Autocorrelation Analysis: ΔLapTime and Baseline Model Residuals
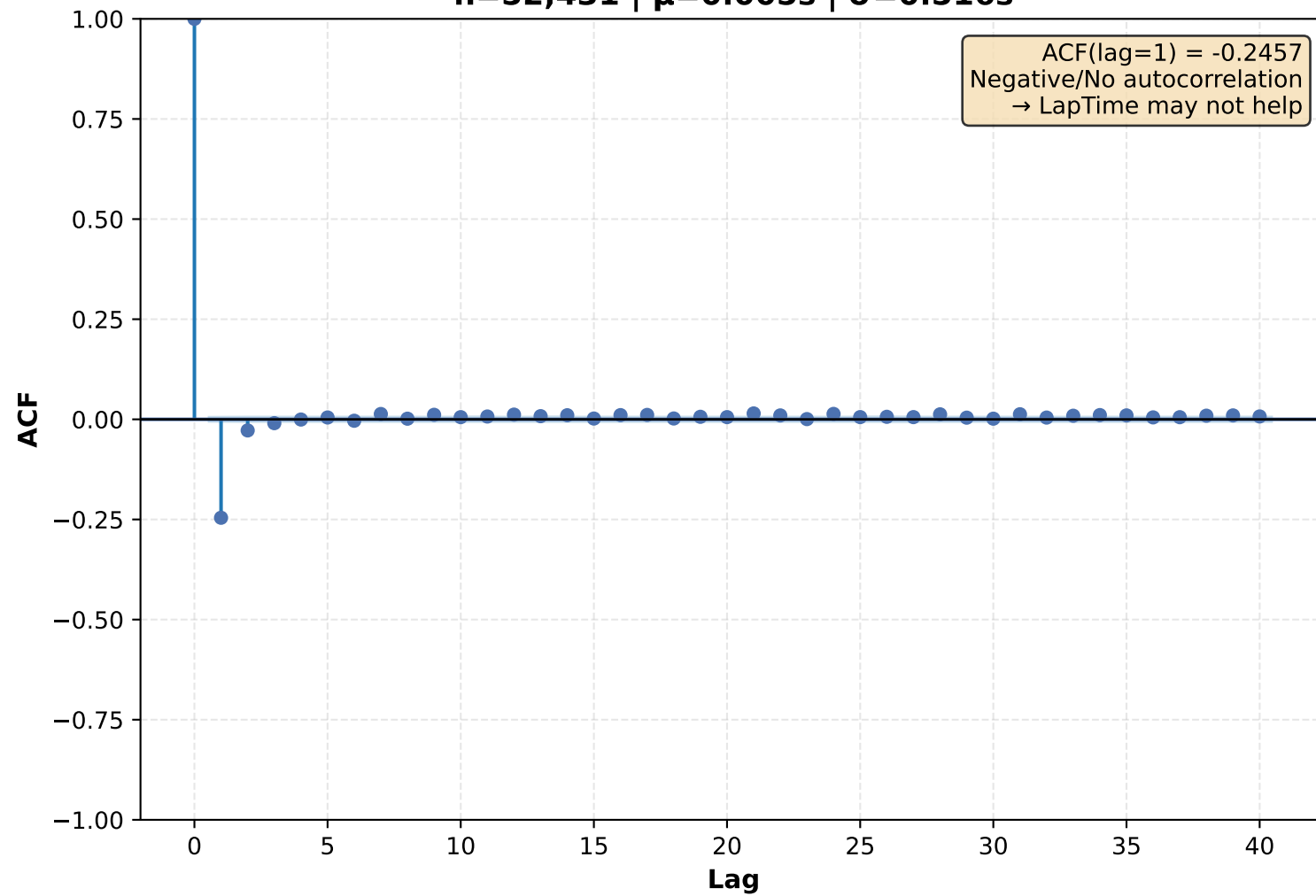