Node support efficacy in Congreve & Lamsdell matrices

Martin R. Smith martin.smith@durham.ac.uk

2018-12-10

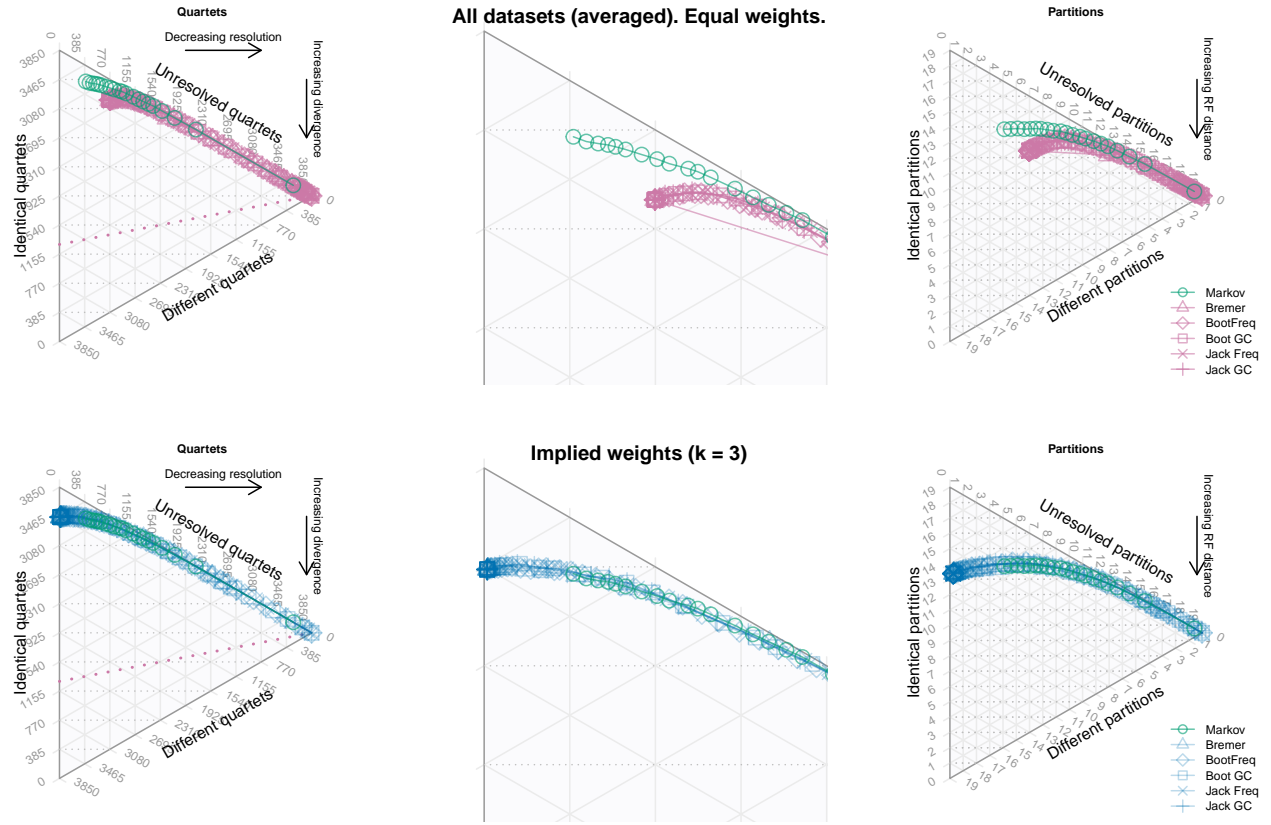## Contents

This page depicts the analytical results of all 100 matrices generated by Congreve & Lamsdell [1] using a ternary plotting approach [2], with quartets and partitions used as distance metrics.

The most highly resolved tree is progressively reduced by collapsing nodes with a support value below an increasing threshold.

```
## Warning in library(package, lib.loc = lib.loc, character.only = TRUE,
## logical.return = TRUE, : there is no package called 'CongreveLamsdell2016'
```
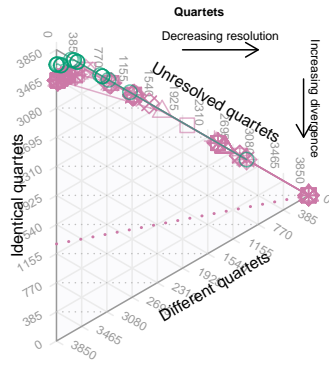
0.1 Summary

Quartets — Decreasing resolution — Increasing divergence — Unresolved quartets — Identical quartets — Different quartets

All datasets (averaged). Equal weights.

Partitions — Increasing RF distance — Unresolved partitions — Identical partitions — Different partitions

Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

Quartets — Decreasing resolution — Increasing divergence — Unresolved quartets — Identical quartets — Different quartets

Implied weights (k = 3)

Partitions — Increasing RF distance — Unresolved partitions — Identical partitions — Different partitions

Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

Though the Bootstrap GC metric systematically produces the lowest normalized tree distances (SD/MaxI), it is not significantly better than other methods. The following table reports P values that fail to reject the null hypothesis that the specified node support metric is equally good at ascribing incorrect nodes the lowest support values.

	eq	k1	k2	k3	k5	kX	kC
Bootstrap GC	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
Bootstrap Freq	0.9840650	0.9915189	0.9934145	0.9760370	0.9485781	0.9615921	0.9720185
Jackknife GC	0.9888177	0.9995312	0.9331647	0.9599348	0.9637166	0.9268107	0.9743023
Jackknife Freq	0.9942934	0.9554285	0.9509308	0.9839102	0.8639063	0.9408796	0.9723566
Bremer	0.4347916	0.3324499	0.5075762	0.4474386	0.3405988	0.2397081	0.8365157

0.2 Trees 1–10

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
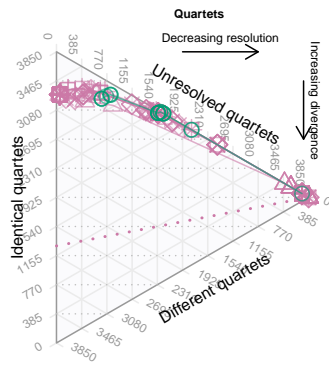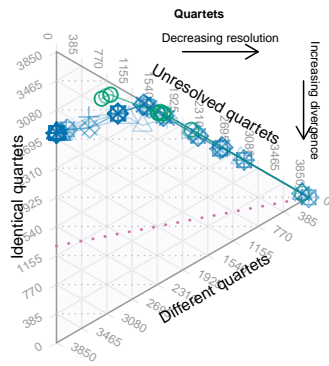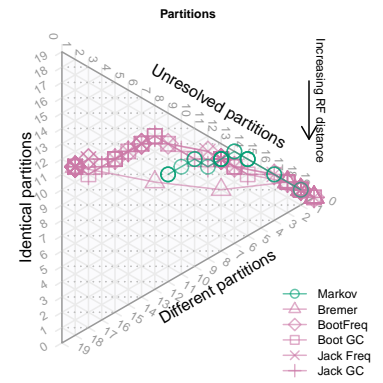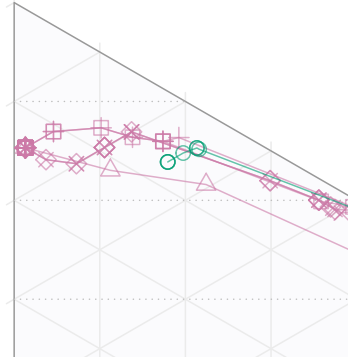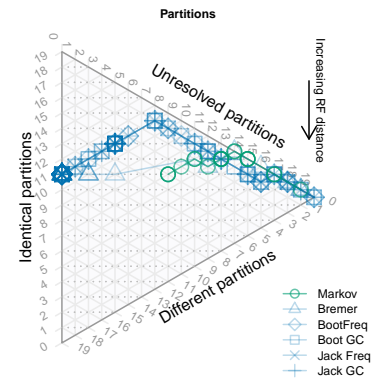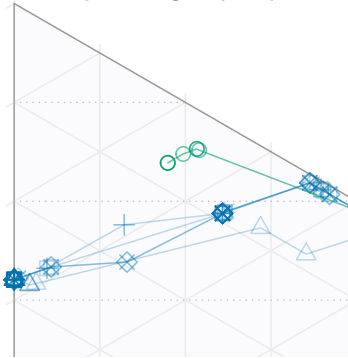
Quartets

Decreasing resolution

Increasing divergence

Identical quartets

Unresolved quartets

Different quartets

Dataset 1: CI=0.28. Equal weights
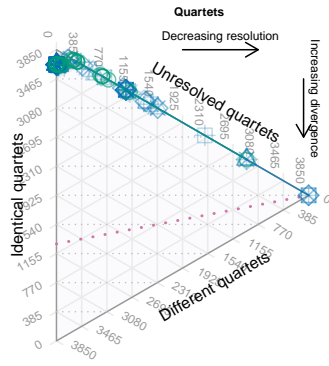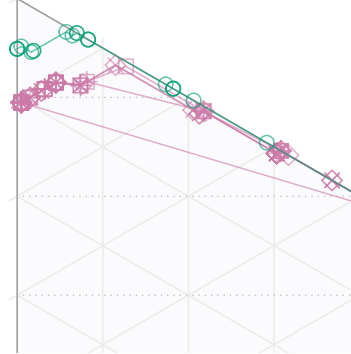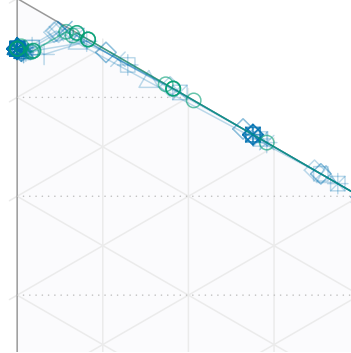
Partitions

Increasing RF distance

Identical partitions

Unresolved partitions

Different partitions

- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Quartets

Decreasing resolution

Increasing divergence

Identical quartets

Unresolved quartets

Different quartets

Implied weights (k = 3)

