Node support efficacy in Congreve & Lamsdell matrices

$Martin\ R.\ Smith\ martin.smith@durham.ac.uk\\ 2019-01-04$

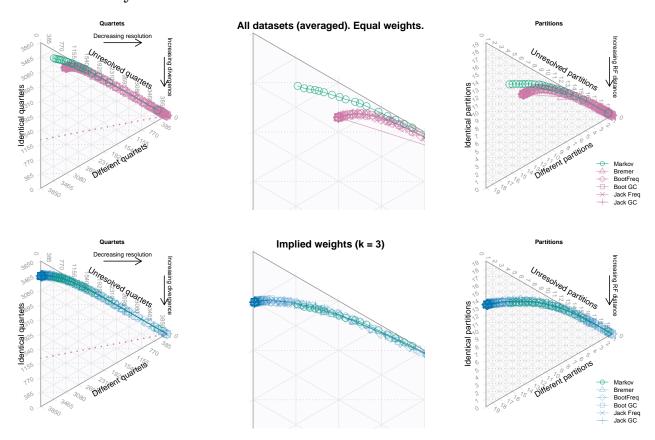
Contents

	Summary																							
0.2	Trees $1-10$					 										 								2
0.3	Trees $11-20$.					 																		12
0.4	Trees $21-30$.					 										 							,	22
	Trees $31–40$.																							
0.6	Trees $41-50$.					 										 							4	42
0.7	Trees $51-60$.					 										 							ļ	52
0.8	Trees $61-70$.					 										 							(62
0.9	Trees $71-80$.					 										 							,	72
0.10	Trees $81-90$.					 																	8	82
	$Trees\ 91100$																							
Refe	rences					 					 					 							10	02

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.

0.1 Summary



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.

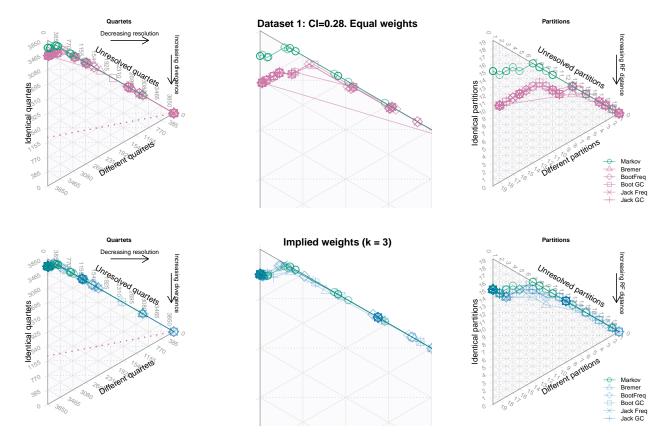
	eq	k1	k2	k3	k5	kX	kC
Bootstrap GC	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
Bootstrap Freq	0.9840650	0.9915189	0.9934145	0.9760370	0.9485781	0.9615921	0.9720185
Jackknife GC	0.9888177	0.9995312	0.9331647	0.9599348	0.9637166	0.9268107	0.9743023
Jackknife Freq	0.9942934	0.9554285	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

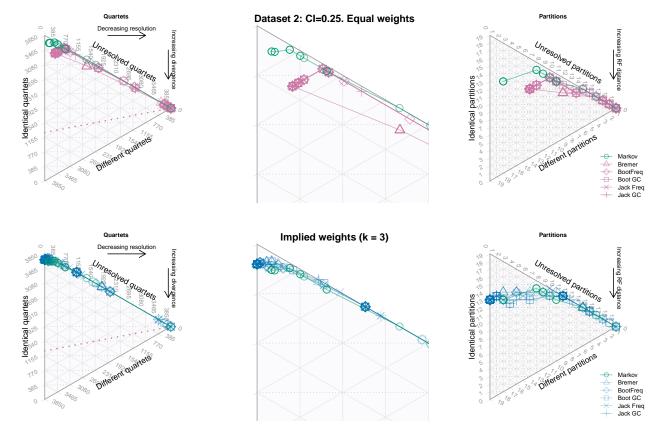
0.2 Trees 1–10

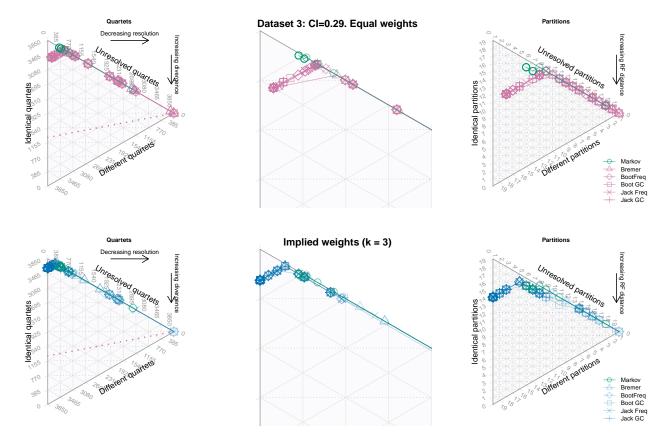
```
## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
```

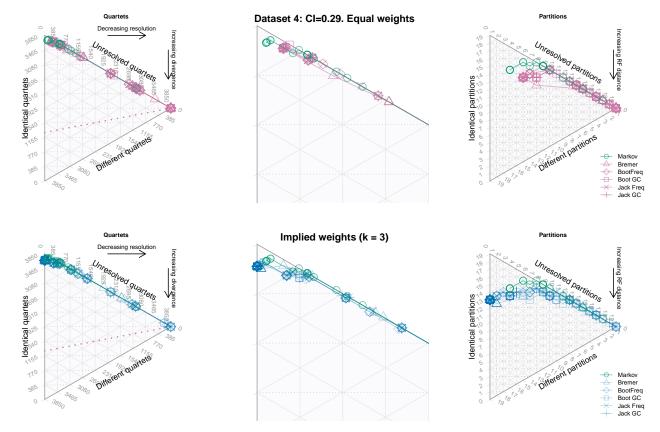
^{##} reports request to set locale to "English_United Kingdom.1252" cannot be