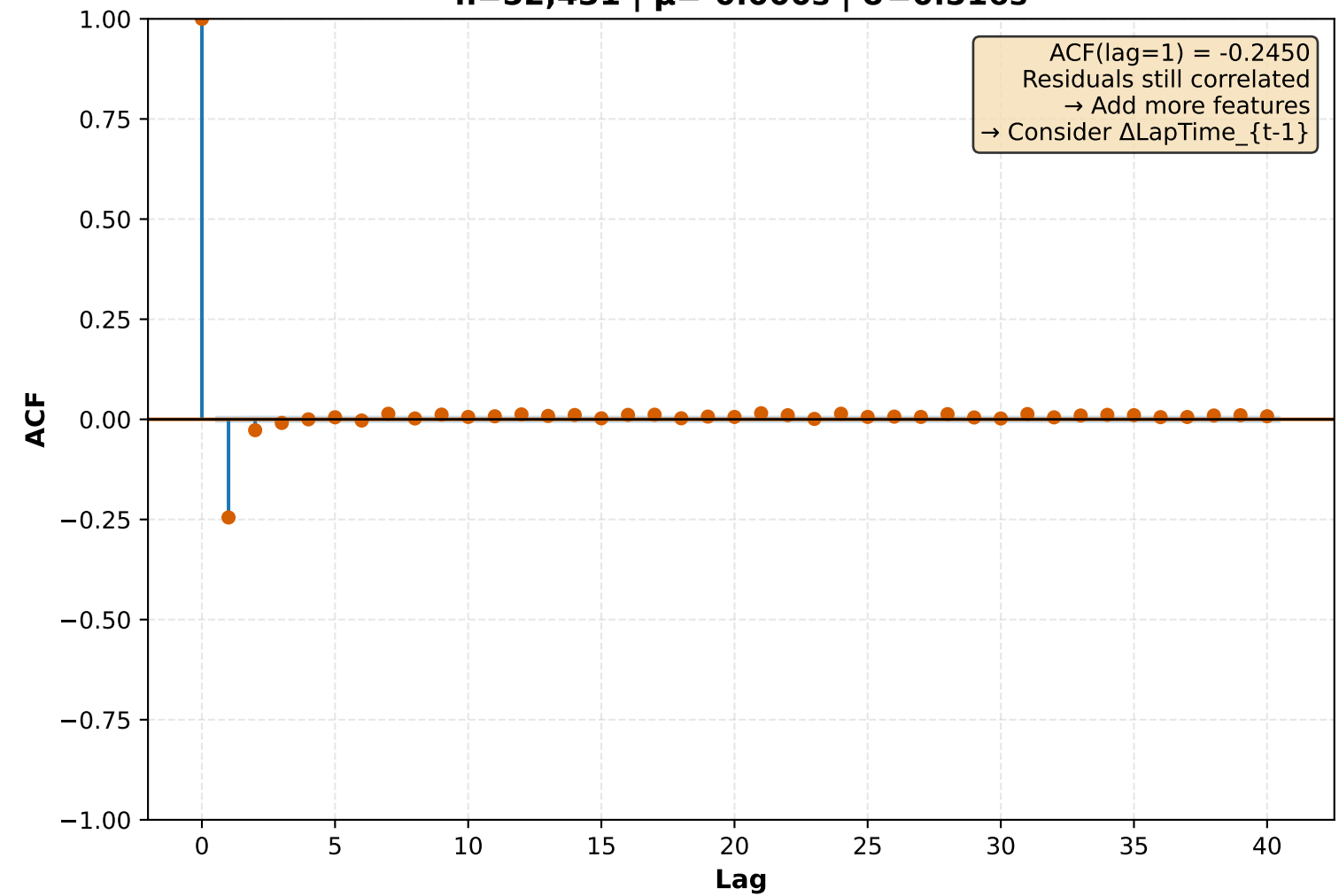
Autocorrelation Function (ACF) of ΔLapTime
n=52,431 | μ=0.005s | σ=0.516s