Partitions

Increasing RF distance

Identical partitions

Unresolved partitions

Different partitions

- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
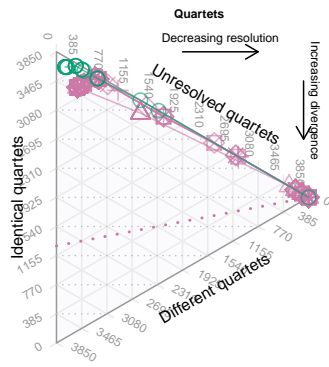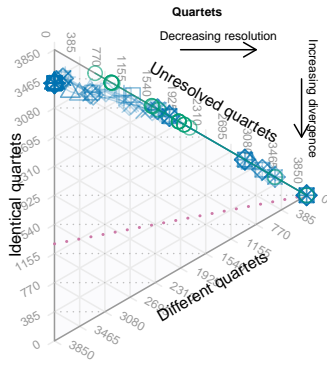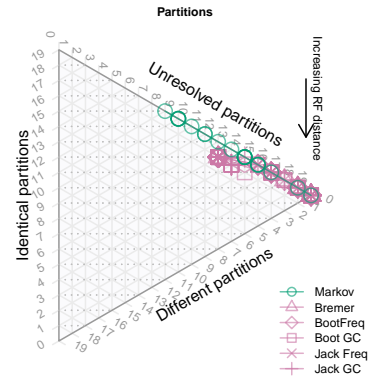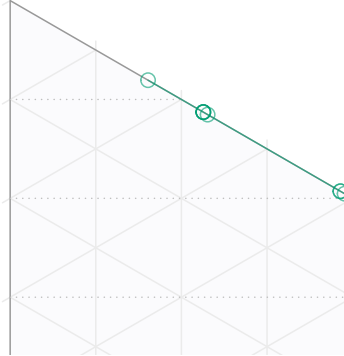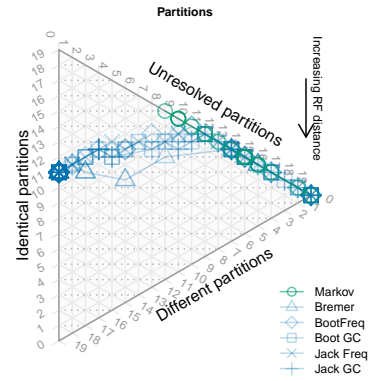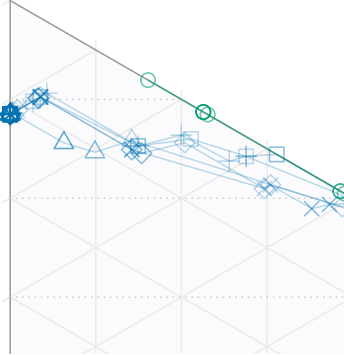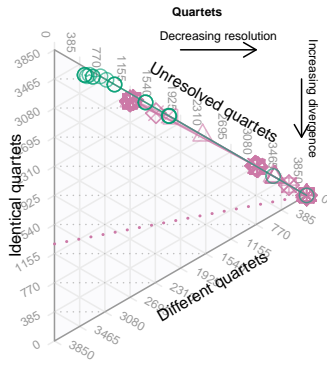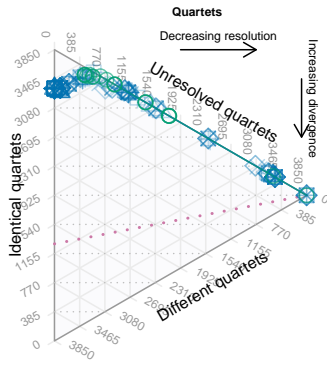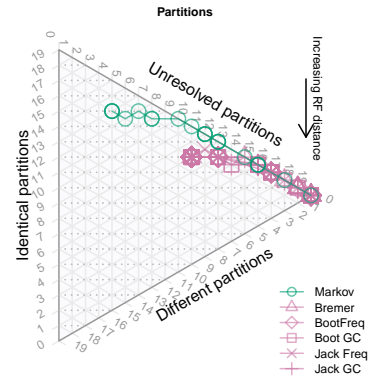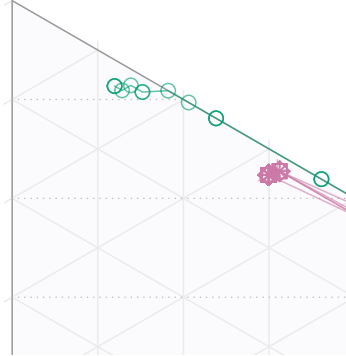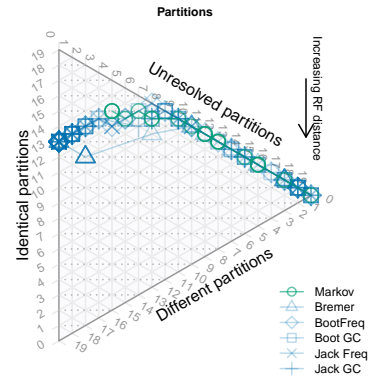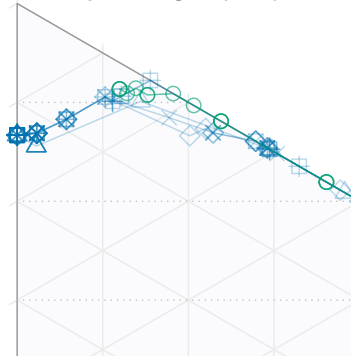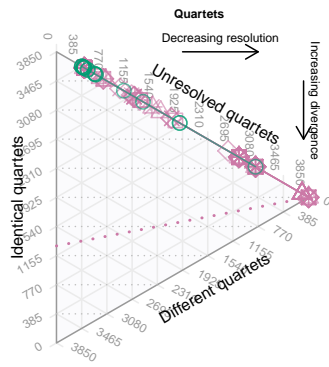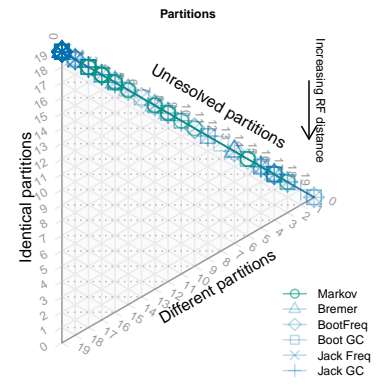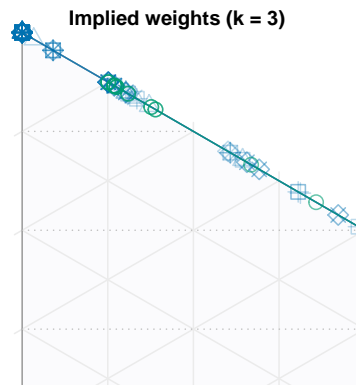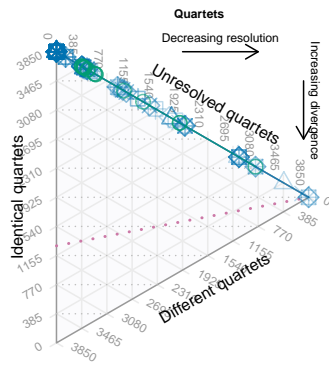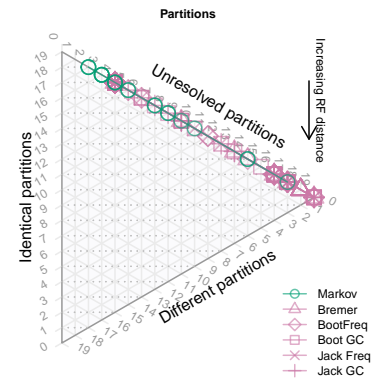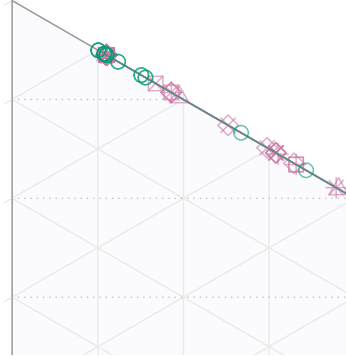
Dataset 2: CI=0.25. Equal weights
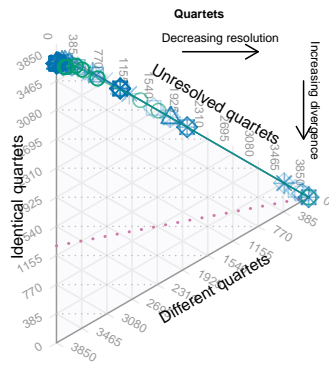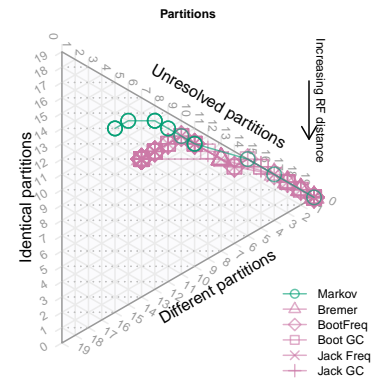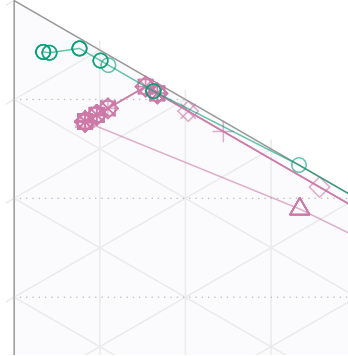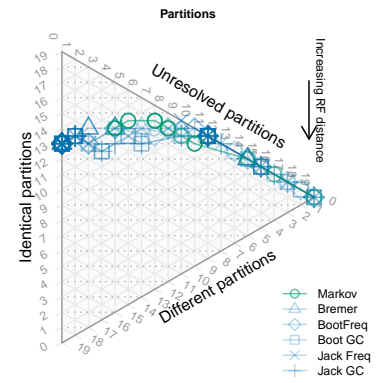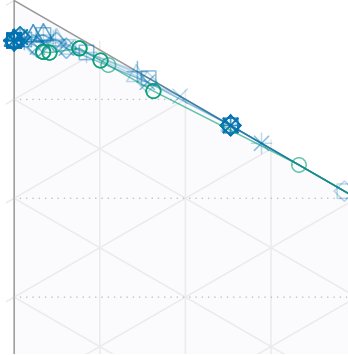
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
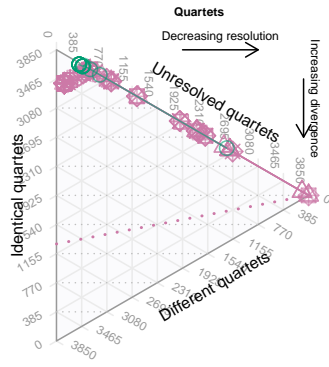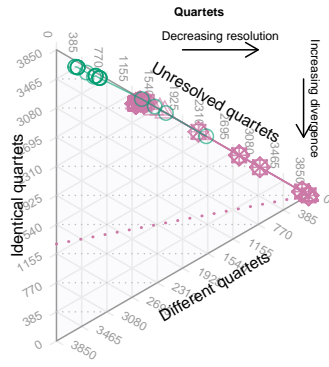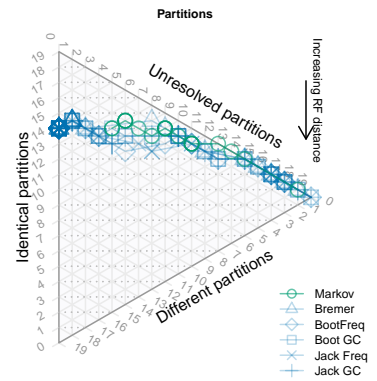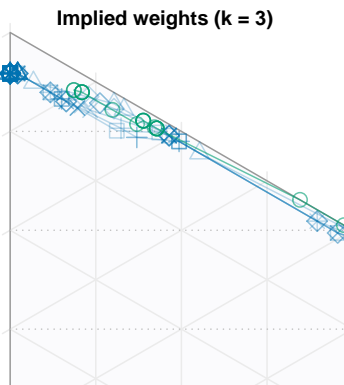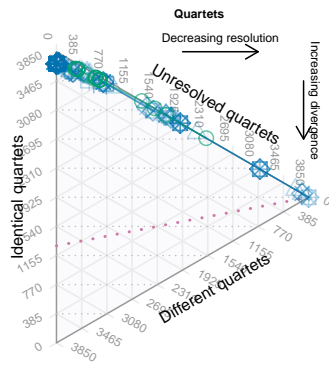
Dataset 3: CI=0.29. Equal weights
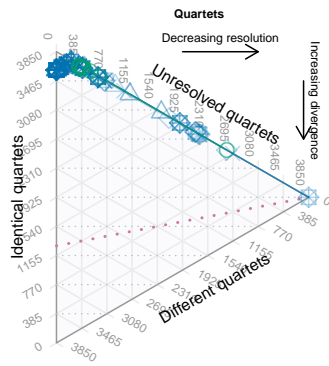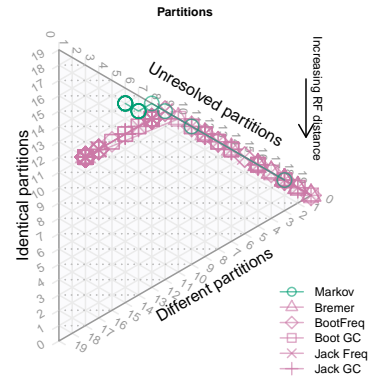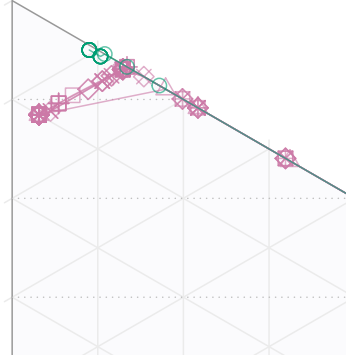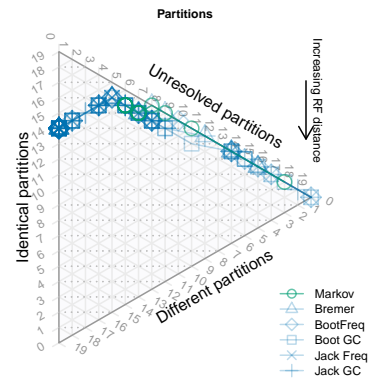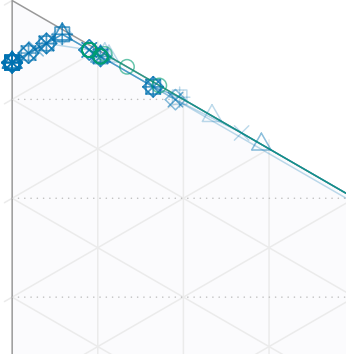
Implied weights (k = 3)
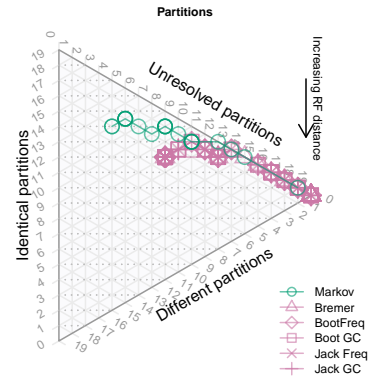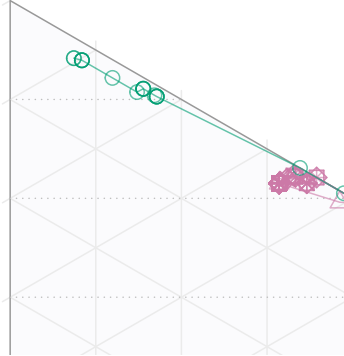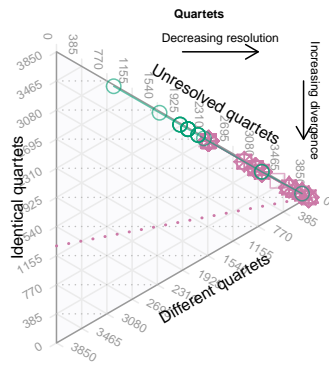
```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
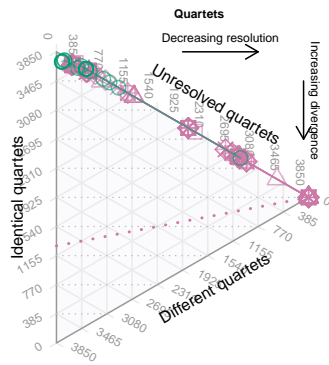
Dataset 4: CI=0.29. Equal weights
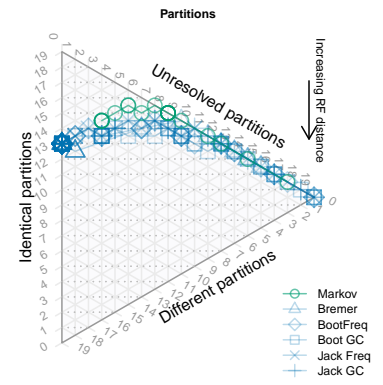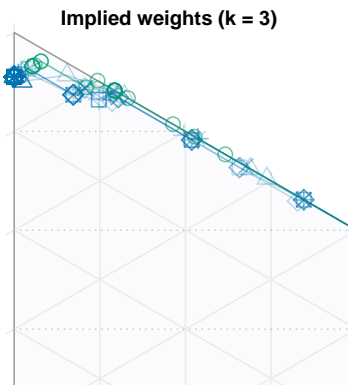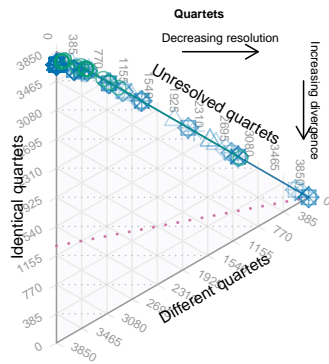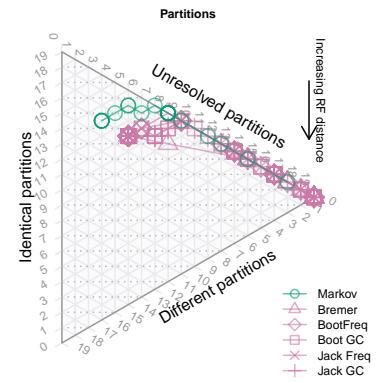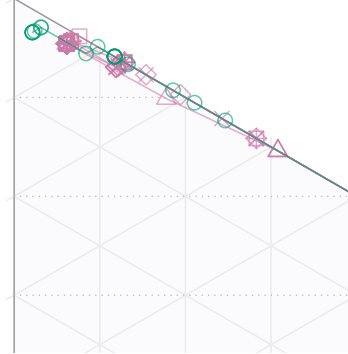
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Quartets — Decreasing resolution → Increasing divergence ↓ — Unresolved quartets — Identical quartets — Different quartets

Dataset 5: CI=0.26. Equal weights

Partitions — Increasing RF distance ↓ — Unresolved partitions — Identical partitions — Different partitions

Legend:
- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Quartets — Decreasing resolution → Increasing divergence ↓ — Unresolved quartets — Identical quartets — Different quartets

Implied weights (k = 3)

Partitions — Increasing RF distance ↓ — Unresolved partitions — Identical partitions — Different partitions

Legend:
- Markov
- Bremer
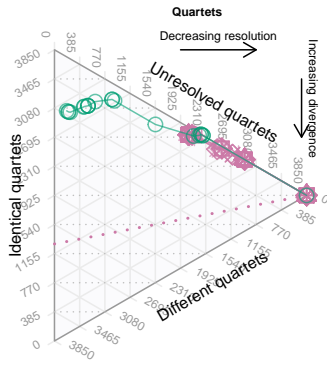- BootFreq
- Boot GC
- Jack Freq
- Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
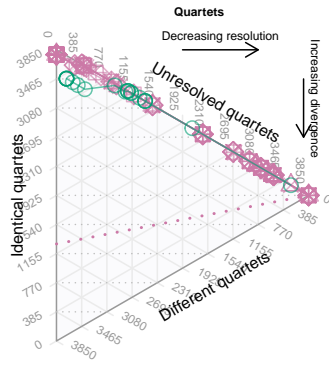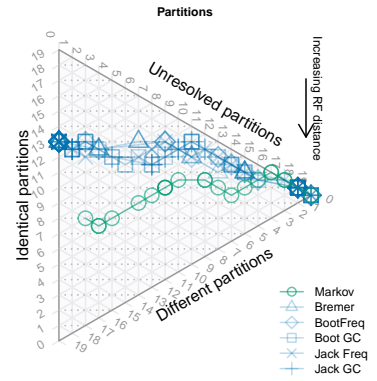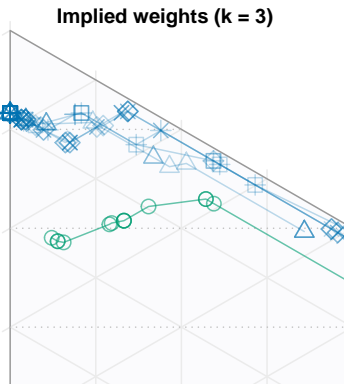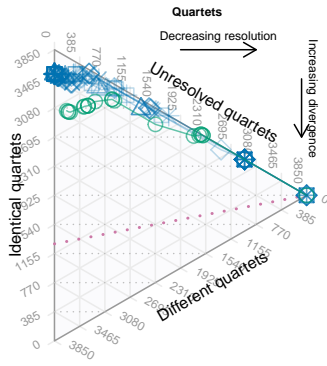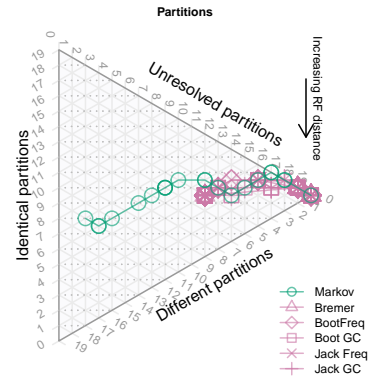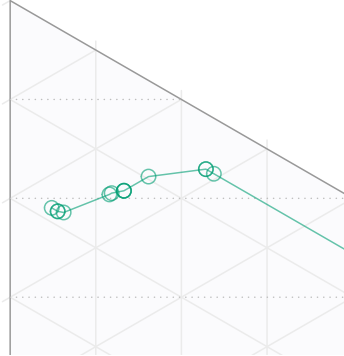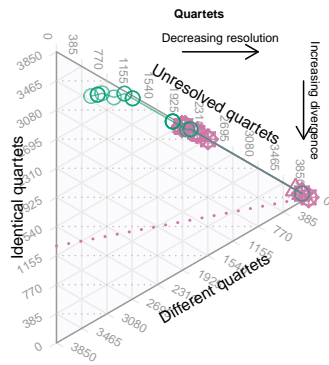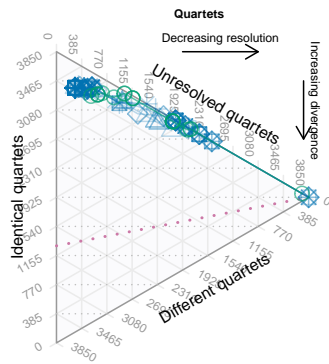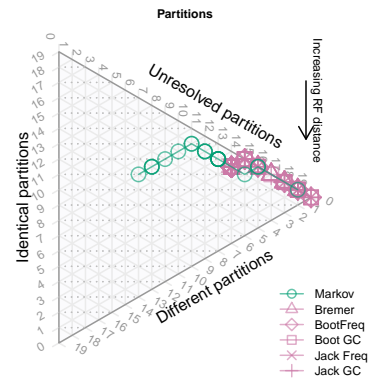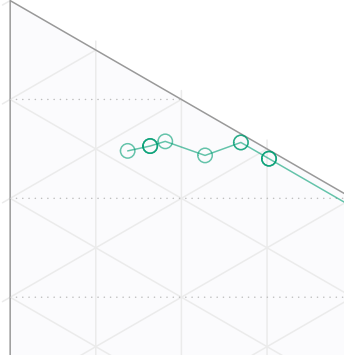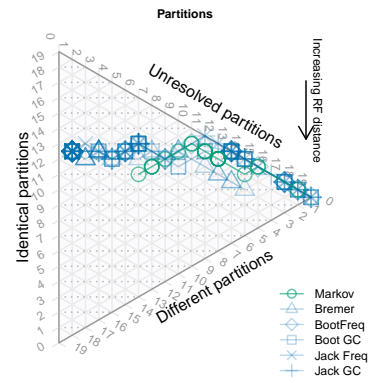
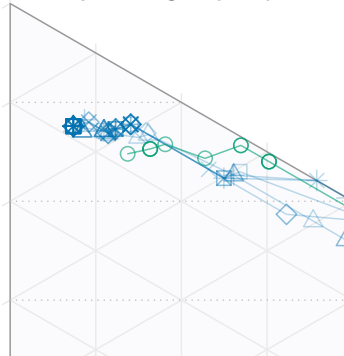Dataset 6: CI=0.26. Equal weights
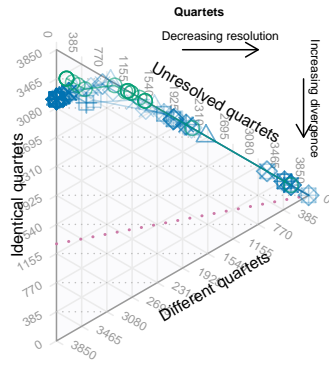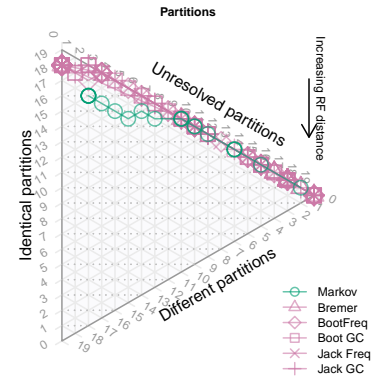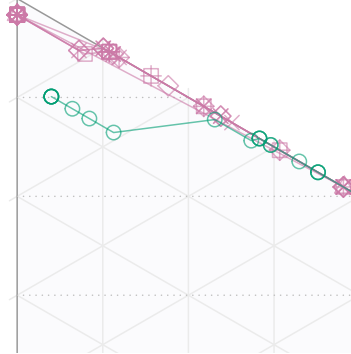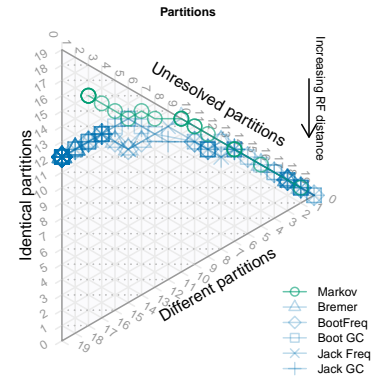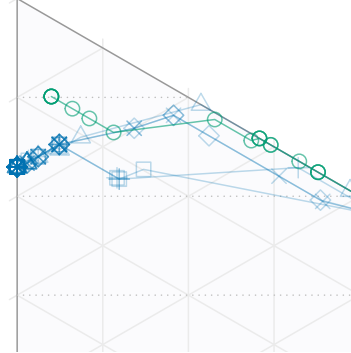
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
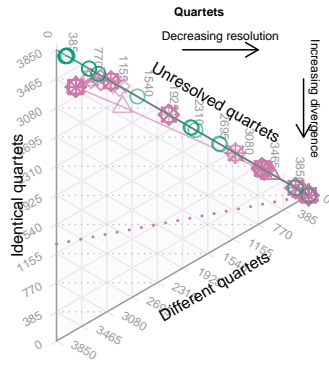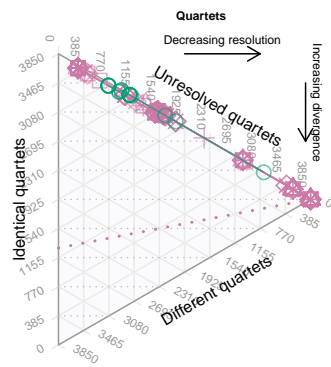
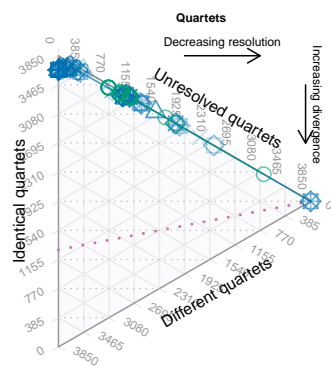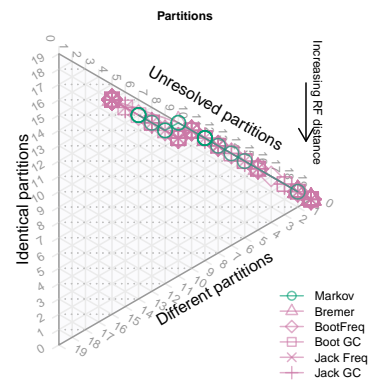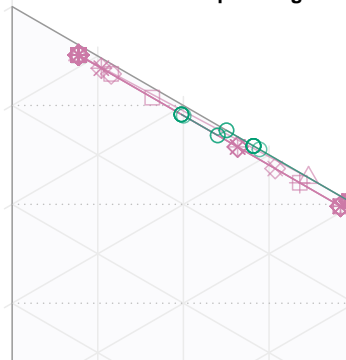**Dataset 7: CI=0.27. Equal weights**
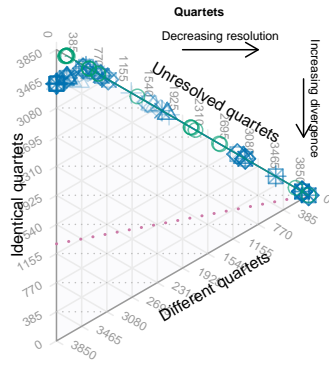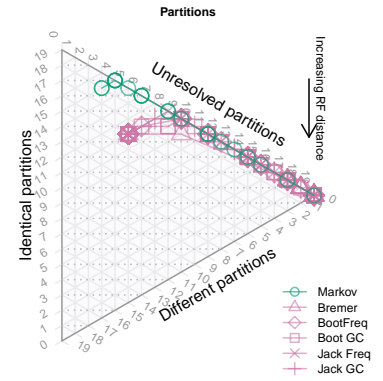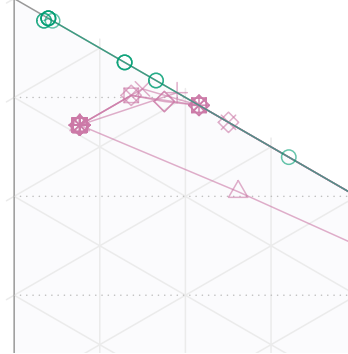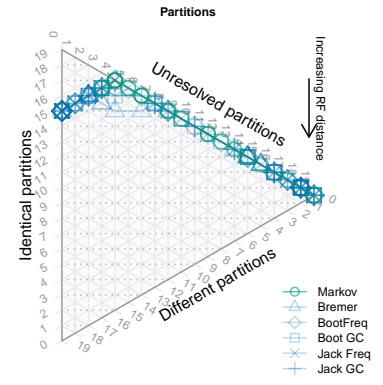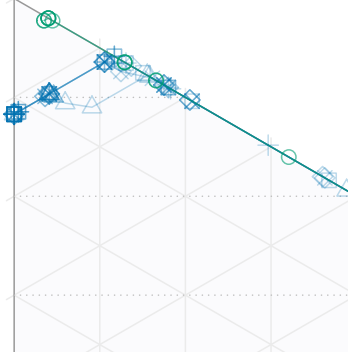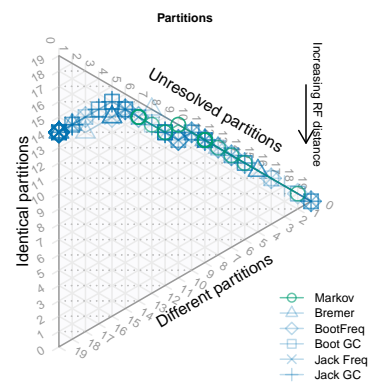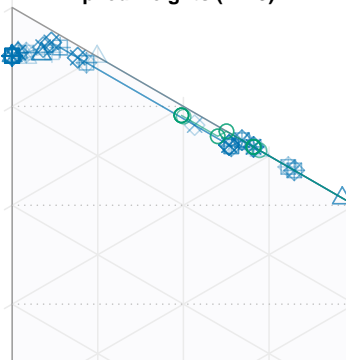
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
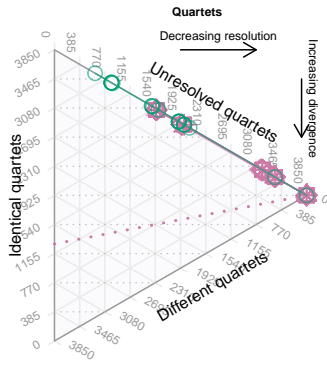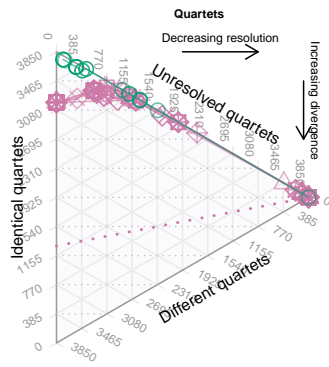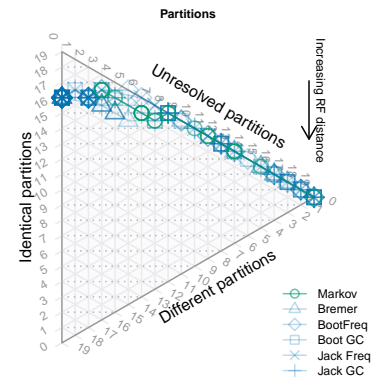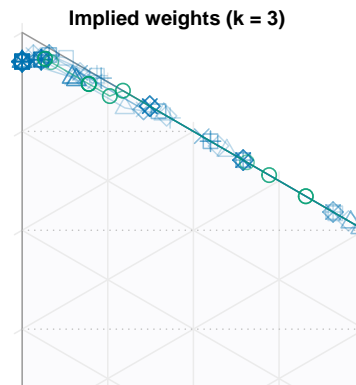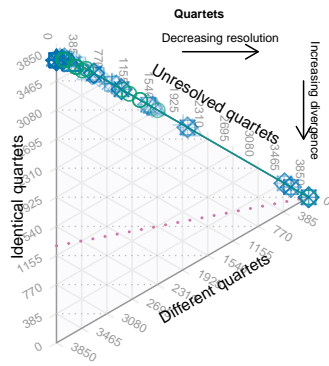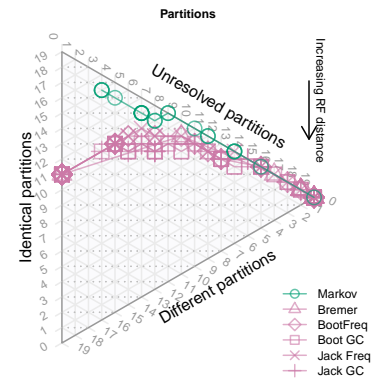
Dataset 8: CI=0.25. Equal weights
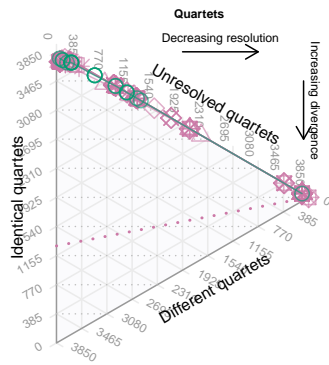
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
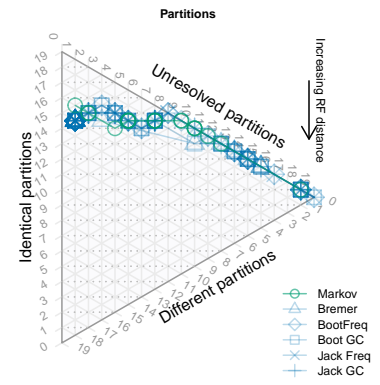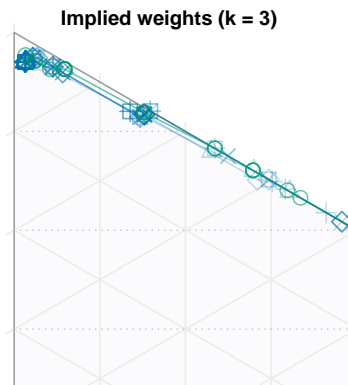
Dataset 9: CI=0.24. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
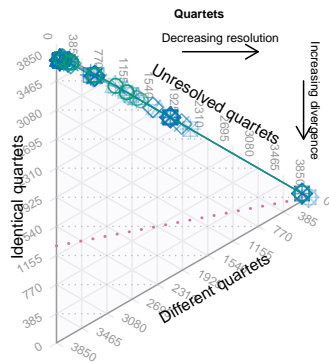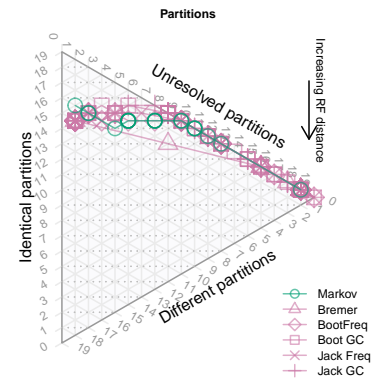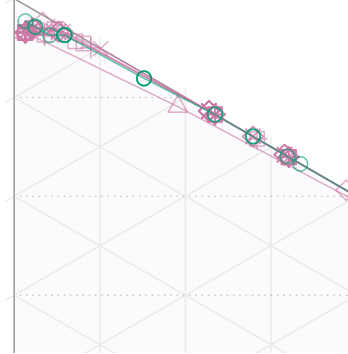
Dataset 10: CI=0.29. Equal weights
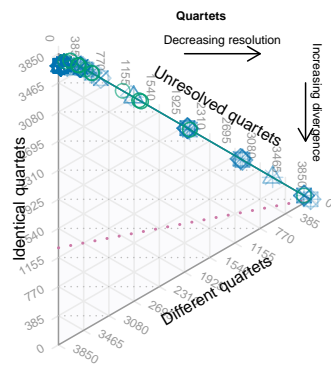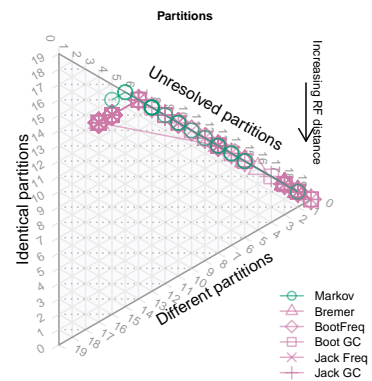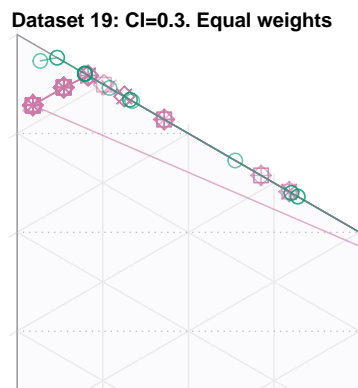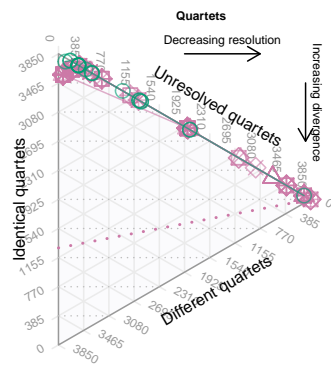
Implied weights (k = 3)

0.3 Trees 11–20

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
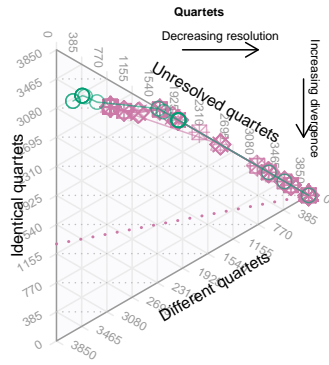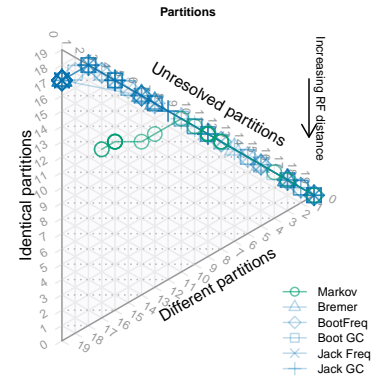
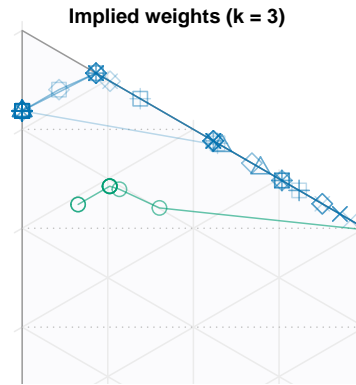**Dataset 11: CI=0.25. Equal weights**
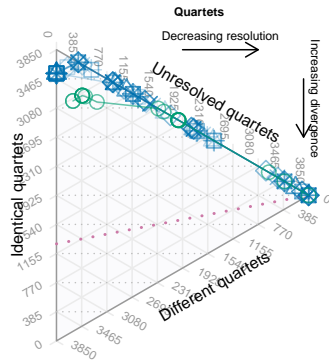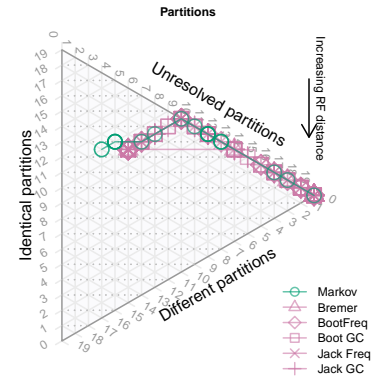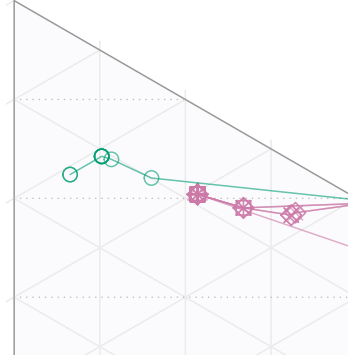
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 12: CI=0.29. Equal weights
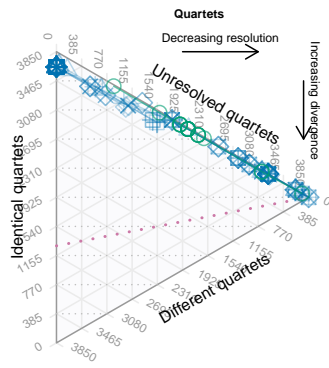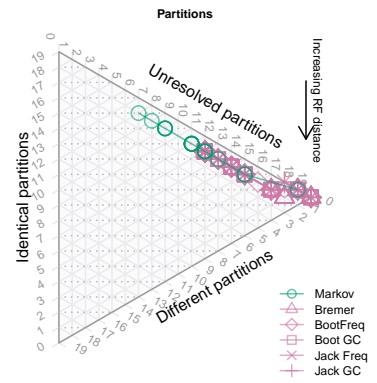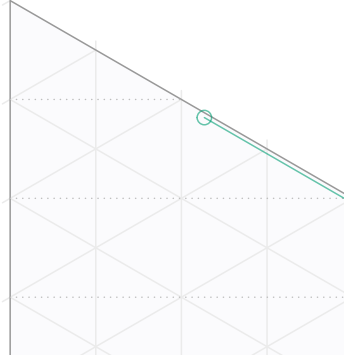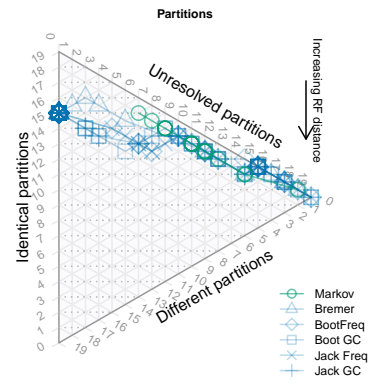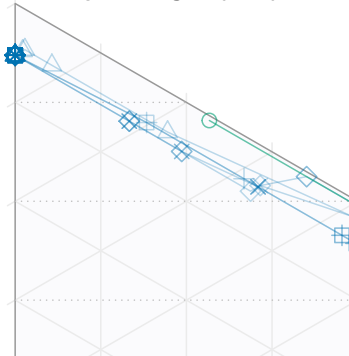
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
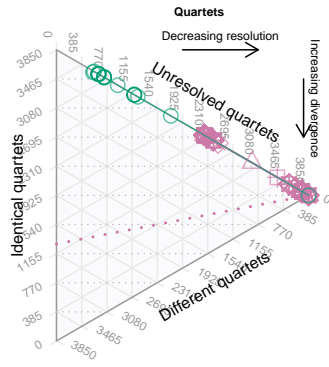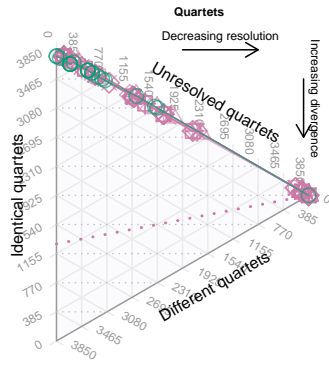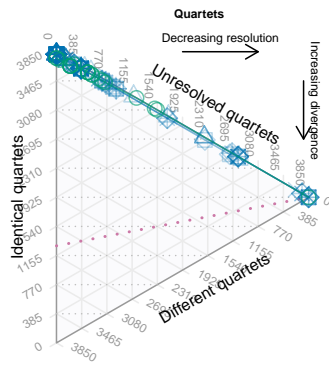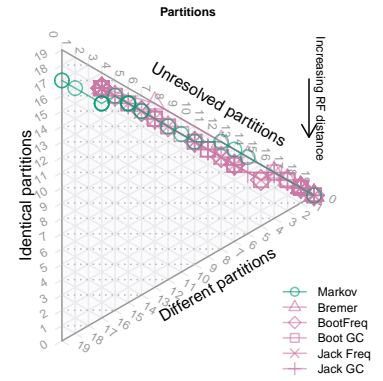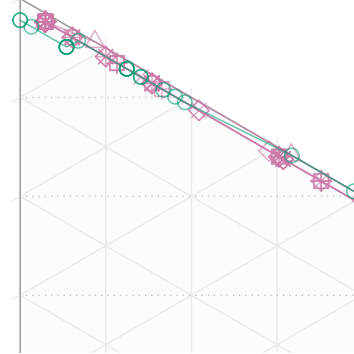
Dataset 13: CI=0.25. Equal weights
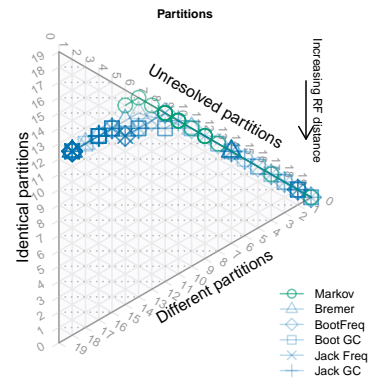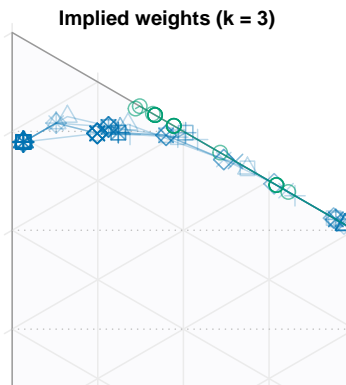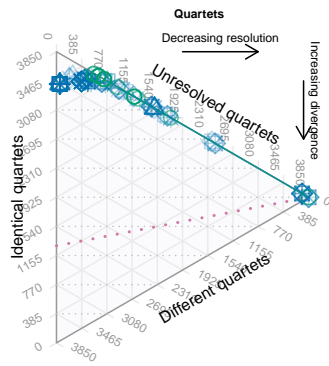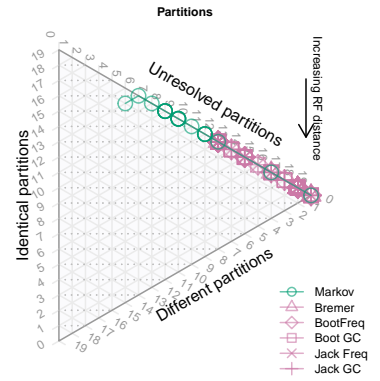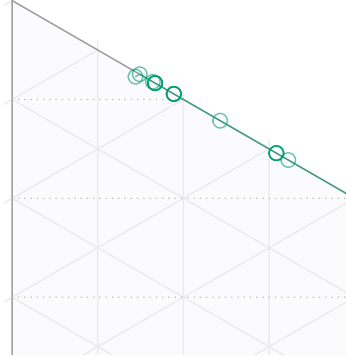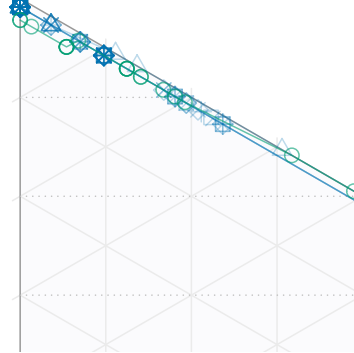
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
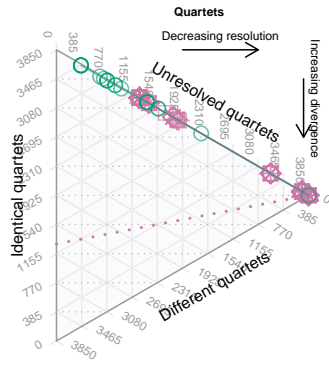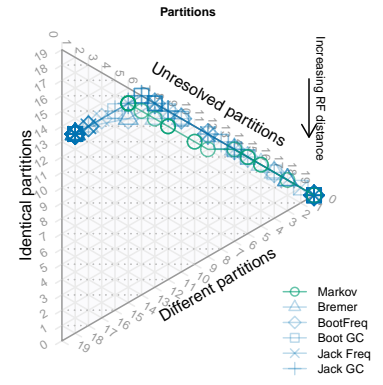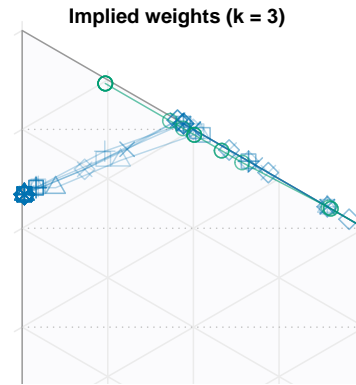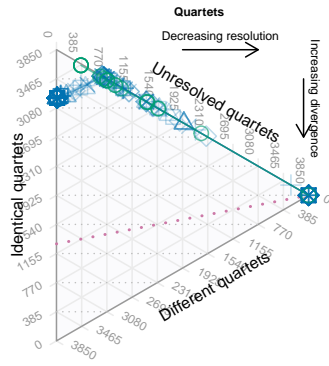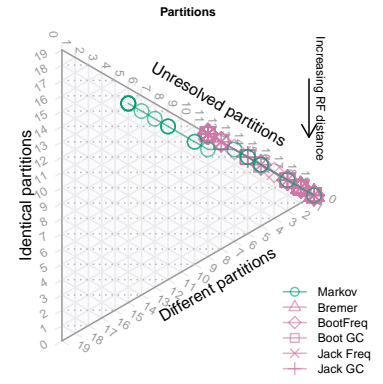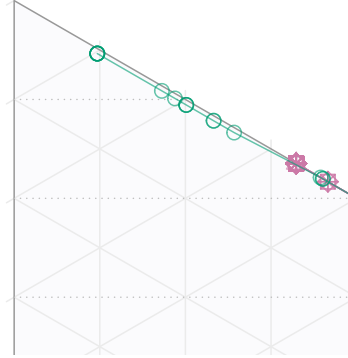
Dataset 14: CI=0.25. Equal weights
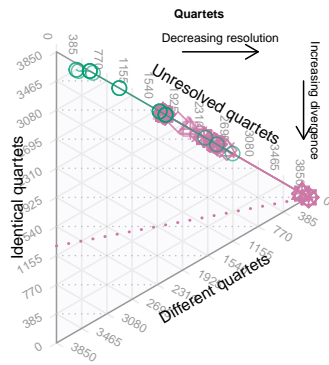
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
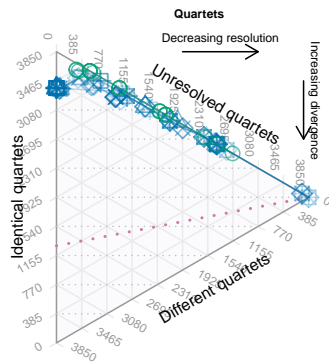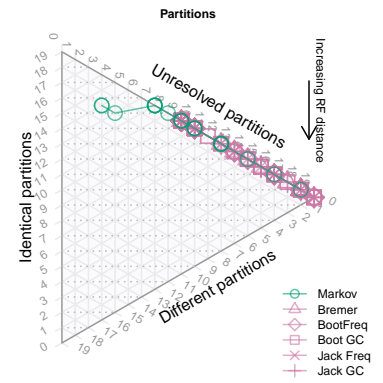
Dataset 15: CI=0.25. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
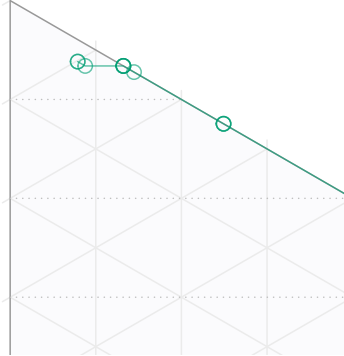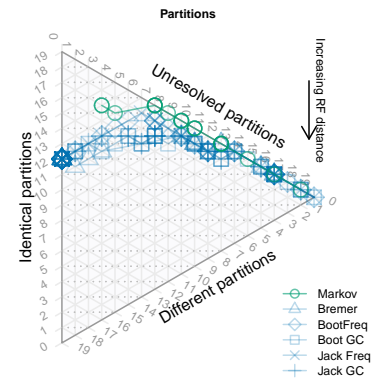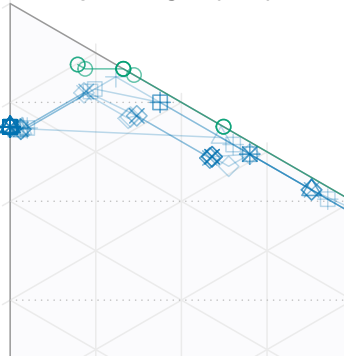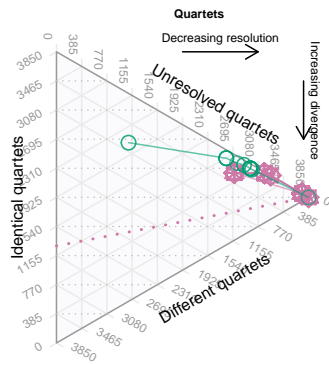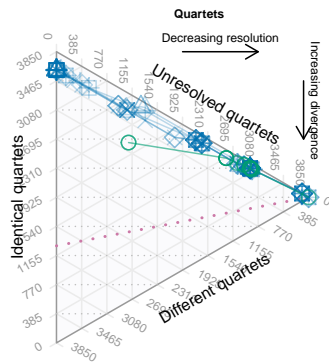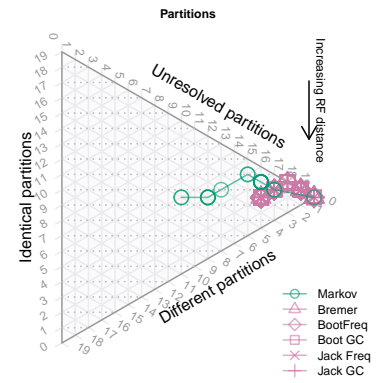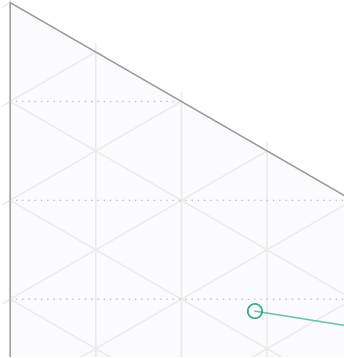
Dataset 16: CI=0.25. Equal weights
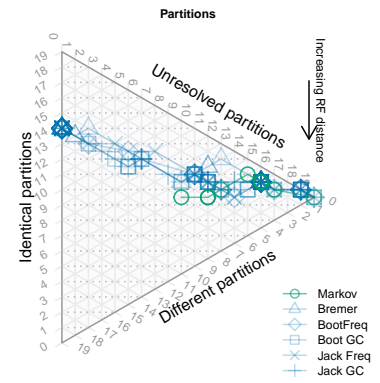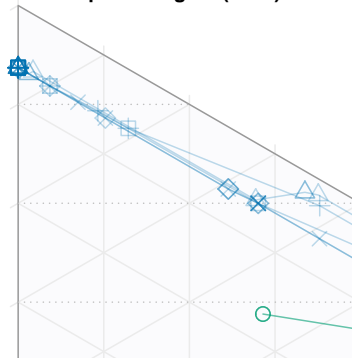
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 17: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
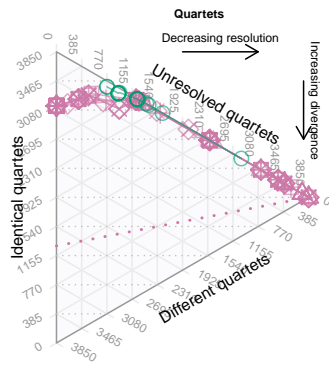
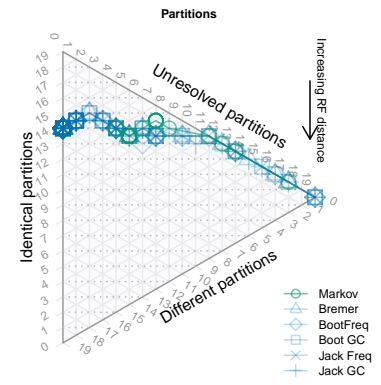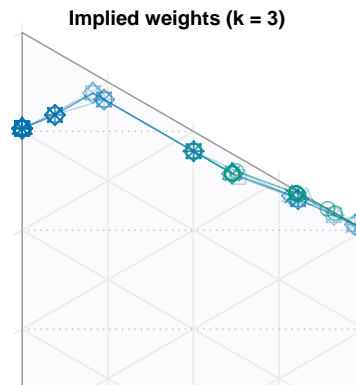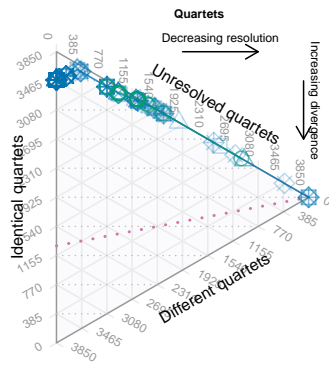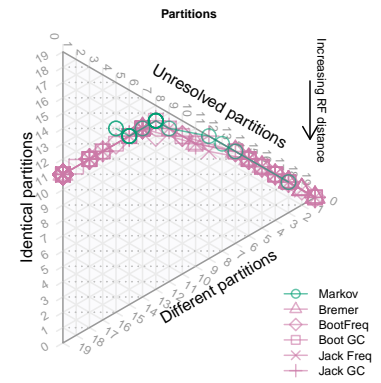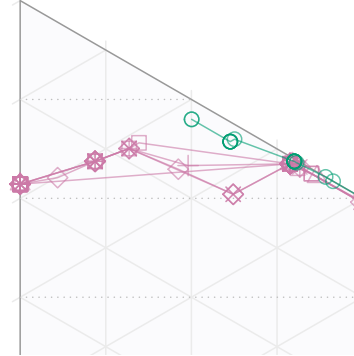**Dataset 18: CI=0.28. Equal weights**
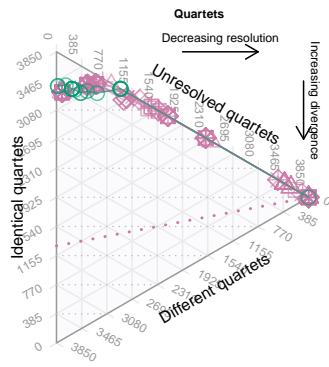
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
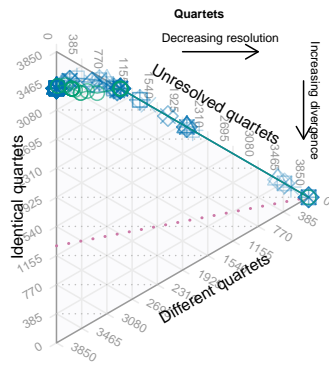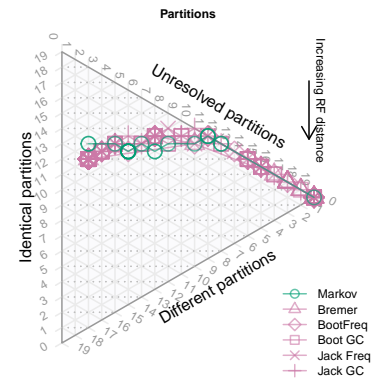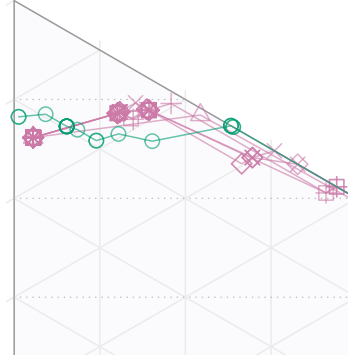
Dataset 19: CI=0.3. Equal weights
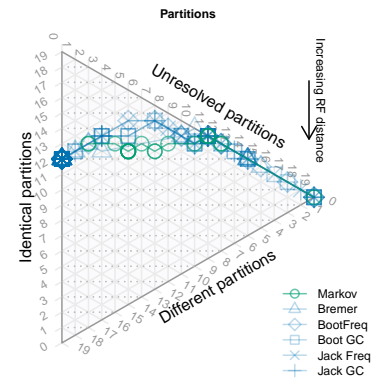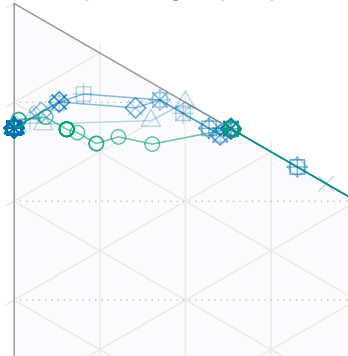
Implied weights (k = 3)
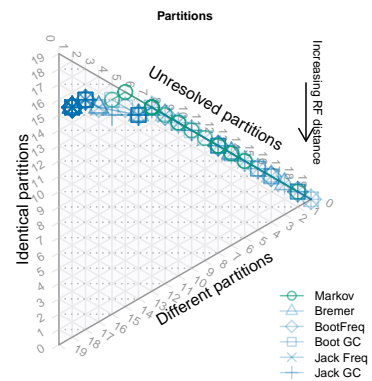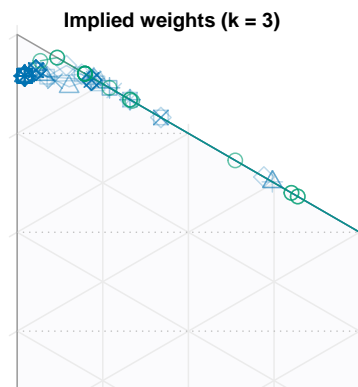
```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
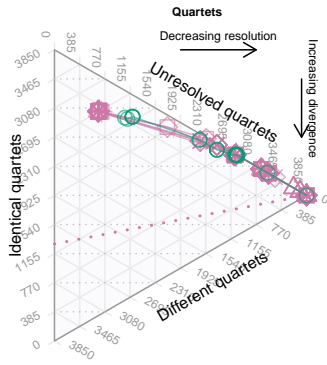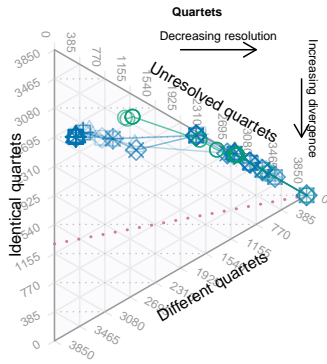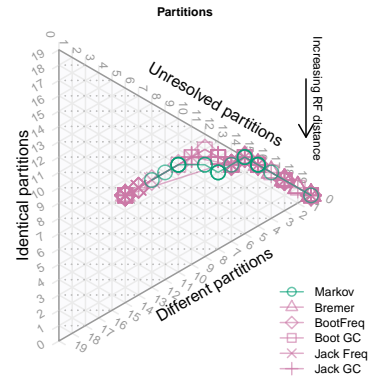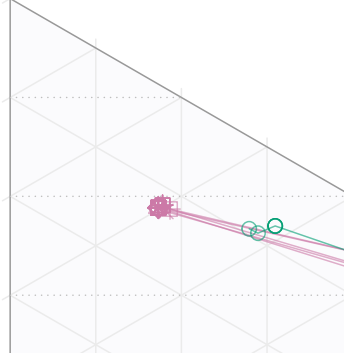
Dataset 20: CI=0.25. Equal weights
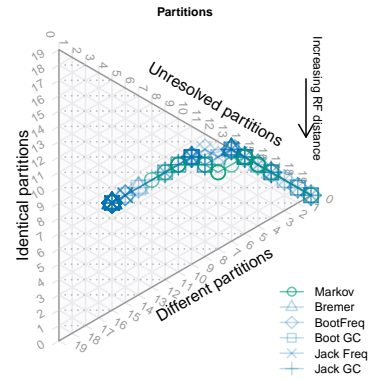

