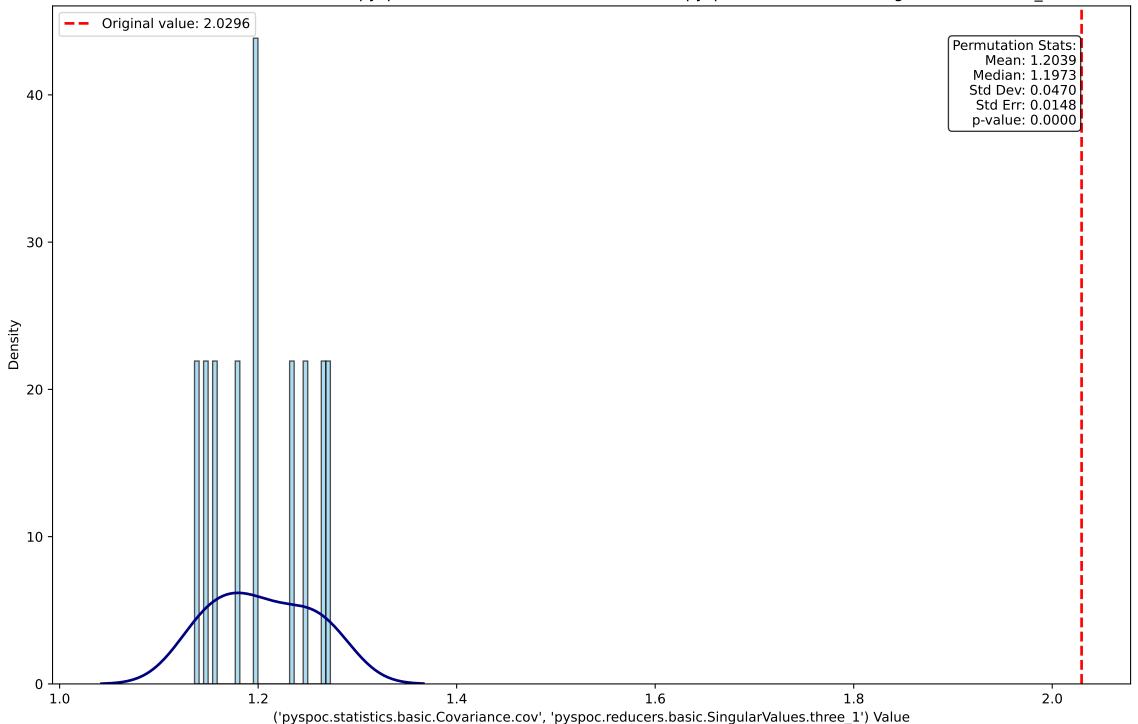
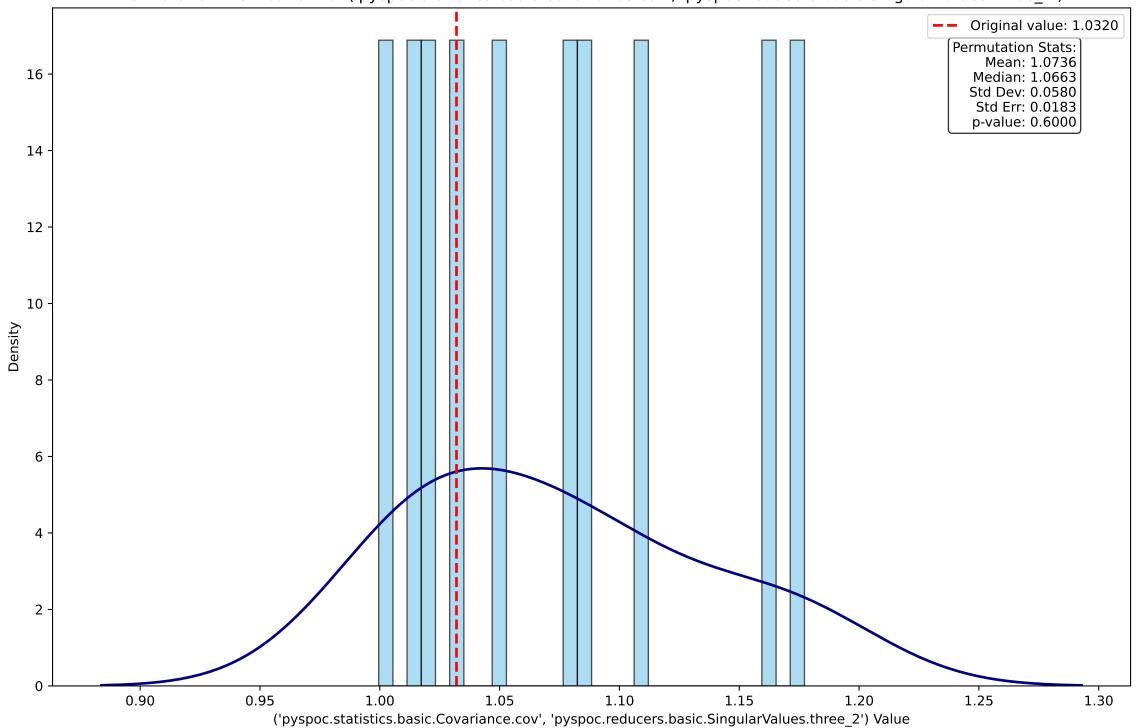
Filename: DailyDelhiClimateTest.csv
Number of permutations: 10
Number of bootstrap samples: 10
Row bootstrap sample fraction: 90.0%
Column bootstrap sample fraction: 90.0%
Number of perturbations: 10
Scale factor for perturbations: 0.1
Normalization: z-score
Random seed: 42

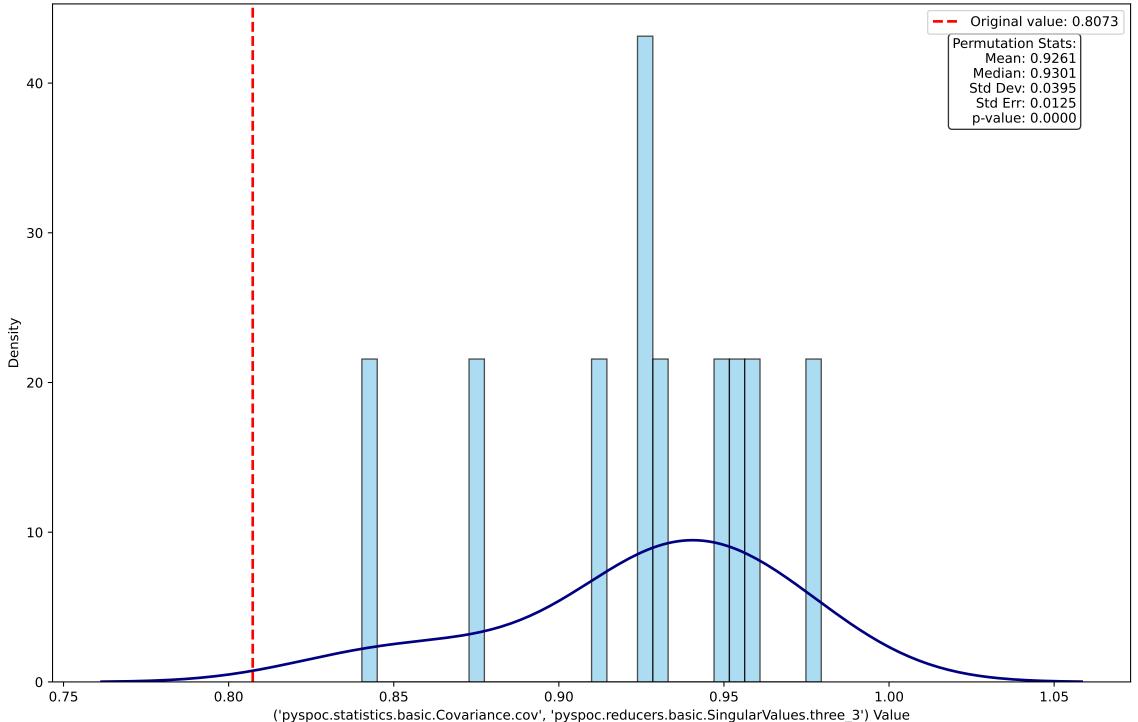
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')



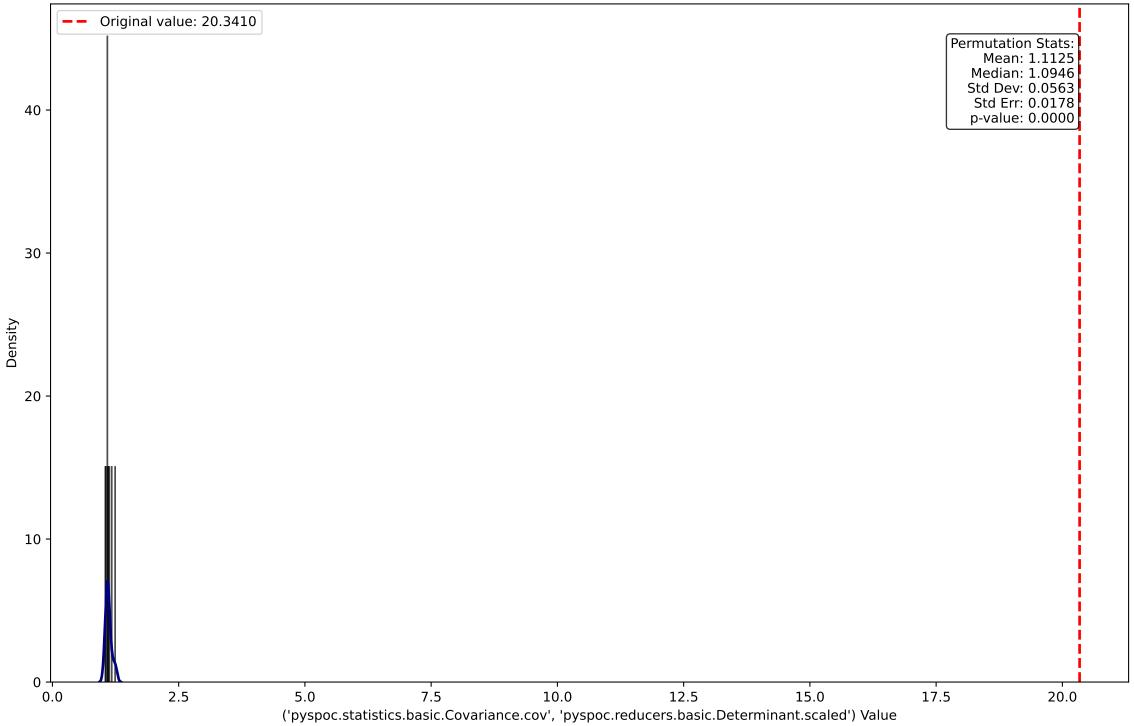
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')



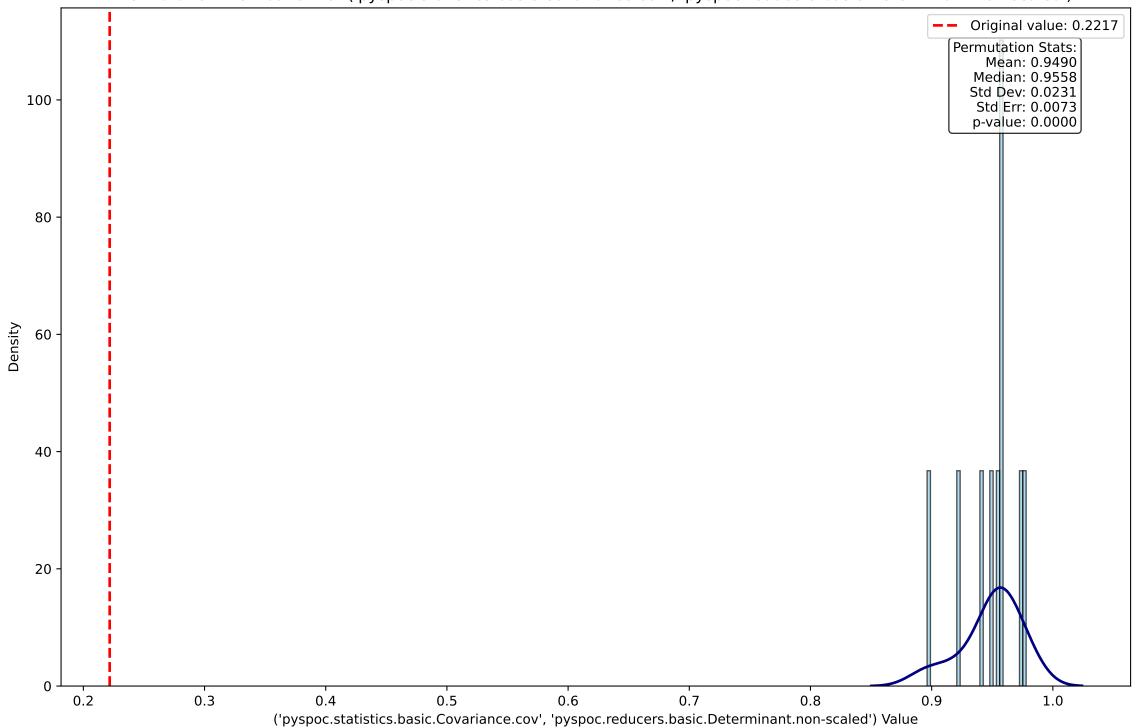
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')