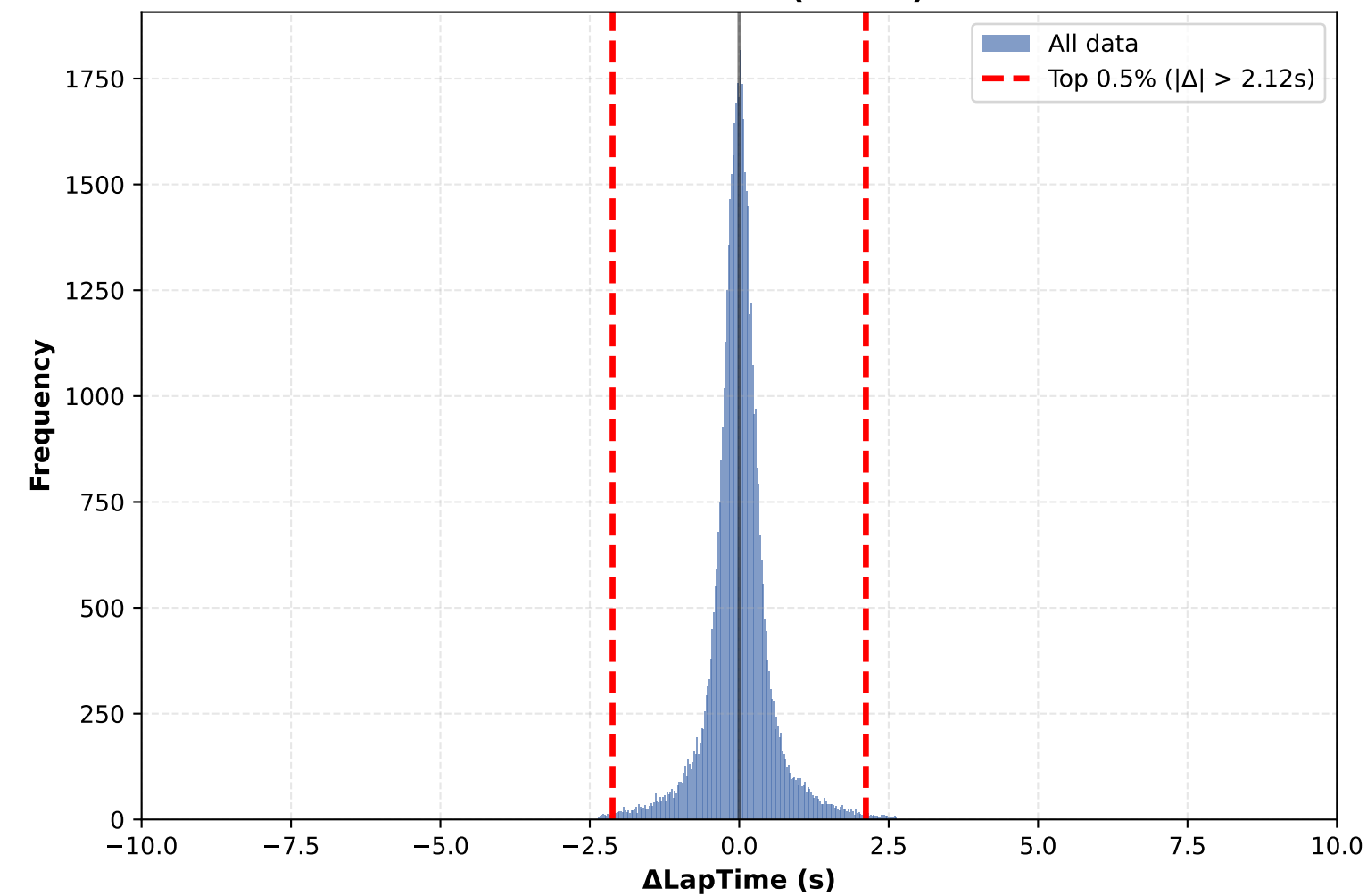ACF(lag=1) = -0.2457
Negative/No autocorrelation
→ LapTime may not help

ACF of Residuals (ΔLapTime ~ LapTime)
n=52,431 | μ=-0.000s | σ=0.516s

ACF(lag=1) = -0.2450
Residuals still correlated
→ Add more features
→ Consider ΔLapTime_{t-1}

ΔLapTime Distribution with Outliers (±10s view)
Outliers: 577 (1.10%)

All data
Top 0.5% (|Δ| > 2.12s)

Residual Plot: Baseline Model Diagnostics
Check for patterns (should be random around 0)

Trend (slope=-0.0000)