Implied weights (k = 3)

0.4 Trees 21–30

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
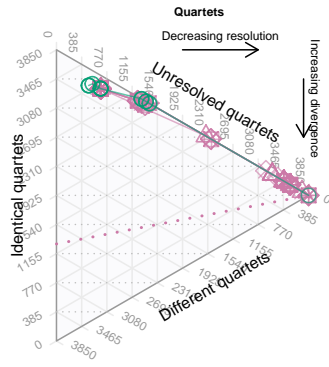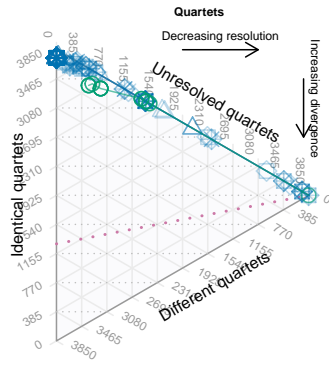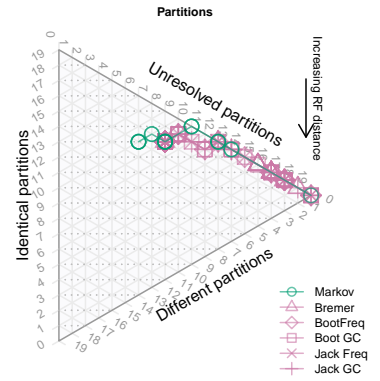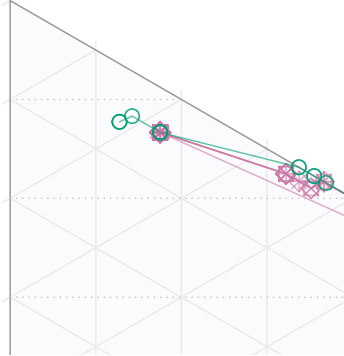
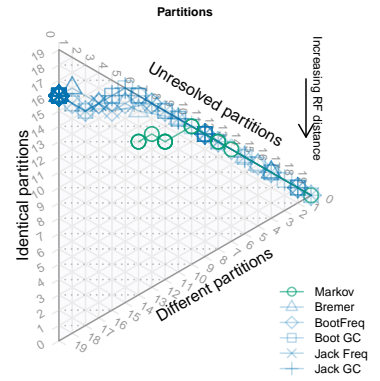Dataset 21: CI=0.26. Equal weights
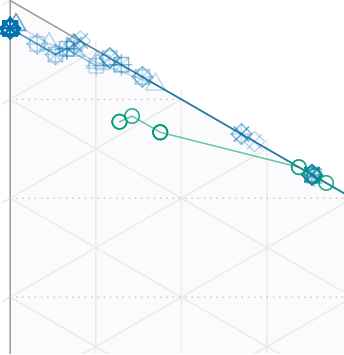
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
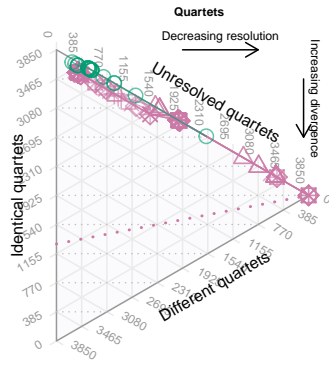
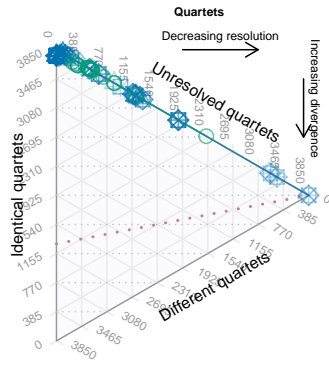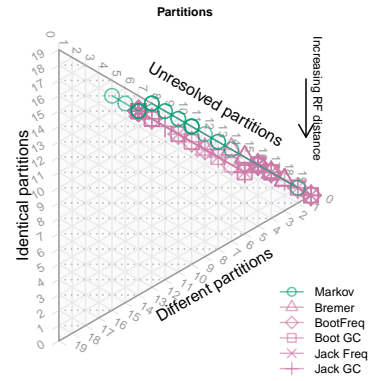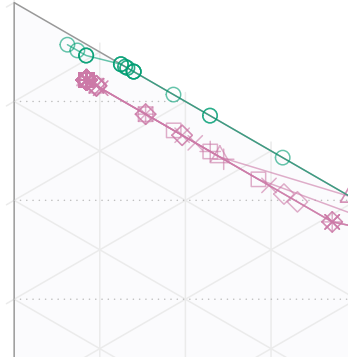Dataset 22: CI=0.26. Equal weights
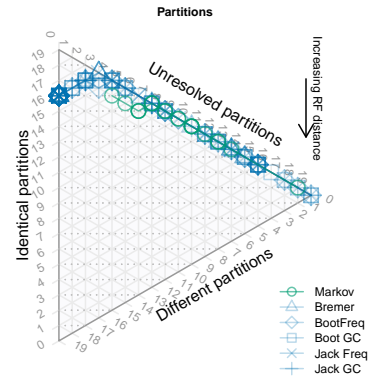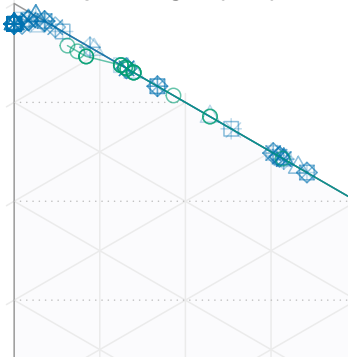
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 23: CI=0.25. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
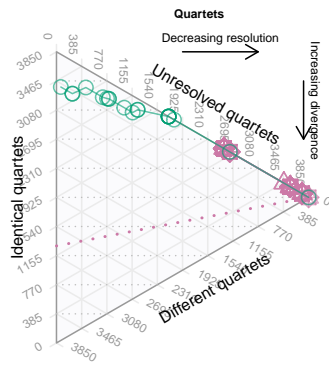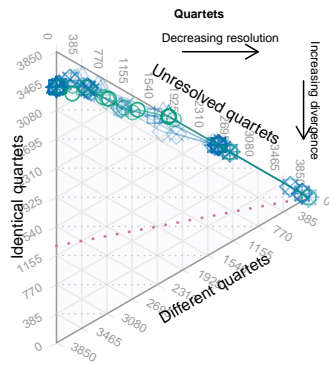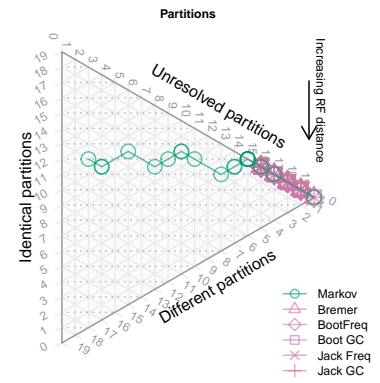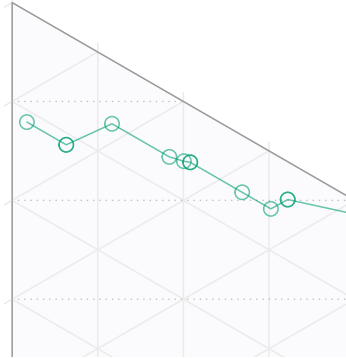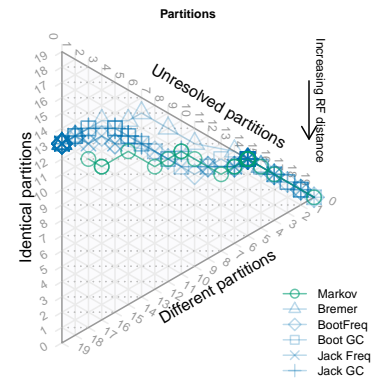
Dataset 24: CI=0.23. Equal weights
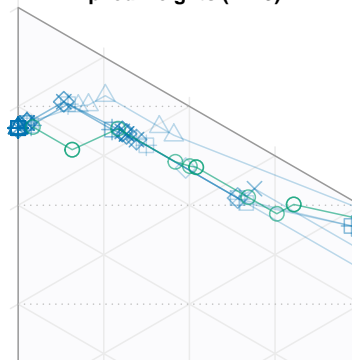
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
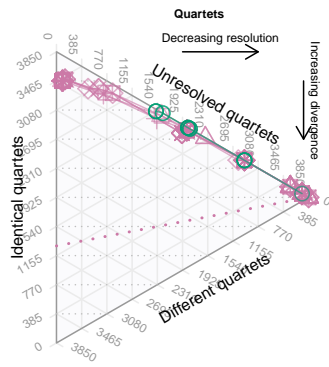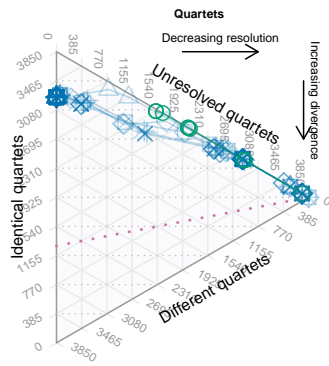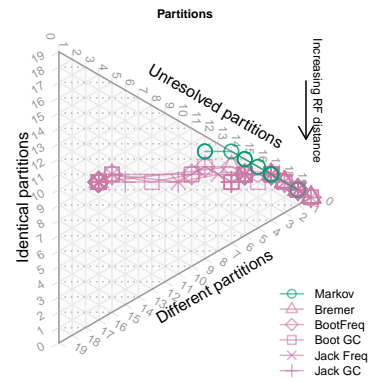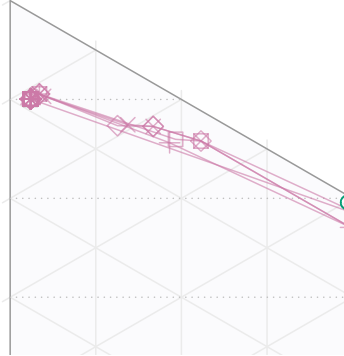
Dataset 25: CI=0.28. Equal weights
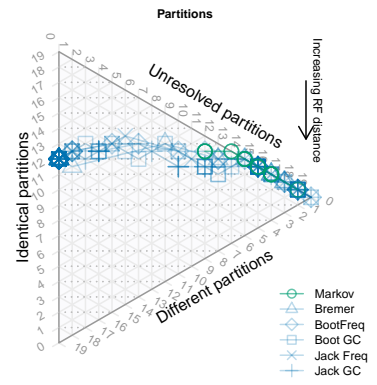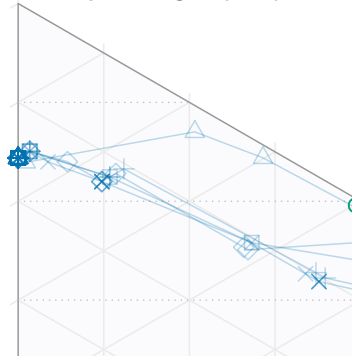
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
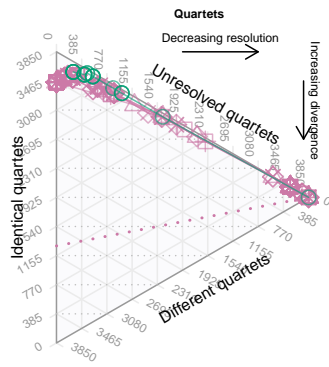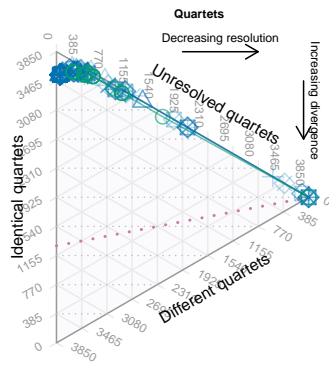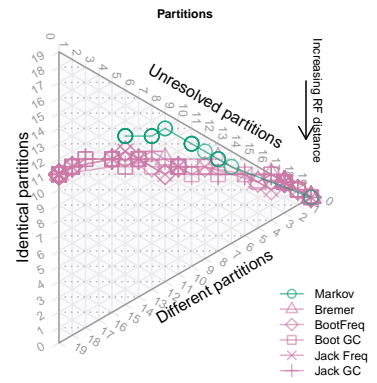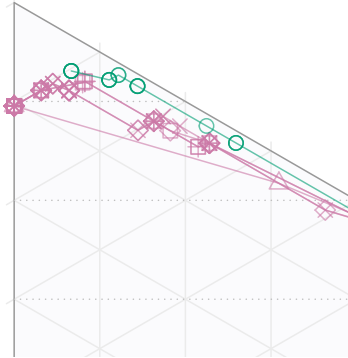
Dataset 26: CI=0.27. Equal weights

Implied weights (k = 3)

Legend (top right):
- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Legend (bottom right):
- Markov
- Bremer
- BootFreq
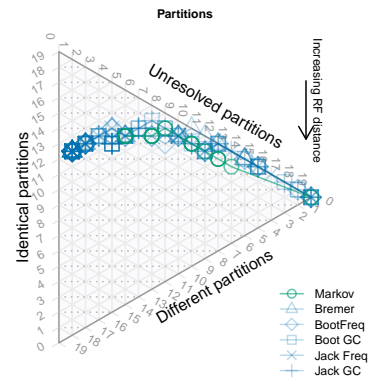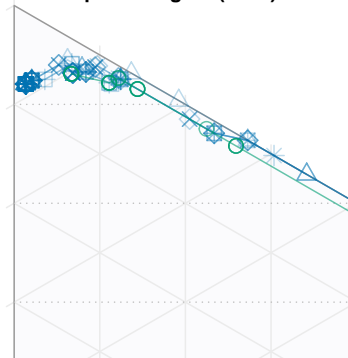- Boot GC
- Jack Freq
- Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
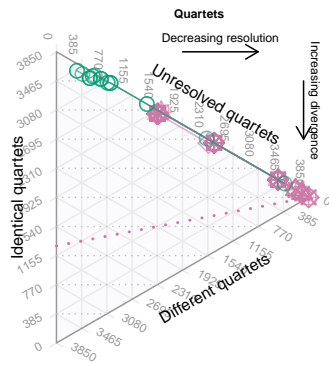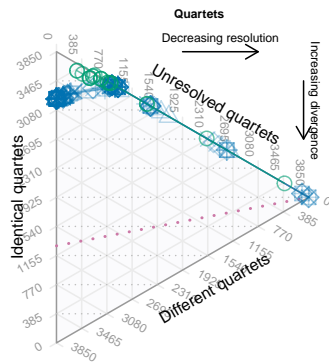
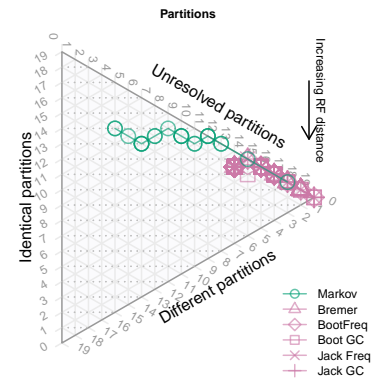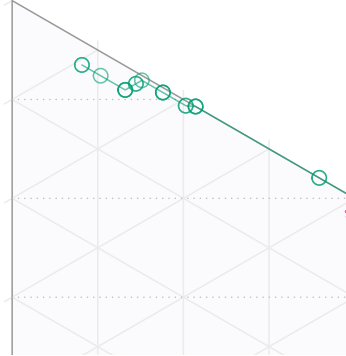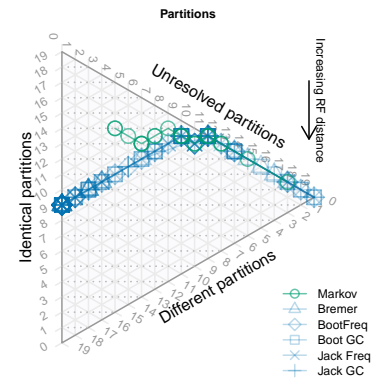**Dataset 27: CI=0.26. Equal weights**
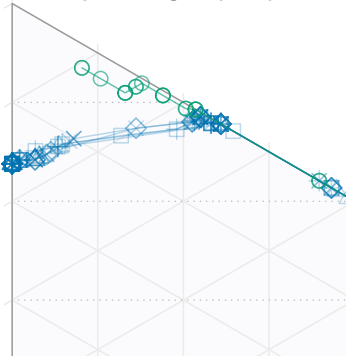
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
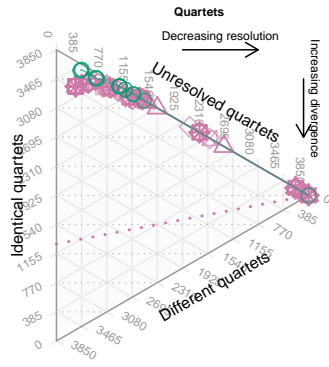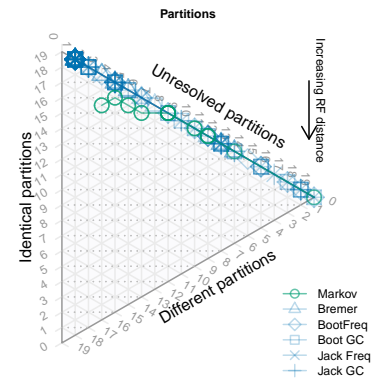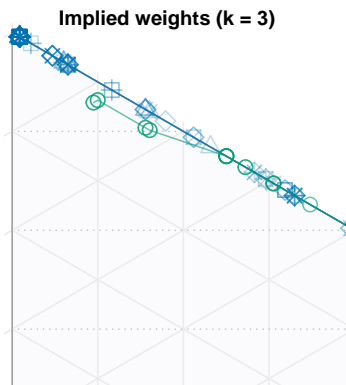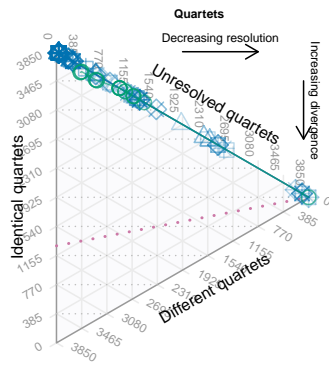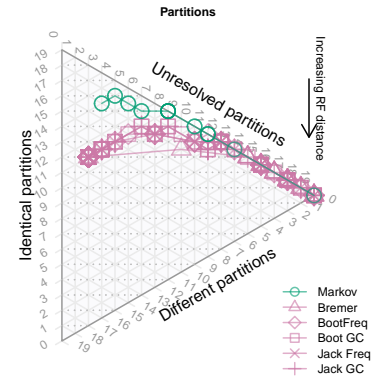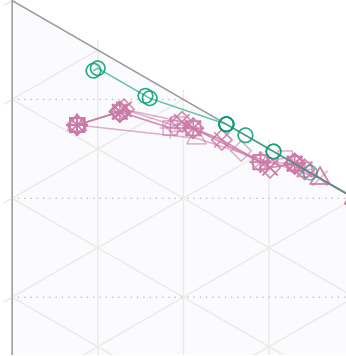
Dataset 28: CI=0.27. Equal weights
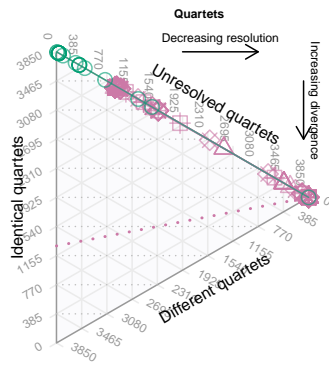
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
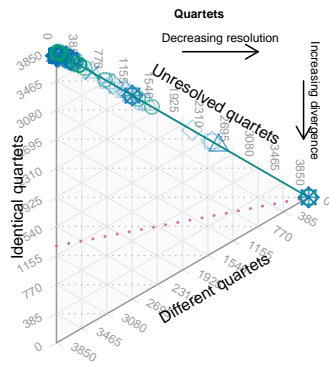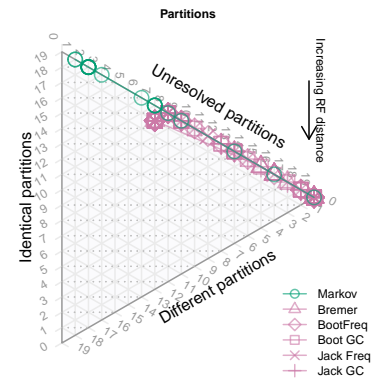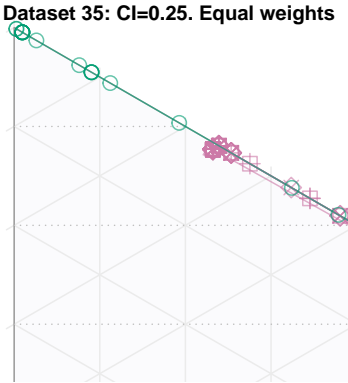
Dataset 29: CI=0.29. Equal weights

Implied weights (k = 3)

Legend (top right):
- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Legend (bottom right):
- Markov
- Bremer
- BootFreq
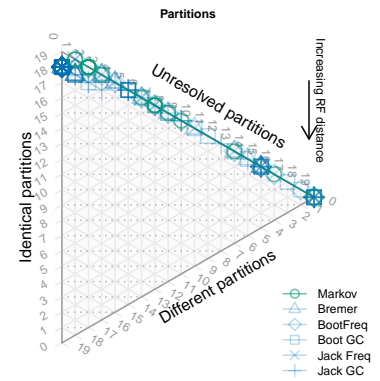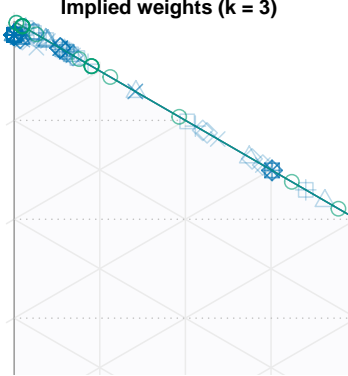- Boot GC
- Jack Freq
- Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
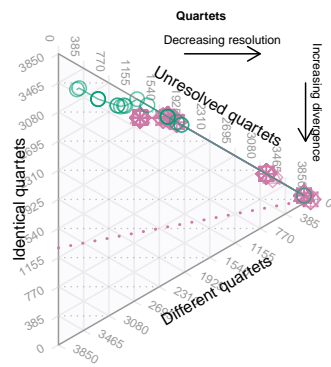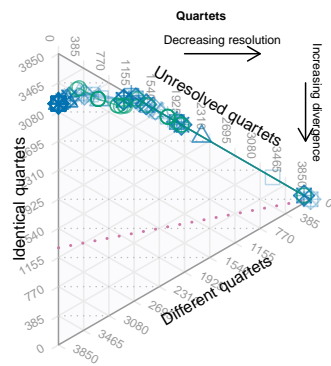
Dataset 30: CI=0.25. Equal weights

Implied weights (k = 3)