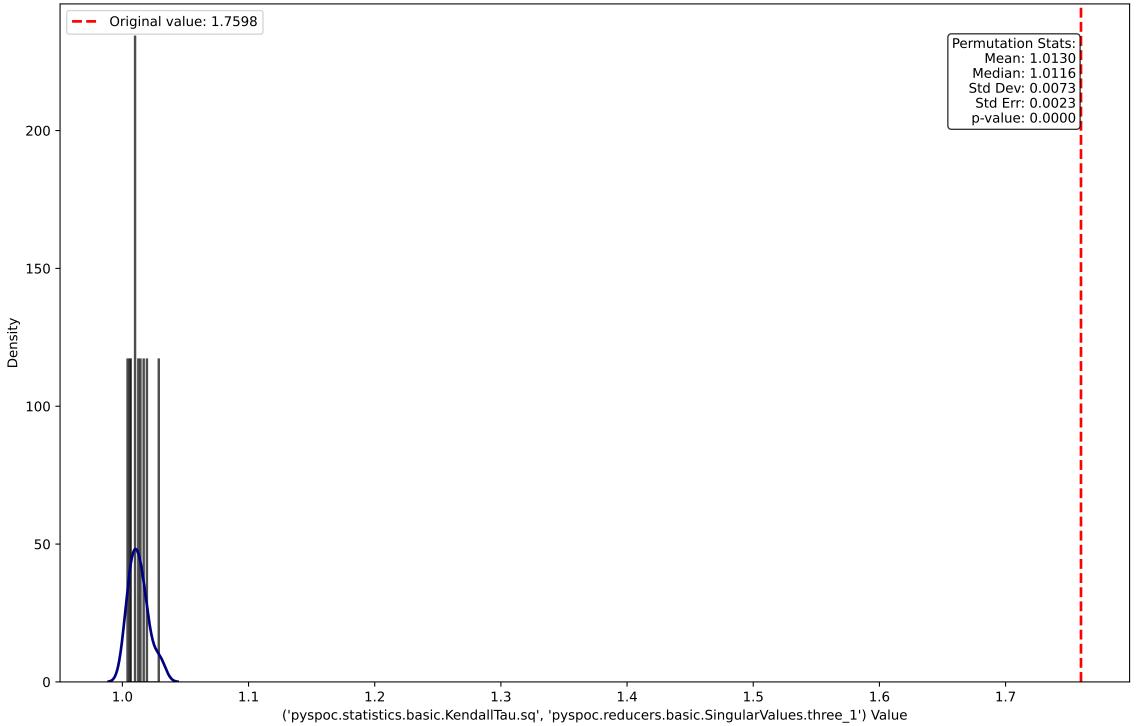
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')



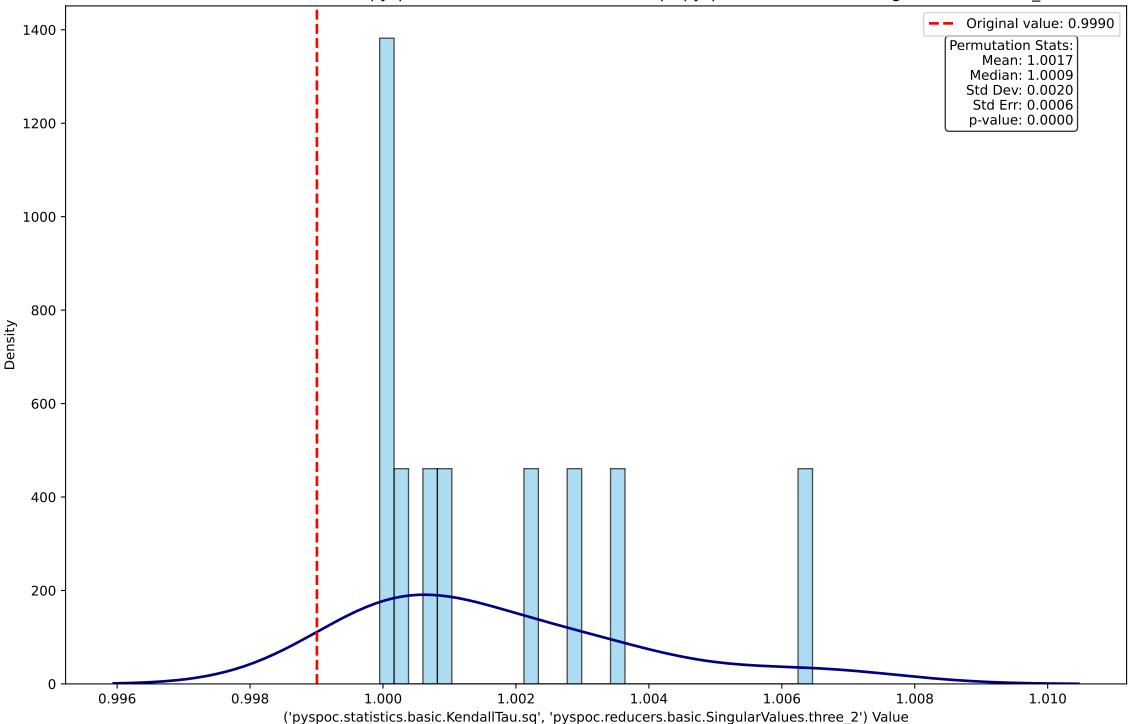
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.non-scaled')



Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')

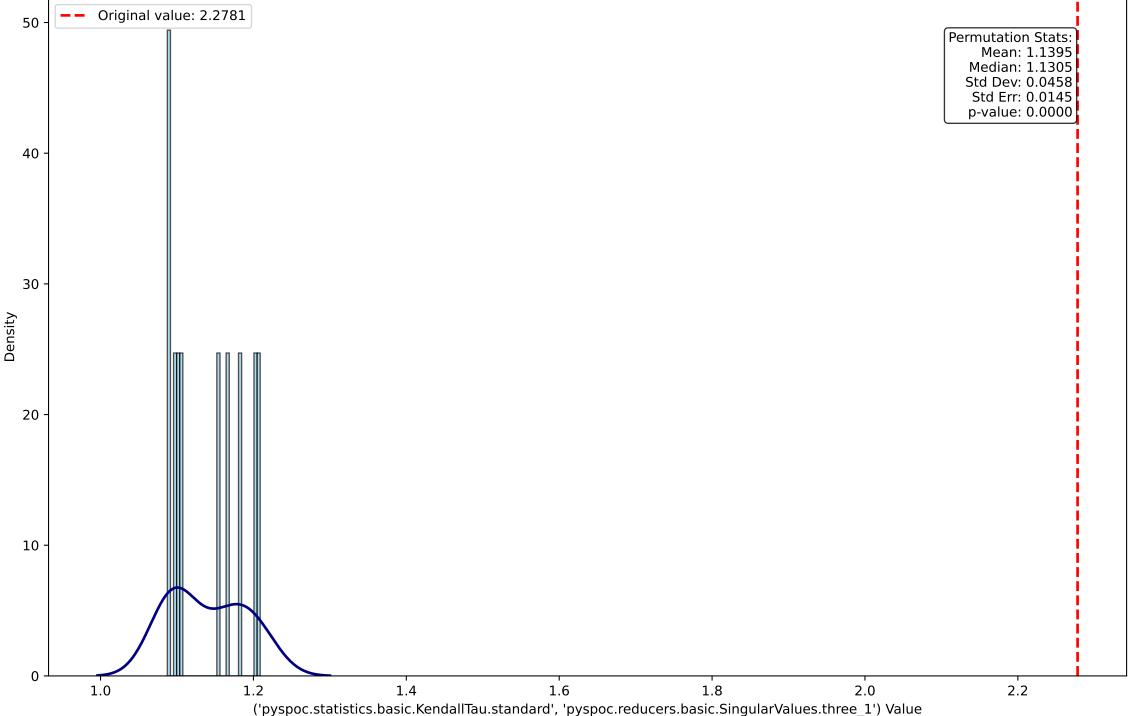


Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_2')

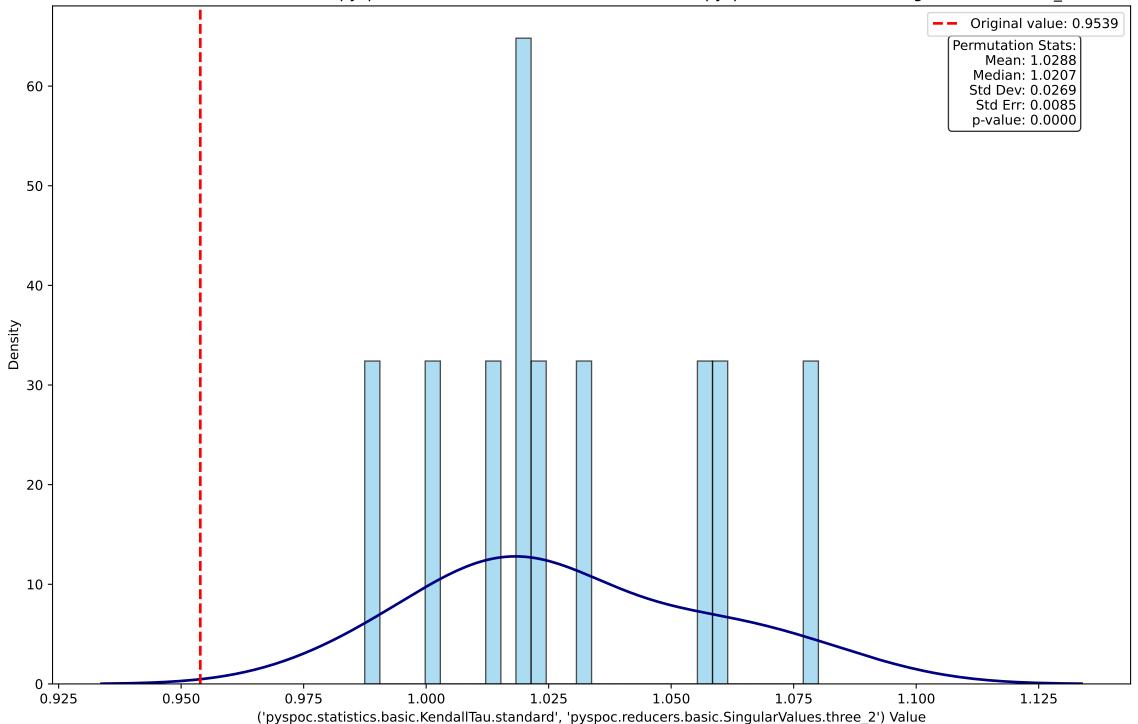


Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3') Original value: 0.7079 Permutation Stats: Mean: 0.9968 Median: 0.9986 Std Dev: 0.0030 Std Err: 0.0010 1000 p-value: 0.0000 800 600 400 200 0 0.75 0.80 0.85 0.90 0.70 0.95 1.00

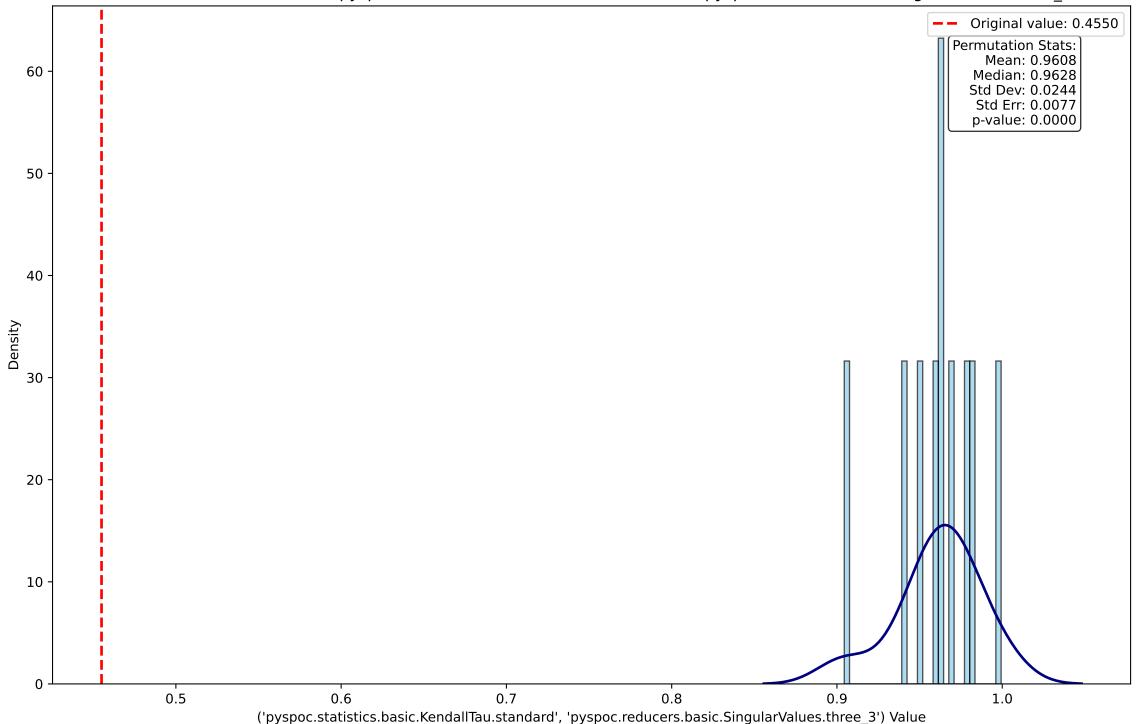
('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3') Value