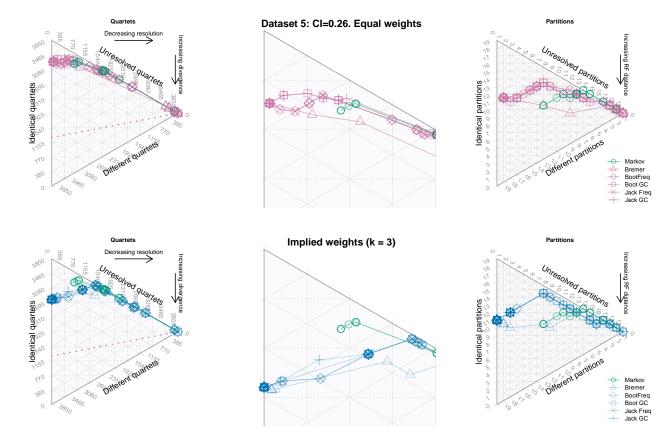
^{##} honored

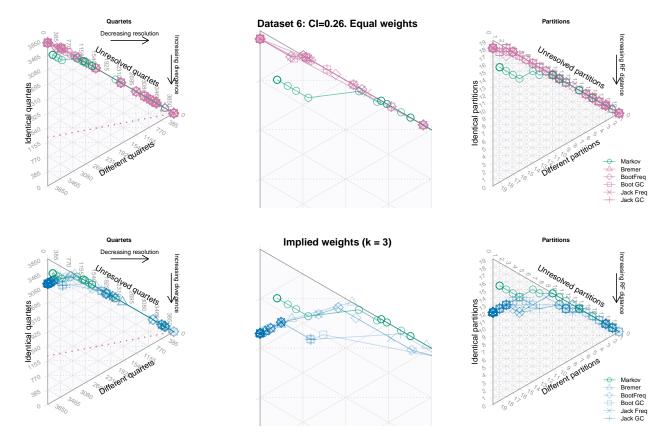


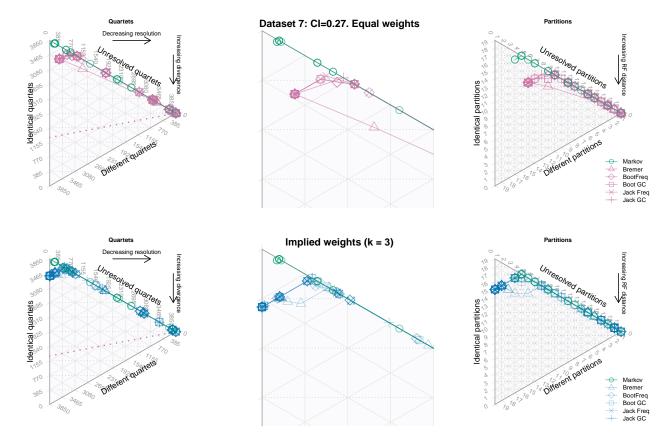




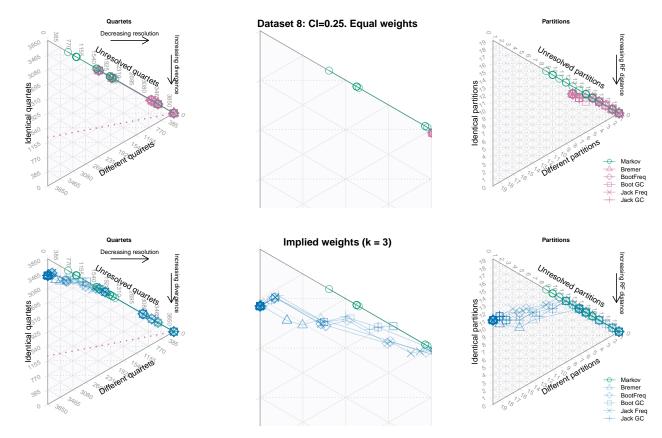


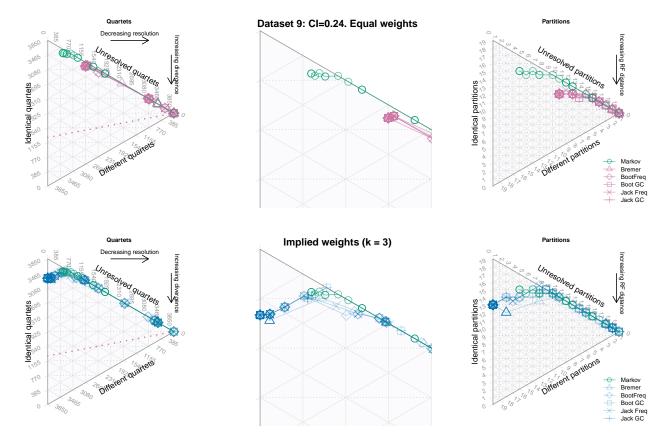


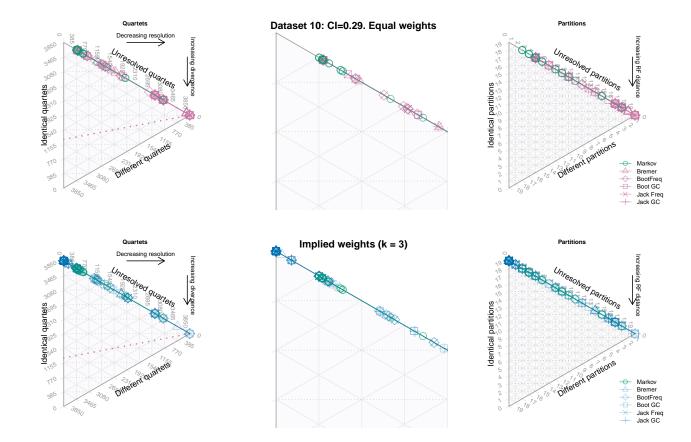




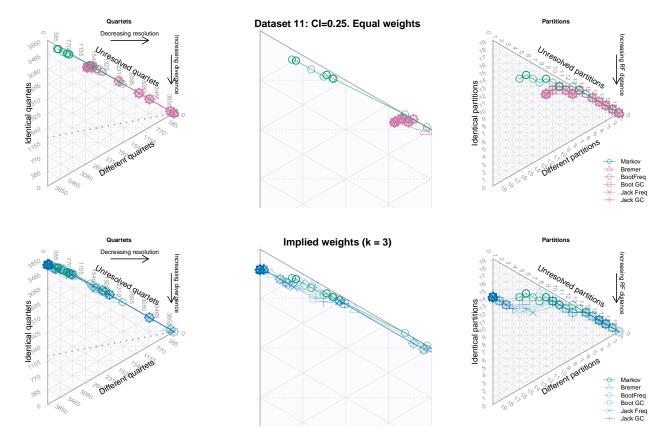
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