0.5 Trees 31–40

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
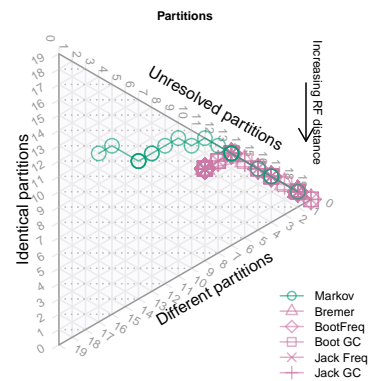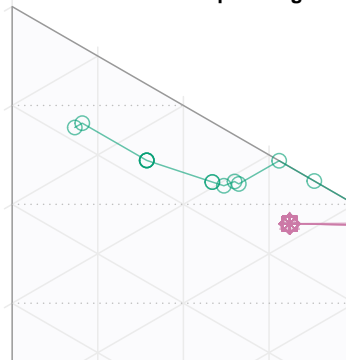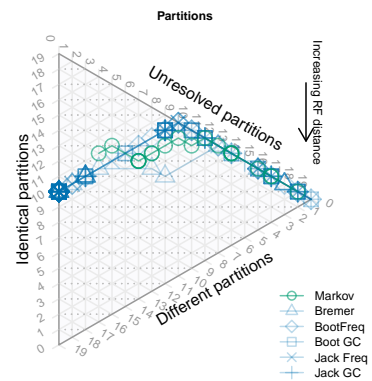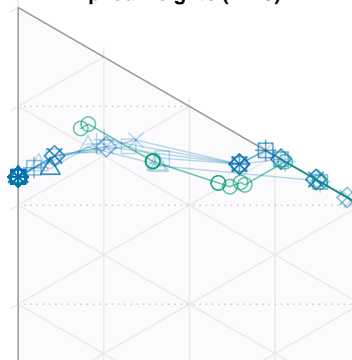```
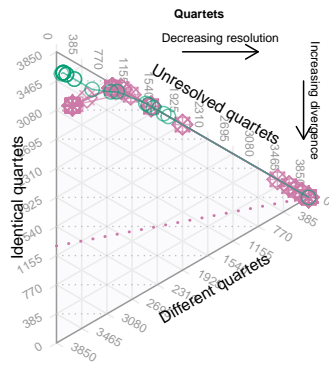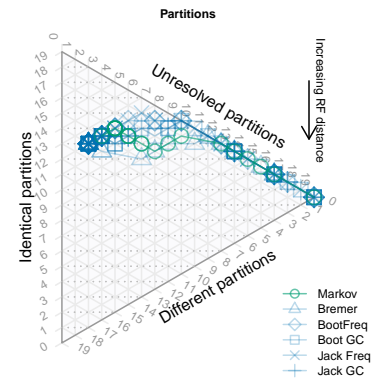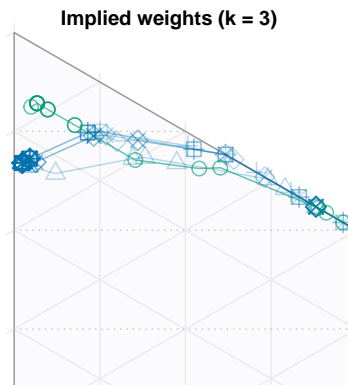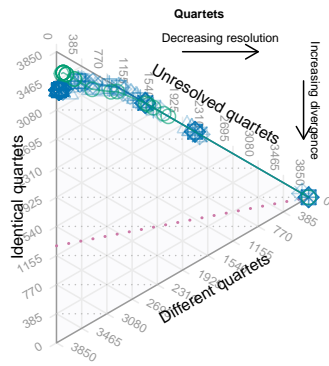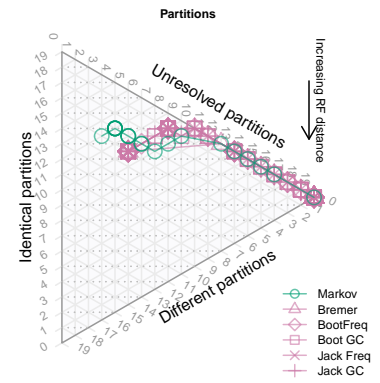
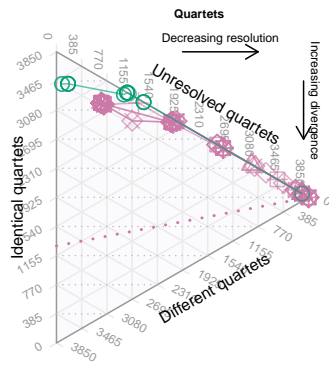Dataset 31: CI=0.26. Equal weights

Implied weights (k = 3)

```
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored
```
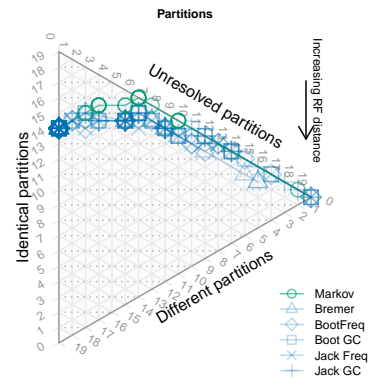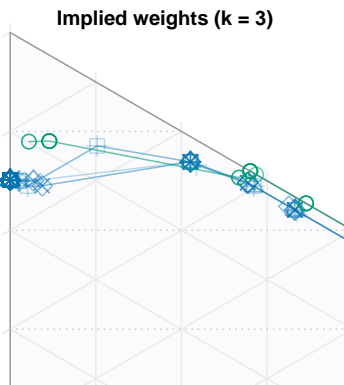
**Dataset 32: CI=0.25. Equal weights**

**Implied weights (k = 3)**

```
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored
```
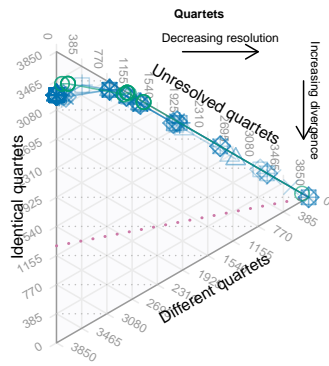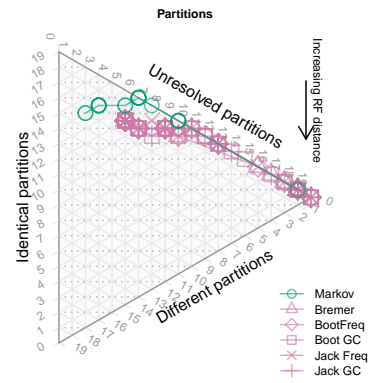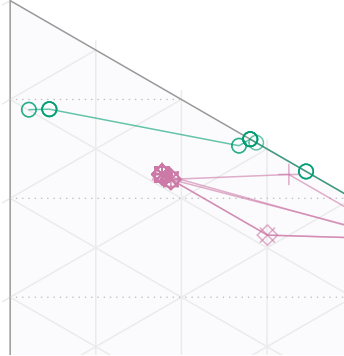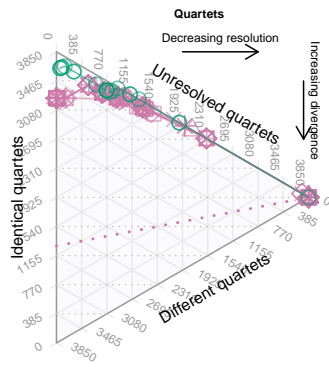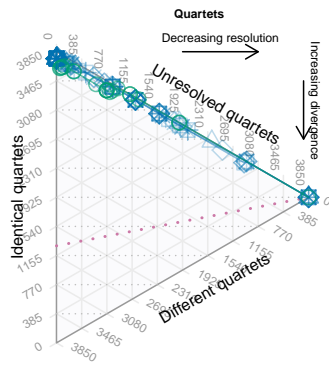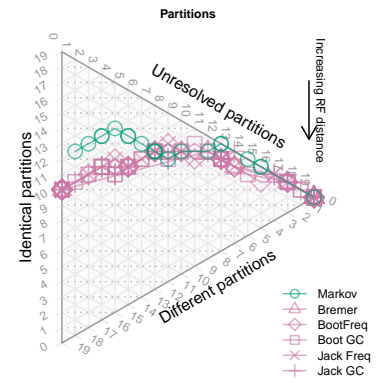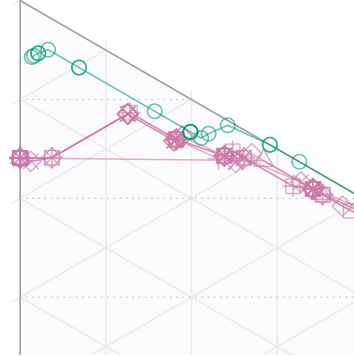
**Dataset 33: CI=0.27. Equal weights**

**Implied weights (k = 3)**

Legend (top right):
- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Legend (bottom right):
- Markov
- Bremer
- BootFreq
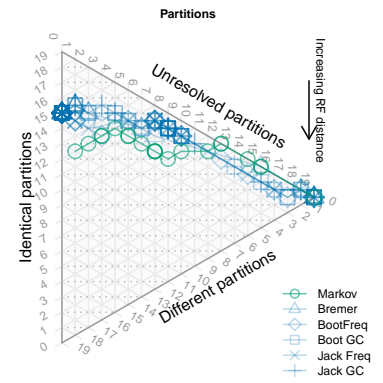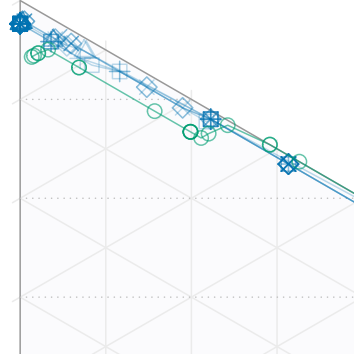- Boot GC
- Jack Freq
- Jack GC

```
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored
```
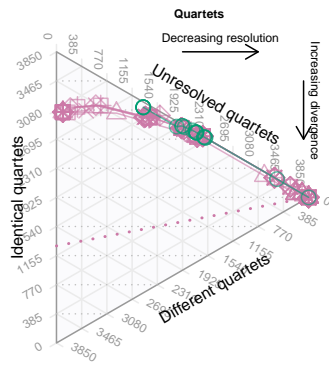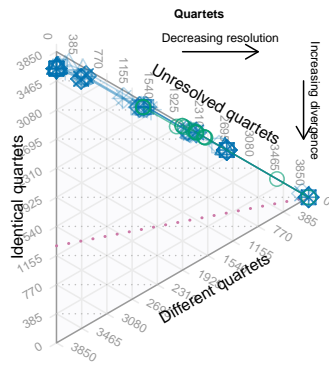
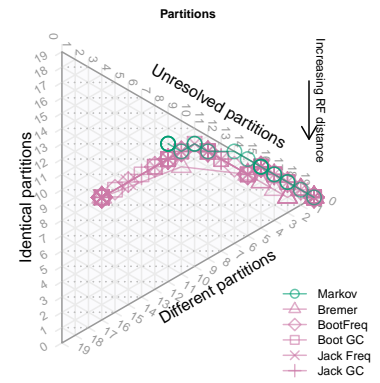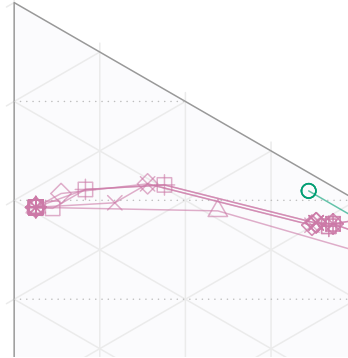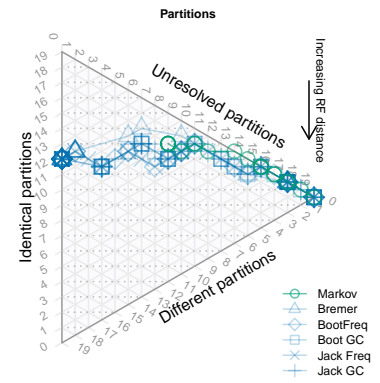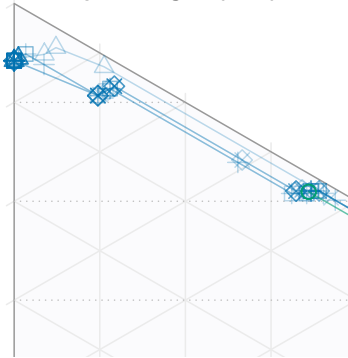Dataset 34: CI=0.29. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

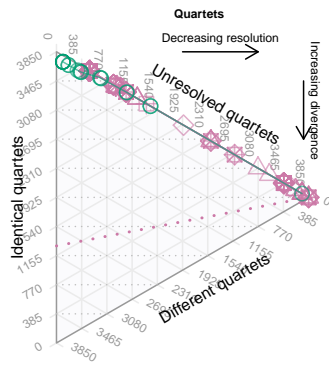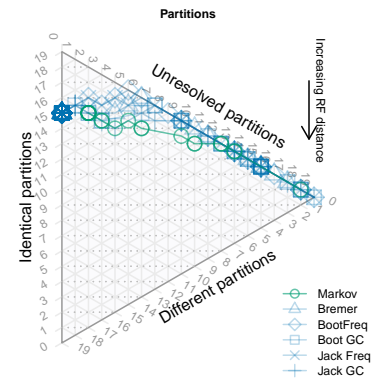**Dataset 35: CI=0.25. Equal weights**

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

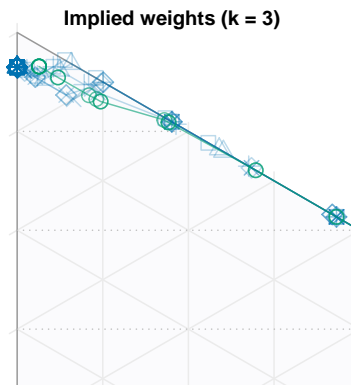Dataset 36: CI=0.24. Equal weights
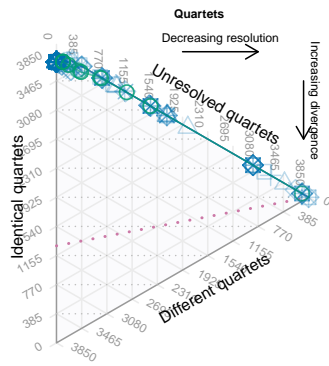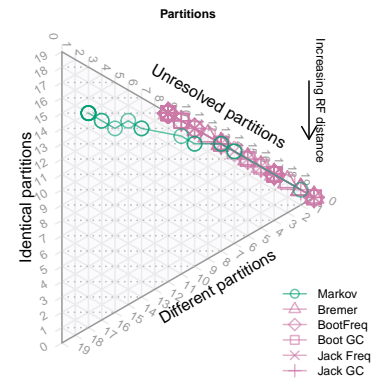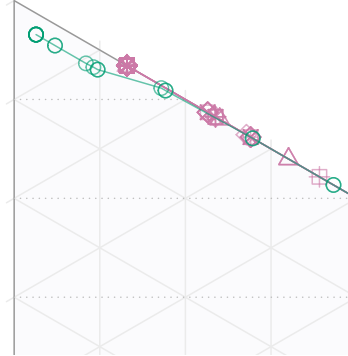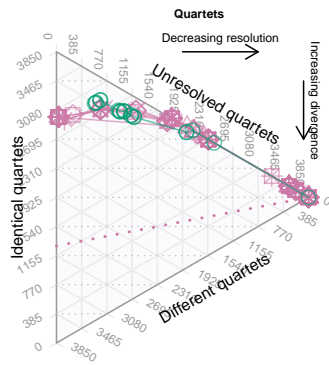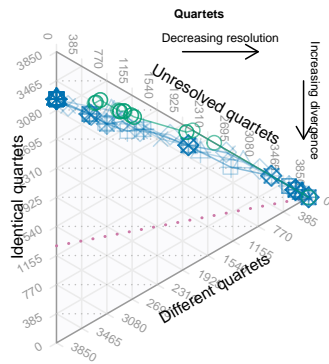
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
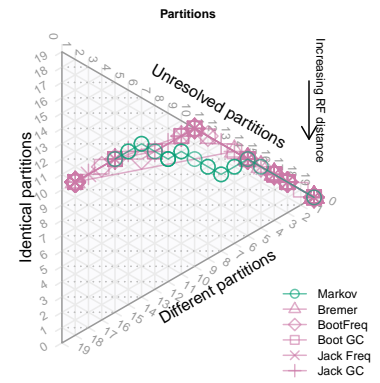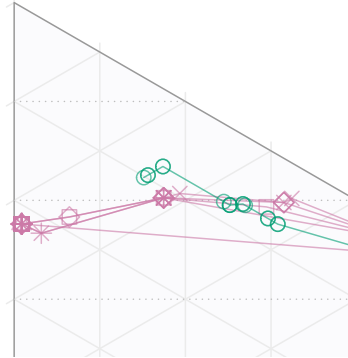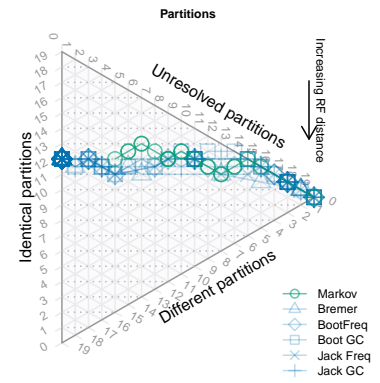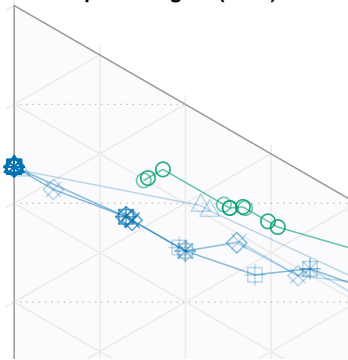
Dataset 37: CI=0.26. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
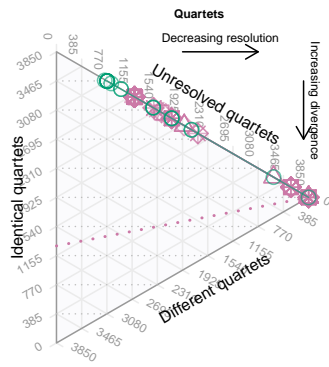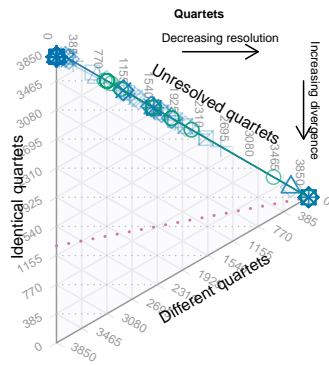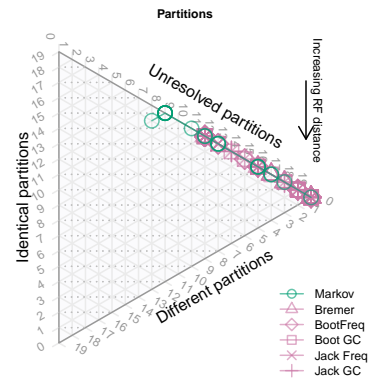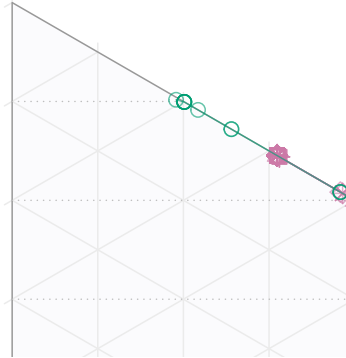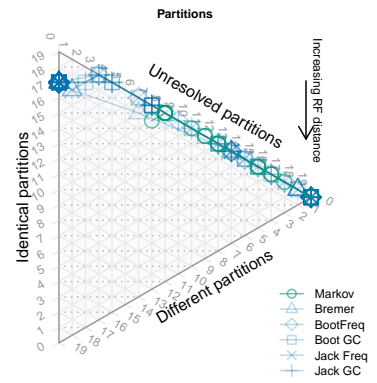
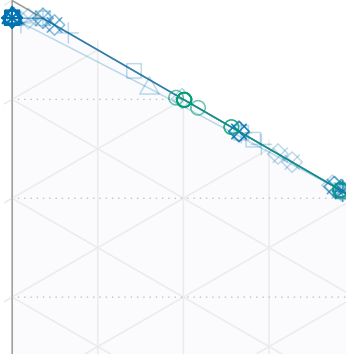Dataset 38: CI=0.29. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
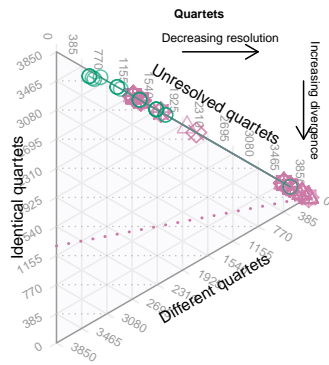
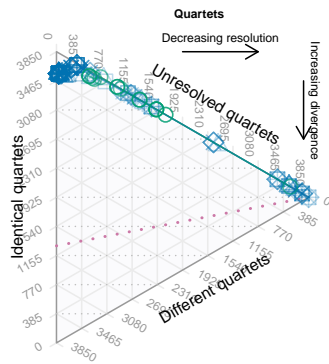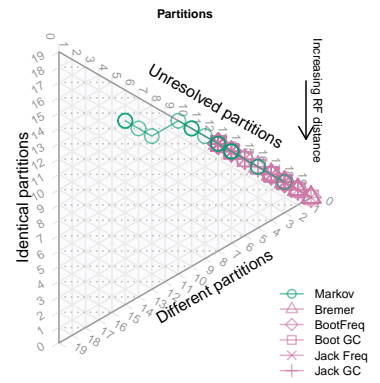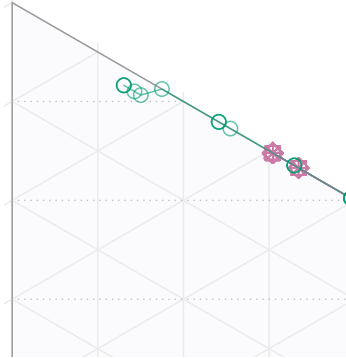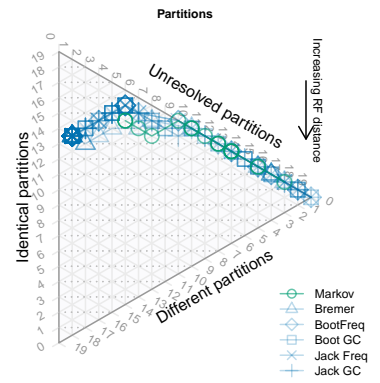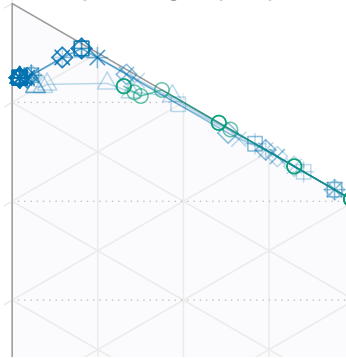Dataset 39: CI=0.25. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
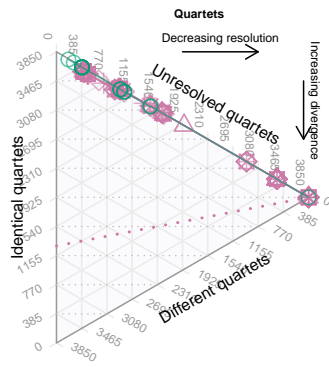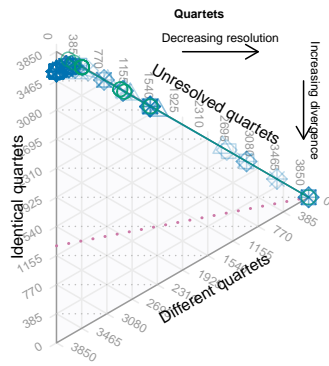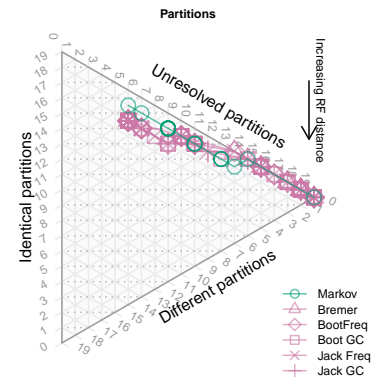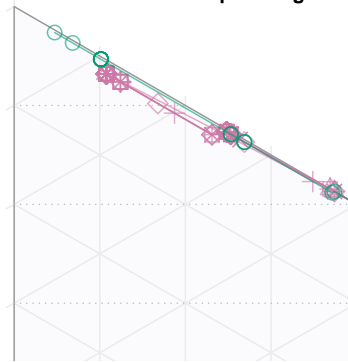
Dataset 40: CI=0.24. Equal weights
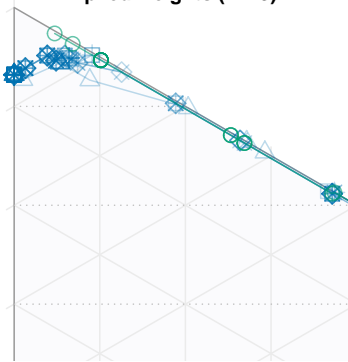
Implied weights (k = 3)