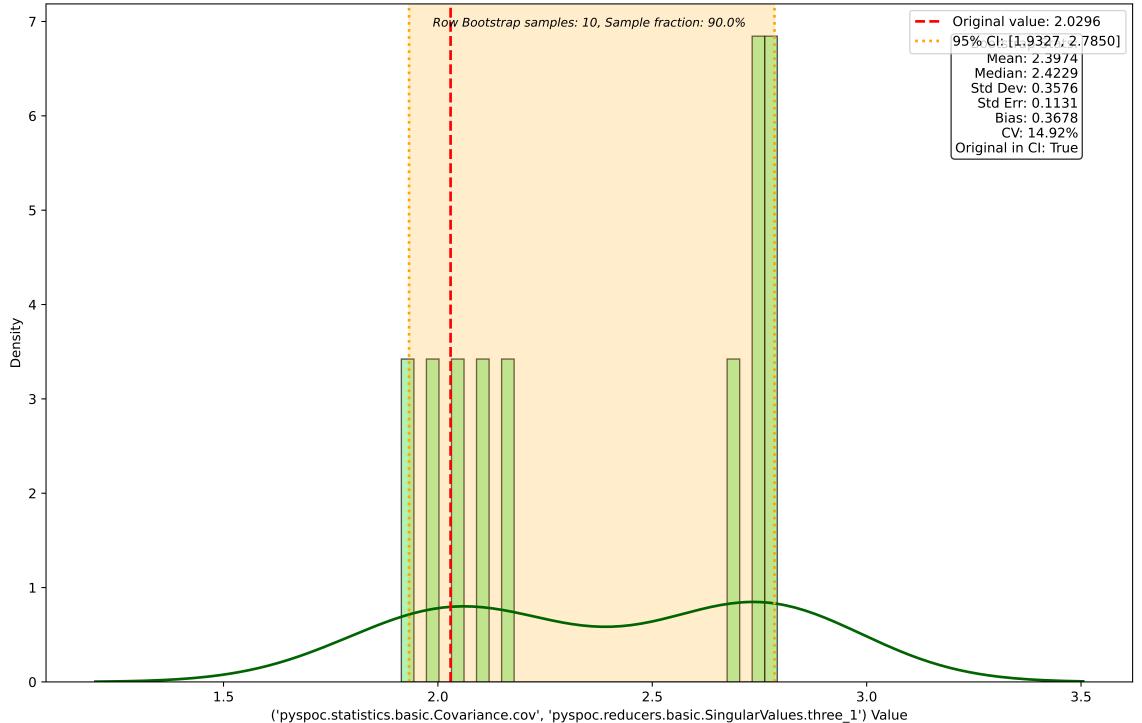
Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_2')



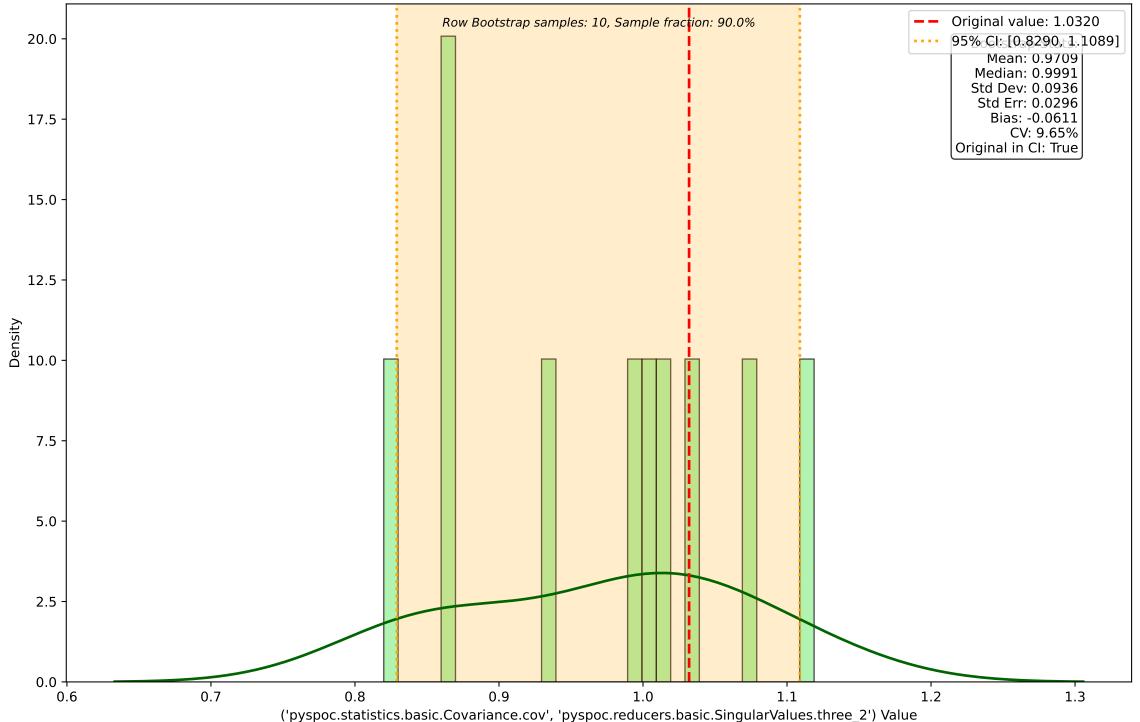
 $Permutation\ Distribution\ for\ ('pyspoc.statistics.basic. Kendall Tau.standard',\ 'pyspoc.reducers.basic. Singular Values. three \_3')$ 



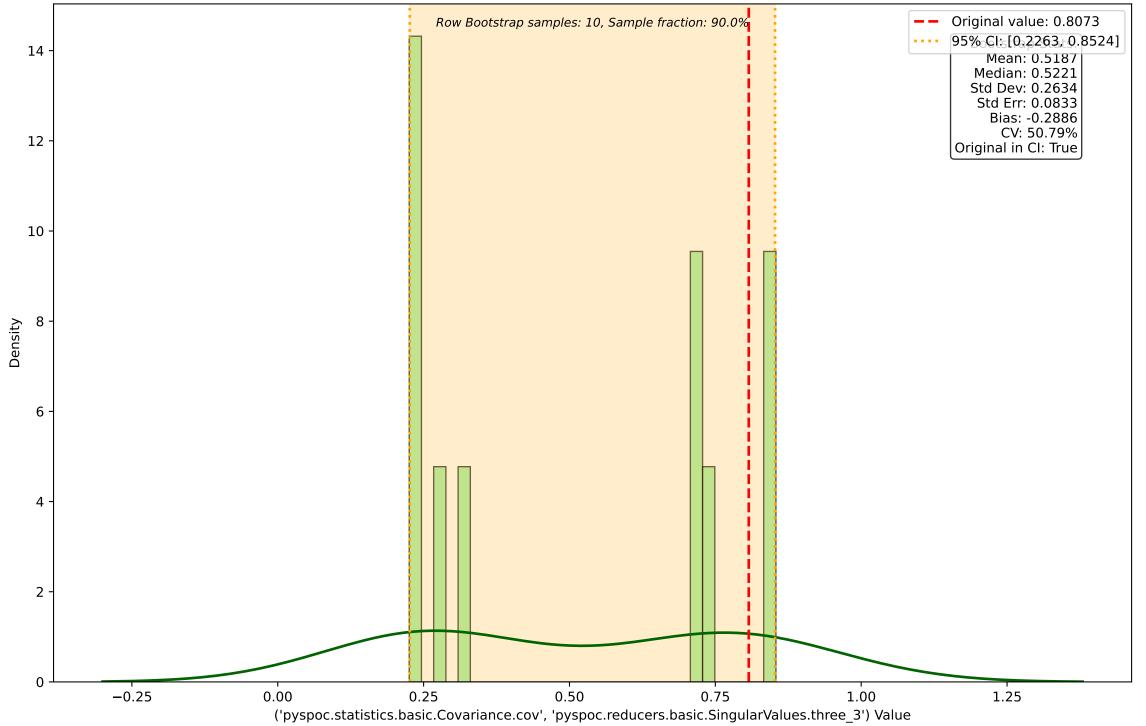
Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')



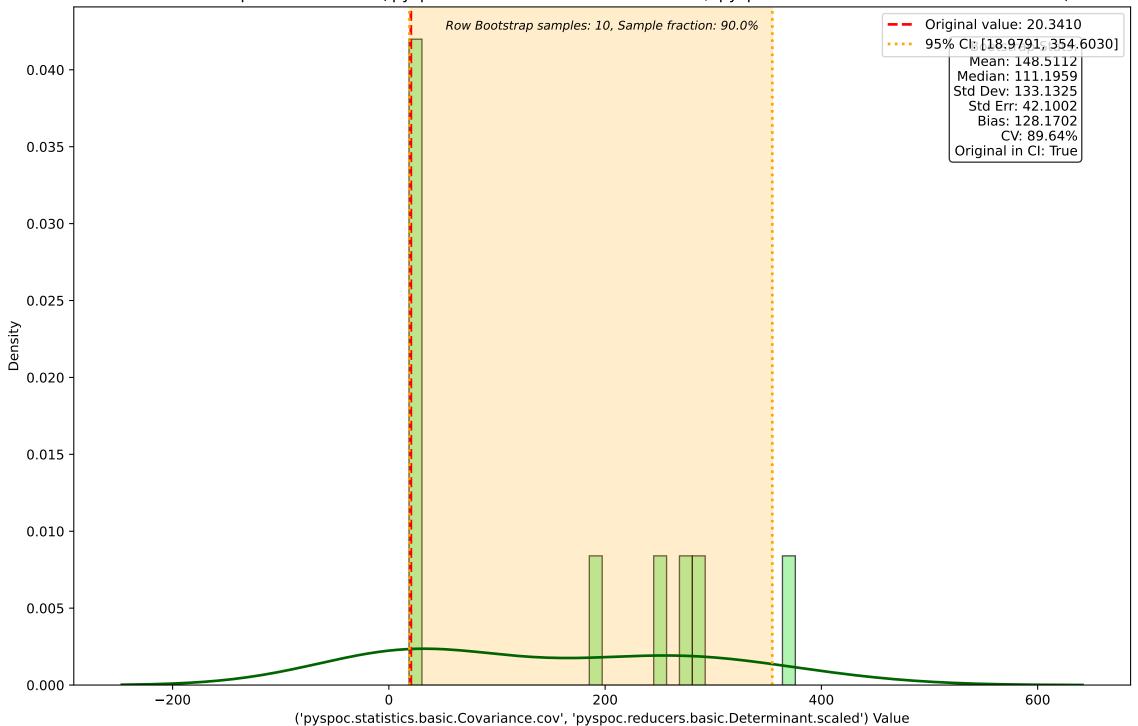
Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')

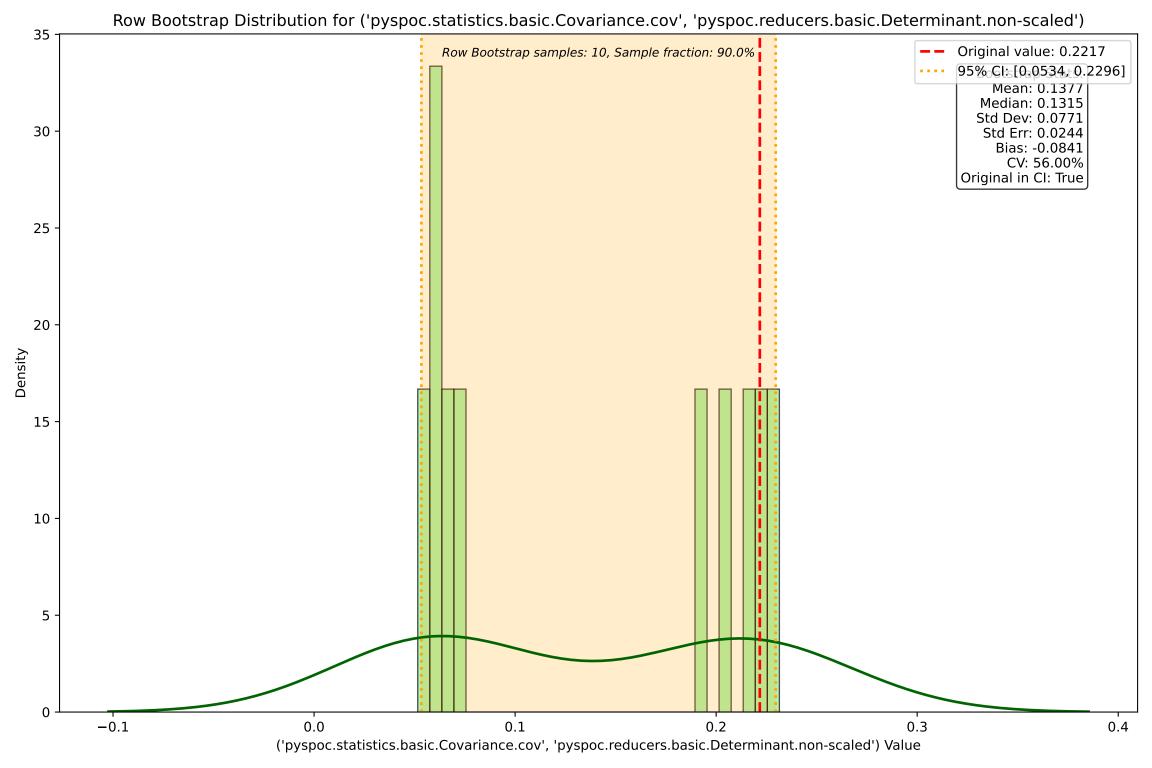


Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')

