68
Space Shuttle, new propulsion system, 49, 50
"Space-time", 41-43, 56, 65
Speed of light, 28, 62-63, 65, 70, 92, 97, 108
  light-speed limit, 106
  matter above the speed of light, 106-107
  matter at, 105
Statistical mathematics, 149
Superconductivity, predictions about, 151-153
Superluminal communication system, 90, 98
Superluminal travel, 107, 108

T

Thermodynamics, first law of, 72
Time, 3-7, 22
  day, 23
  in empty space, 13-14
"Time travel", 7
Transient energy
  atomic structure and, 115-121
  magnetic field and, 131-135, 137, 138-139, 142

U

Universe, 22-23
  age of, 94
  closed loop theory of, 10-11
  empty space, 13-15, 18, 19, 22, 53, 63, 68
  first event theory of, 9-10
  governing laws, 16, 22
  matter, origin of, 28
  origin of, 9-11, 22-23, 27
  Origo, 18-21, 22-23, 94
  pre-universe, 12, 18, 19, 22, 27
  spontaneous origins of, 16-17, 22
  stability of, 29

V

Volume, 14, 22

W

Warp, of "space-time", 41-43, 56, 65
Wave nature of light, 61, 79-81