0.6 Trees 41–50

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
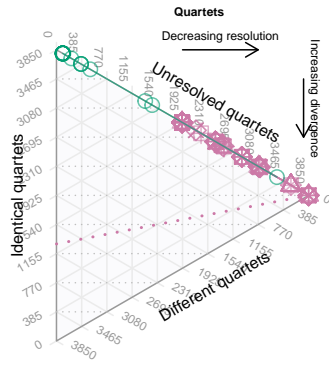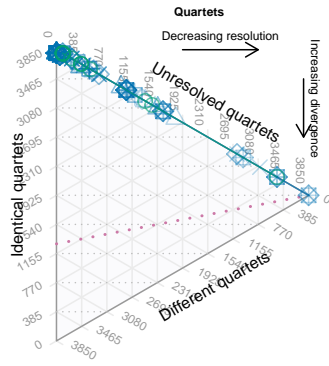
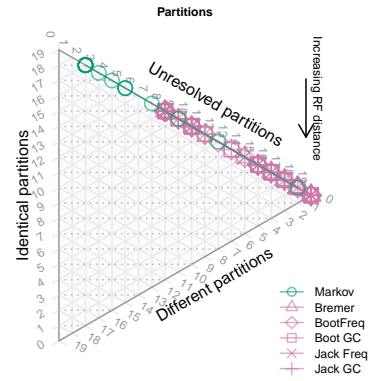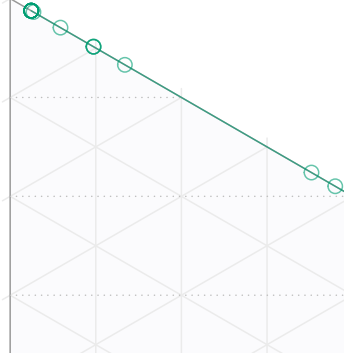**Dataset 41: CI=0.3. Equal weights**
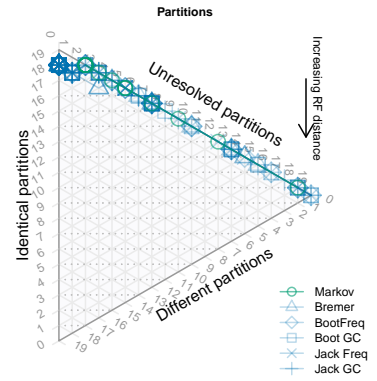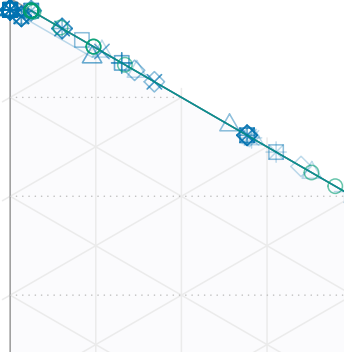
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
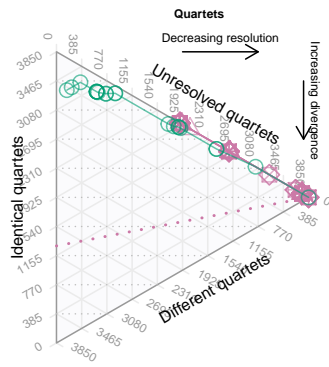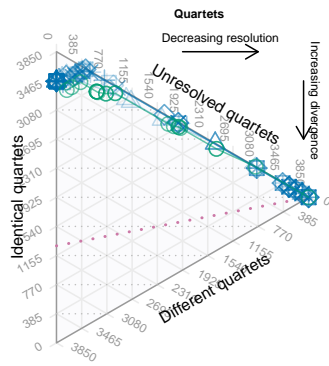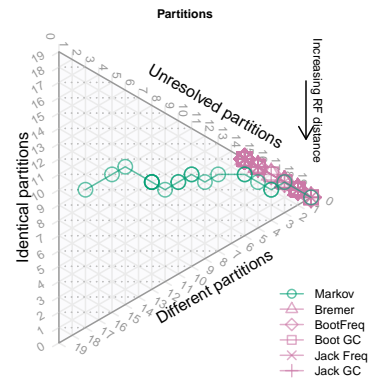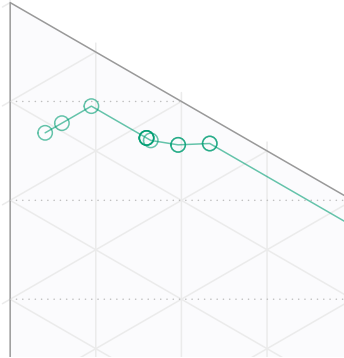
Dataset 42: CI=0.24. Equal weights
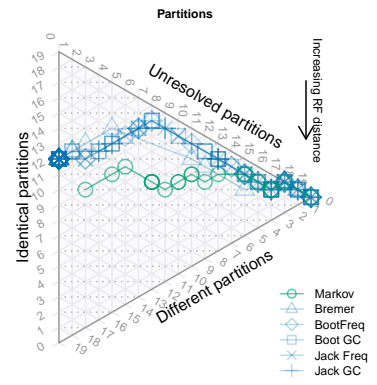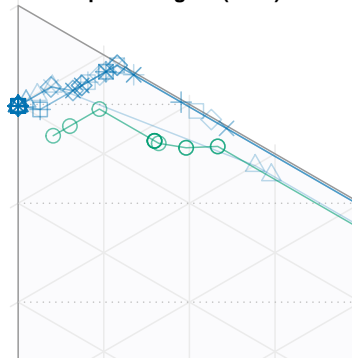
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 43: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
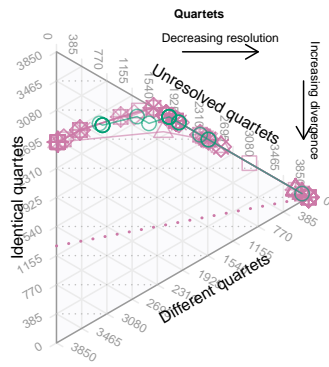
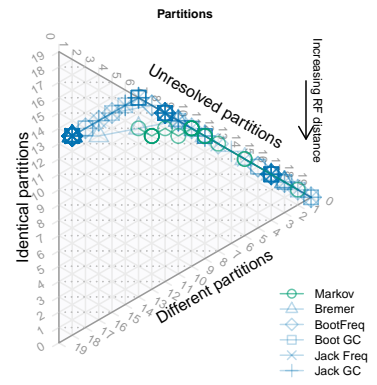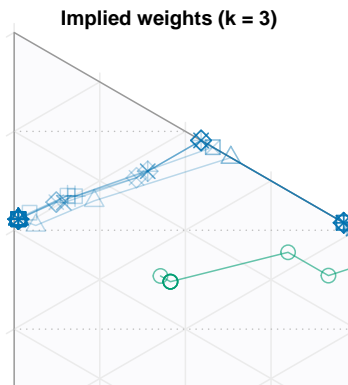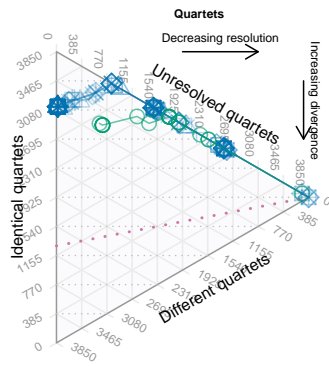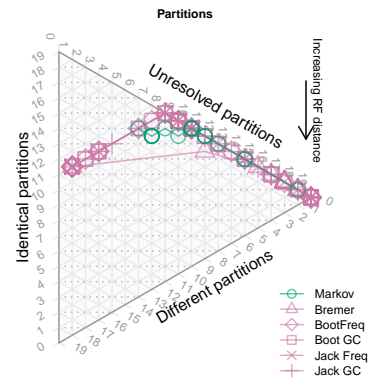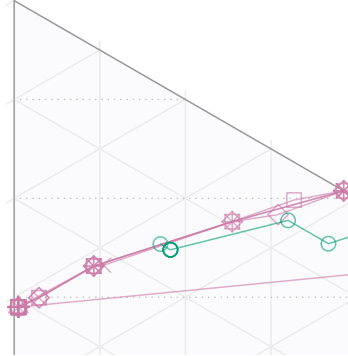**Dataset 44: CI=0.27. Equal weights**
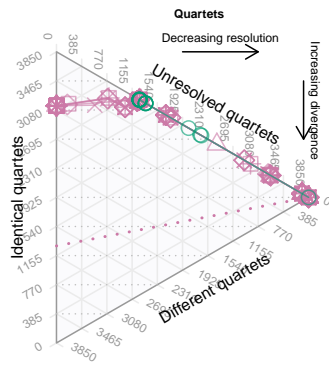
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
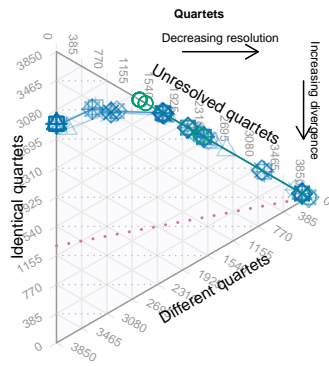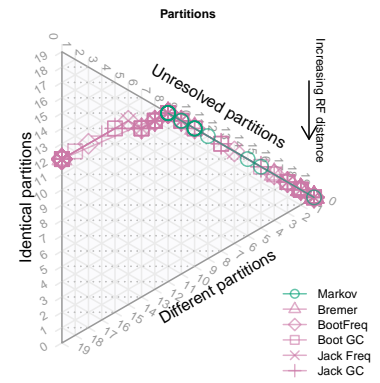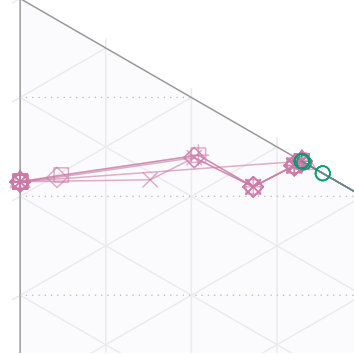
Dataset 45: CI=0.27. Equal weights
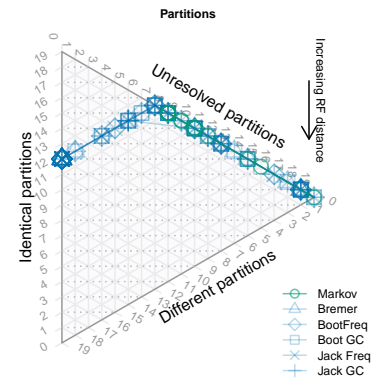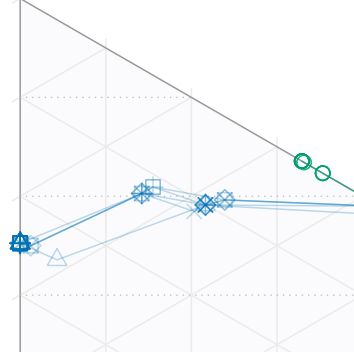
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
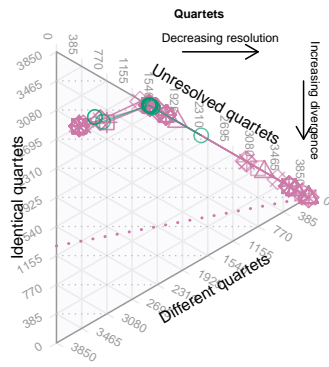
Dataset 46: CI=0.24. Equal weights
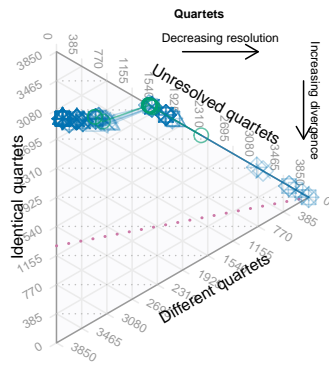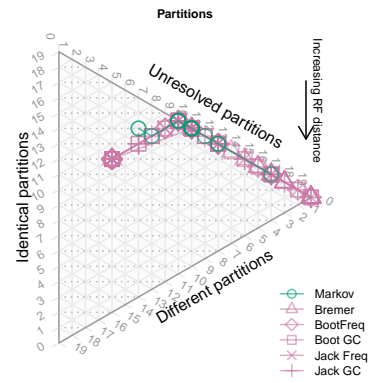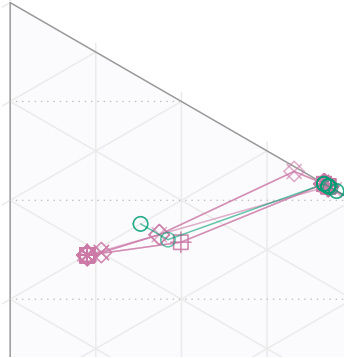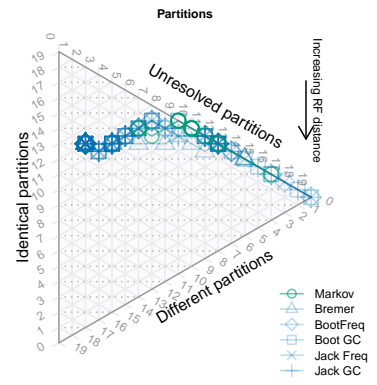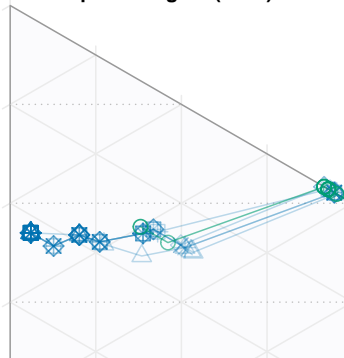
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
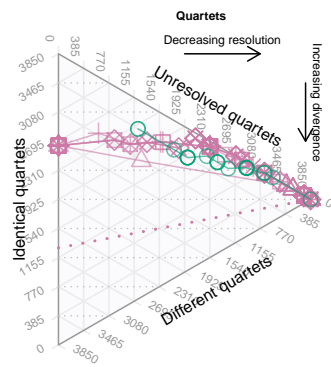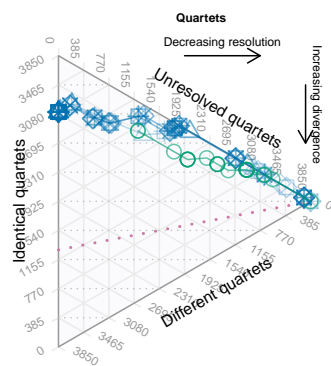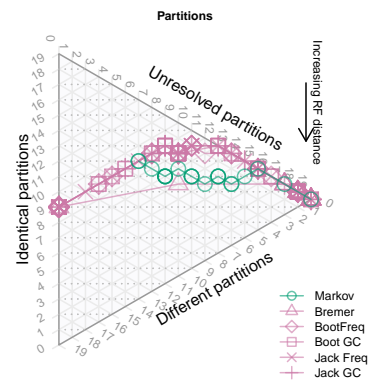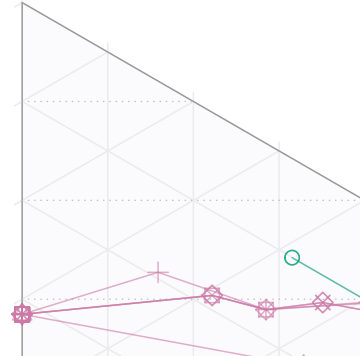
Dataset 47: CI=0.29. Equal weights
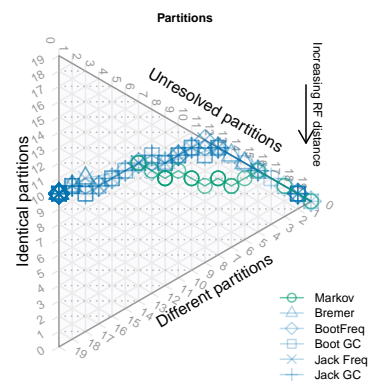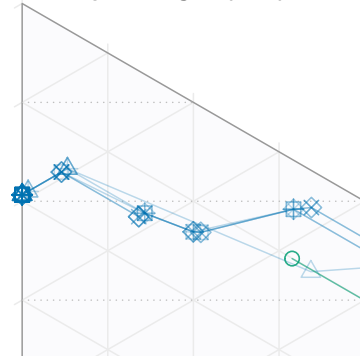
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 48: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
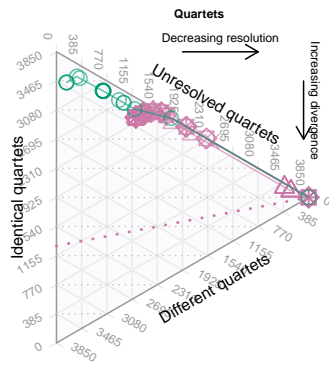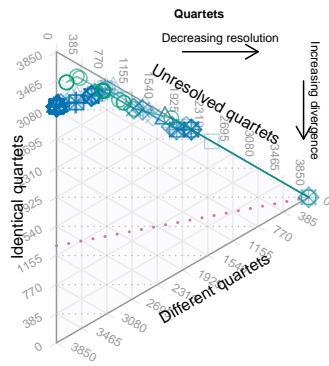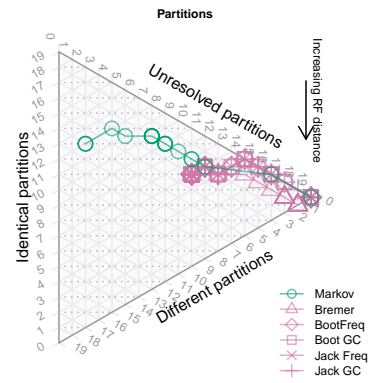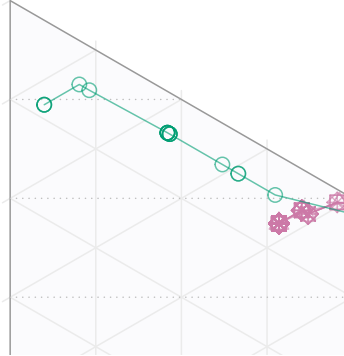
Dataset 49: CI=0.28. Equal weights
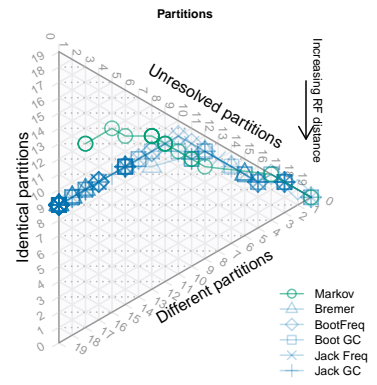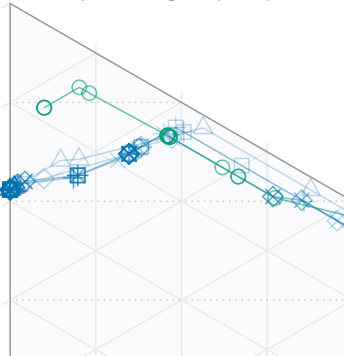
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
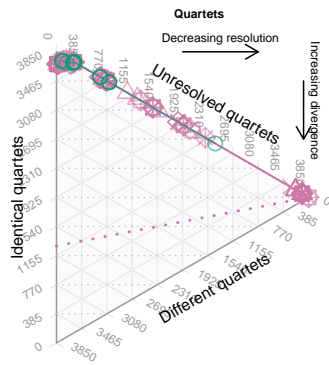
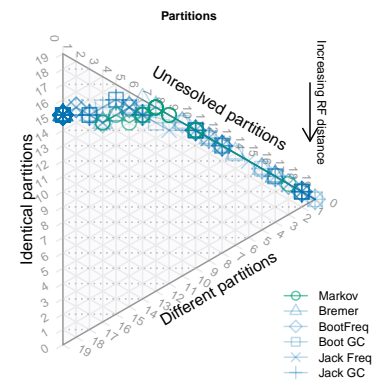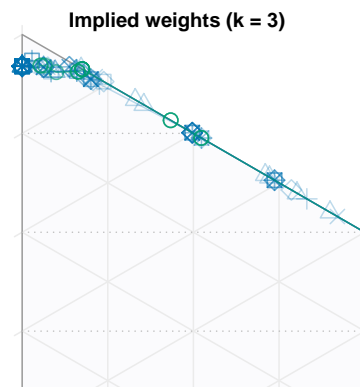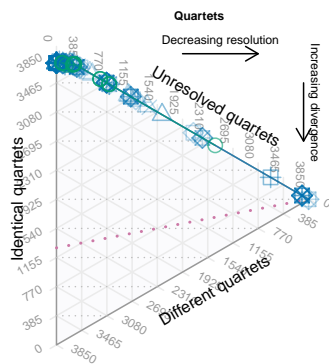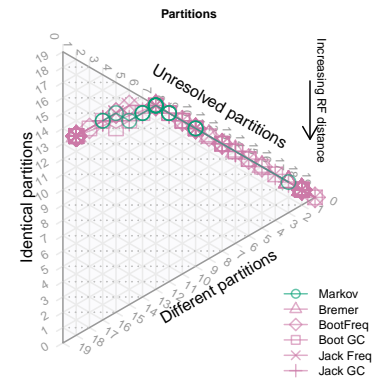Dataset 50: CI=0.25. Equal weights

Implied weights (k = 3)

0.7 Trees 51–60

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

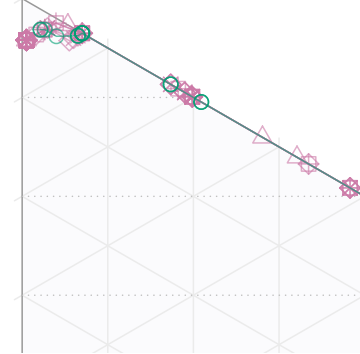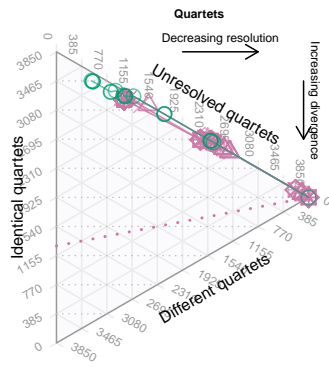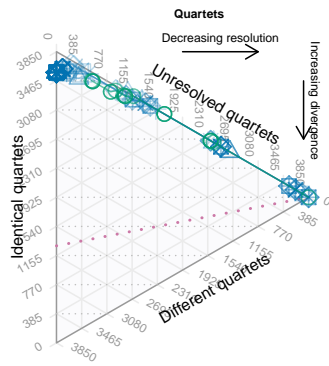**Dataset 51: CI=0.3. Equal weights**

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
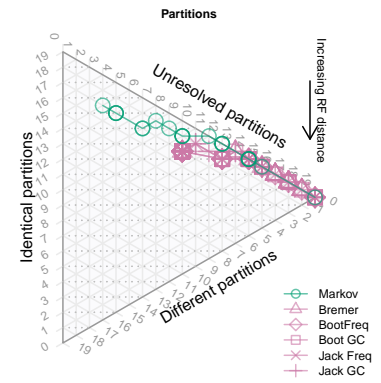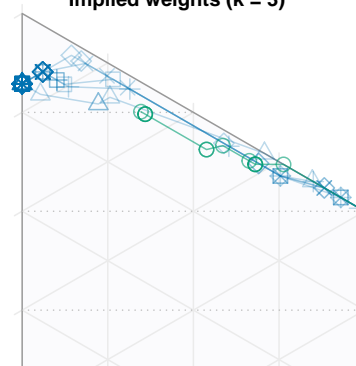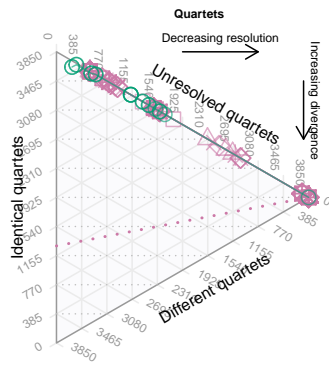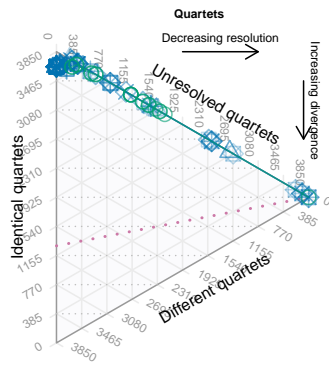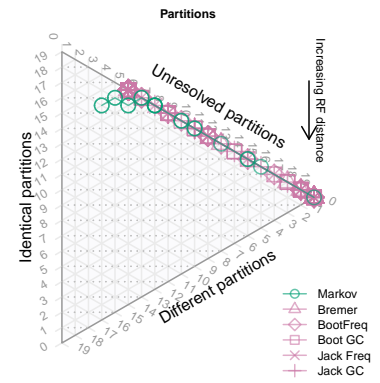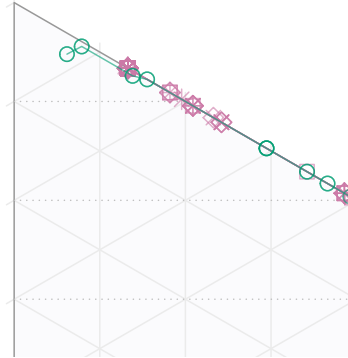
Dataset 52: CI=0.25. Equal weights

Implied weights (k = 3)