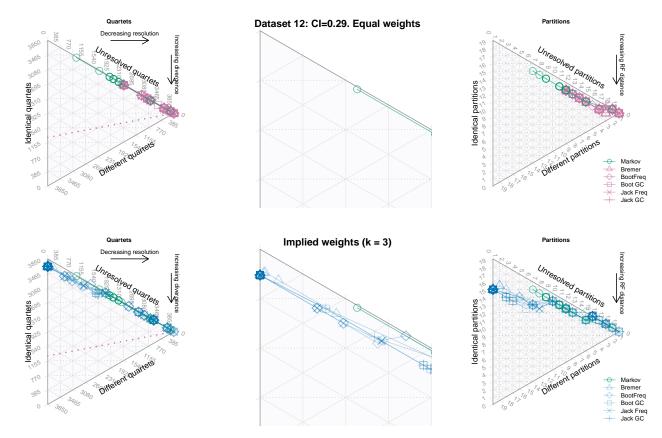


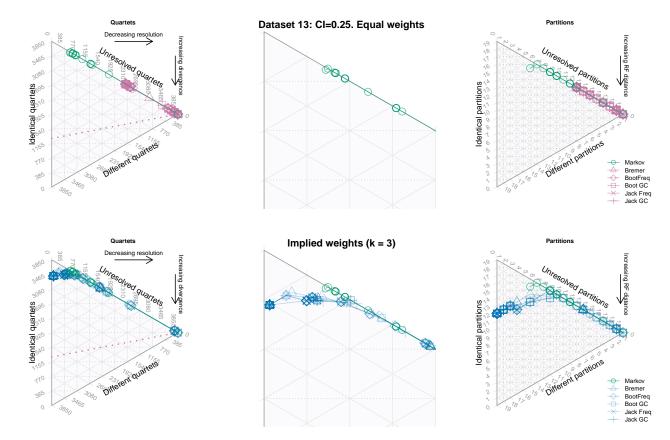


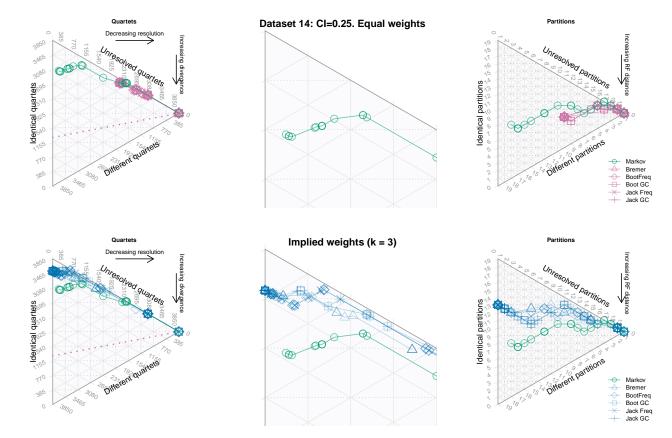


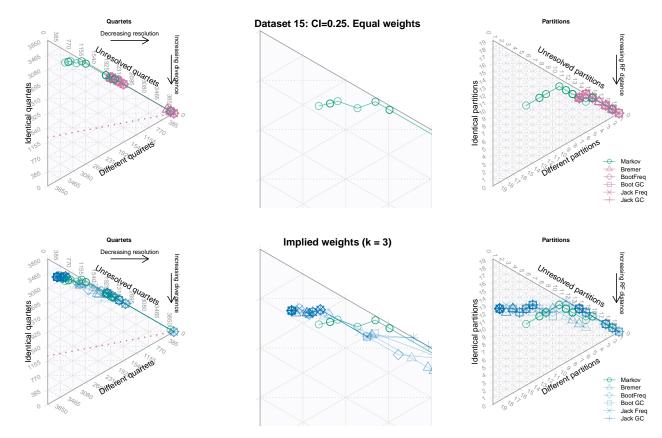
0.3 Trees 11-20

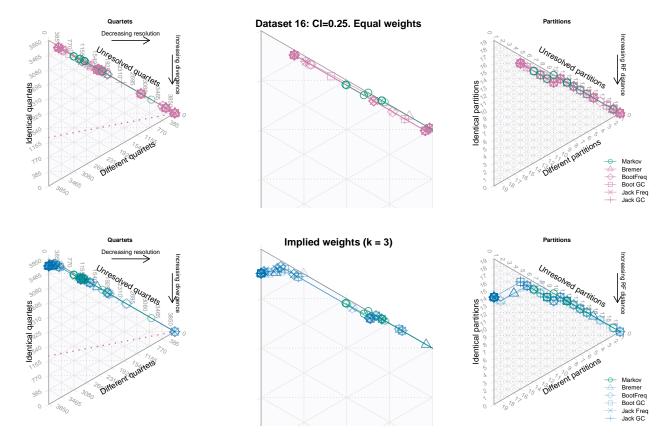


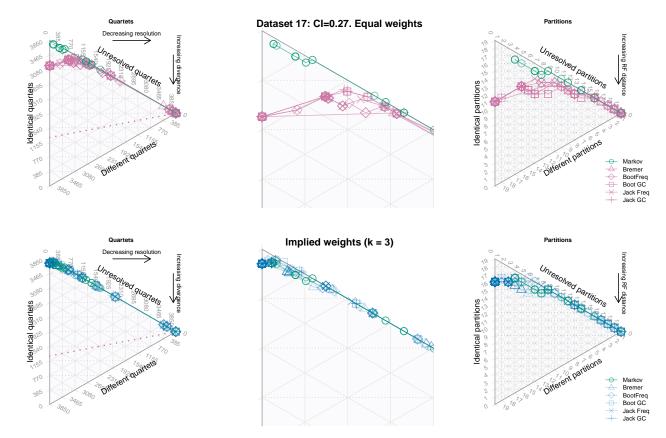


