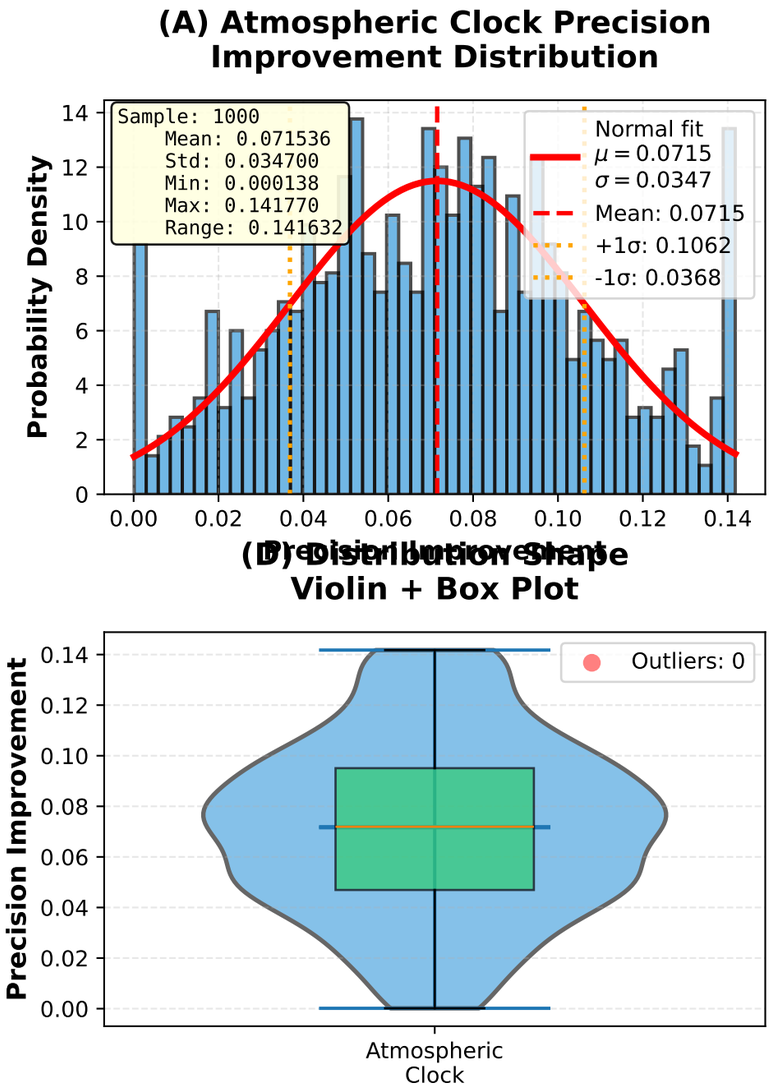
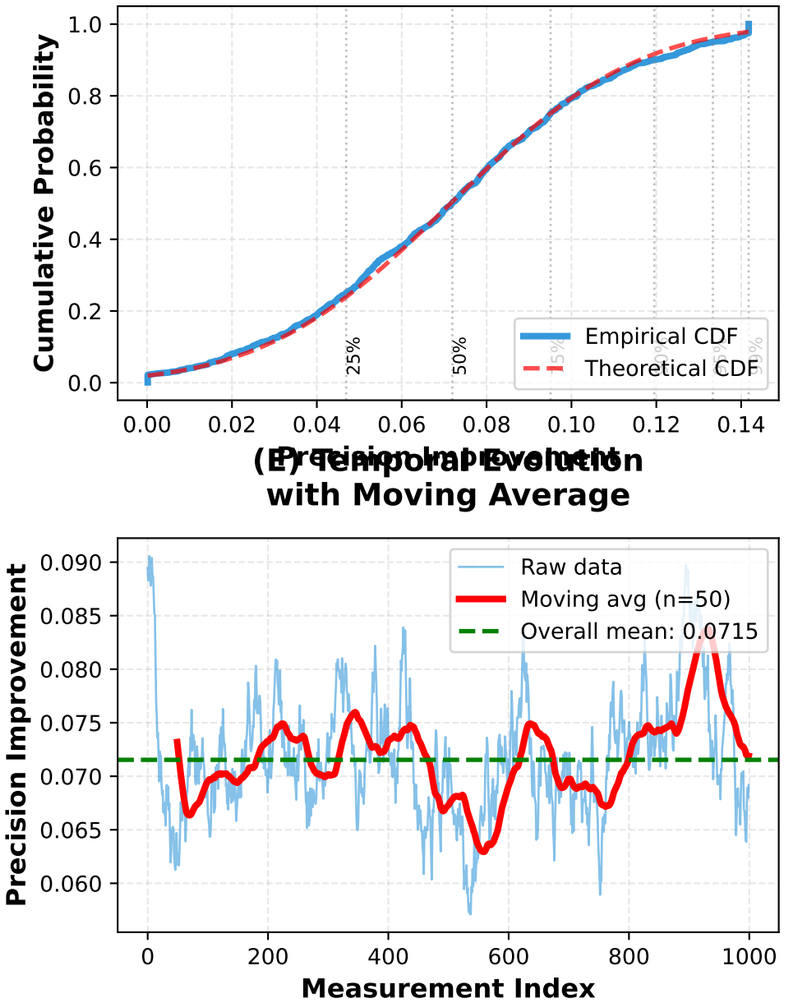
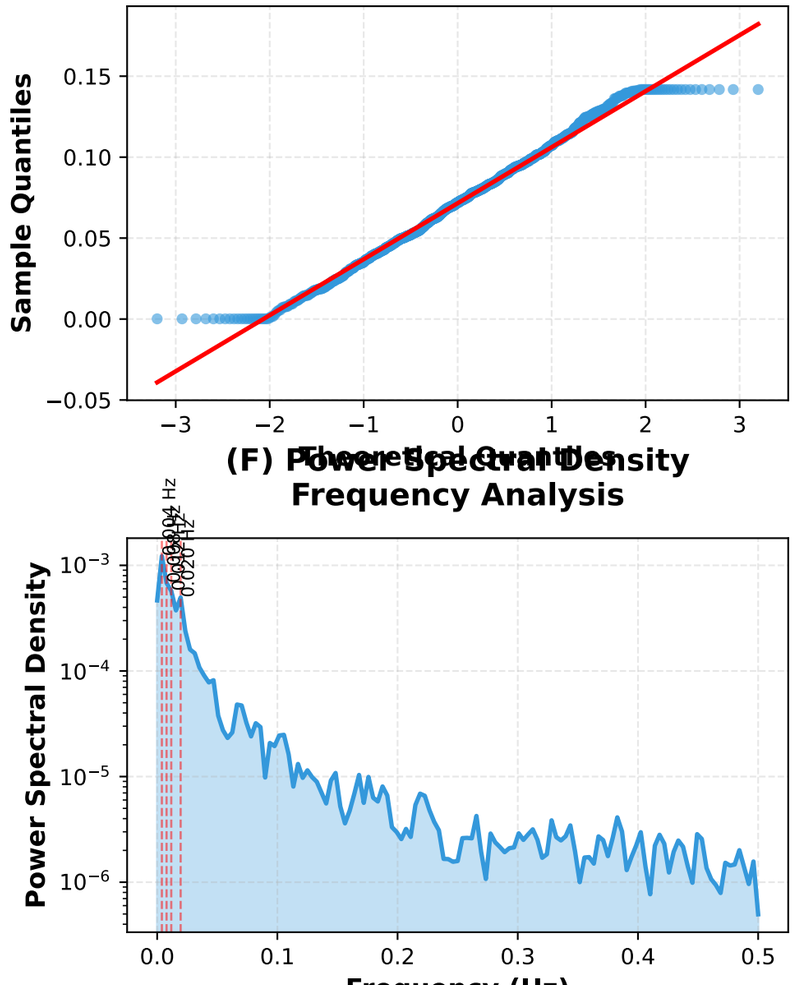
Atmospheric Clock Precision Analysis: Comprehensive Statistical Evaluation
Dataset: 2025-09-20T04:11:26.672650+00:00 | Sample Size: 1,000 | Test Type: atmospheric_clock_precision