Legend (top right): Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

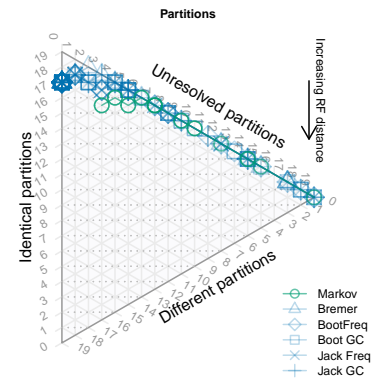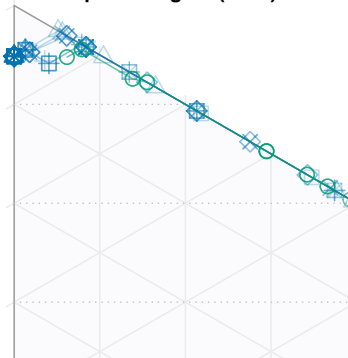Legend (bottom right): Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
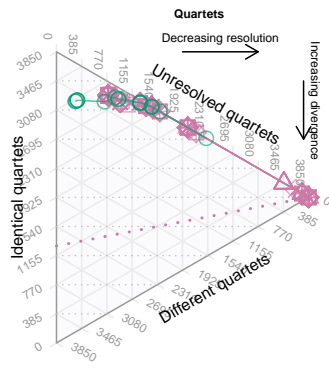
```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

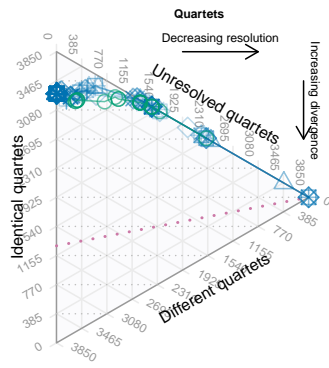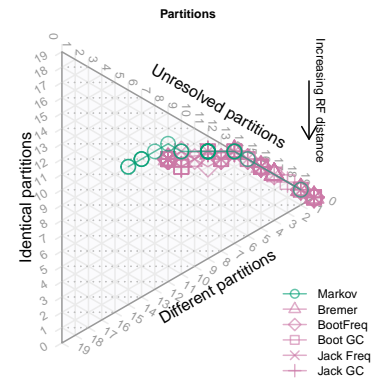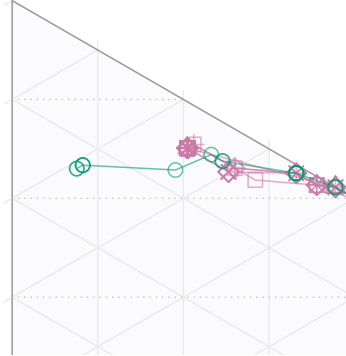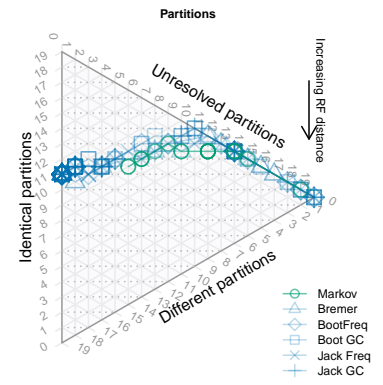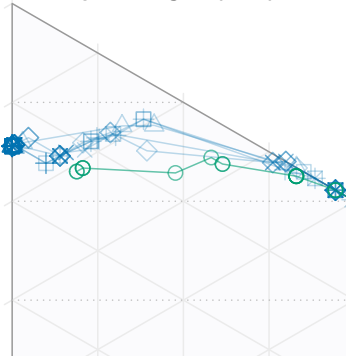Dataset 54: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
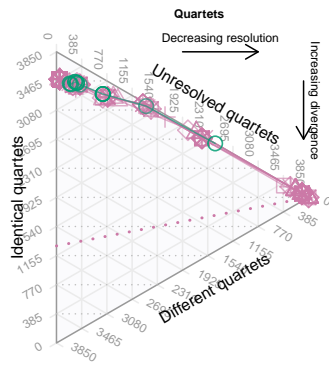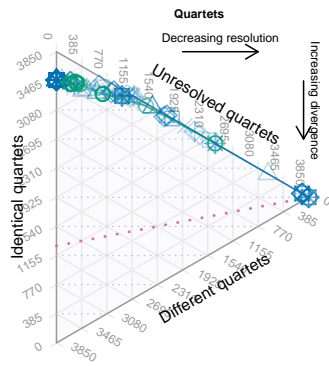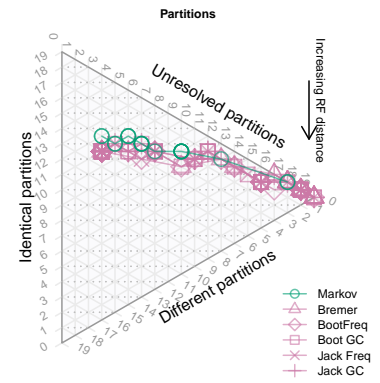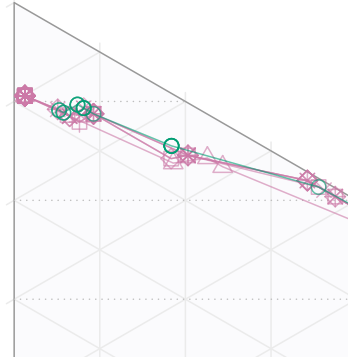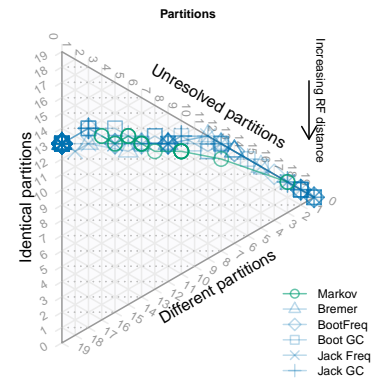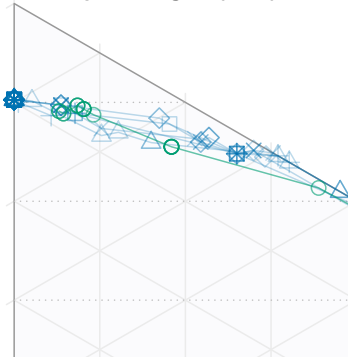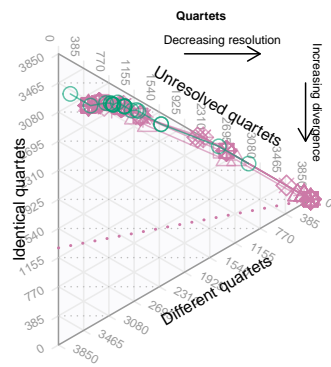
Dataset 55: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
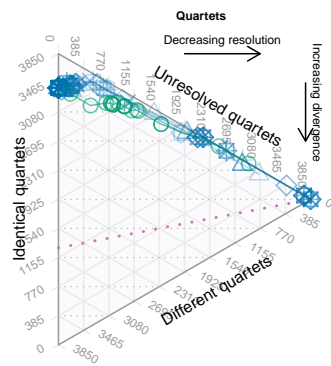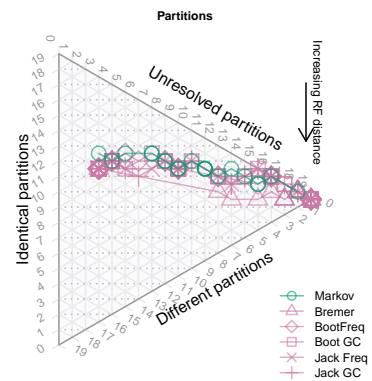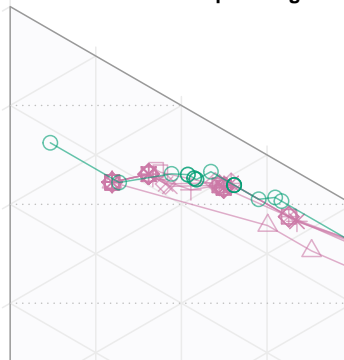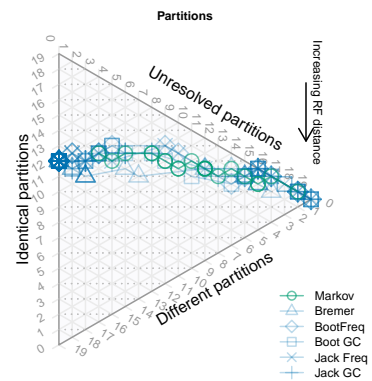
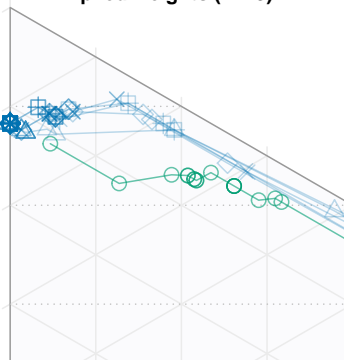Dataset 56: CI=0.31. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
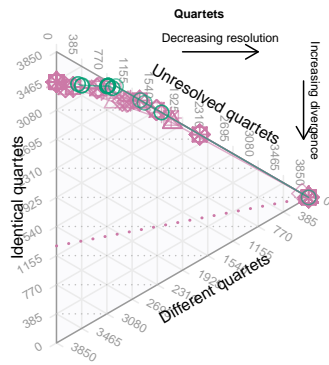
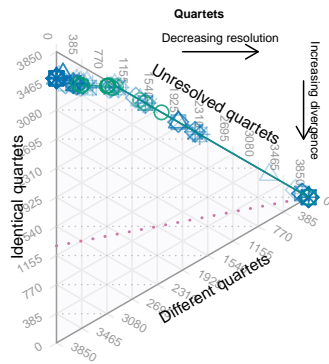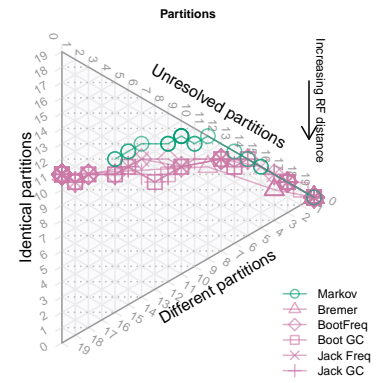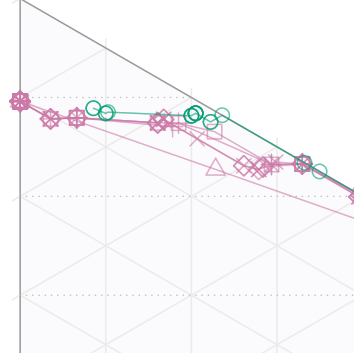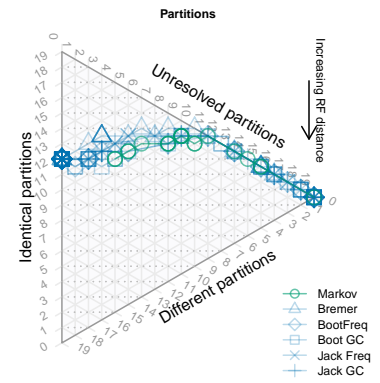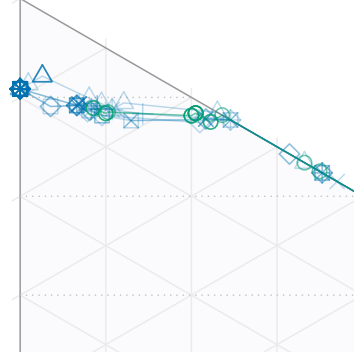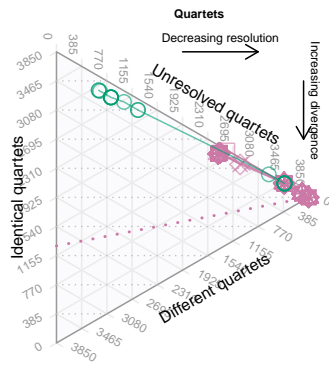Dataset 57: CI=0.25. Equal weights
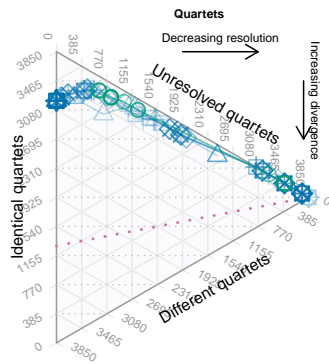
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Quartets — Dataset 58: CI=0.25. Equal weights — **Partitions**

Quartets — Implied weights (k = 3) — **Partitions**

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

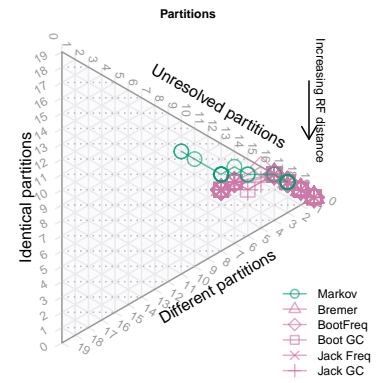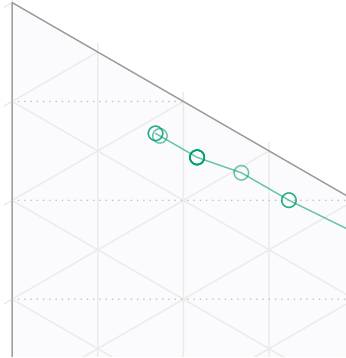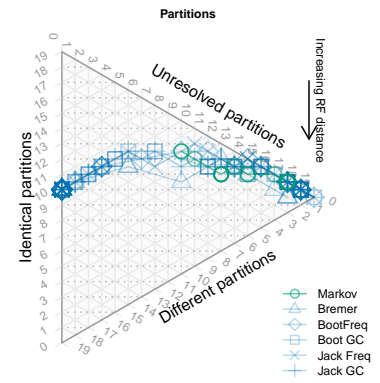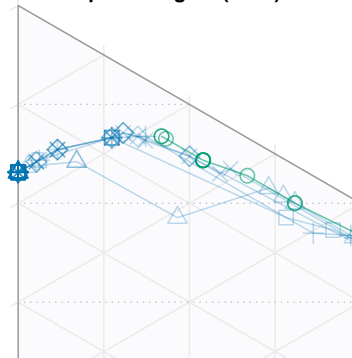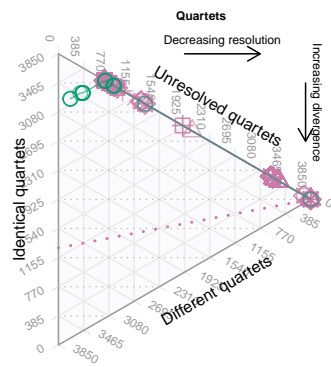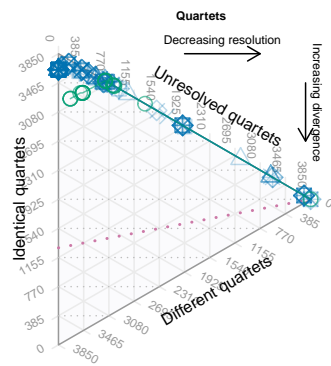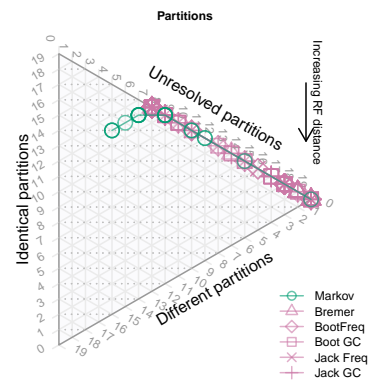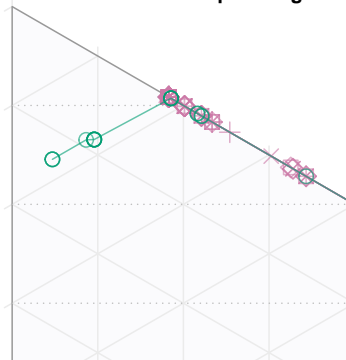Dataset 59: CI=0.26. Equal weights
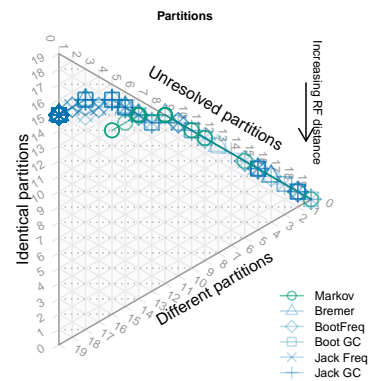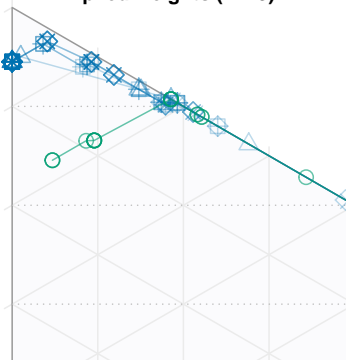
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
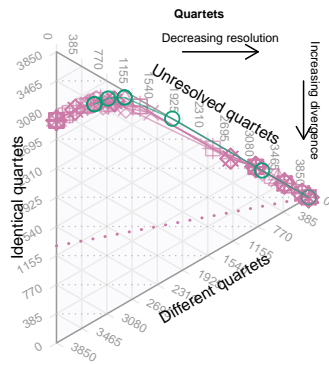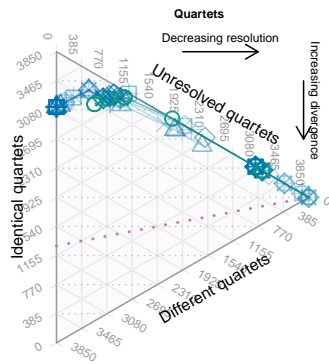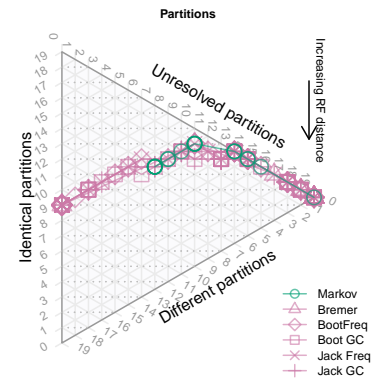
Dataset 60: CI=0.24. Equal weights
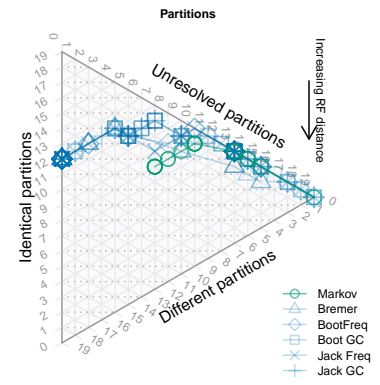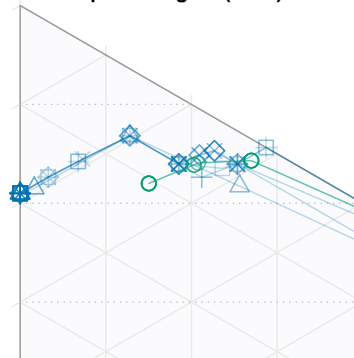
Implied weights (k = 3)

0.8 Trees 61–70

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
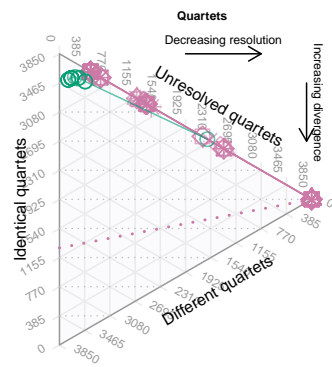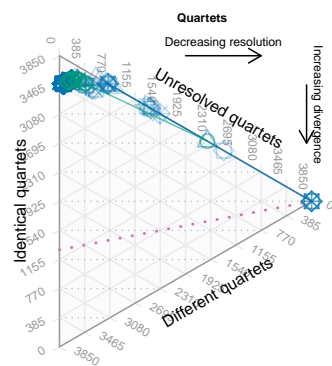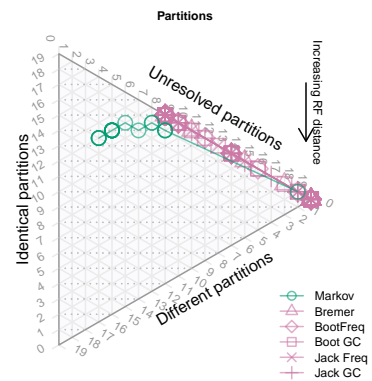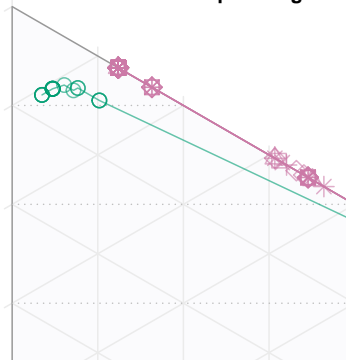
Dataset 61: CI=0.26. Equal weights
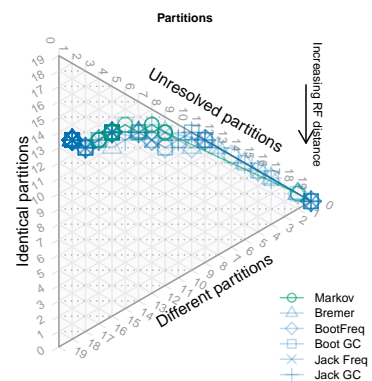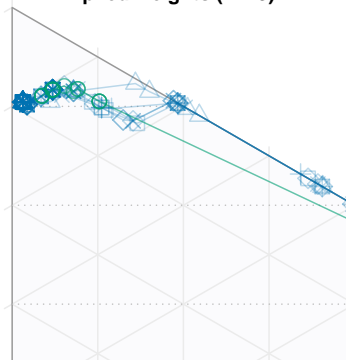

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 62: CI=0.26. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
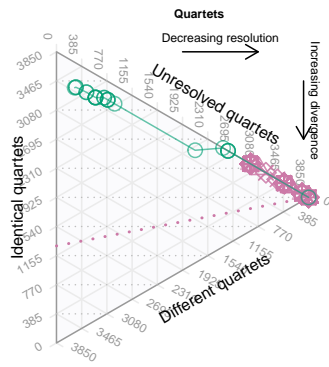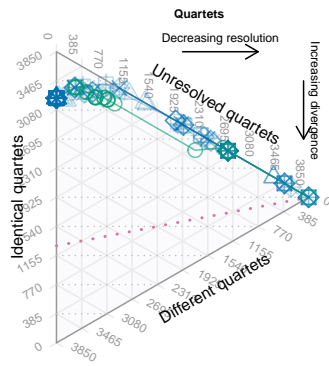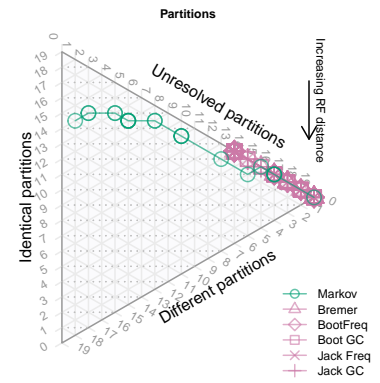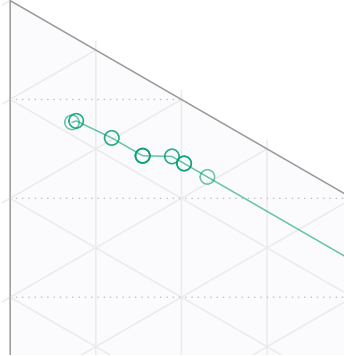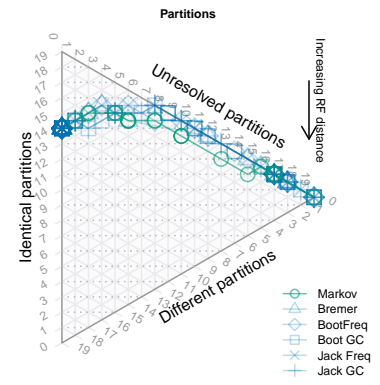
Dataset 63: CI=0.24. Equal weights
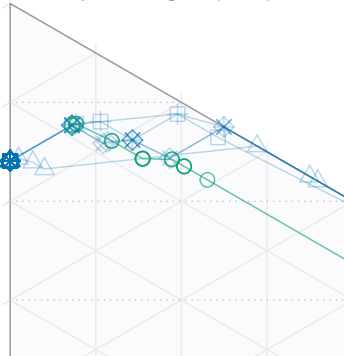
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
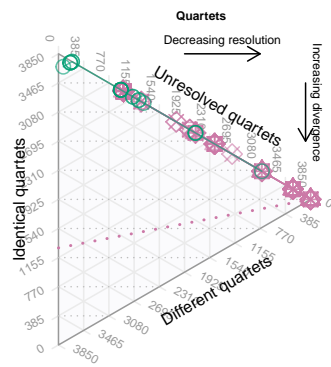
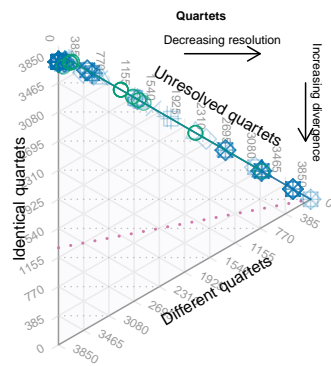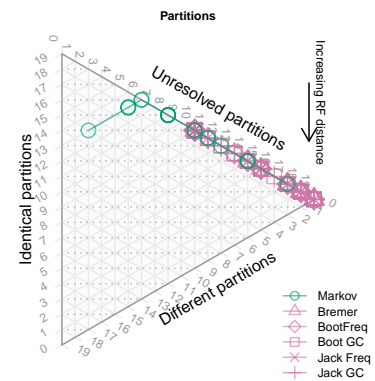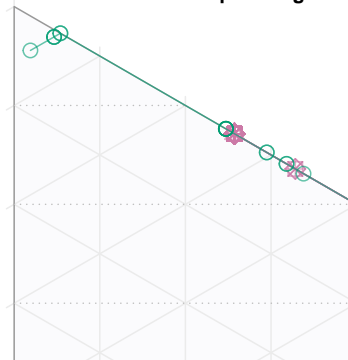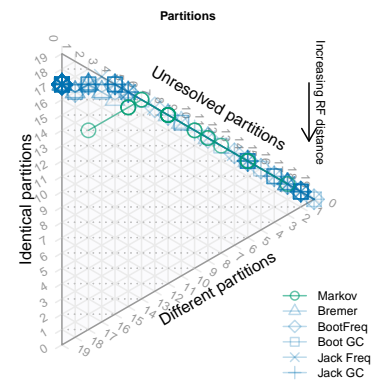Dataset 64: CI=0.29. Equal weights
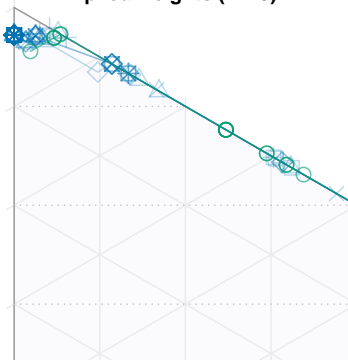
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
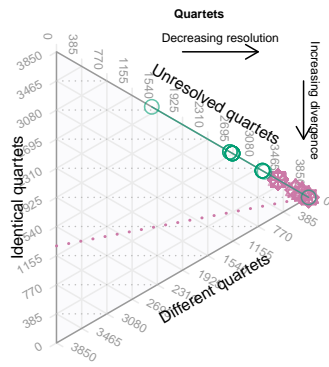
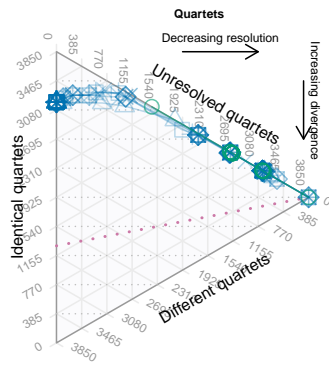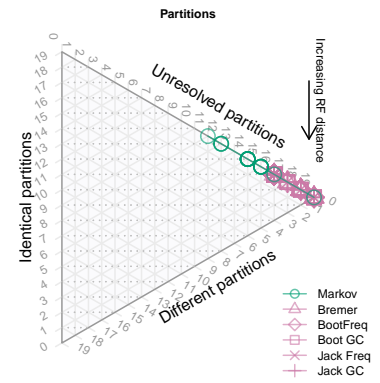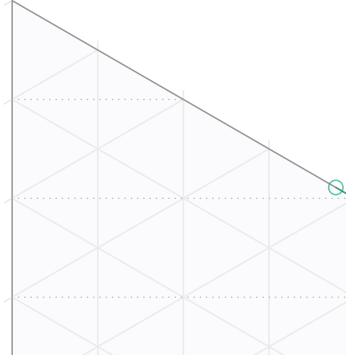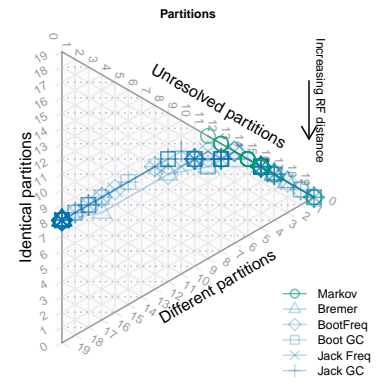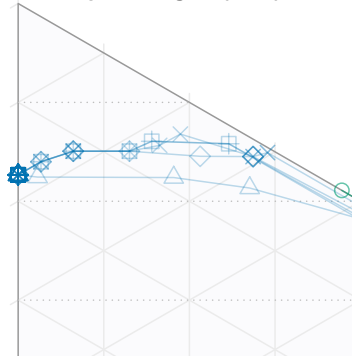**Dataset 65: CI=0.25. Equal weights**

Quartets — Decreasing resolution — Increasing divergence — Unresolved quartets — Identical quartets — Different quartets

Partitions — Increasing RF distance — Unresolved partitions — Identical partitions — Different partitions

Legend: Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

Implied weights (k = 3)

Legend: Markov, Bremer, BootFreq, Boot GC, Jack Freq, Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 66: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
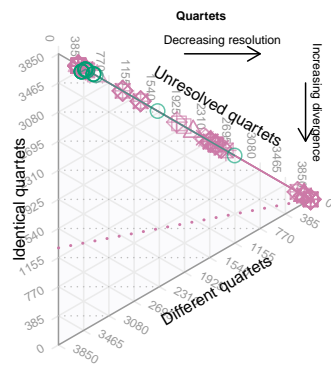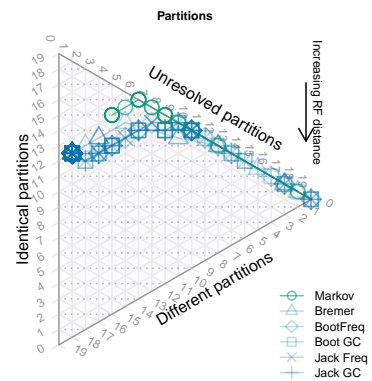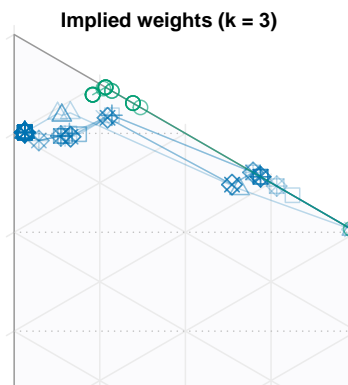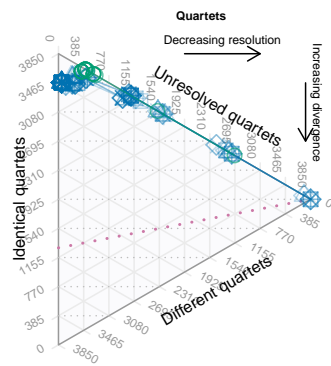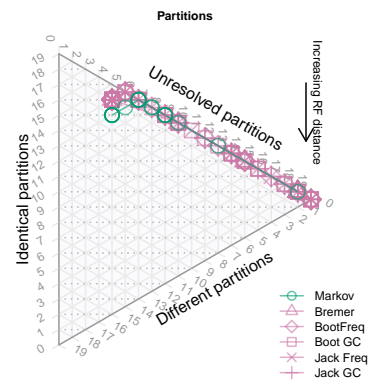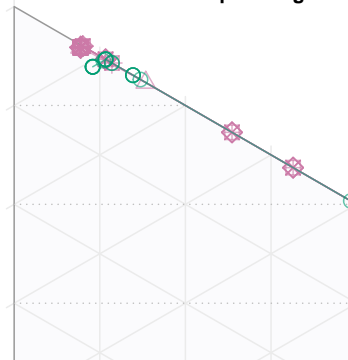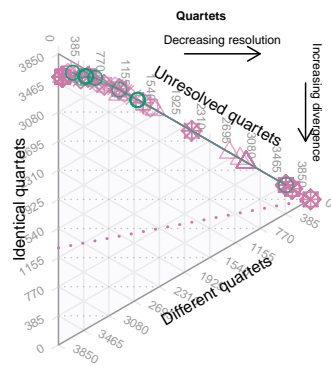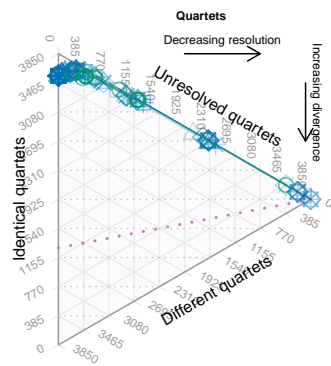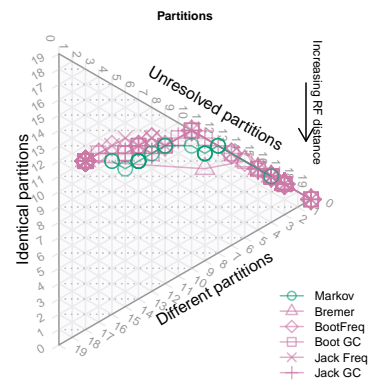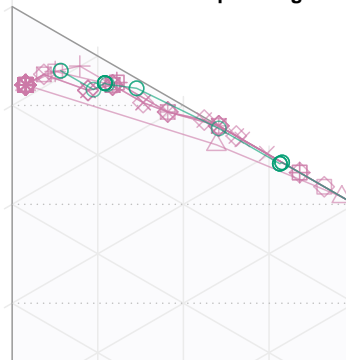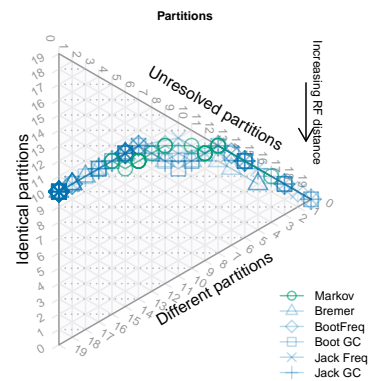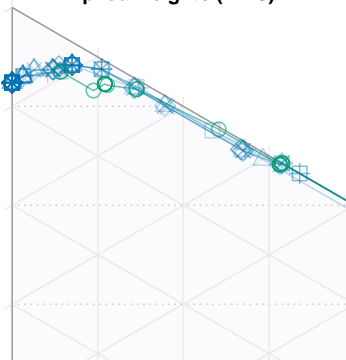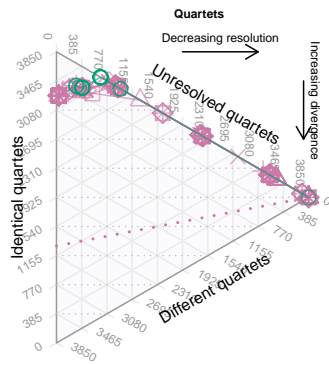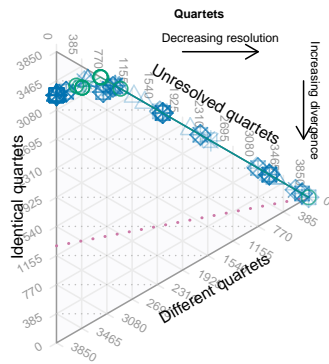
Dataset 67: CI=0.26. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
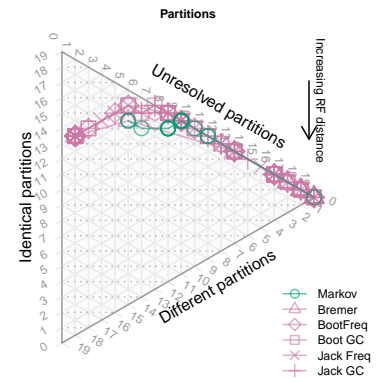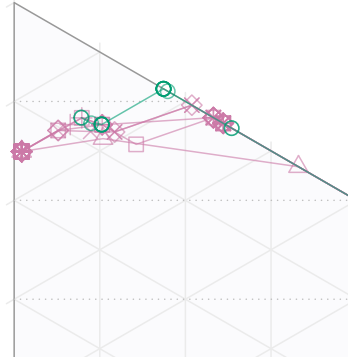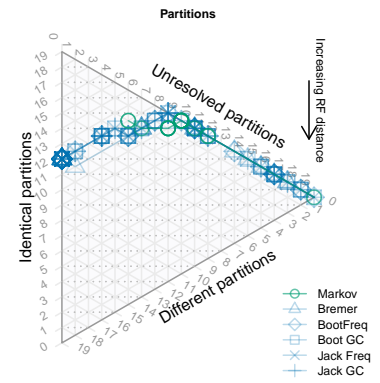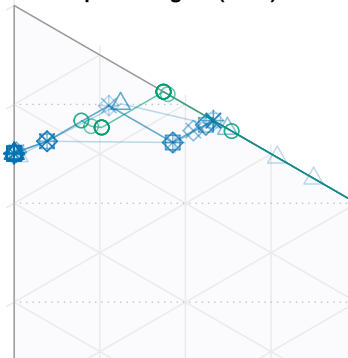
Dataset 68: CI=0.31. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

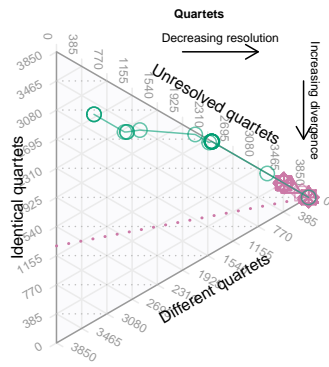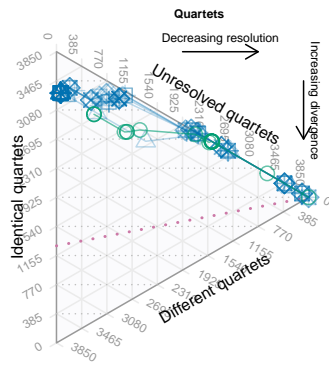**Dataset 69: CI=0.27. Equal weights**

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 70: CI=0.27. Equal weights
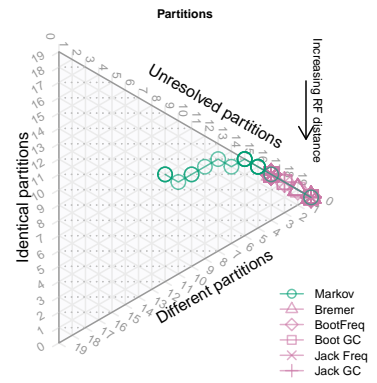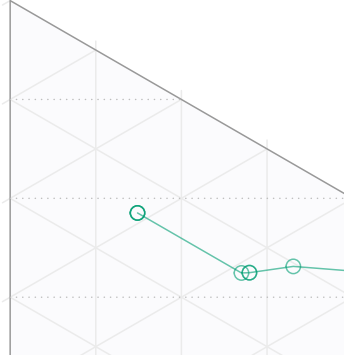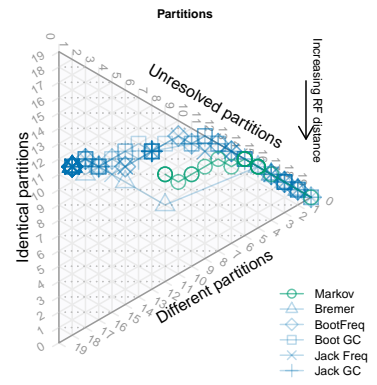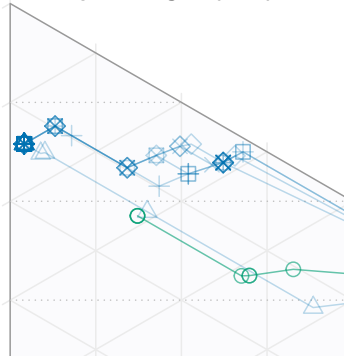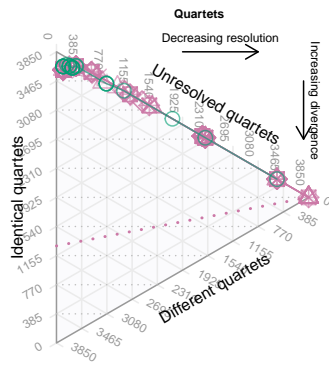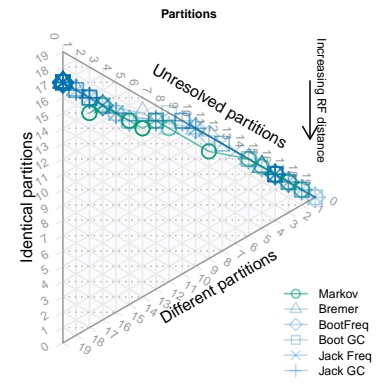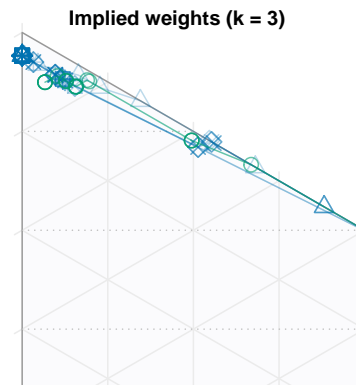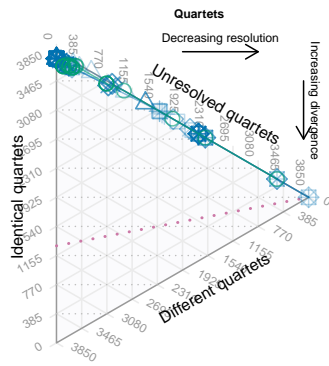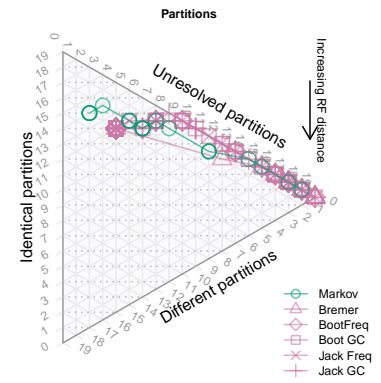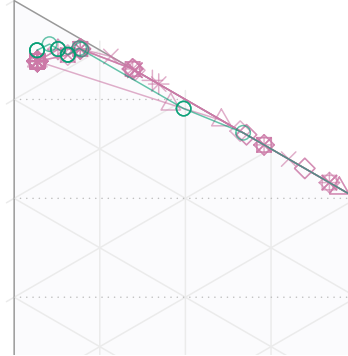
Implied weights (k = 3)
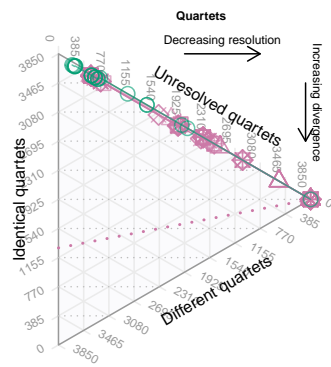
0.9 Trees 71–80

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 71: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
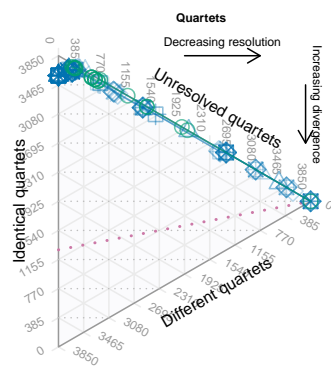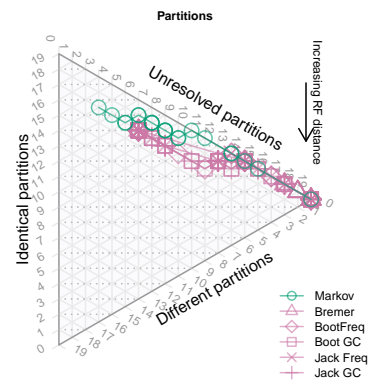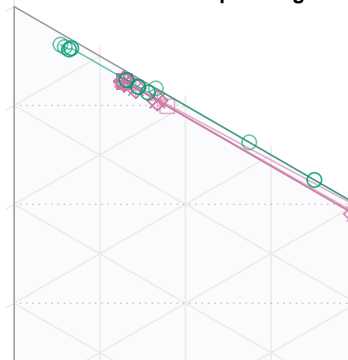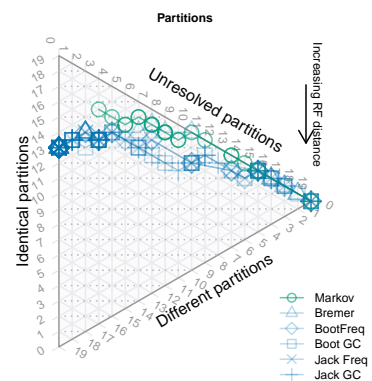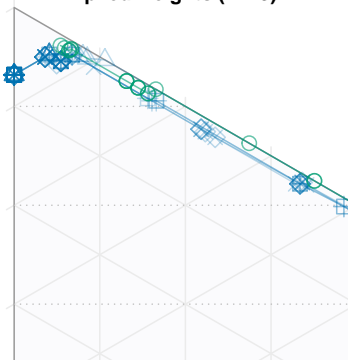
Dataset 72: CI=0.29. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
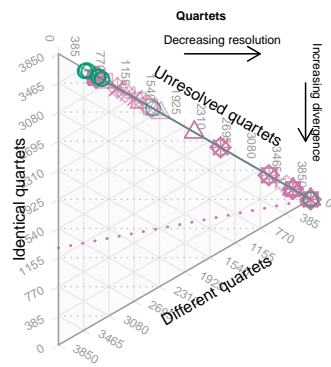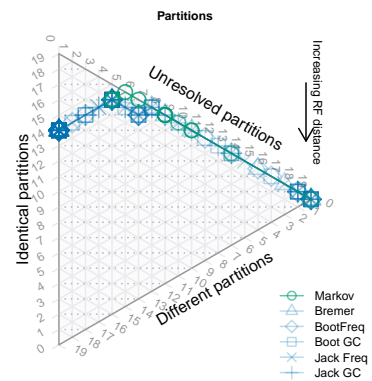
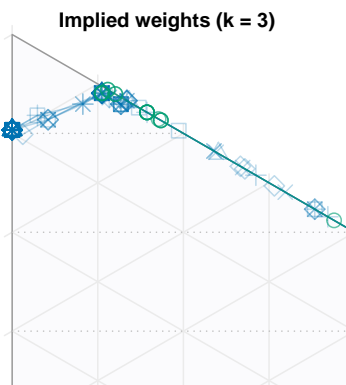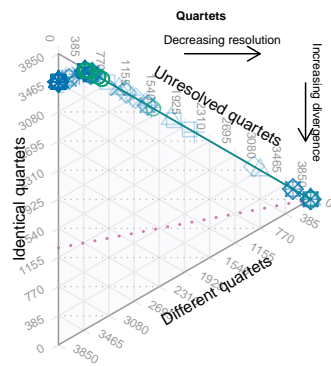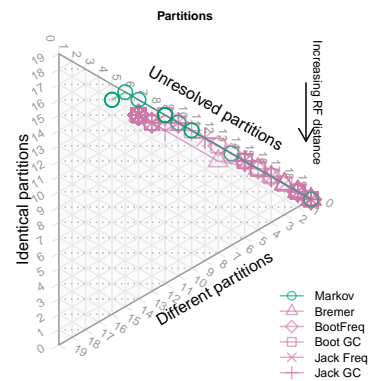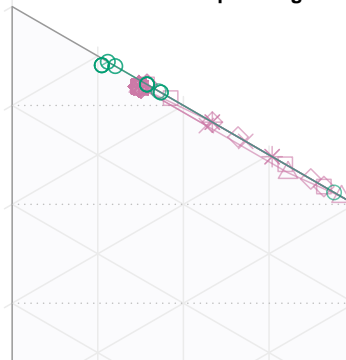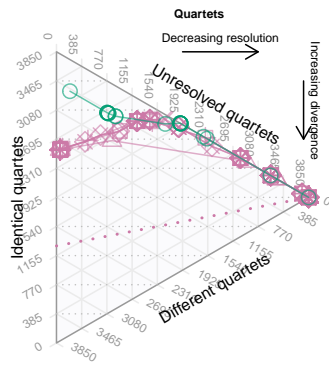Dataset 73: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
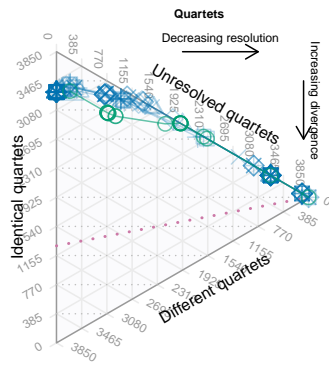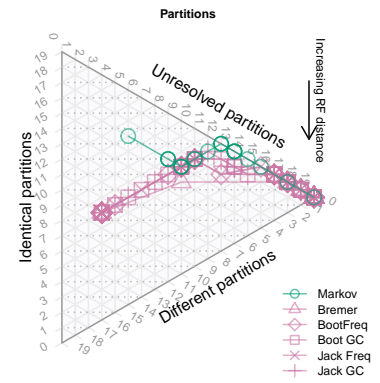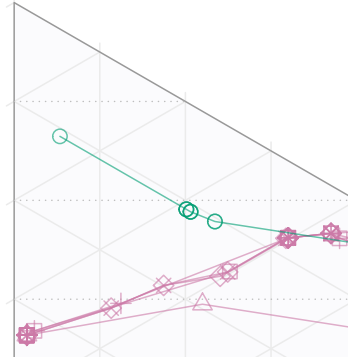
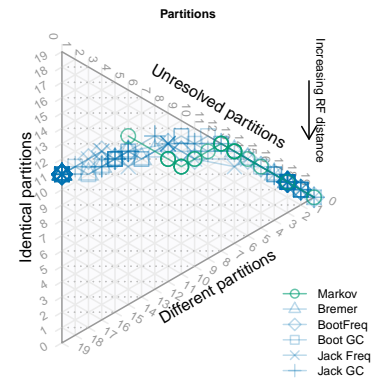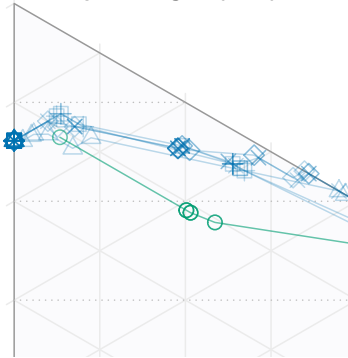Dataset 74: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
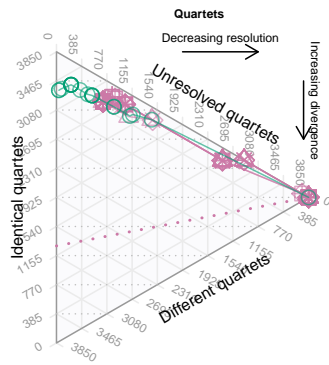
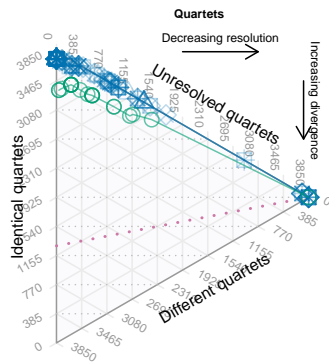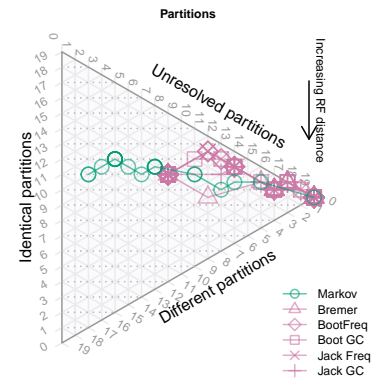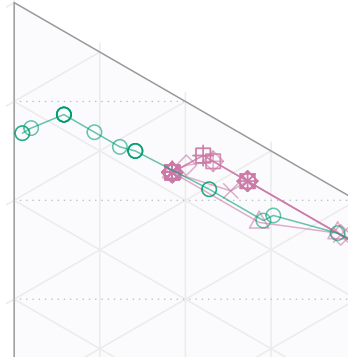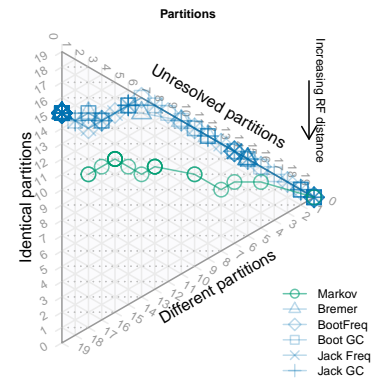Dataset 75: CI=0.24. Equal weights
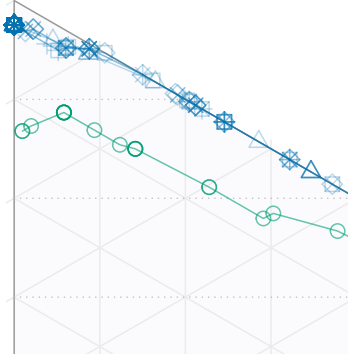
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
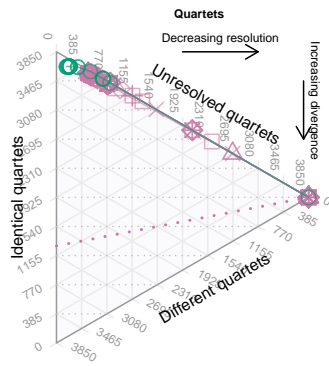
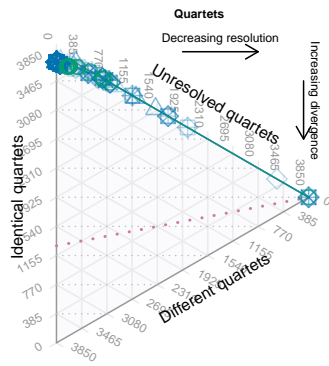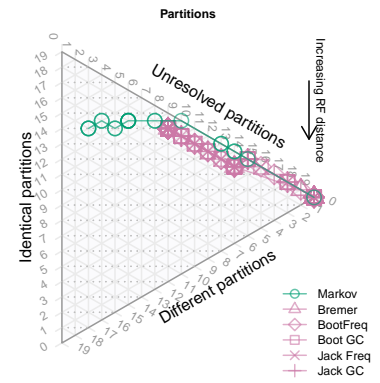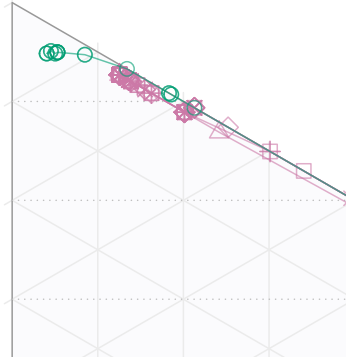Dataset 76: CI=0.26. Equal weights