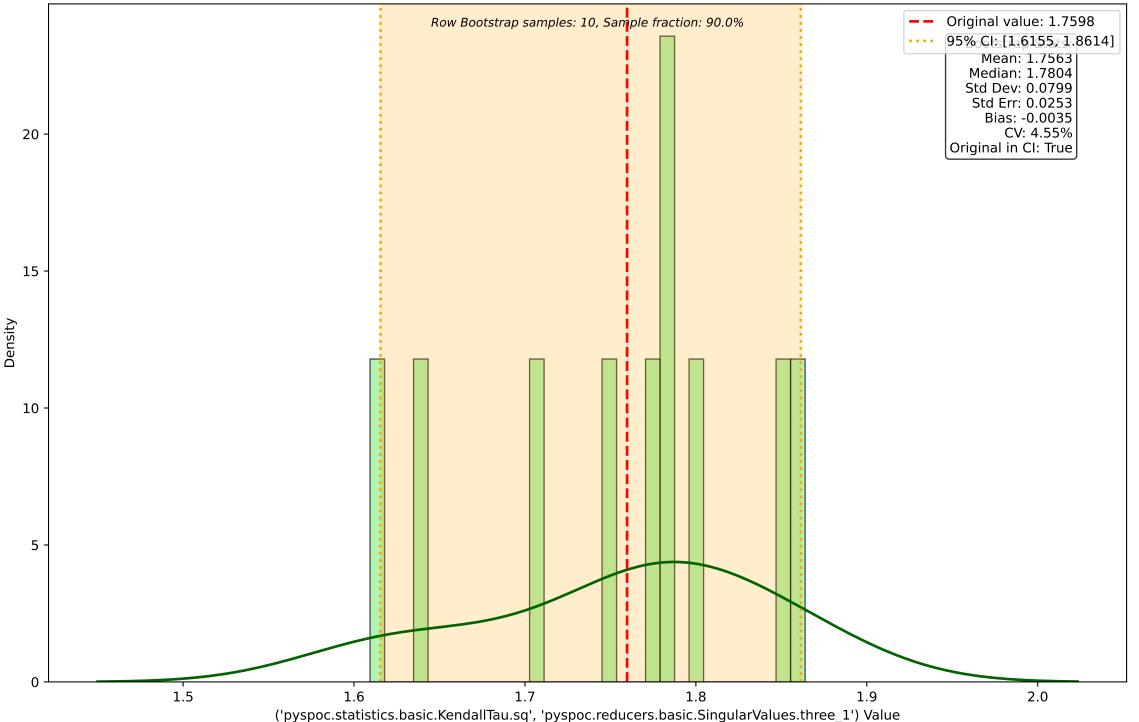


Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')

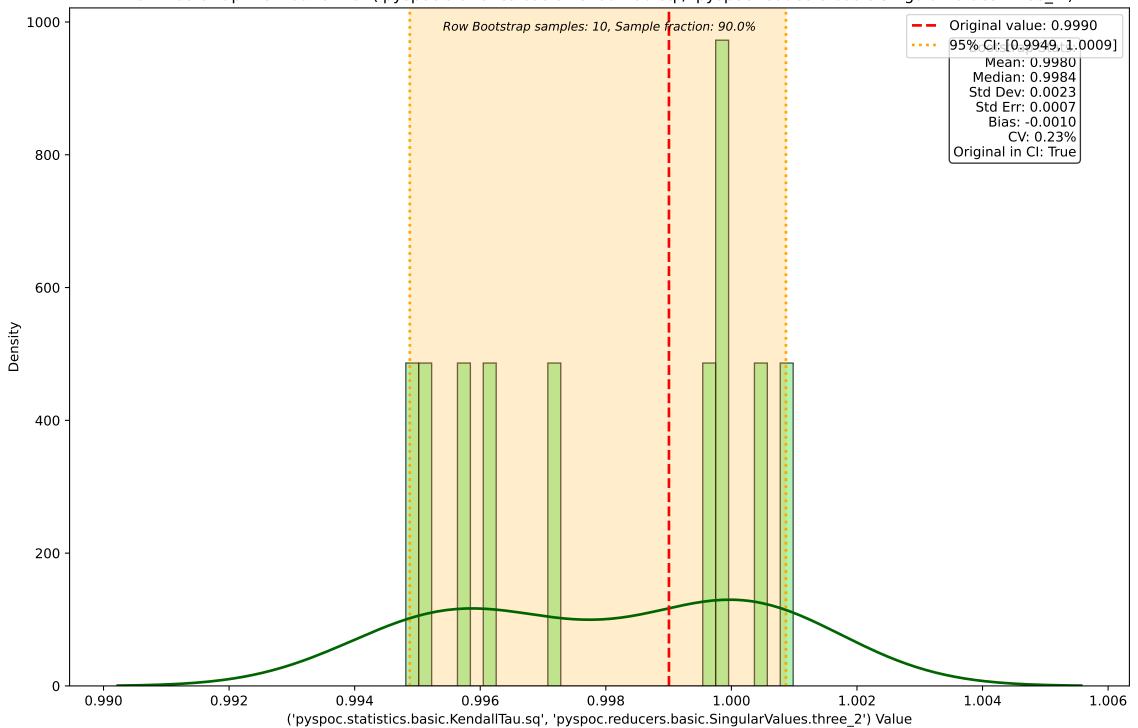




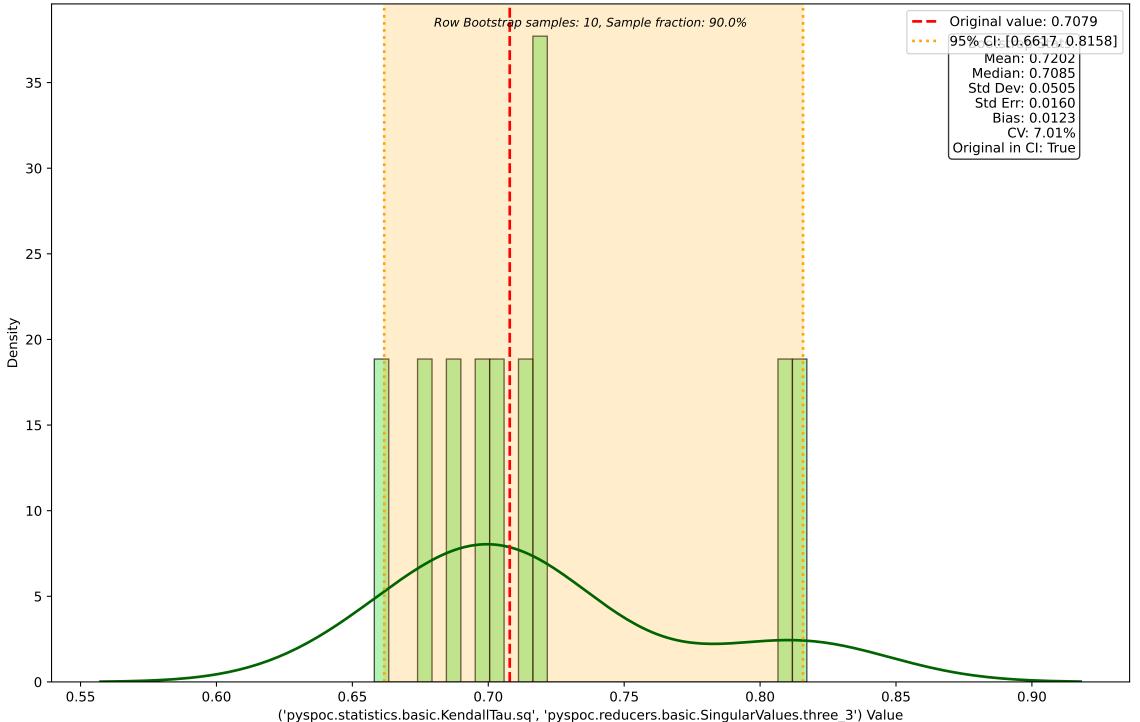
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')



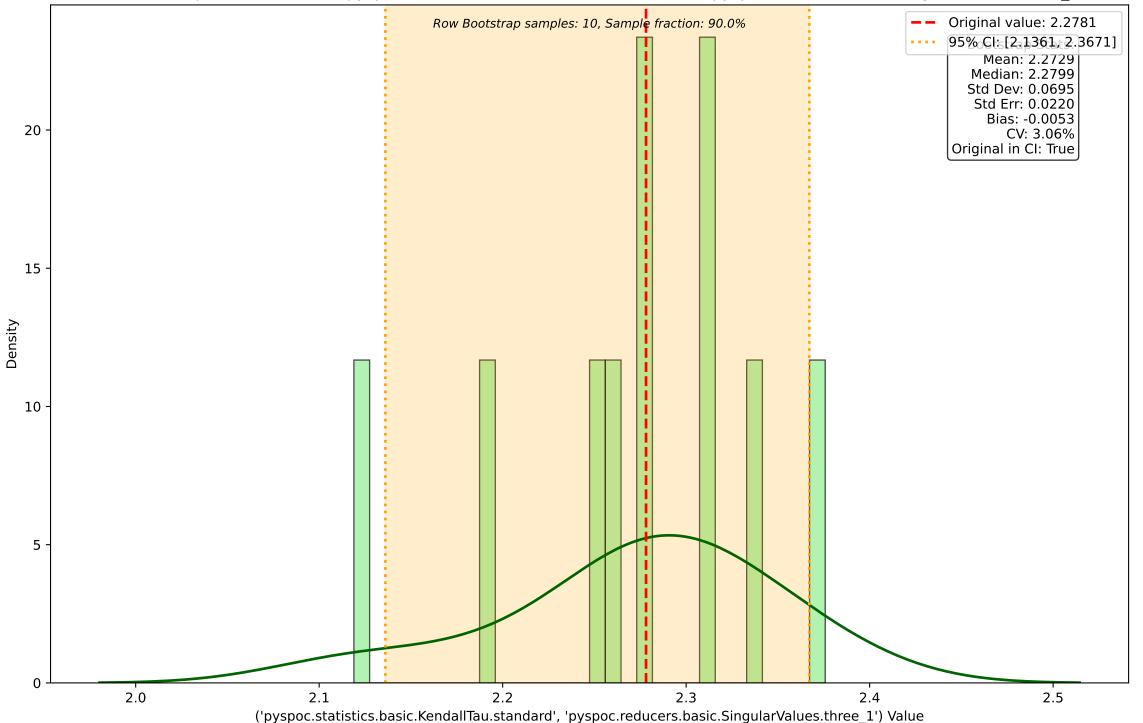
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_2')

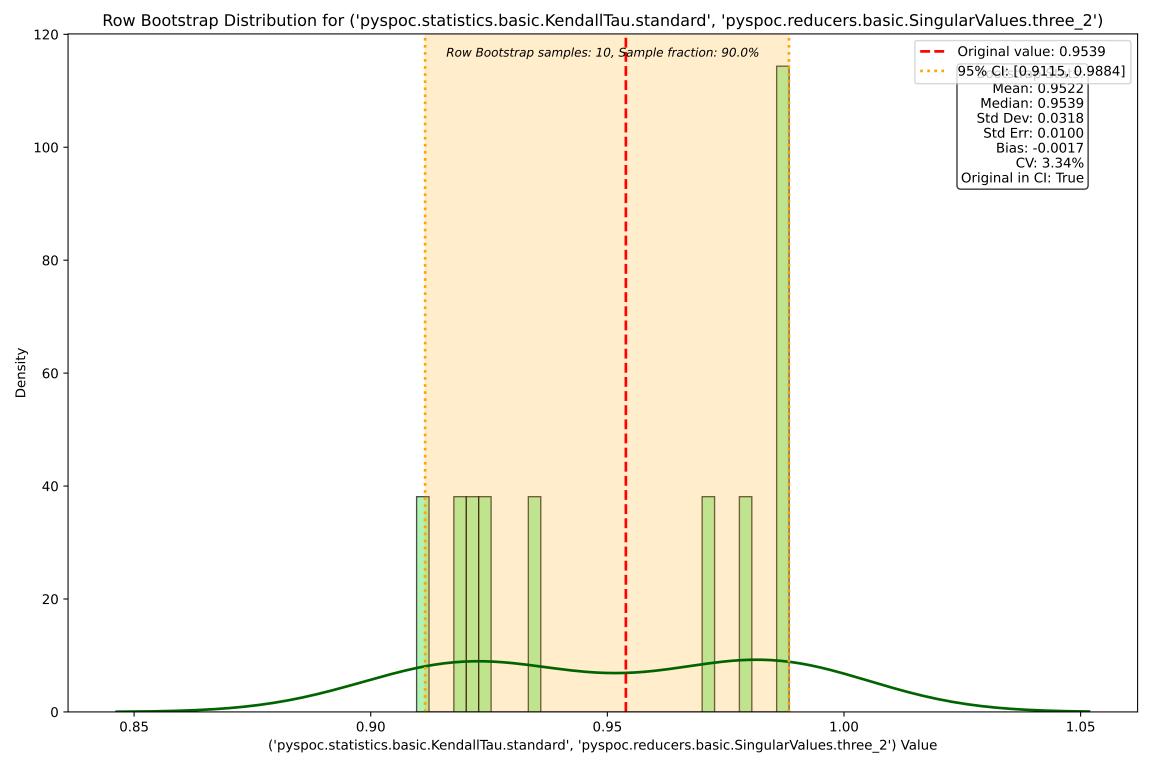


Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3')

