

Θ	Perturbation to photon distribution
Θ_l	Legendre moment of photon perturbation
Θ_P	Polarization perturbation
Θ_r	Perturbation to radiation = $\rho_\gamma \Theta + \rho_\nu \mathcal{N}$
Θ^T	Photon perturbation due to tensor perturbations
κ	Convergence
Λ	Cosmological constant
μ	Cosine of the angle between $\hat{k}$ and $\hat{p}$
$\xi(r)$	3D correlation function
ξ^0, ξ	Generators of coordinate transformations
ρ_b	Baryon energy density
ρ_{cr}	Critical energy density
ρ_{de}	Dark energy density
ρ_{dm}	Dark matter energy density
ρ_{m}	Matter energy density
ρ_γ	Energy density of photons
ρ_ν	Energy density of neutrinos
ρ_r	Energy density of all radiation
σ_T	Thomson cross-section
$\tau(\eta)$	Optical depth of photons back to conformal time η
$\dot{\tau}$	Scattering rate
τ_n	Neutron lifetime
Φ	Scalar perturbation to metric
Φ_{p}	Primordial value of Φ set during inflation
$\phi^{(0)}$	Zero-order value of the field driving inflation
$\chi(z)$	Comoving distance out to redshift z
χ_∞	Comoving distance to redshift infinity
Ψ	Scalar perturbation to metric
ψ_{ij}	2×2 distortion tensor
Ω_i	Energy density in i th species over ρ_{cr}
Ω_k	Ratio of curvature density to critical density
A_{ij}	2×2 transformation matrix
a	Scale factor of the universe
a_*	Scale factor at recombination
a_{eq}	Scale factor at matter–radiation equality
a_{late}	Scale factor after which perturbations evolve as D_1
B	B -mode of polarization or weak lensing
B_D	Binding energy of deuterium
C	Full covariance matrix
$\mathcal{C}$	Band power
C_l^{matter}	Angular power spectrum for matter

c_s	Sound speed
C_N	Covariance matrix due to the noise
C_S	Covariance matrix due to the signal
D_1	Growth function
d_A	Angular diameter distance
d_L	Luminosity distance
E	E -mode of polarization or weak lensing
$F_{\alpha\beta}$	Fisher matrix
$\mathcal{F}$	Curvature matrix
f	Distribution function, often referring to photons
f_{dm}	Distribution function of dark matter
f_e	Distribution function of electrons
$f^{(0)}$	Zero-order distribution function of photons
$g(\eta)$	Visibility function
g_*	Effective relativistic degrees of freedom
$g_{\mu\nu}$	Metric
g_i	Number of spin states of species i
G	Newton's constant
$G_{\mu\nu}$	Einstein tensor
h	Parameter for Hubble constant
$\tilde{h}$	Variable tracing tensor perturbations
$h_{\times}, h_{+}$	Tensor perturbations to metric
$\mathcal{H}$	3D matrix describing tensor perturbations
H	Hubble rate of expansion
H_0	Hubble rate today
k	Wavenumber
$k_i = k^i$	Wavevector
k_{eq}	Wavenumber crossing horizon at a_{eq}
k_{nl}	Wavenumber of nonlinearity
k_{p}	Location of acoustic peaks
$\mathcal{L}$	Likelihood function
$\mathcal{M}$	Particle physics amplitude for a process
m_e	Electron mass
m_n	Neutron mass
m_ν	Neutrino mass
m_{Pl}	Planck mass
m_p	Proton mass
N_p	Number of pixels in an experiment
n_{b}	Baryon number density
n_{dm}	Dark matter number density
$n_{\text{dm}}^{(0)}$	Zero-order dark matter number density

$n^{(0)}$	Equilibrium number density
$\mathcal{N}$	Perturbation to neutrino distribution function
$\mathcal{P}_l$	Legendre polynomial of order l
$\mathcal{P}$	Pressure
P^α	4D comoving energy–momentum vector
p	Proper momentum
$P(k)$	Power spectrum of matter
$P_\Phi(k)$	Gravitational potential power spectrum
$\hat{p}^i = \hat{p}_i$	Unit direction vector
Q	Proton–neutron mass difference
Q	Stokes parameter
r	Tensor/scalar ratio
r_s	Sound horizon
$R_{\mu\nu}$	Ricci tensor
$\mathcal{R}$	Ricci scalar $= g^{\mu\nu} R_{\mu\nu}$
R	Baryon-to-photon ratio, $3\rho_b/4\rho_\gamma$
s	Entropy density
t	Age of the universe
T_{ant}	Antenna temperature
T	Zero-order photon temperature
$T_{\mu\nu}$	Stress–energy tensor
U	Stokes parameter
$\vec{v}_b = \hat{k}v_b$	Velocity of baryons
$\vec{v} = \hat{k}v$	Velocity of dark matter
v_H	Velocity due to Hubble expansion
v_{pec}	Peculiar velocity
w	Pressure to energy-density ratio
$w(\theta)$	Angular correlation function
X_e	Free electron fraction
X_n	Neutron abundance
$X_{n,\text{EQ}}$	Equilibrium neutron abundance
Y_p	Mass fraction of ^4He
y	Scale factor normalized to 1 at a_{eq}
y_H	y when mode crosses horizon
Y_{EQ}	Equilibrium abundance of dark matter particles
z	Redshift
z_*	Redshift at recombination
z_{eq}	Redshift at matter–radiation equality