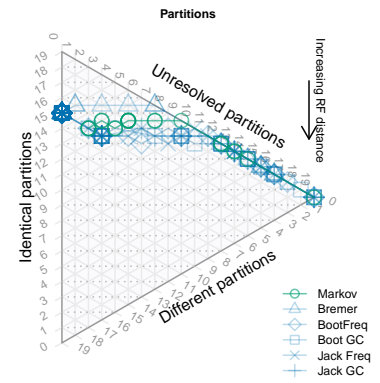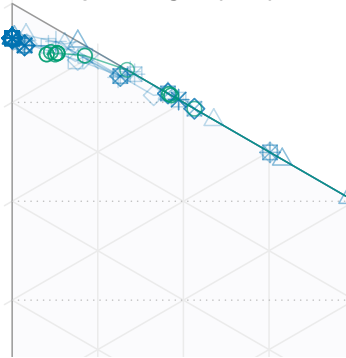
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
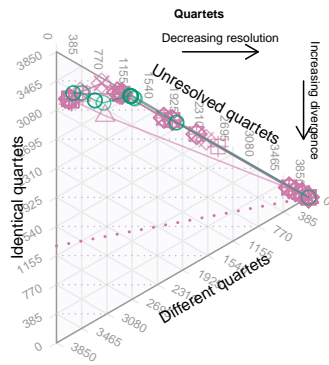
Dataset 77: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
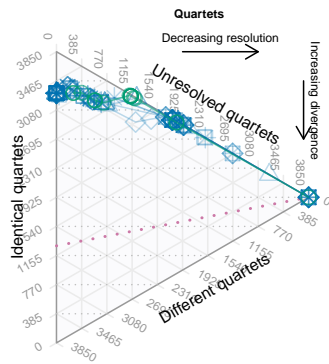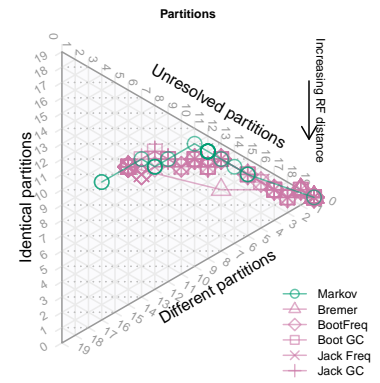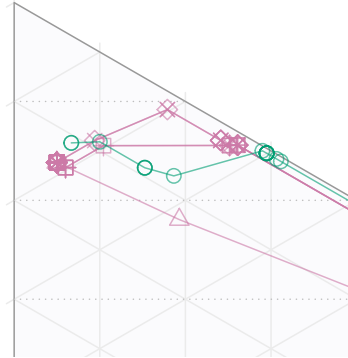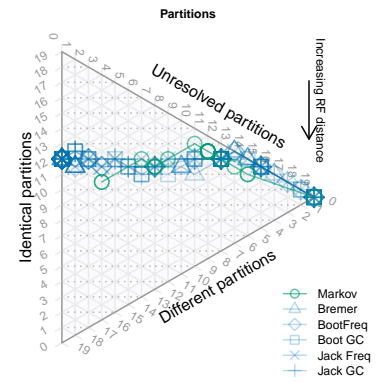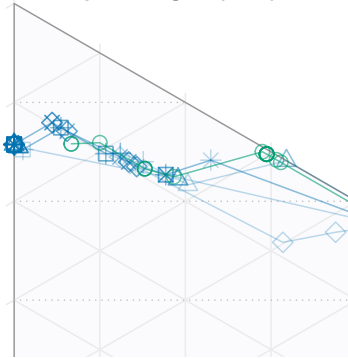
Dataset 78: CI=0.24. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
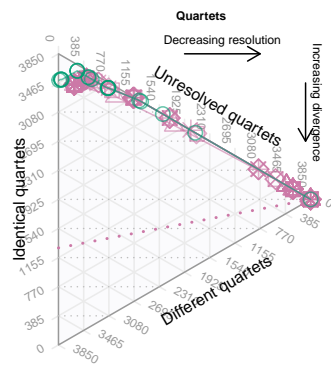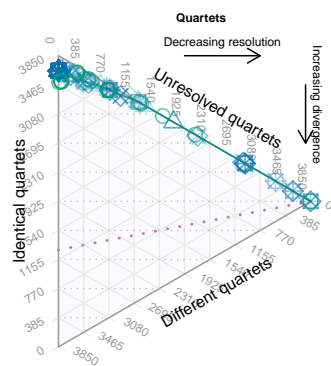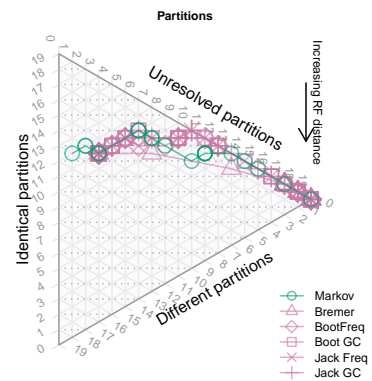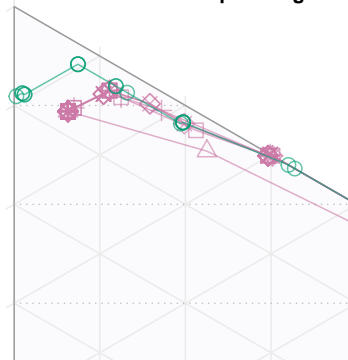
Dataset 79: CI=0.24. Equal weights
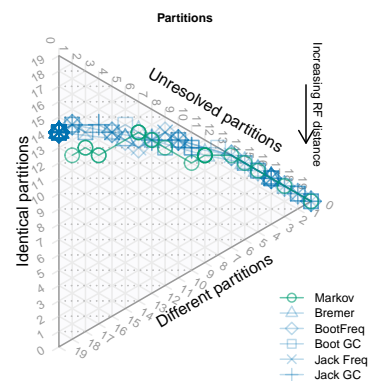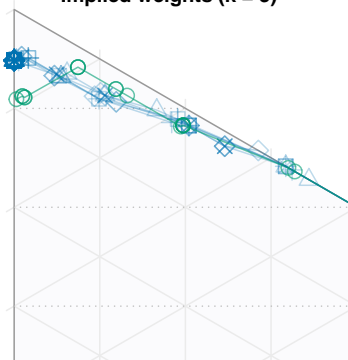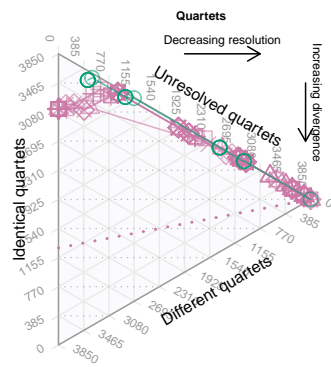
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

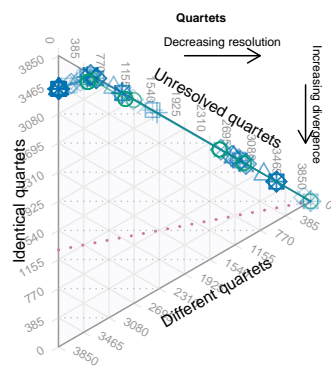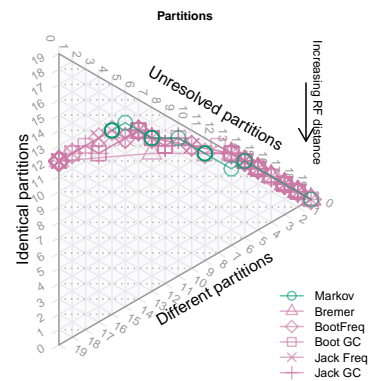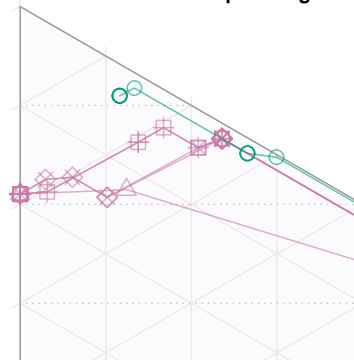**Dataset 80: CI=0.27. Equal weights**

Implied weights (k = 3)
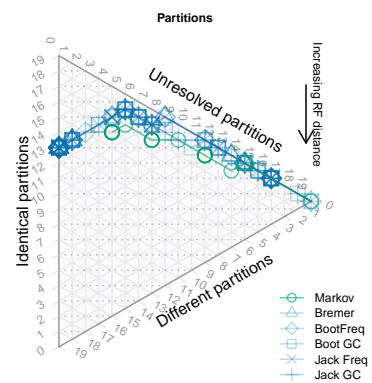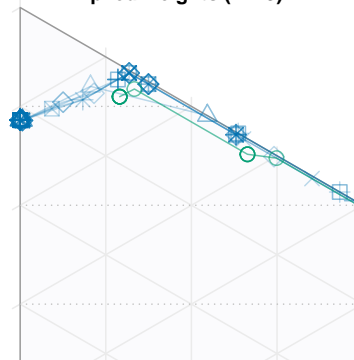
0.10   Trees 81–90

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

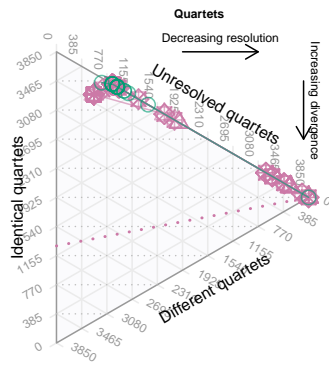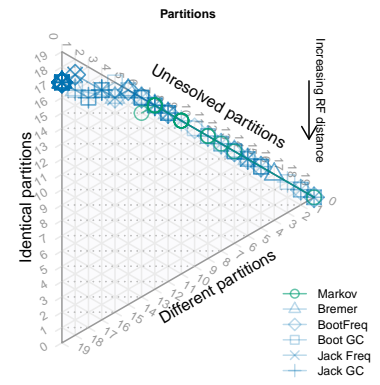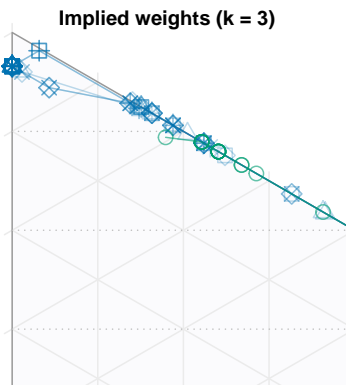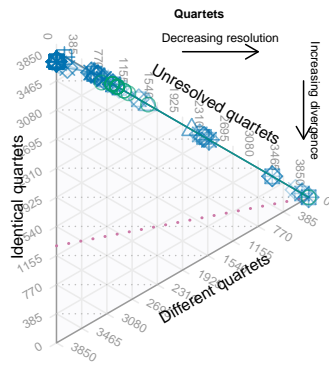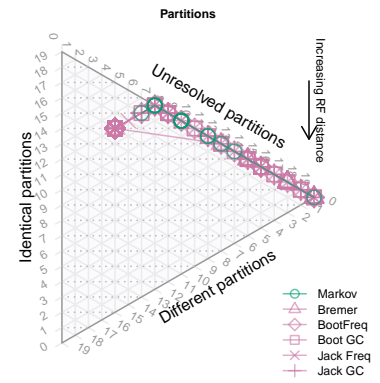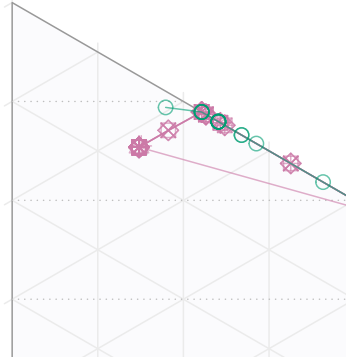Dataset 81: CI=0.27. Equal weights
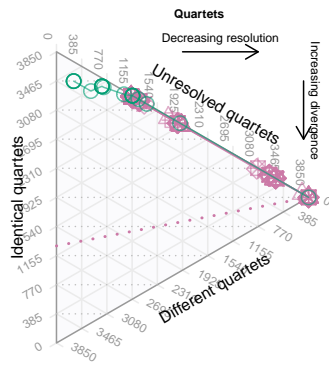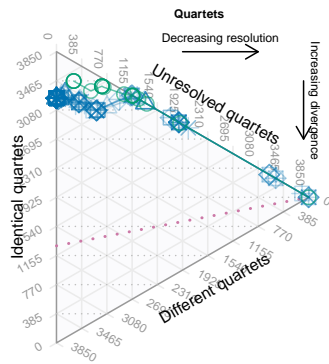
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 82: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
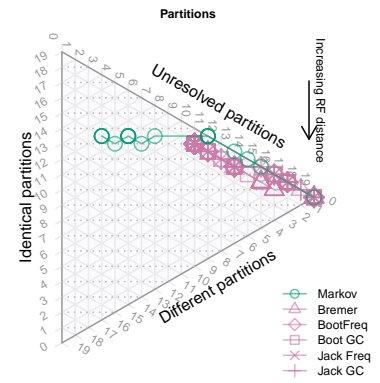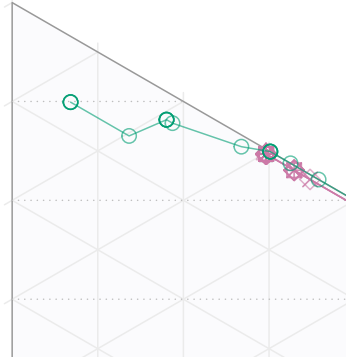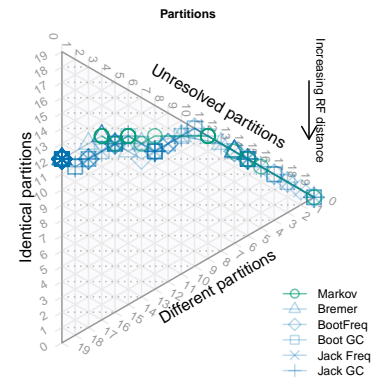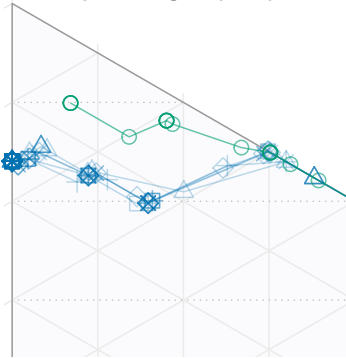
Dataset 83: CI=0.25. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
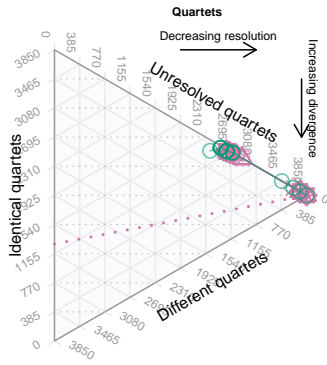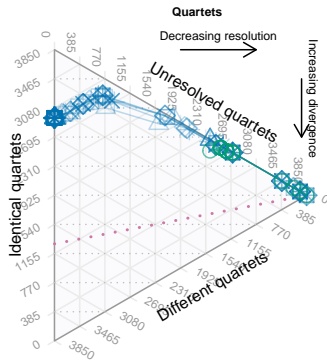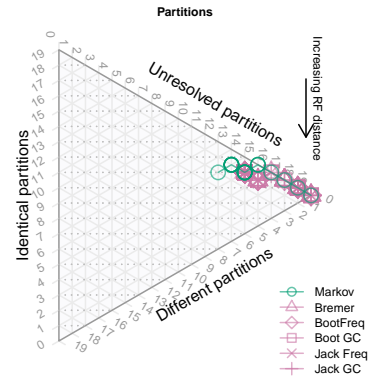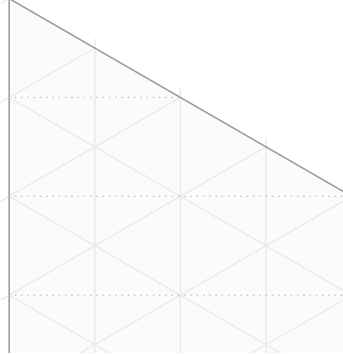
Dataset 84: CI=0.24. Equal weights
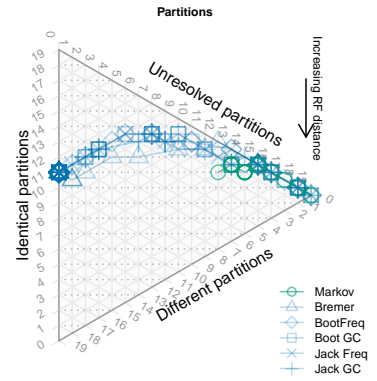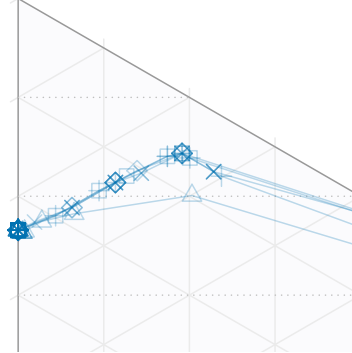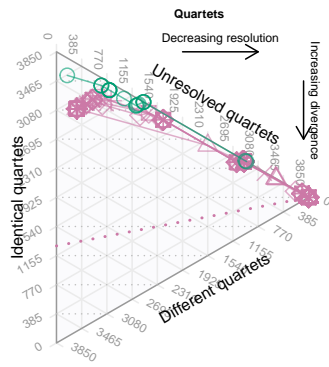
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

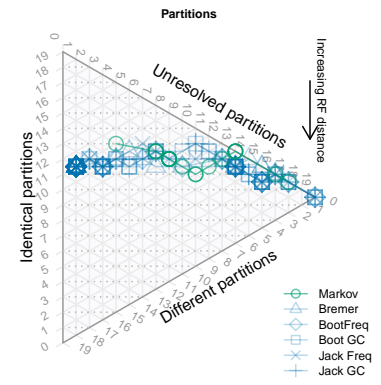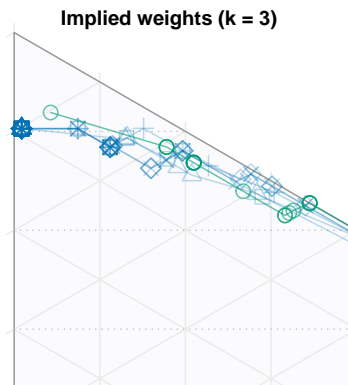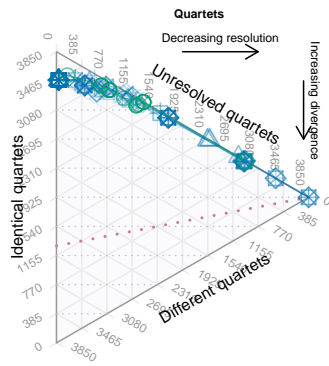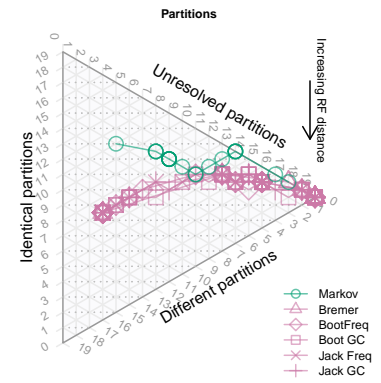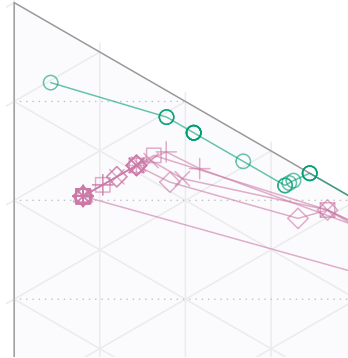Dataset 85: CI=0.27. Equal weights
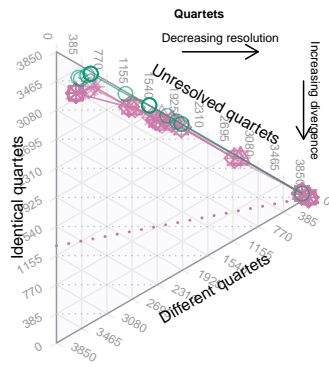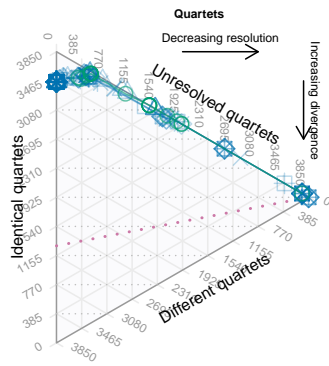
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 86: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
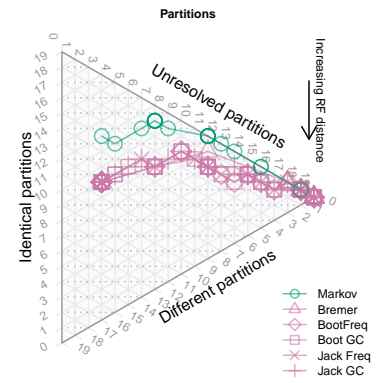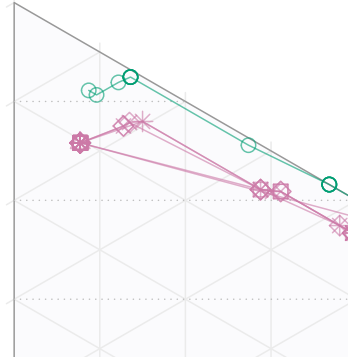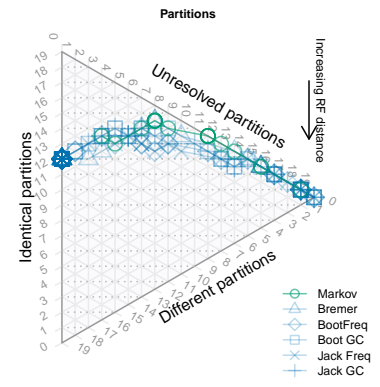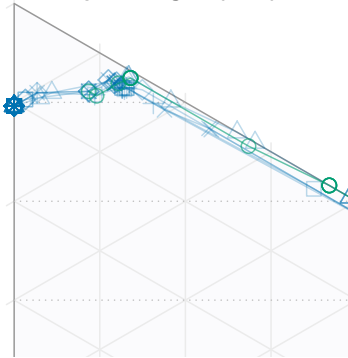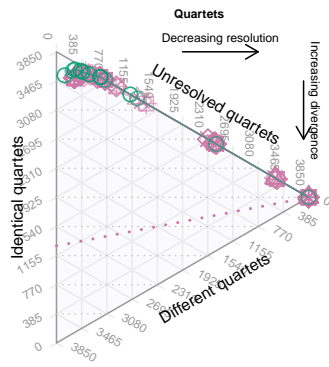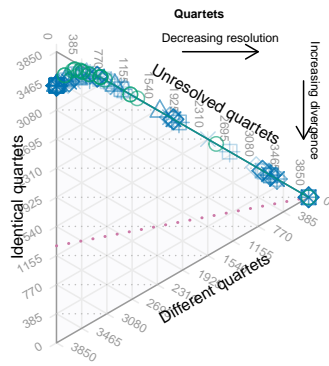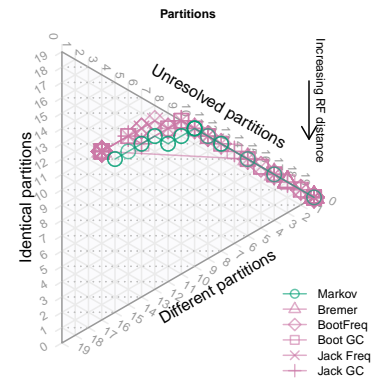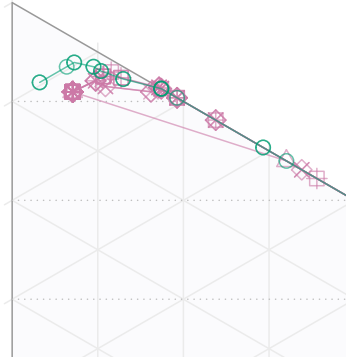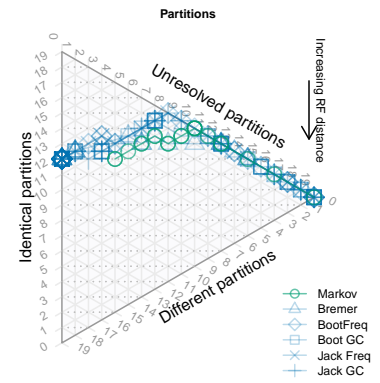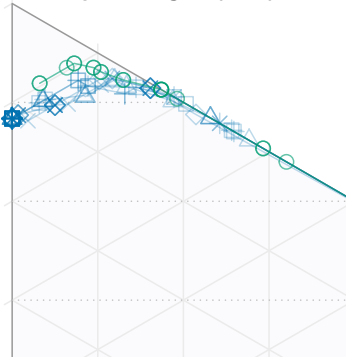
Quartets

Decreasing resolution →

Increasing divergence

Unresolved quartets

Identical quartets

Different quartets

Dataset 87: CI=0.23. Equal weights

Partitions

Increasing RF distance

Unresolved partitions

Identical partitions

Different partitions

- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

Quartets

Decreasing resolution →

Increasing divergence

Unresolved quartets

Identical quartets

Different quartets

Implied weights (k = 3)

Partitions

Increasing RF distance

Unresolved partitions

Identical partitions

Different partitions

- Markov
- Bremer
- BootFreq
- Boot GC
- Jack Freq
- Jack GC

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
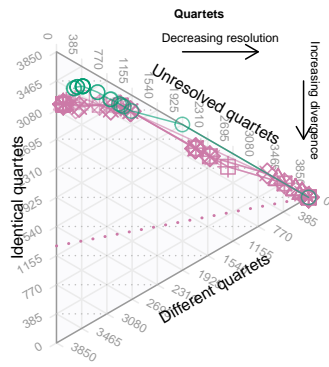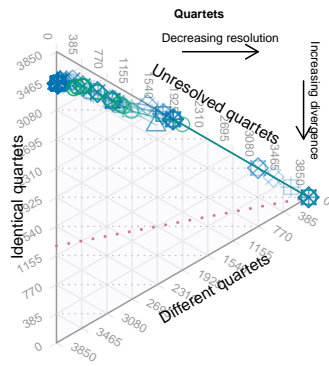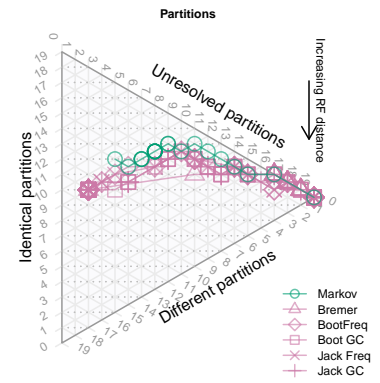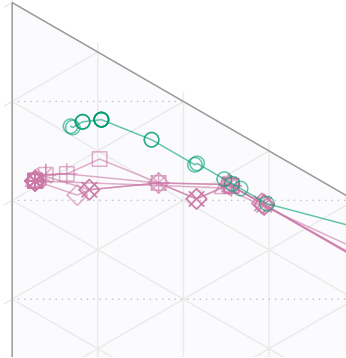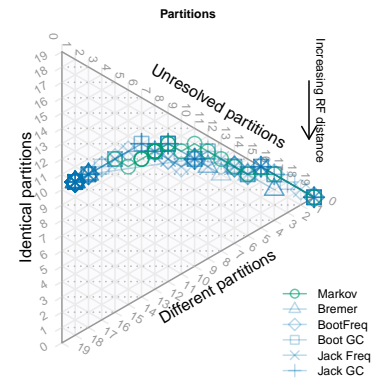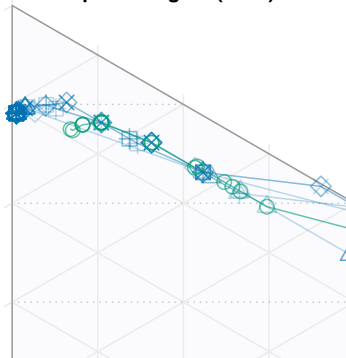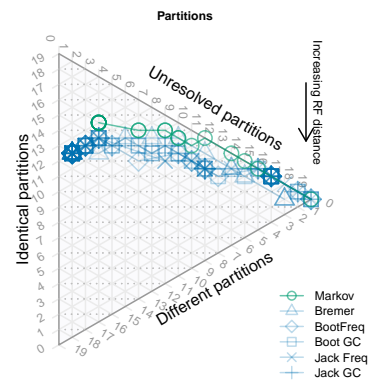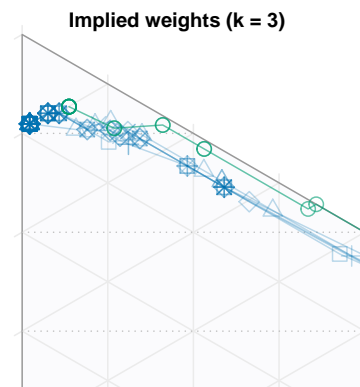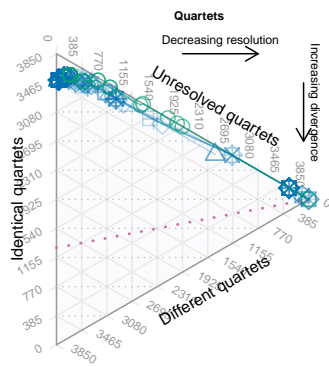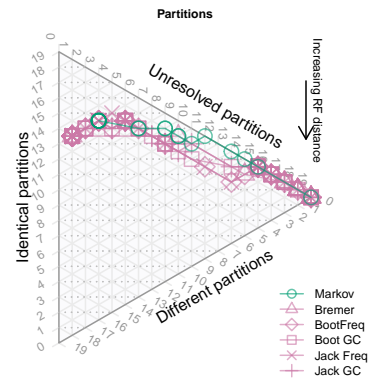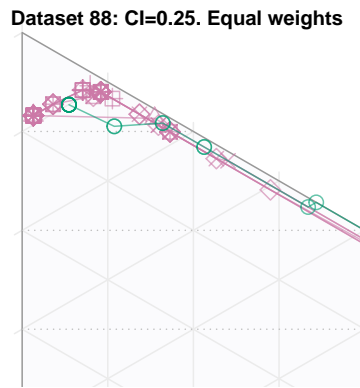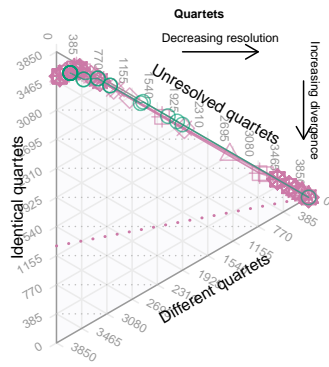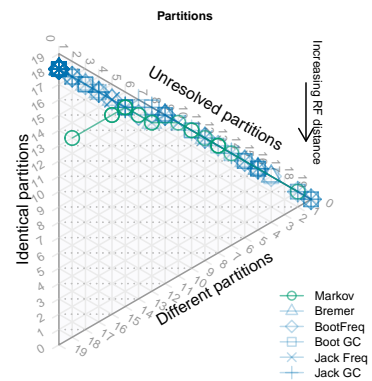
Dataset 88: CI=0.25. Equal weights
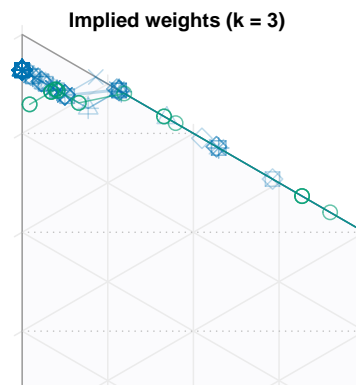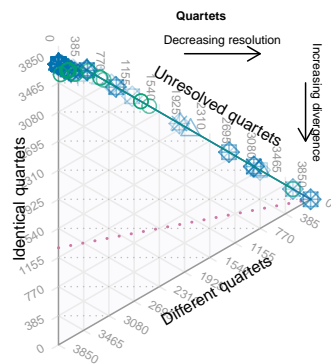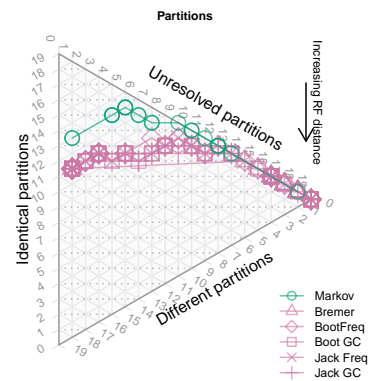
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
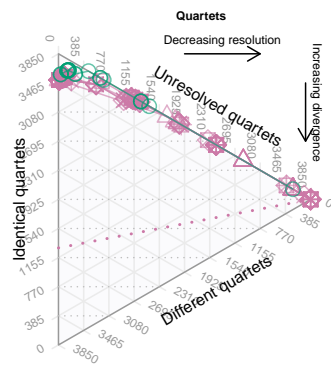
Dataset 89: CI=0.27. Equal weights
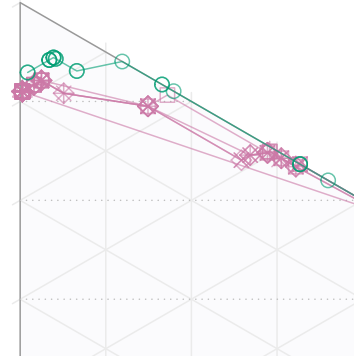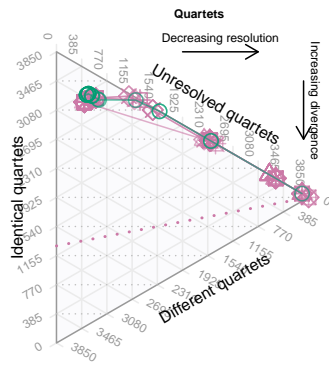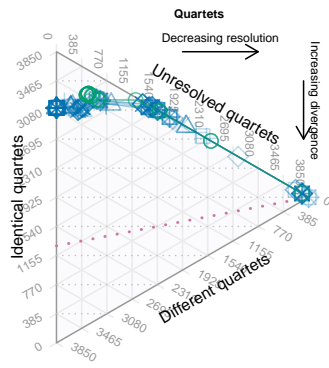
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
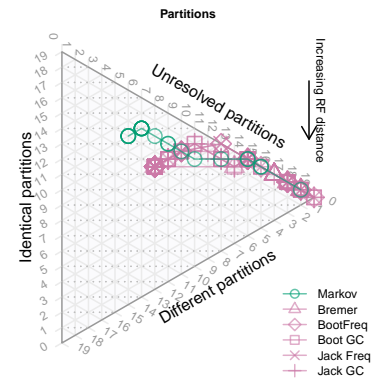
Dataset 90: CI=0.26. Equal weights

Implied weights (k = 3)

0.11   Trees 91–100

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
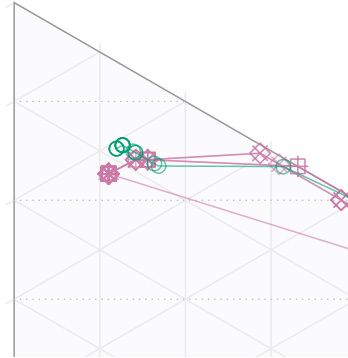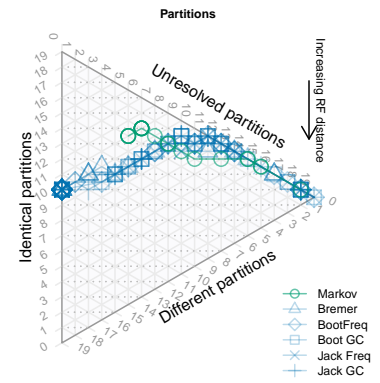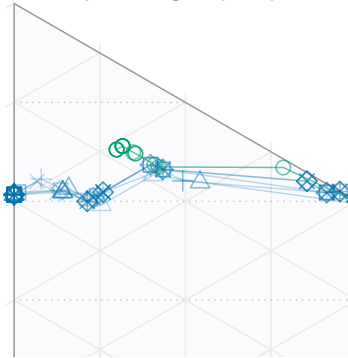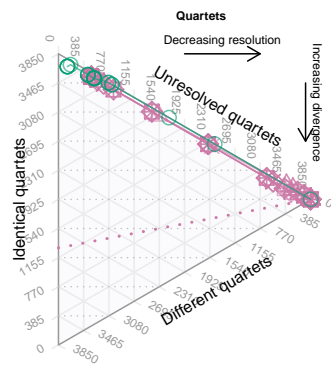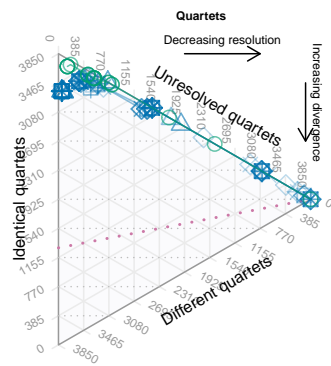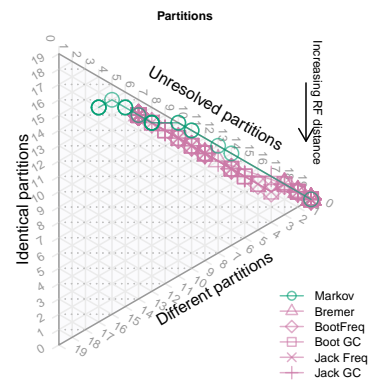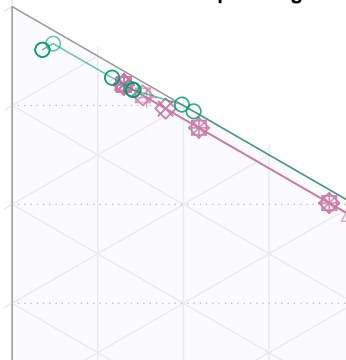
Dataset 91: CI=0.26. Equal weights
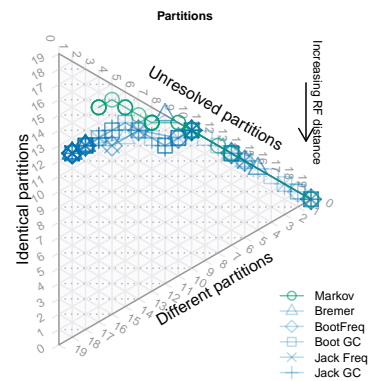
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
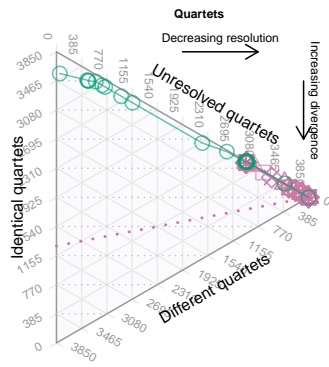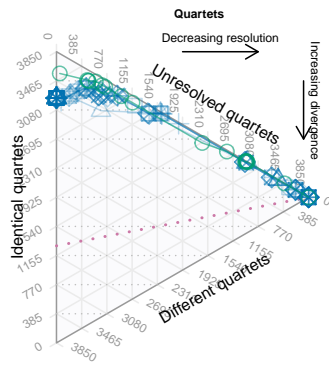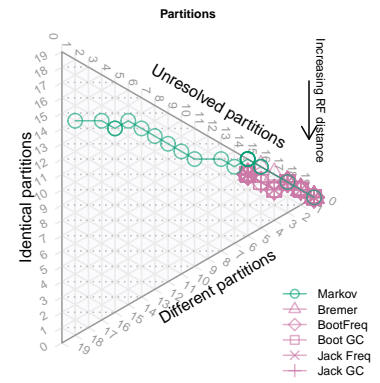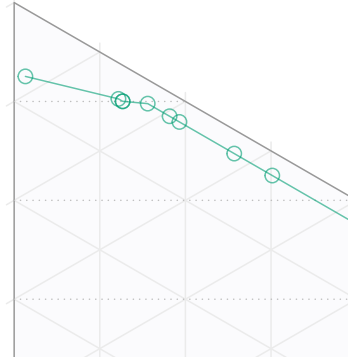
Dataset 92: CI=0.25. Equal weights
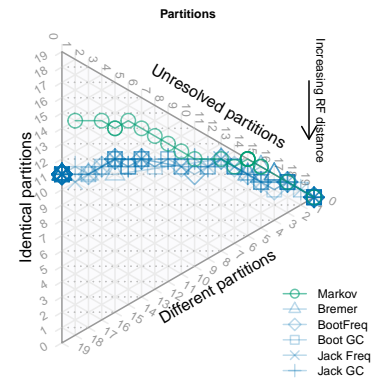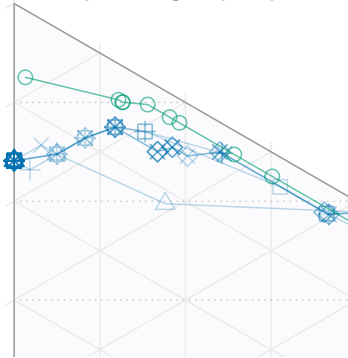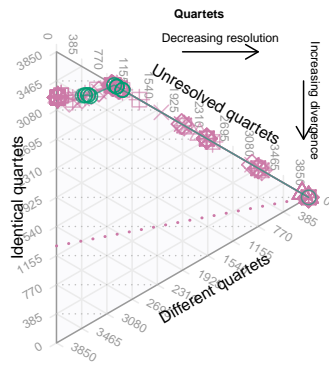
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 93: CI=0.28. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
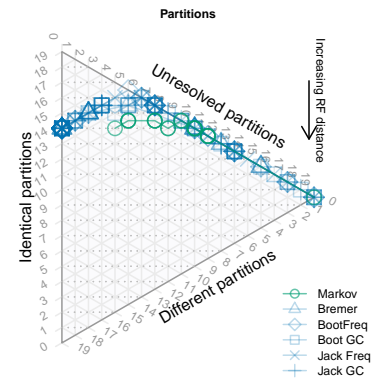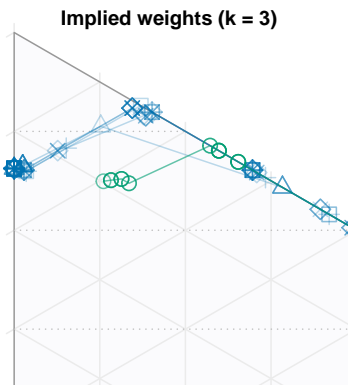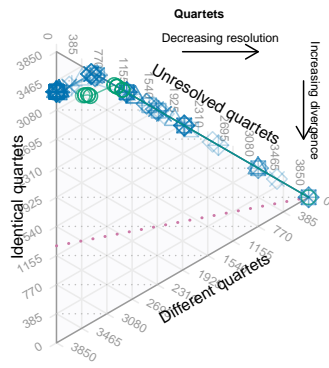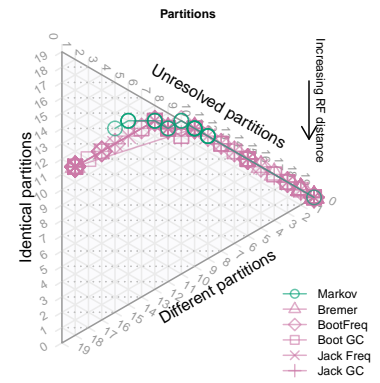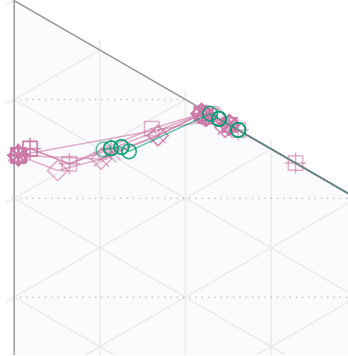
Dataset 94: CI=0.24. Equal weights
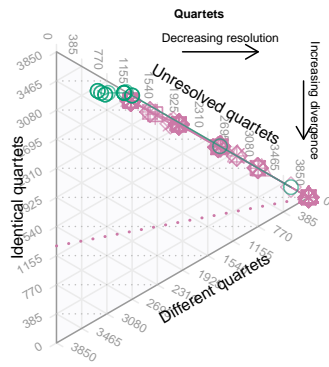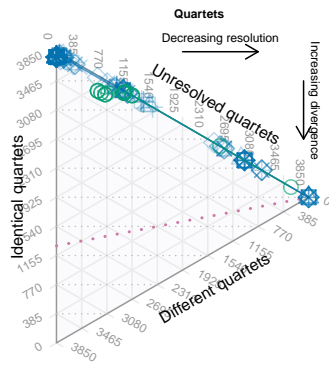
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
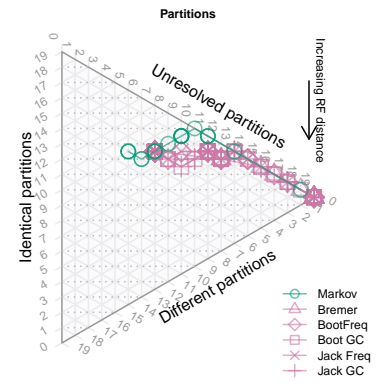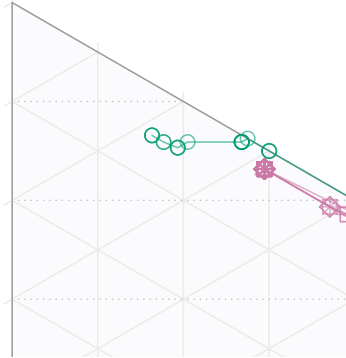
Dataset 95: CI=0.24. Equal weights
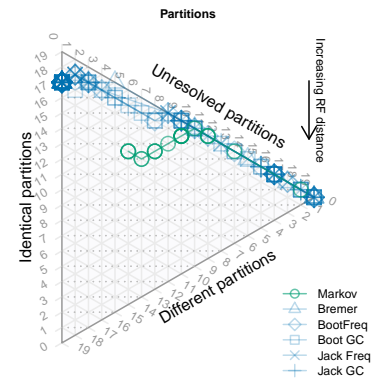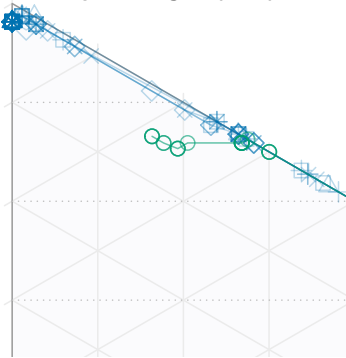
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
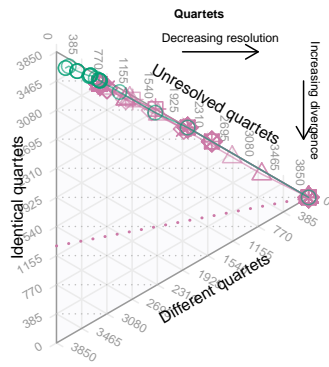
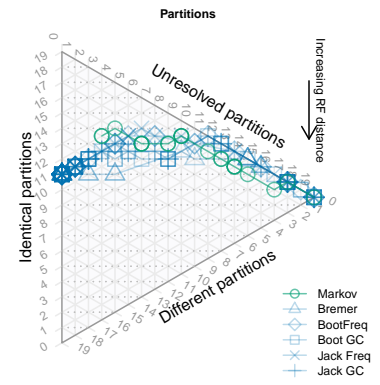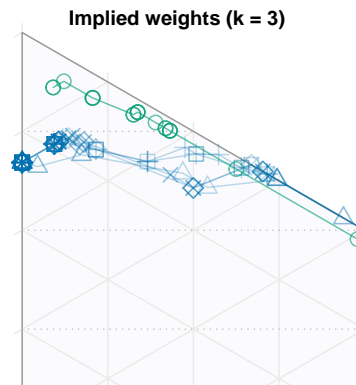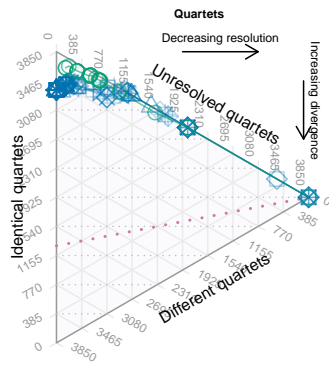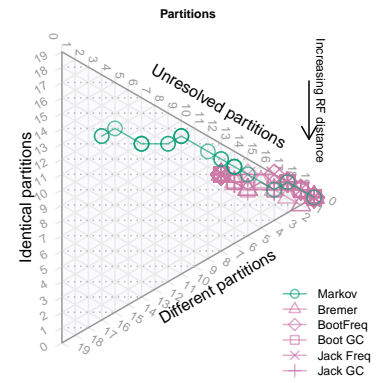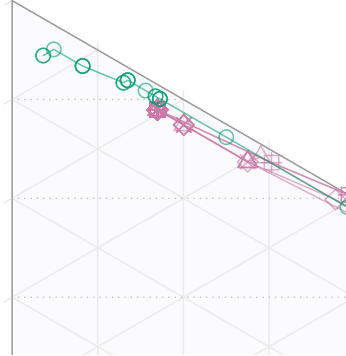Dataset 96: CI=0.26. Equal weights
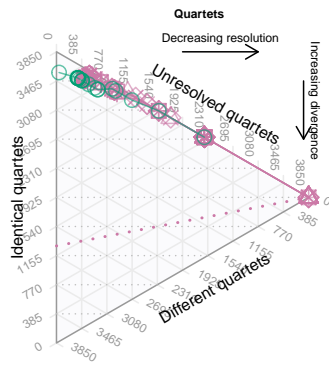
Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```

Dataset 97: CI=0.27. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
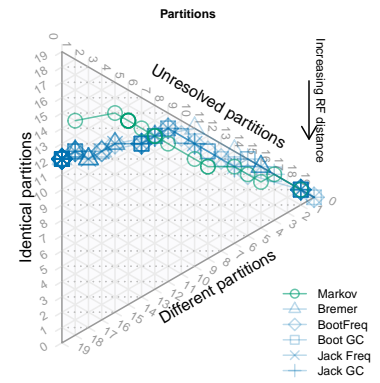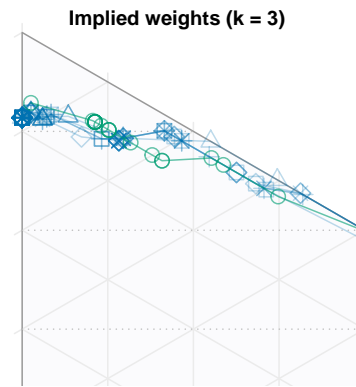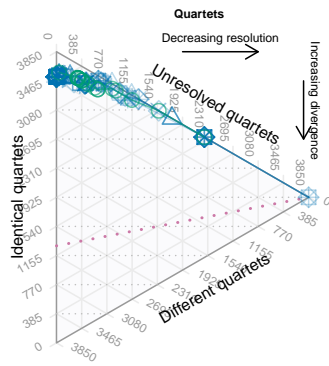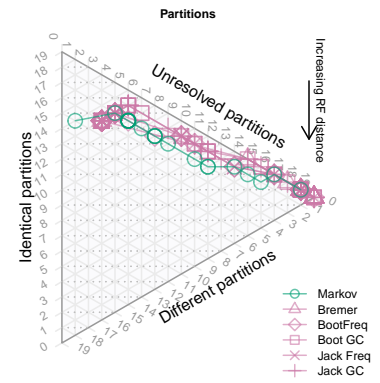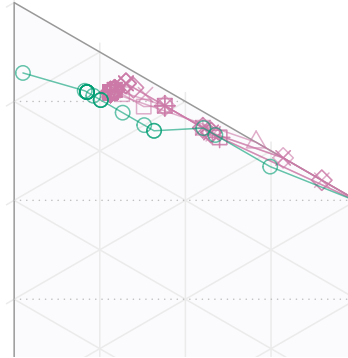
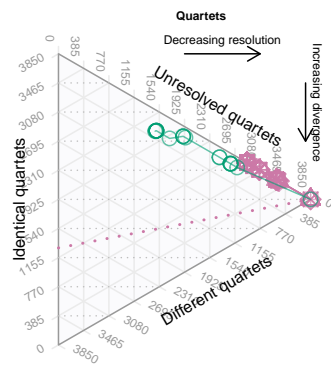Dataset 98: CI=0.26. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
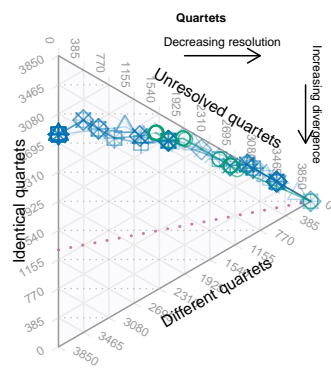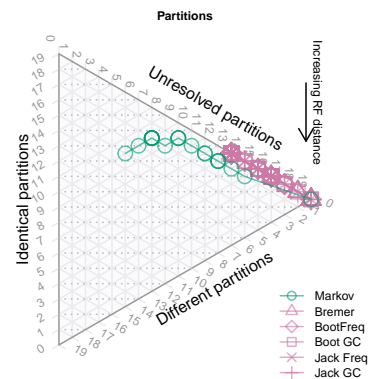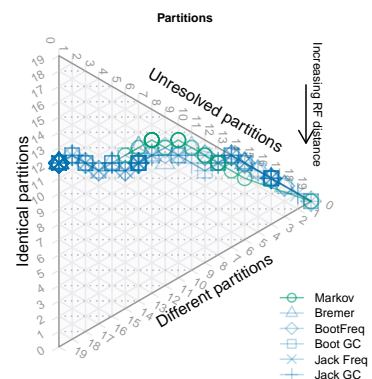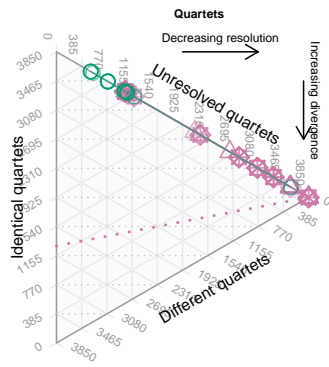
Dataset 99: CI=0.24. Equal weights

Implied weights (k = 3)