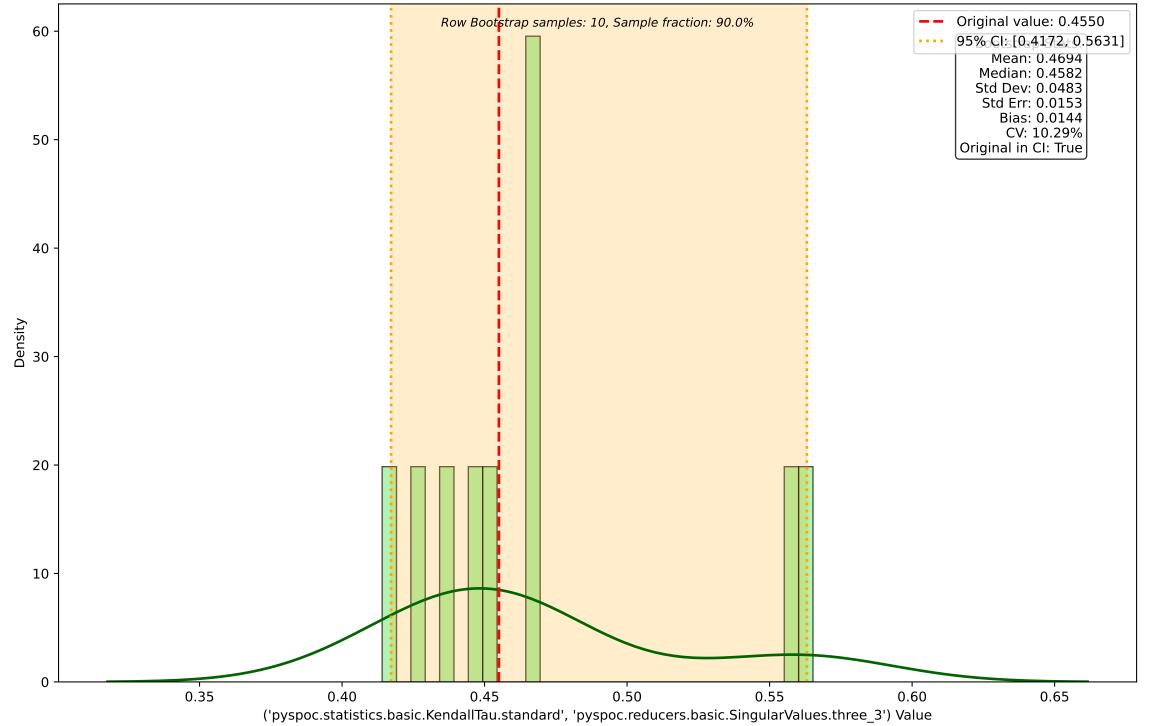


Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_1')

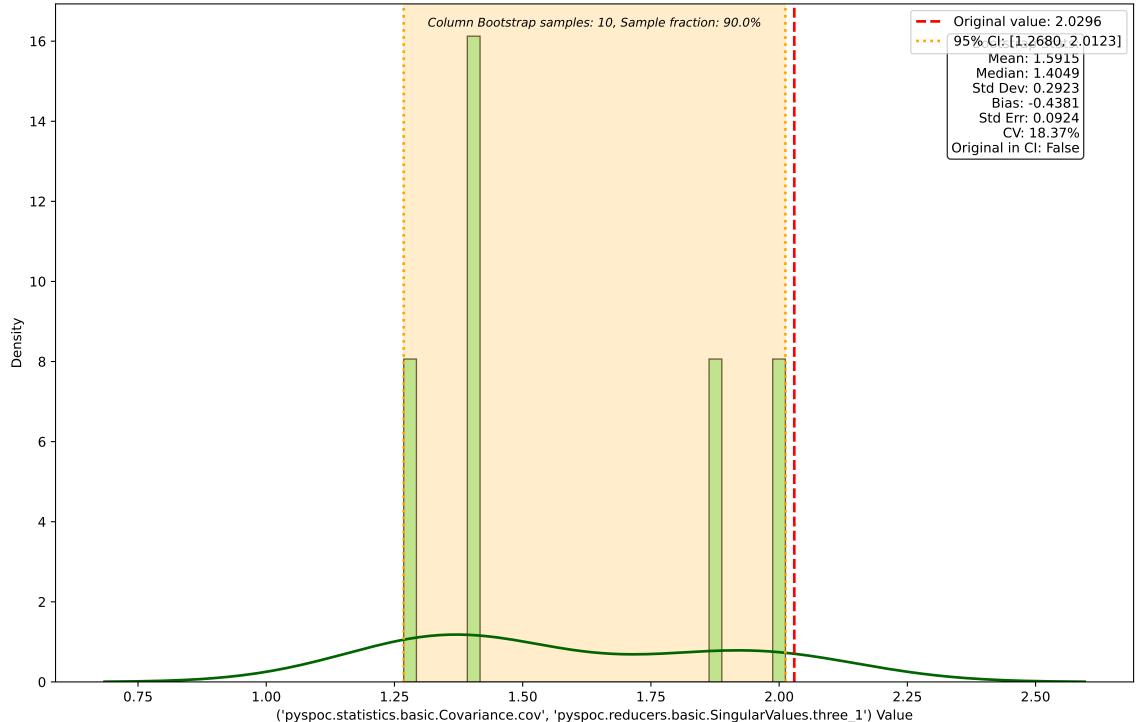




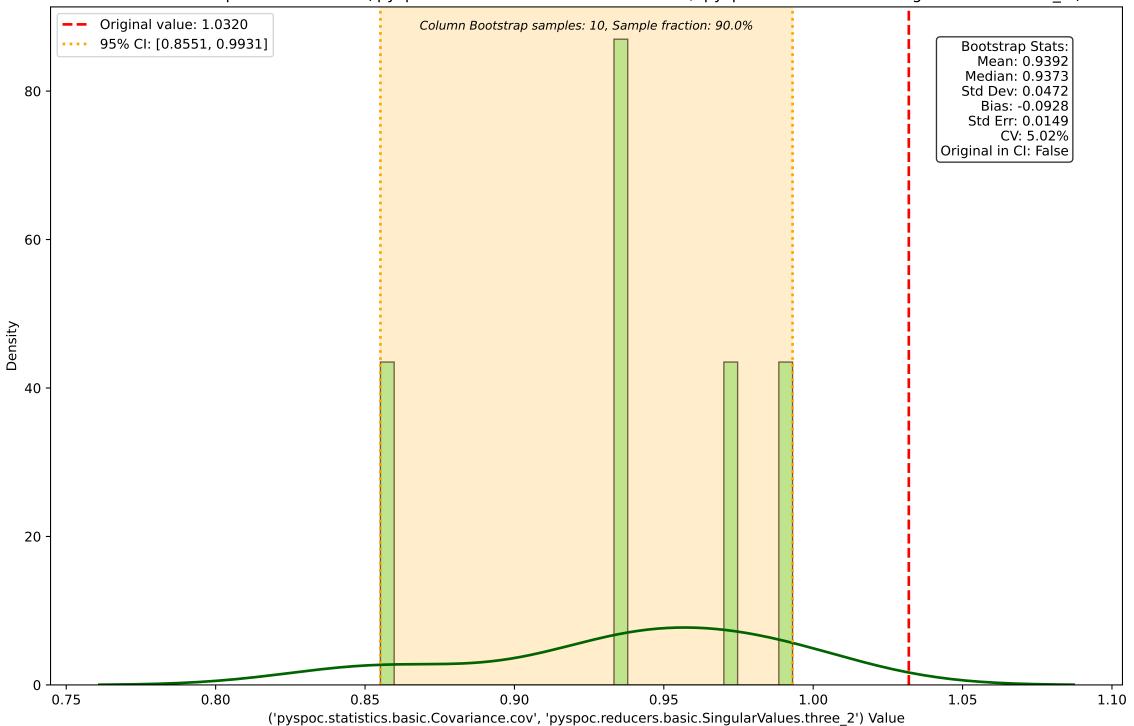
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')



Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')



Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')



Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3') Original value: 0.8073 Column Bootstrap samples: 10, Sample fraction: 90.0% 95% CI: [0.1326, 0.7589] Mean: 0.4693 Median: 0.6578 Std Dev: 0.2746 Bias: -0.3380 Std Err: 0.0868 CV: 58.50% Original in CI: False