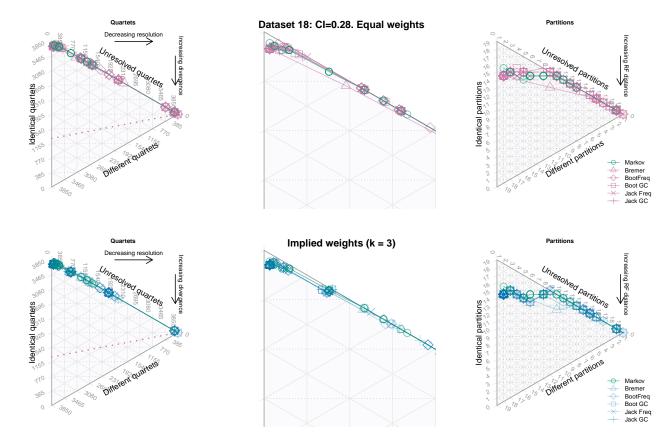


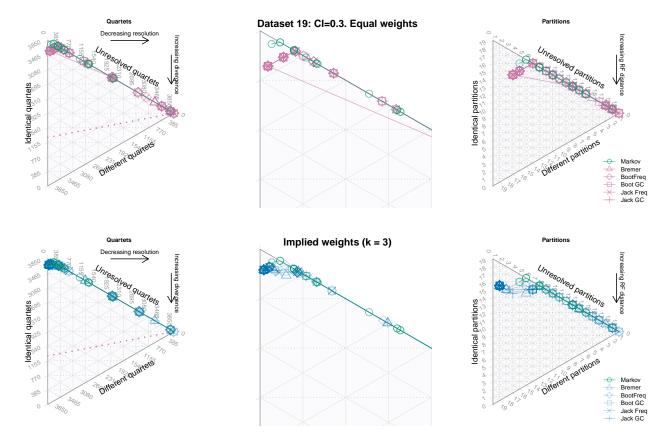




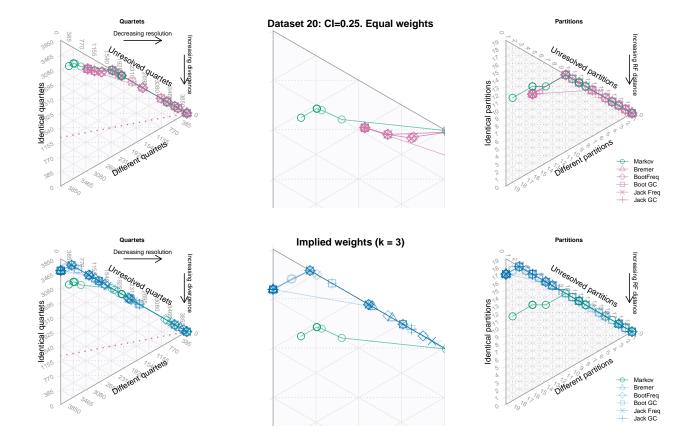




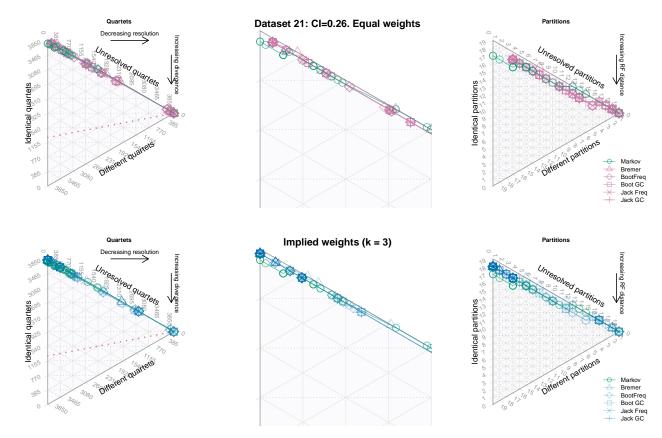


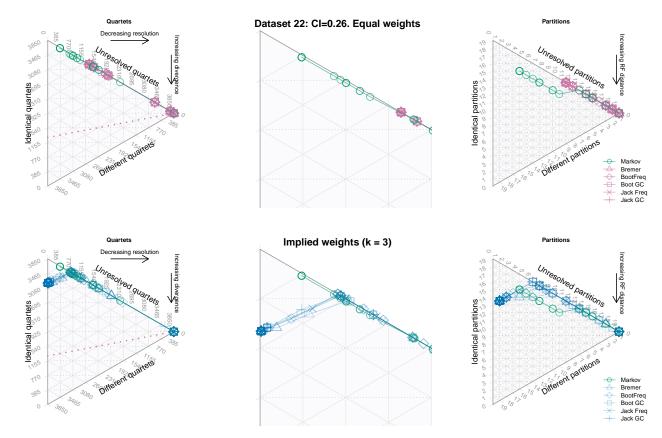


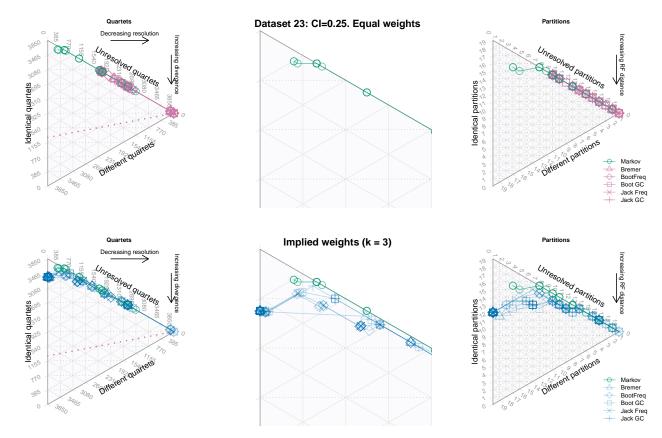
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

