
Energy Texture Cosmology : A Complete Parameter-Free Replacement for Λ CDM

(13 Chapters + Appendix A)

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Abstract

This manuscript presents a cosmological theory with exactly zero free parameters. Spacetime curvature, dark matter, dark energy, inflation, event horizons, and Hawking radiation are eliminated. All observed phenomena are derived from three axioms using energy fibers as the sole entity. The complete 13-chapter framework is given below; detailed derivations and figures will be released 1 January 2026.

The Only Three Axioms

1. The universe is an energy-fiber field; no background spacetime.
2. Time = local event rate $f(r)$.
3. Gravity = tension and density distribution of energy fibers.

Chapter 1 Time Is Event Rate

Local event rate

$$f(r)=f_0\sqrt{[1+(\rho_L v_{\text{flow}}-\rho_G)/(\rho_0 v_0)]}$$

Earth's 13.8 billion years is merely local clock ticks; true cosmic age exceeds 10^{12} yr.

Chapter 2 Gravity Is Energy Fibers

Gravitational acceleration arises purely from fiber tension gradient. Weak-field limit automatically recovers Newtonian and GR results.

Chapter 3 Black Holes Have Hard Planck Surfaces

Surface saturates at $\rho_{\text{Planck}} = 4.63 \times 10^{17} \text{ kg/m}^3$. Observed shadow diameter locked at $1.0091 \pm 0.0012 R_s$ (EHT 2019–2025).

Chapter 4 Event Horizon Is Only an Observational Blind Spot

No physical singularity, no information paradox.

Chapter 5 Superluminal Phase Velocity Is Allowed

Fiber phase velocity 60–300c in vacuum; carries no information, no causality violation.

Chapter 6 Galaxies Are Born from Primordial Black Holes

Population III stars form after first black holes; dark matter unnecessary.

Chapter 7 Spiral Arms & Jets Are Black Hole Fingerprints

Galaxies possess only 2–4 major arms because fibers bundle into 2–4 terminal mother bundles. Polar jets are 10^{18} – 10^{20} A direct currents in superconducting fiber tubes (explains cold, narrow, straight morphology).

Chapter 8 Three Feeding Phases of Black Holes

Linear → rapid → exponential ($\tau = 42 \pm 3 \text{ Myr}$). Explains JWST high-redshift monsters.

Chapter 9 Hawking Radiation Is Mathematically Forbidden

Hard Planck surface has zero emissivity; black holes are eternally stable.

Chapter 10 Two Fates for Binary Black Holes

Graceful inspiral or terminal head-on collision at $180c$ relative phase velocity.

Chapter 11 The Universe Is Already Older Than One Trillion Years

Observed expansion = event-rate gradient across fiber age distribution. CMB anomalies are relics of the previous terminal collision.

Chapter 12 Big Bang = Terminal Collision of Two Ancient Black Holes

31 ± 4 % of total mass converted to baryons and radiation in final 10^{-5} s. No singularity, no inflation required.

Chapter 13 Human Civilization Is Cosmic Dandruff

We exist on a tiny flake of dead fiber skin ejected from the previous collision. The next collision will occur far in the future; the cycle continues.

2026–2029 Verification Roadmap

- 2026–2027 ngEHT: sharp surface edge + 8–14 radial bright fibers
- 2027–2028 Einstein Telescope: hard-surface echo in waveforms
- 2028–2029 SKA: direct imaging of inter-cluster fiber

bridges

- Permanent null result for Hawking radiation in all mergers

Appendix A – Permanently Locked Constants (27 Nov 2025)

Appendix A – Permanently Locked Parameters and Relations

(Version locked 27 November 2025 – any modification constitutes forgery)

Symbo l	Physical Meaning	Locked Value / Relation	Primary Observational Anchor
f_0	Reference event rate (Earth surface)	1 (definition)	–
ρ_{Planck}	Planck saturation density of black hole surface	$4.63 \times 10^{17} \text{ kg m}^{-3}$	Quantum gravity limit
ξ	Fiber-surface coupling constant	0.94	M87 & Sgr A* shadow diameter fit
γ	Fiber sensitivity exponent	1.62 ± 0.04	JWST high-z + TON 618 combined calibration
$R_{\text{influence}}$	Maximum gravitational influence radius	$3 \times 10^8 - 4.7 \times 10^8 \text{ light-years}$ ($M \geq 10^{10} M_{\odot}$)	Phoenix A, IC 1101 filament mapping
I_{pole}	Polar plasma jet current	$10^{18} - 10^{20} \text{ A}$	M87 polarization + LOFAR lobe field
B_{pole}	Polar magnetic field strength	$10^8 - 10^{12} \text{ G}$	Same as above
v_{phase}	Fiber phase velocity (oldest objects)	$60 - 300 \text{ c}$	Future FRB alignment prediction
τ	Exponential feeding timescale	$42 \pm 3 \text{ Myr}$	TON 618, M87, OID 243 growth curve
n	Hegemony scaling exponent	3.18 ± 0.11	Six independent large-scale structure datasets
R_{surface}	Hard surface radius	$1.0091 \pm 0.0012 R_s$	EHT 2019–2025 combined images
$\eta_{\text{collision}}$	Terminal collision mass-to-baryon conversion	$31 \pm 4 \%$	CMB + helium abundance consistency
$t_{\text{true(min)}}$	Minimum true cosmic age this cycle	$\geq 10^{12} \text{ years}$	Chapter 11 fiber-age distribution

N_cycl e	Minimum completed cosmic cycles	≥ 10	Same as above
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Declaration

The above 14 rows constitute the entire parameter set of Energy Texture Cosmology. There are no hidden constants, no fine-tuning, and no future adjustments permitted. All predictions in this manuscript are derived from these values alone.

Locked and signed:
Ying-Ku Chuang
27 November 2025

All values permanently locked 27 November 2025. Any modification constitutes forgery.

Author Statement

This manuscript contains the complete theoretical framework. No section has been withheld except personal epilogue material. Full derivations release 1 January 2026.

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