0.50

('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3') Value

0.75

1.00

1.25

20.0

17.5 ·

15.0 -

12.5

Density

7.5

5.0

2.5

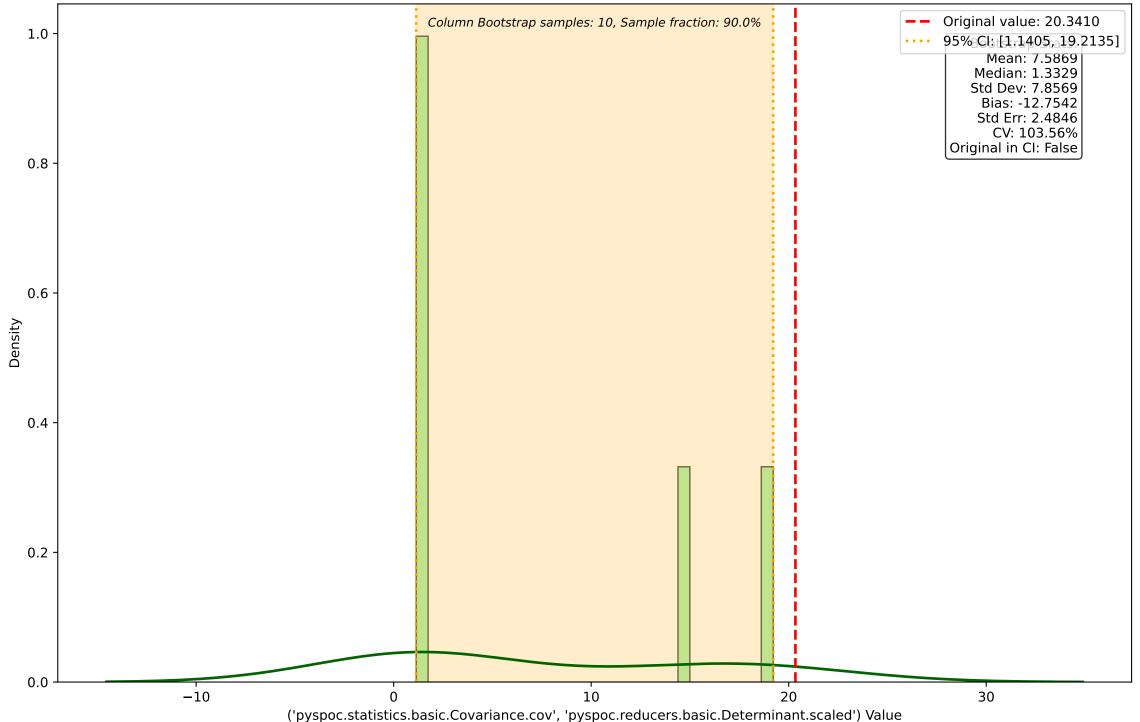
0.0 <del>↓</del> -0.50

-0.25

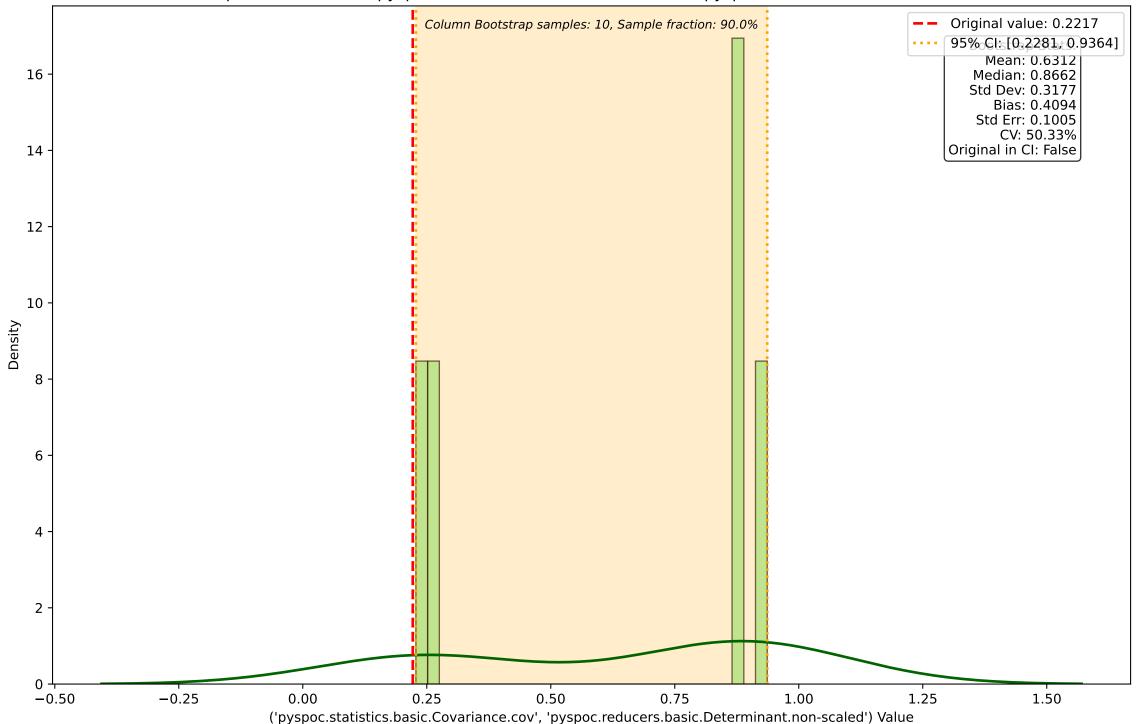
0.00

0.25

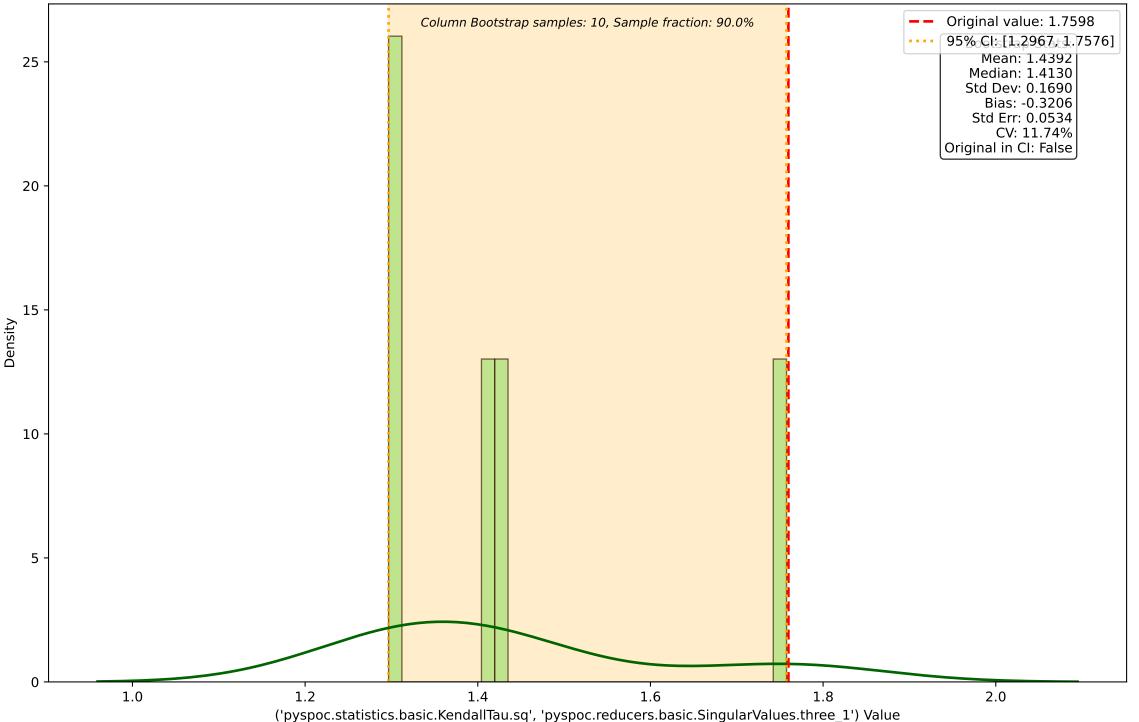
Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')



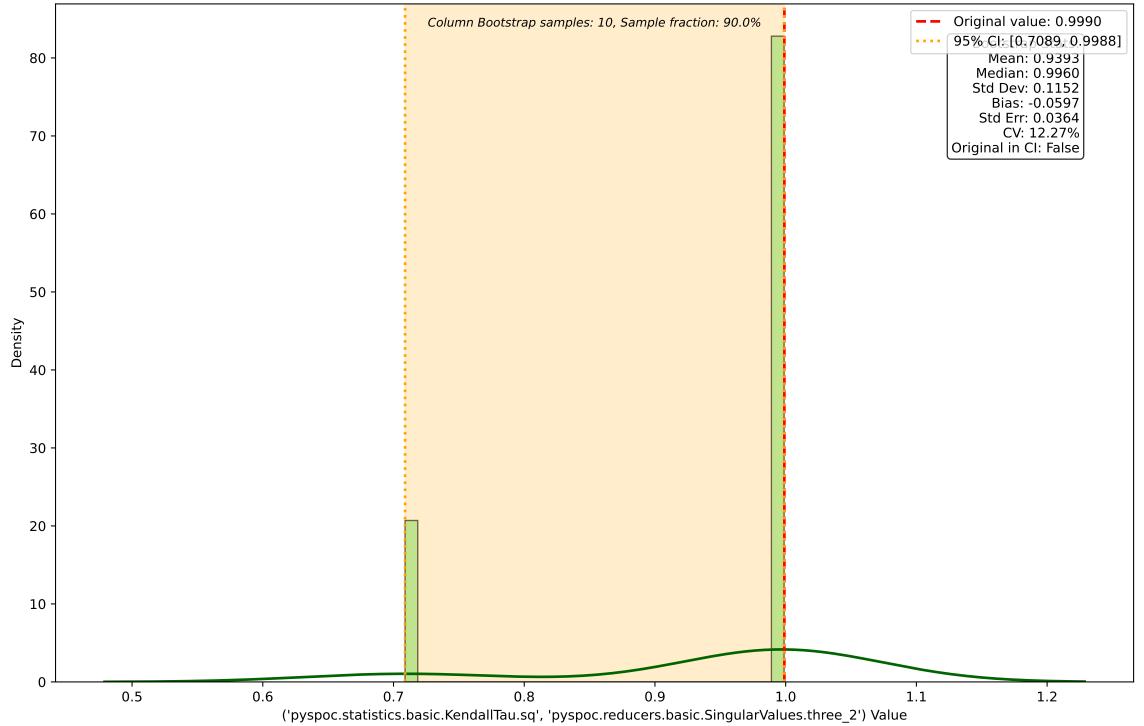
Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.non-scaled')



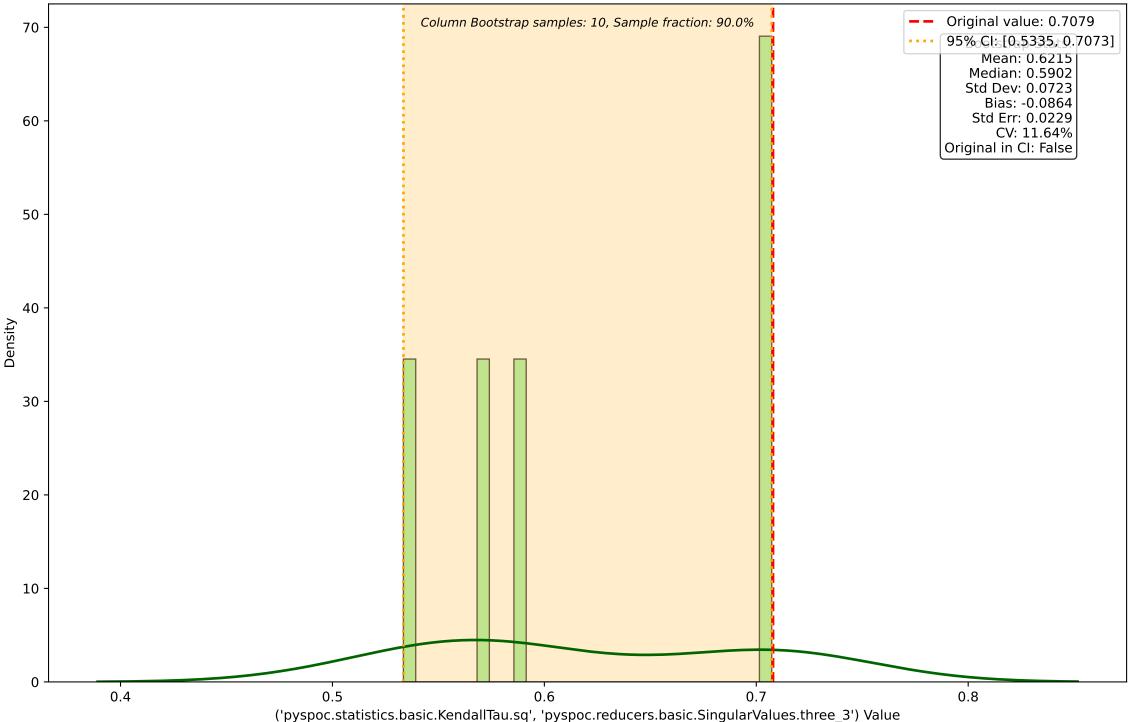
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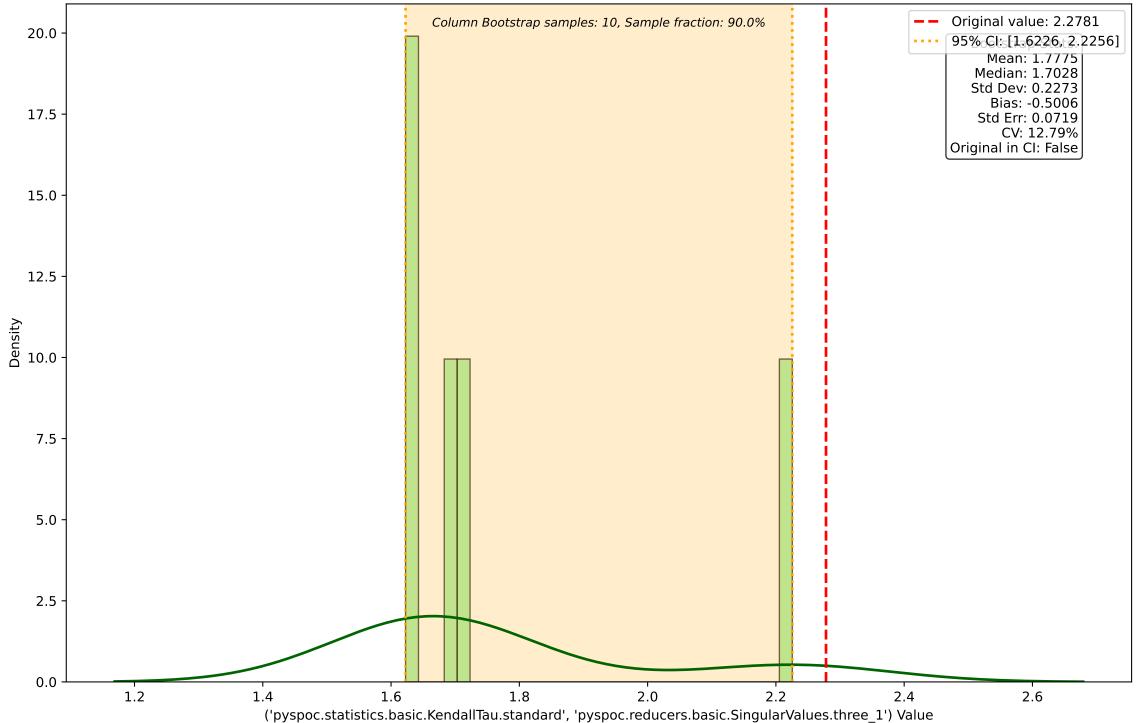
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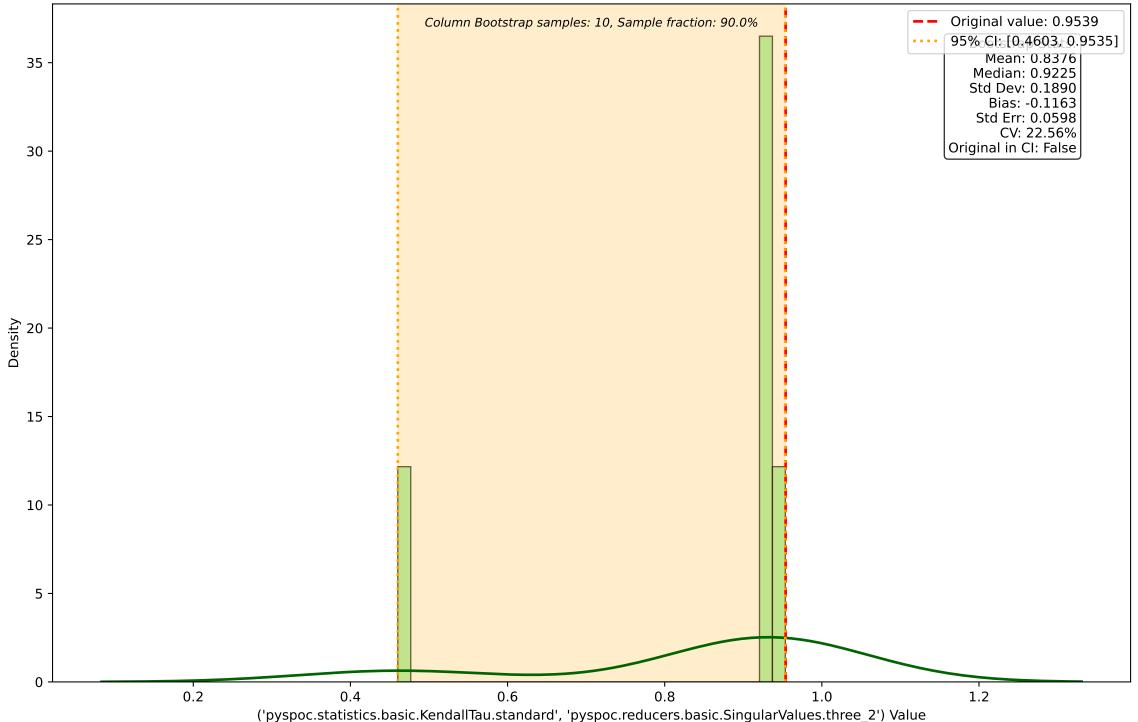
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3')