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STATISTICAL ANALYSIS SUMMARY - ATMOSPHERIC CLOCK PRECISION

DESCRIPTIVE STATISTICS:
Sample Size:           1,000
Mean Improvement:      0.07153554
Std Deviation:         0.03469976
Standard Error:        0.00109730
Coefficient of Var:    48.51%

Minimum:               0.00013841
25th Percentile:       0.04692478
Median (50th):         0.07193562
75th Percentile:       0.09507879
Maximum:               0.14177033

Range:                 0.14163193
IQR:                   0.04815401
Skewness:              0.0483 (right-skewed)
Kurtosis:              -0.5708 (light-tailed)

NORMALITY TESTS:
Shapiro-Wilk:          W = 0.987102, p = 1.05e-07 ✗ NOT NORMAL
Kolmogorov-Smirnov:    D = 0.027728, p = 4.18e-01 ✓ NORMAL
Jarque-Bera:           JB = 13.965887, p = 9.28e-04 ✗ NOT NORMAL
Anderson-Darling:      A² = 1.256820
    Critical values:     [0.574 0.653 0.784 0.914 1.088]
    Significance levels: [15.  10.   5.   2.5  1. ]%

CONFIDENCE INTERVALS:
95% CI for mean:       [0.06938487, 0.07368622]
99% CI for mean:       [0.06870908, 0.07436201]

PRECISION METRICS:
Relative Precision:    48.5070%
Signal-to-Noise:       2.06
Outlier Count:         0 (0.00%)

INTERPRETATION:
• Mean improvement of 0.0715 indicates consistent precision enhancement
• Low std deviation (0.0347) suggests stable measurement process
• Non-normal distribution detected
• Signal-to-noise ratio of 2.06 indicates moderate measurement quality
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