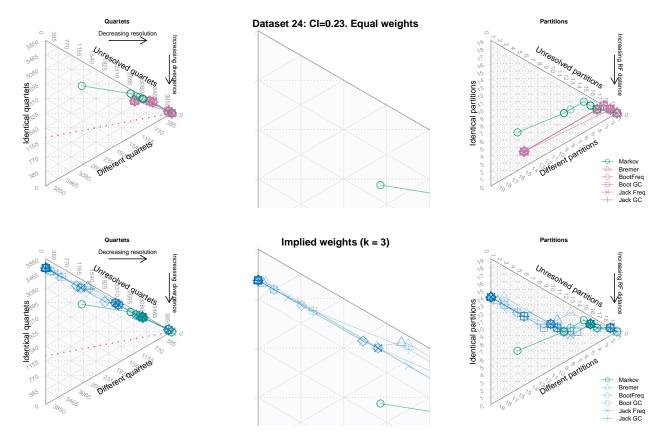


0.4 Trees 21-30

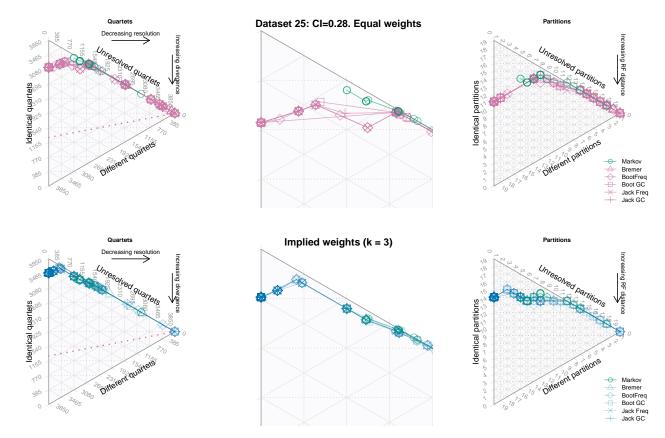


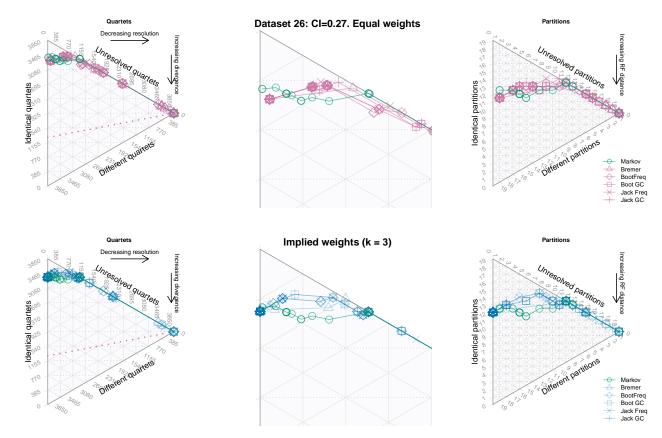


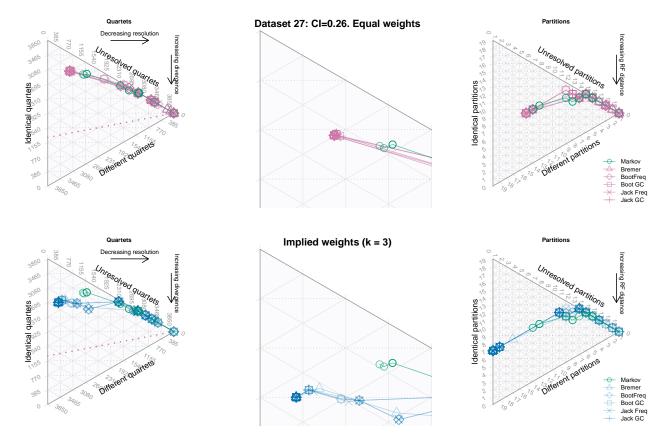


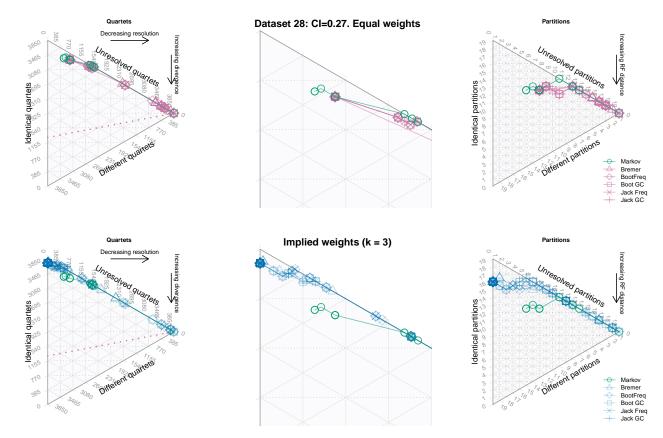


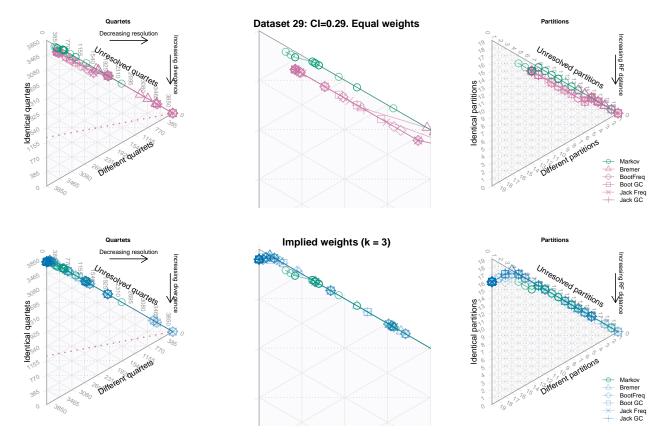
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



