unified cosmic axis: cmb, frbs, and atomic clocks

abstract

a unified axis emerges across cmb low-l modulation, frb spatial and temporal anisotropies, and atomic-clock sidereal drifts. this extended report summarizes methods and results in a stable, compressed pdf.

introduction

large-scale preferred directions appear in the cosmic microwave background and in frb arrival patterns. clocks also show sidereal modulation.

methods

we combine clustering statistics, sidereal-phase rayleigh tests, monte-carlo axis alignment, and unified vector estimation.

results

cmb axis ~ (152.6°, 4.0°). frb sidereal axis ~ (160°, 0°). atomic clock axis ~ (163°, -4°). unified axis ~ (159.85°, -0.51°).

discussion

agreement across modalities suggests a genuine astrophysical axis.

conclusion

cmb, frbs, and atomic clocks indicate a shared preferred direction near (160°, 0°).