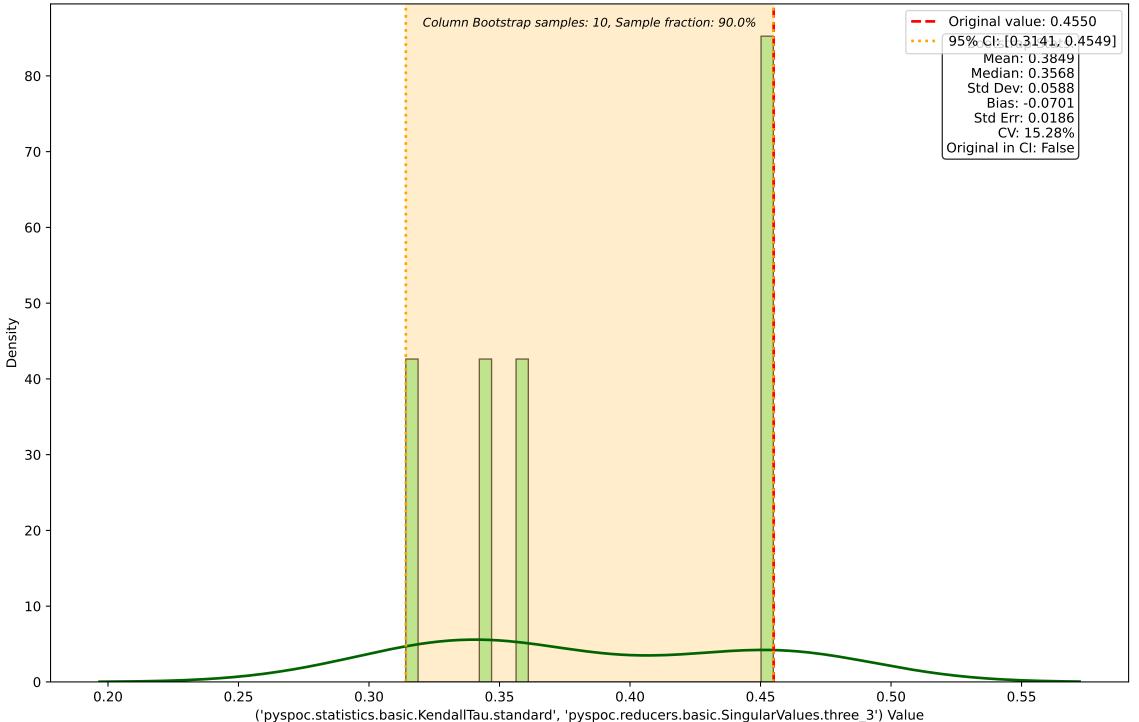
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_1')



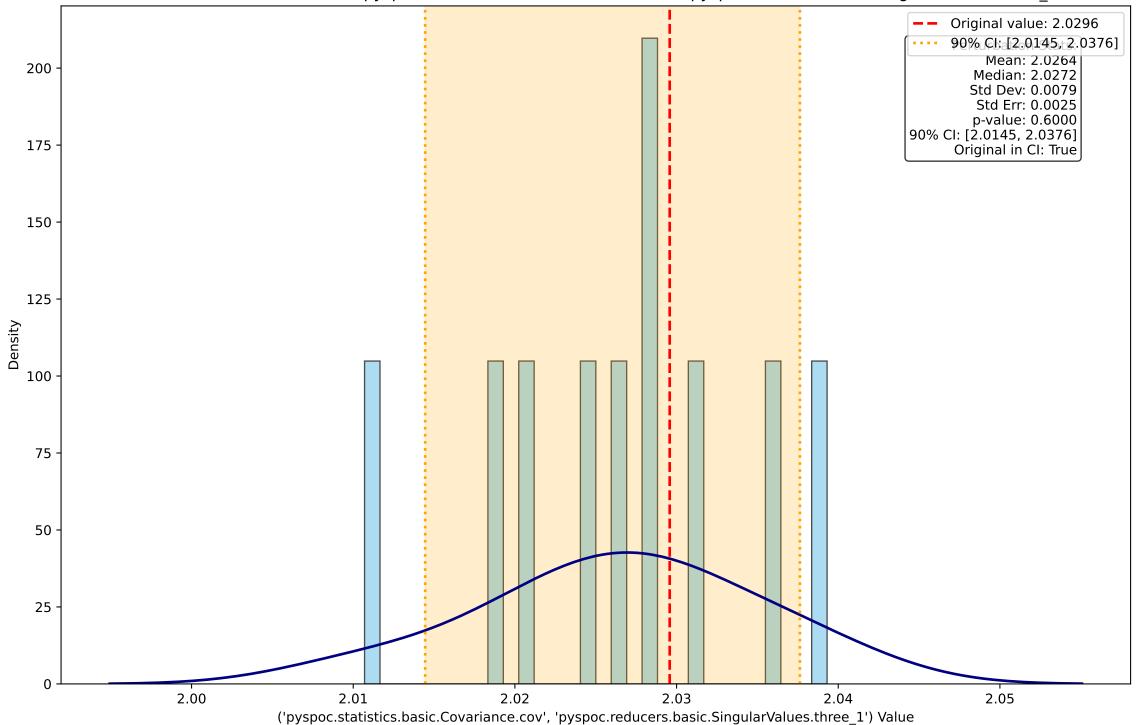
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_2')



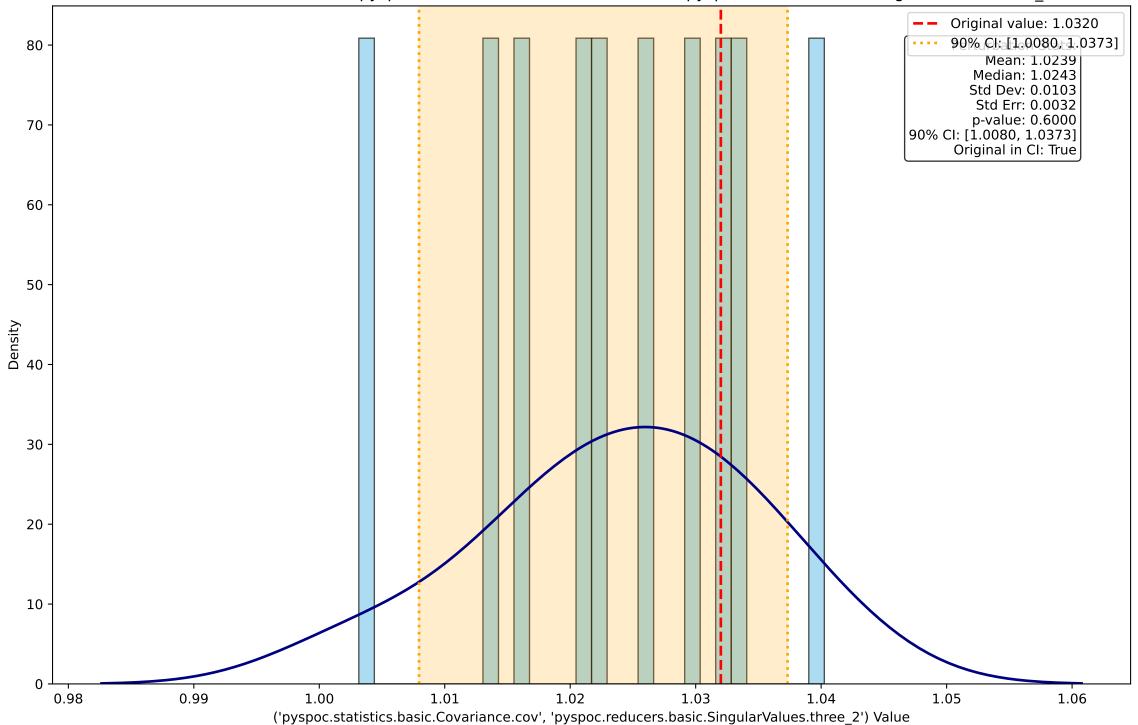
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')



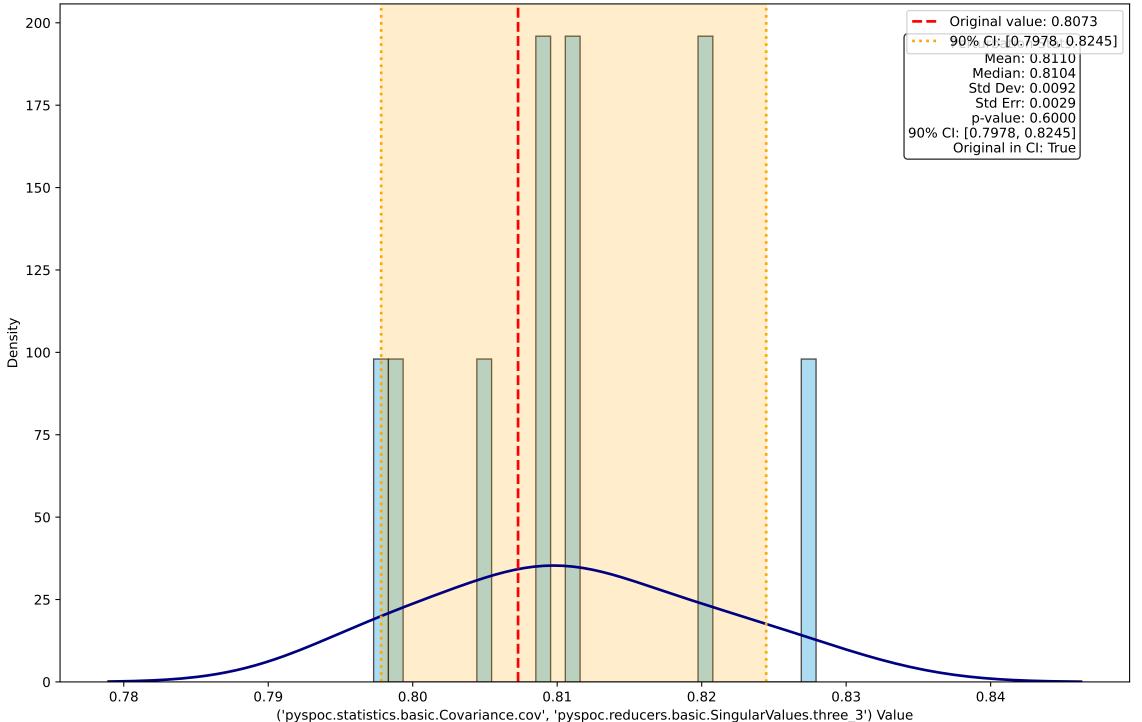
Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')

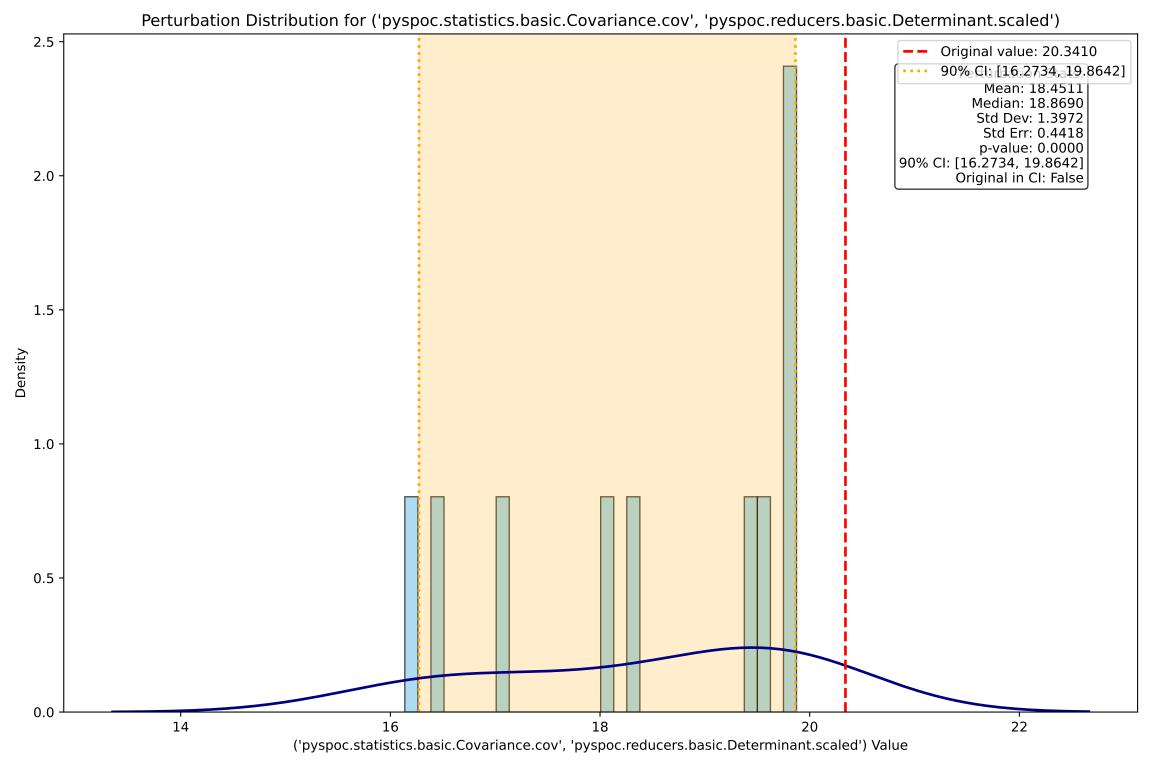


Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')