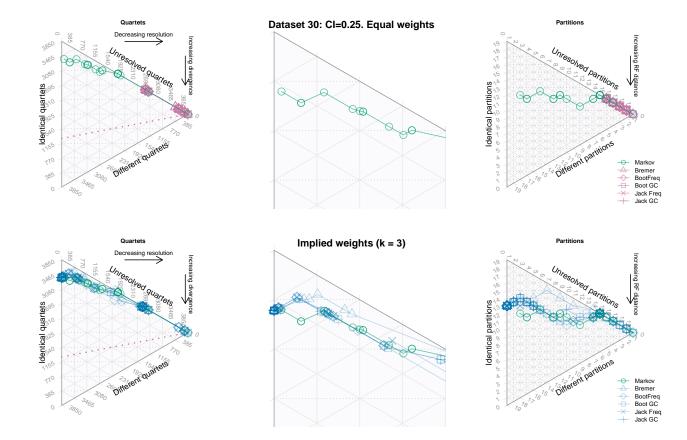




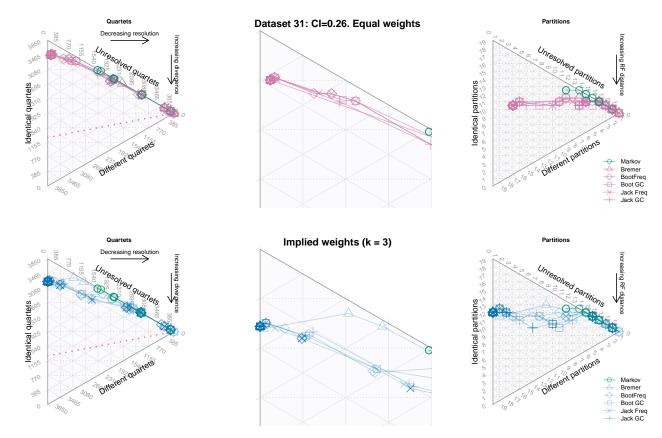


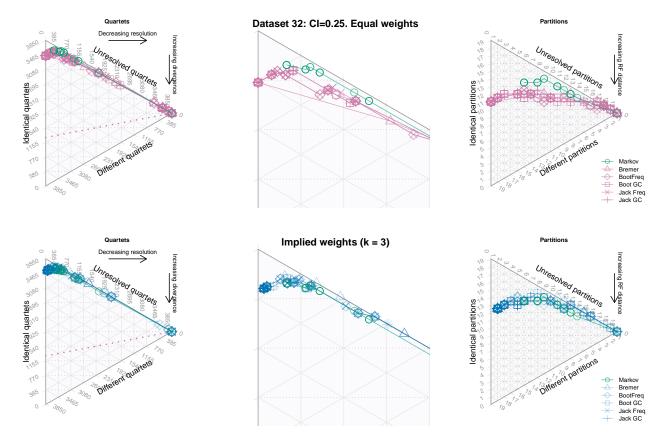


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

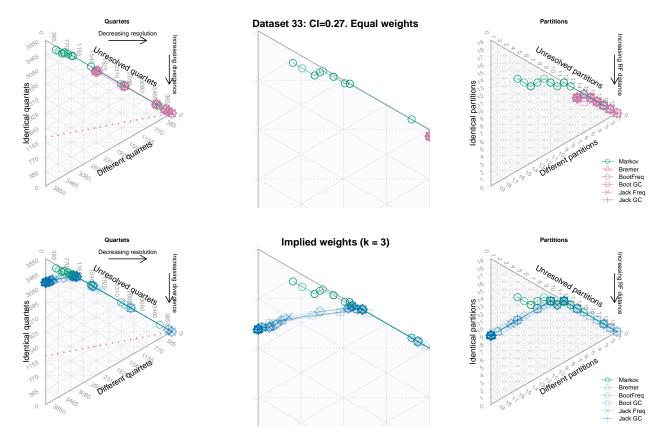


0.5 Trees 31-40

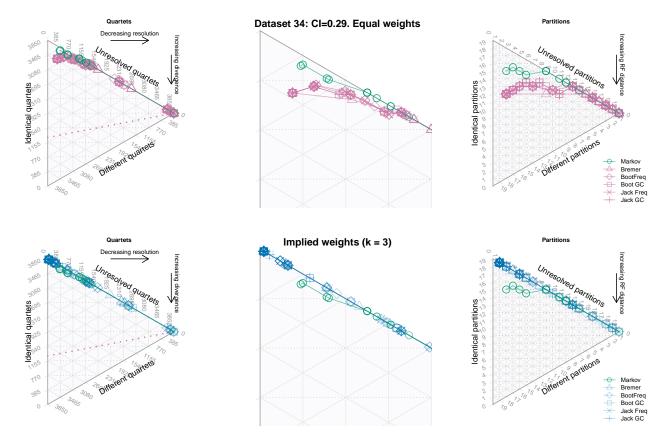


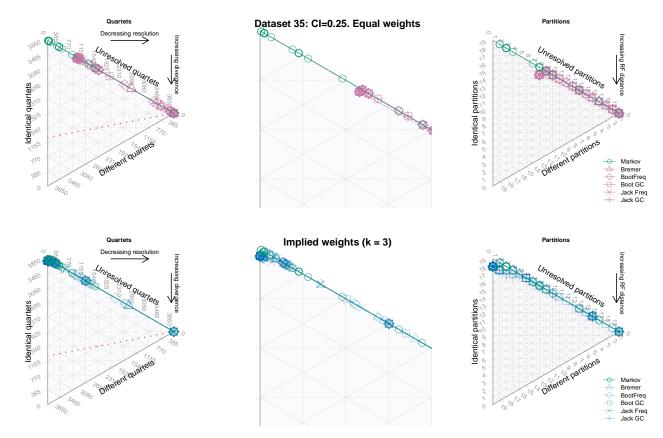


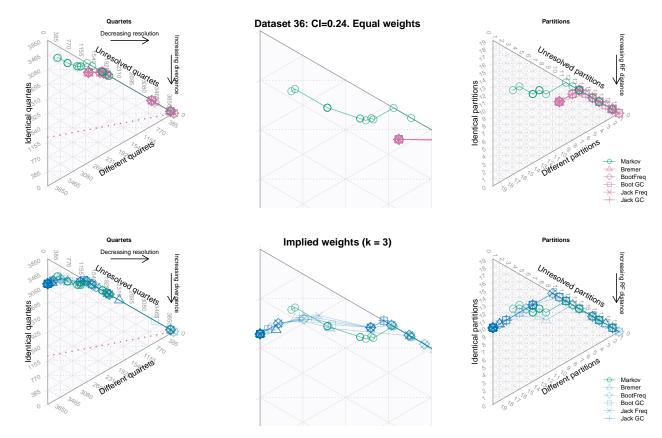
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