```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
## reports request to set locale to "English_United Kingdom.1252" cannot be
## honored
```
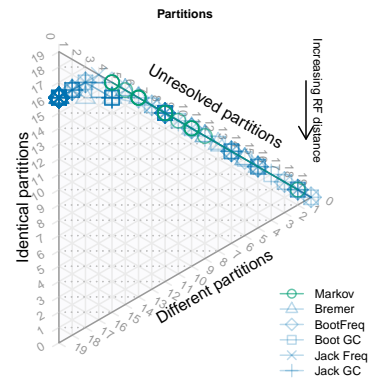
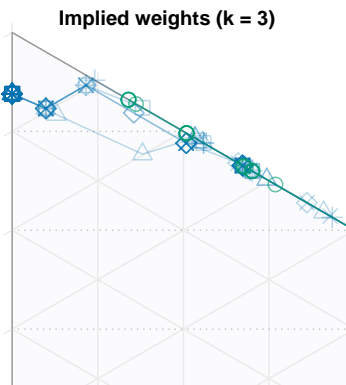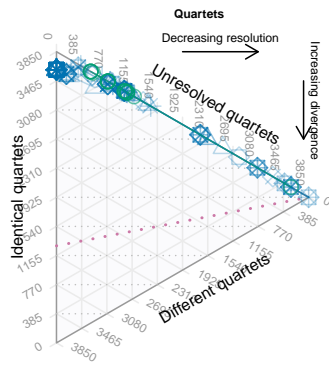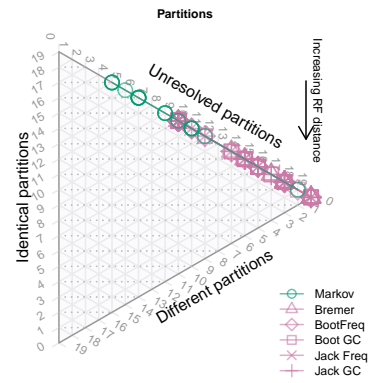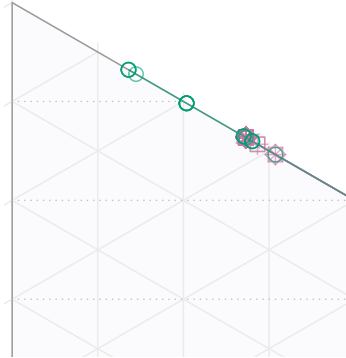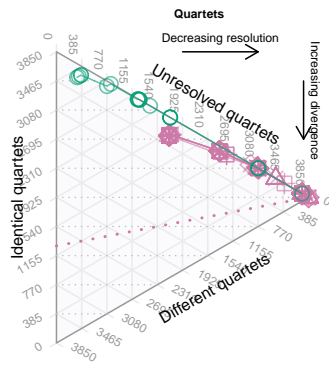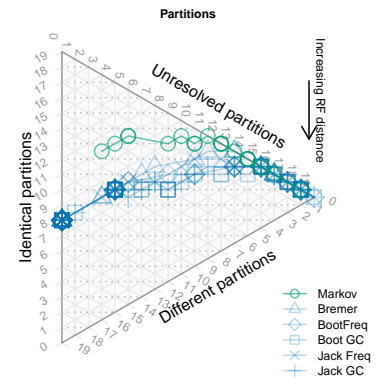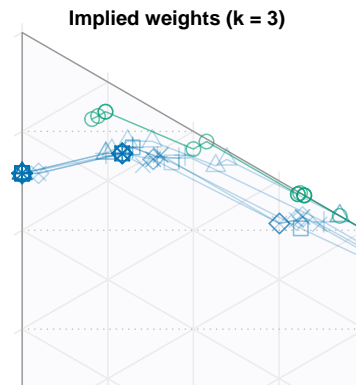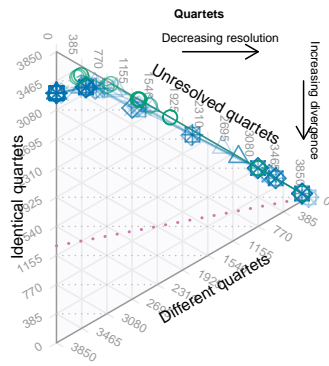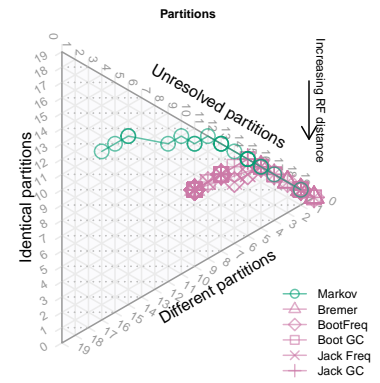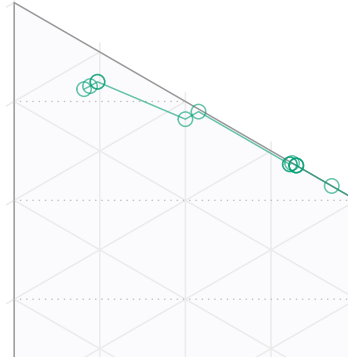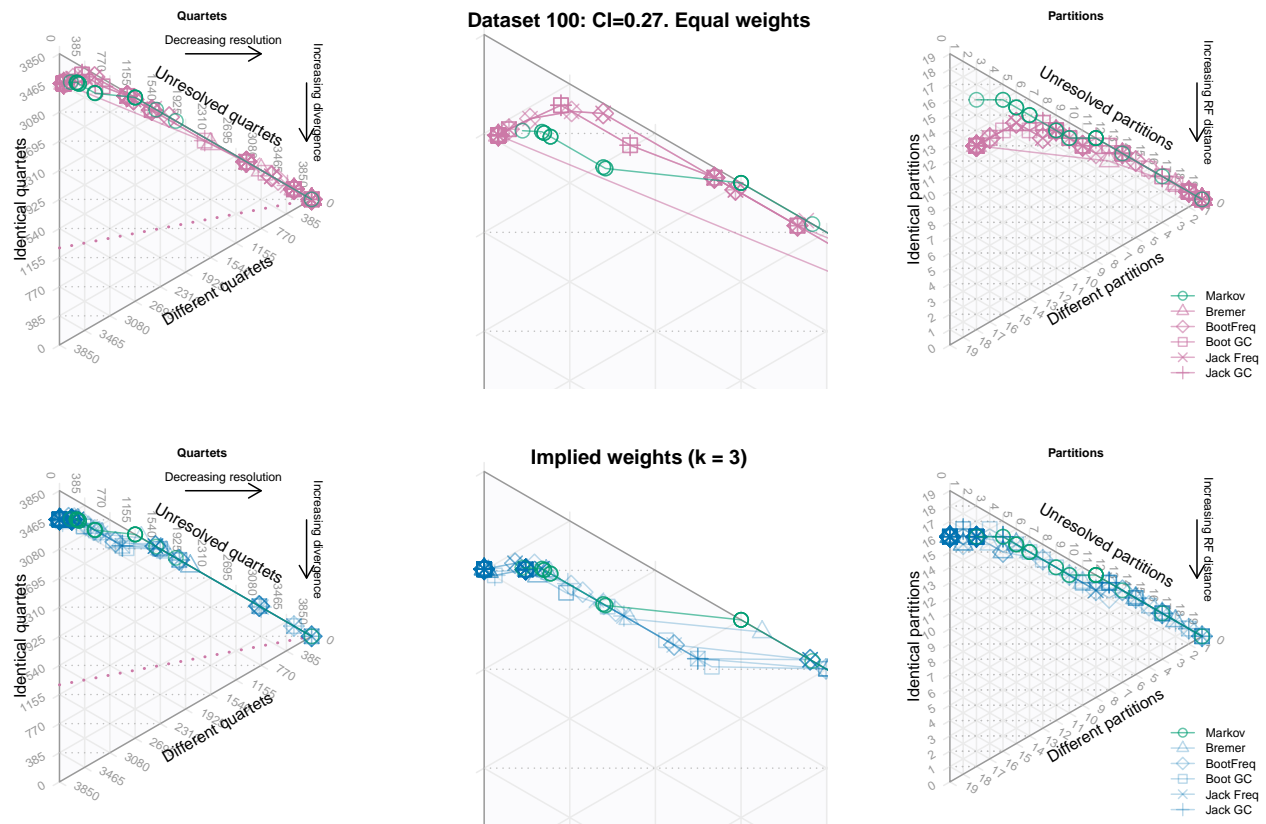Dataset 100: CI=0.27. Equal weights

Implied weights (k = 3)

References

1. Congreve CR, Lamsdell JC. 2016 Implied weighting and its utility in palaeontological datasets: a study using modelled phylogenetic matrices. *Palaeontology* **59**, 447–465. (doi:10.1111/pala.12236)

2. Smith MR. In press. Bayesian and parsimony approaches reconstruct informative trees from simulated morphological datasets. *Biology Letters; preprint at BioRxiv* (doi:10.1101/227942)