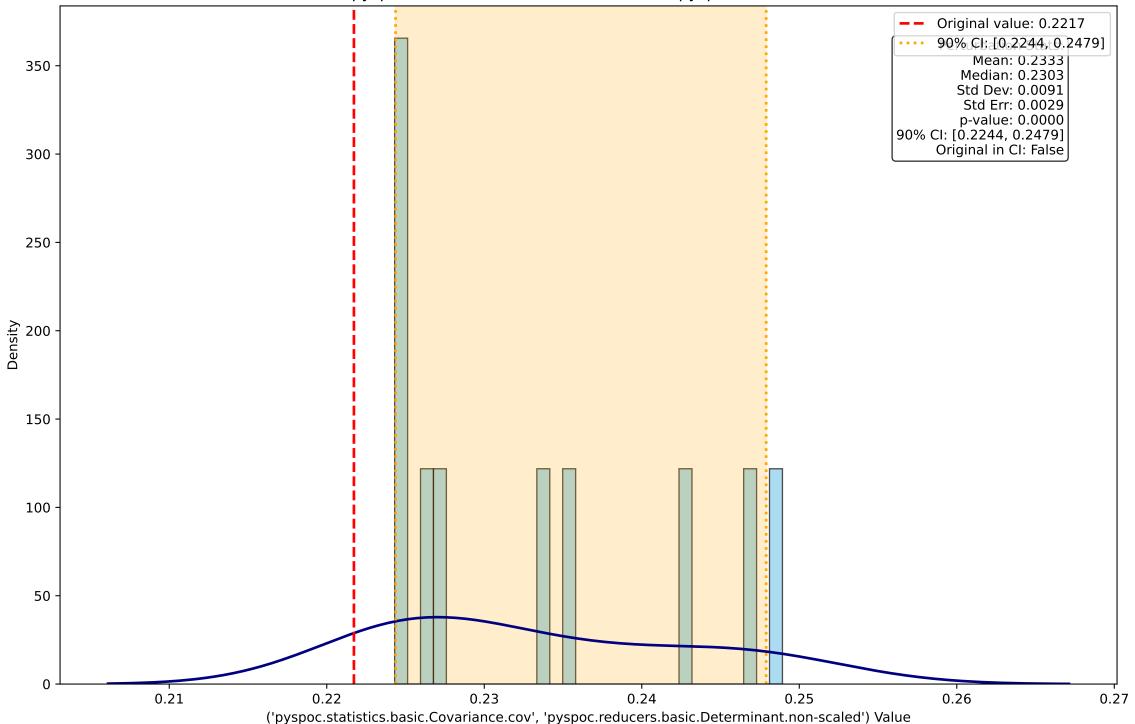


Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')

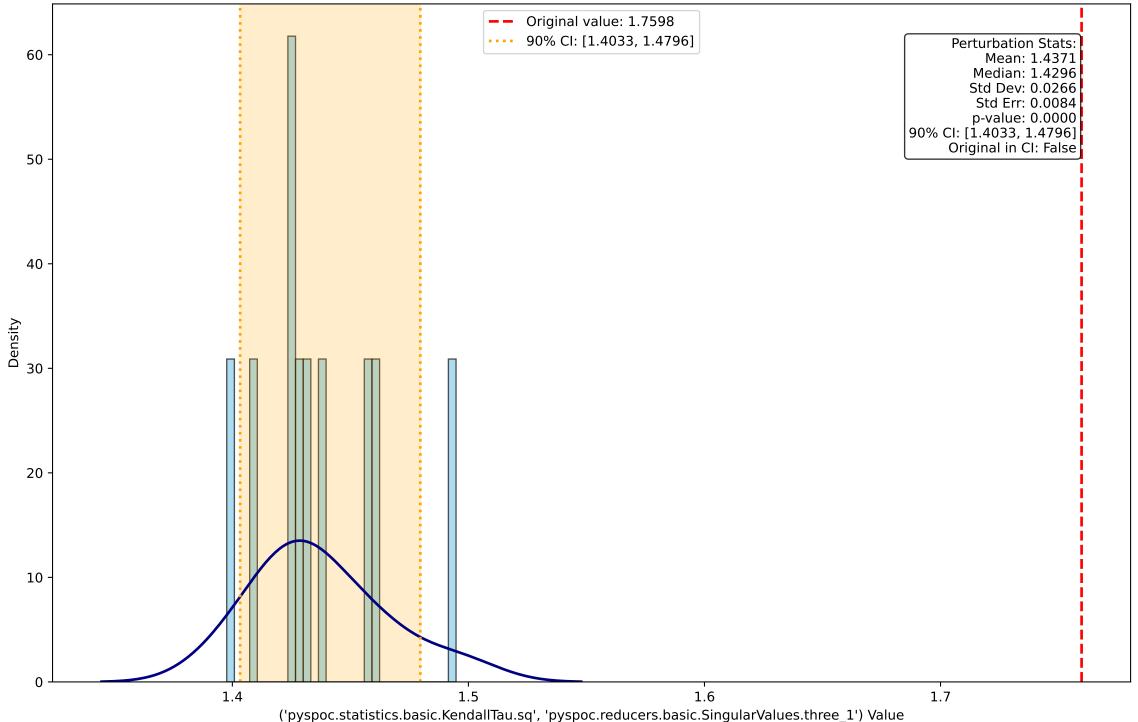




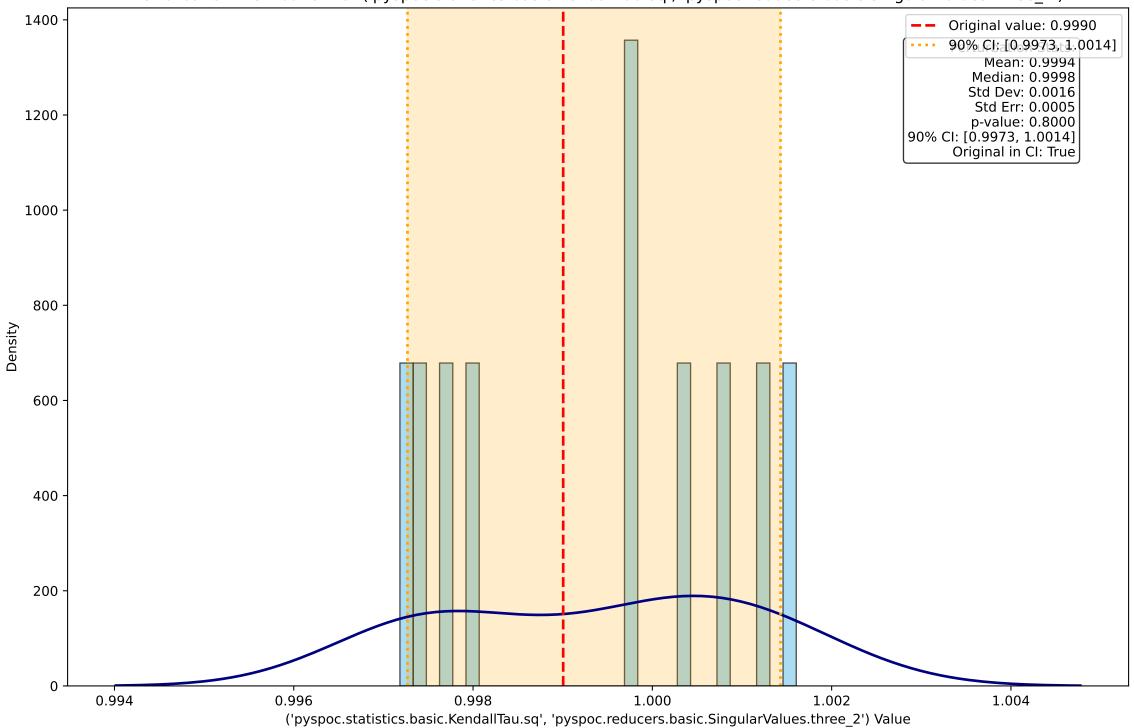
Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.non-scaled')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')



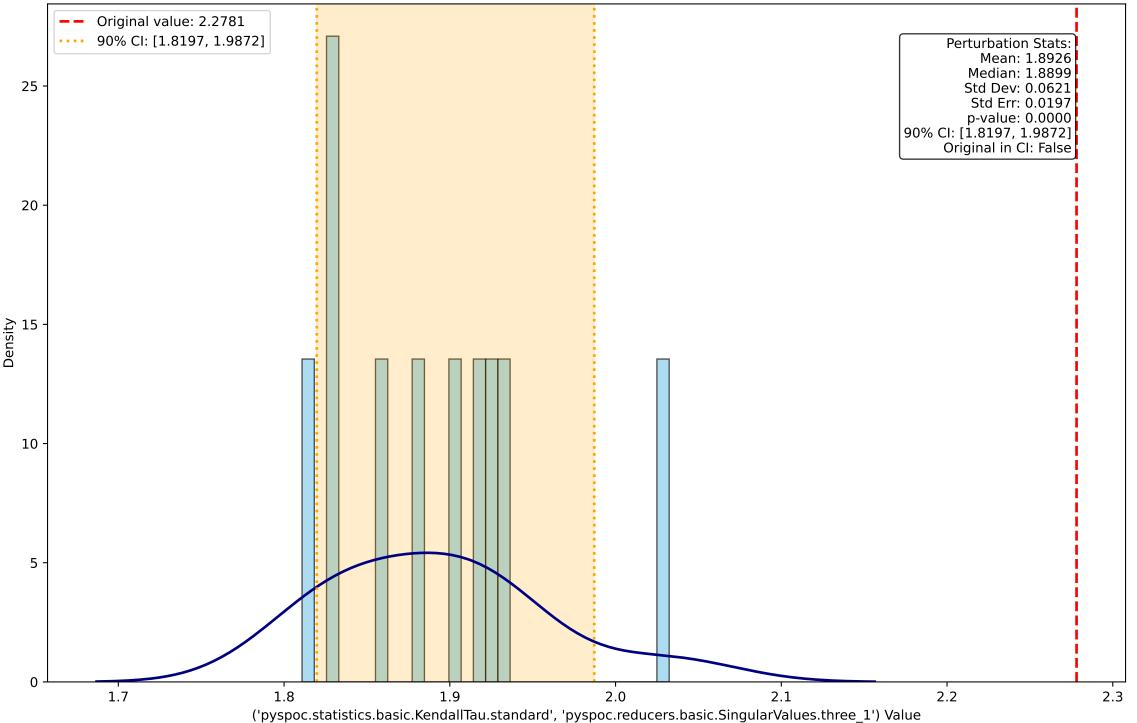
Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_2')



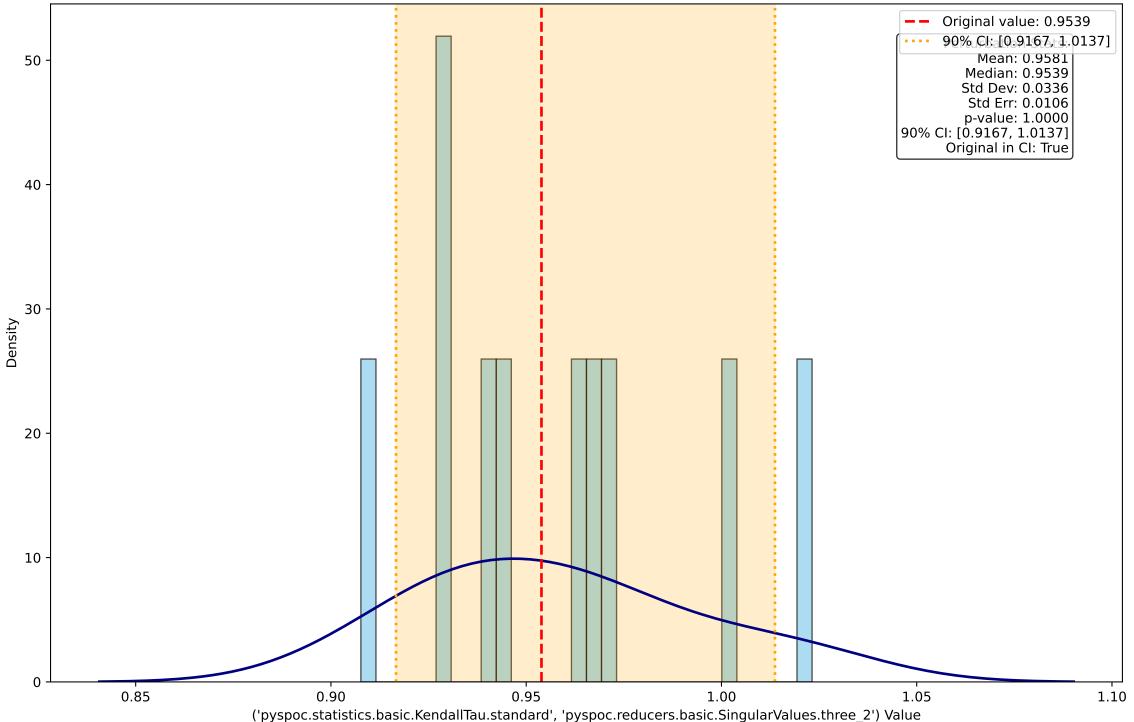
Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3') Original value: 0.7079 70 · 90% CI: [0.9251, 0.9866] Perturbation Stats: Mean: 0.9645 Median: 0.9661 Std Dev: 0.0243 Std Err: 0.0077 60 p-value: 0.0000 90% CI: [0.9251, 0.9866] Original in CI: False 50 40 30 -20 -10 0 0.75 0.80 0.85 0.90 0.95 1.00 0.70 1.05

('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3') Value

Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_1')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_2')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')