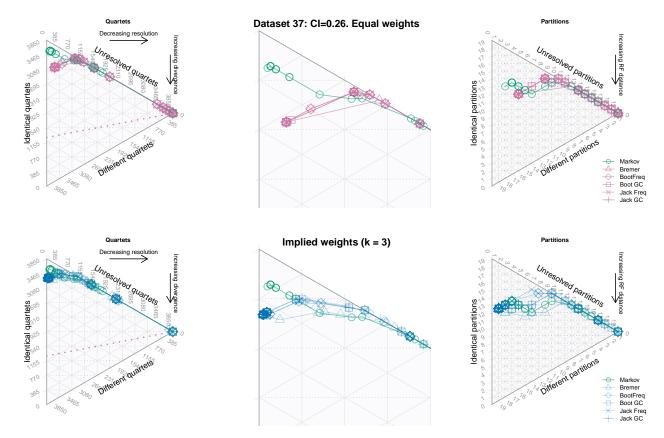


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

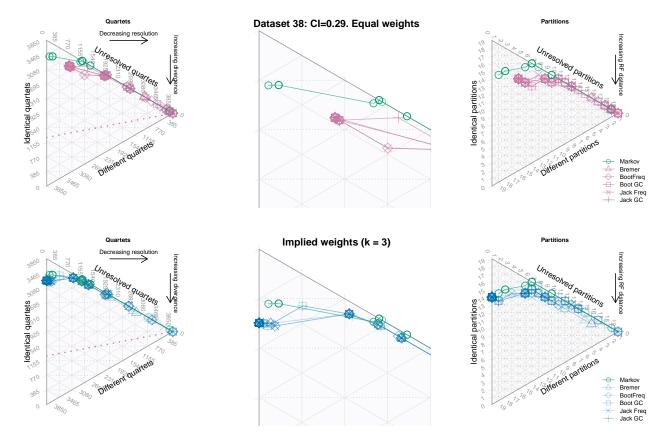


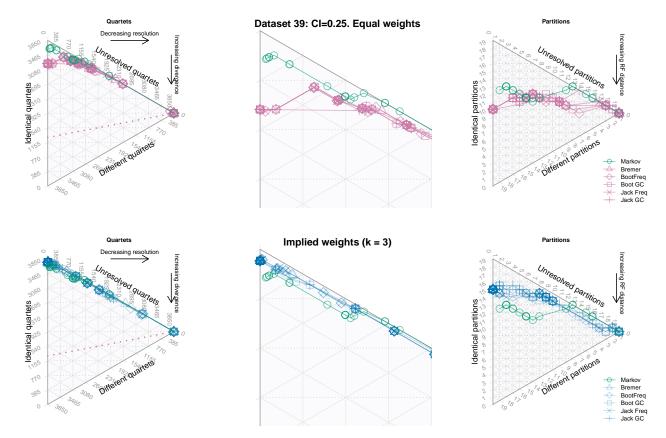




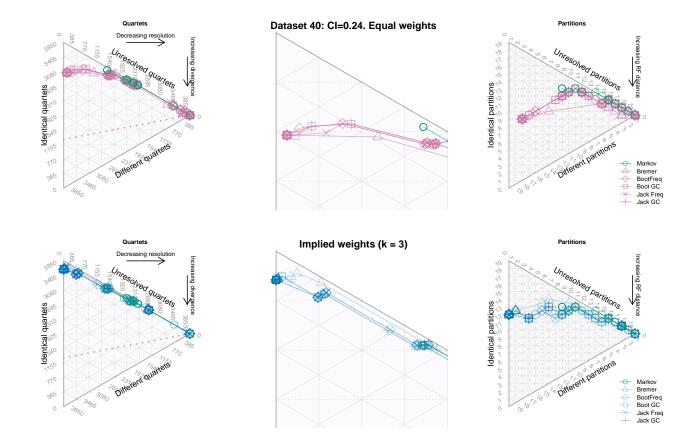


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

