

Index

e-folding depth 70
3V criterion 18

a

aerosol 26
Ambartsumyan's equations 71
Ampère's Law 5
asymmetry parameter 37
asymptotic flux attenuation coefficient 69
atmospheric remote sensing 13
azimuthally averaged radiance 63

b

Boltzmann constant 4
broken stick mode 131

c

CALIPSO 12
cloud albedo effect 21
cloud feedback 20
cloud types 24, 36
CloudSat 12
coherent backscattering 8
Cornette-Shanks phase function 39
cosine expansion 43
cumulative distribution function 118

d

delta-M method 111
discrete ordinates 101
DOAS 134
Draine's phase function 39
DSCOVR EPIC camera 11

e

eigenvalue problem 101, 111
electromagnetic spectrum 15

empirical orthogonal functions 136
ergodicity 7, 8

f

far-field approximation 8
Faraday's Law 5
feedback 19
Foldy-Lax approximation 8

g

Gamma distribution 25
Gauss's Law 5
Google Earth 10
greenhouse effect 19

h

Hapke approximation 73
Henyey-Greenstein function 38
Henyey-Greenstein phase function 85

i

ice-albedo feedback 20
ill-posed problem 14
invariance principle 70
inverse problems 14
isotropic phase function 38
isotropic scattering 38

l

ladder approximation 10
Lagrangian point 1, 11
Lambert law 1
Laplace 2
Legendre polynomials 36, 143
level 0 4, 13
line-by-line 117

m

Markov process 7
Maxwell 4
Maxwell's equations 4
microphysical approach 8
Mie scattering 37
Mie theory 145
Milne problem 63

n

NASA Worldview 10
neural networks 138

o

O₂ A-band 25
optical thickness 35
optimal spectral sampling 121
orthogonality property 44

p

permafrost feedback 20
phenomenological radiative transfer 7
Planck's law 4
plane wave 15
polarization 114
Poynting vector 9
principal component analysis 130
PRISMA instrument 23

r

radiance 29
radiative forcing 19
ray approximation 7
Rayleigh scattering 37, 117

s

Schwarzschild-Milne equation 65
semi-infinite medium 51, 59, 70, 76, 124
single scattering approximation 49, 54, 97
size parameter 146
small-angle approximation 57
Sobolev approximation 93
spectral mapping 120
spherical harmonics method 111
Stefan-Boltzmann law 2
Stokes theory of plates 46

t

trace gases 21
Twersky approximation 9

v

vector spherical wave function 146

w

water vapor feedback 20
wave equation 15
Wien's displacement law 4