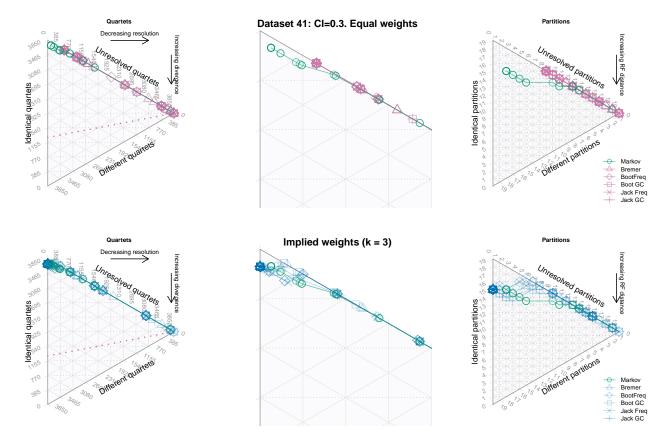


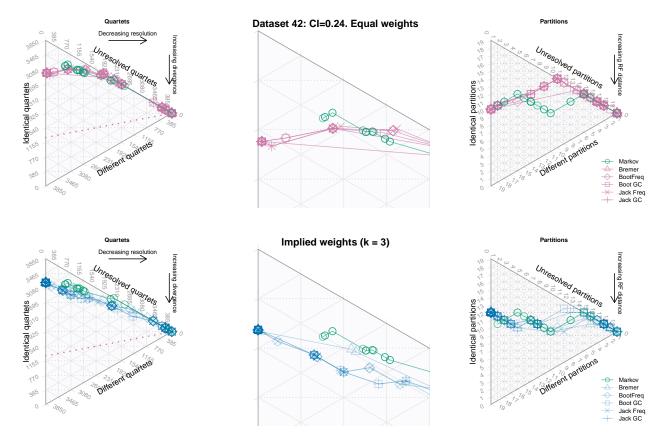


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

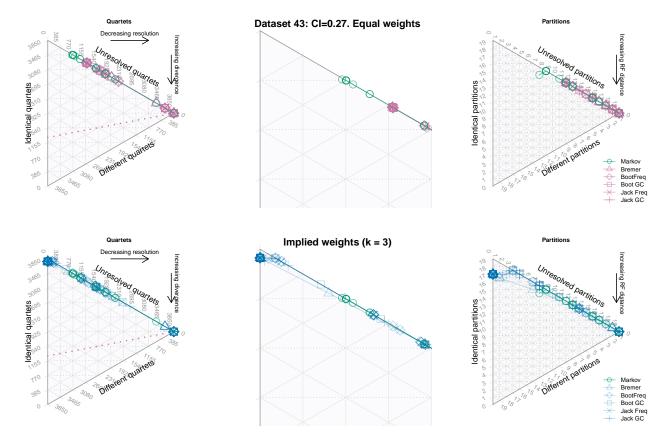


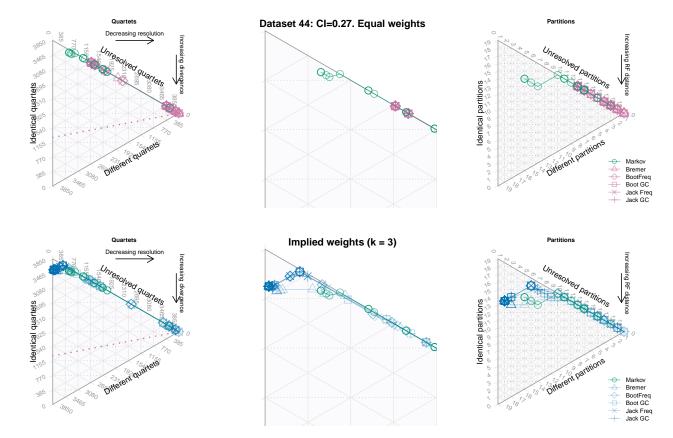
0.6 Trees 41-50

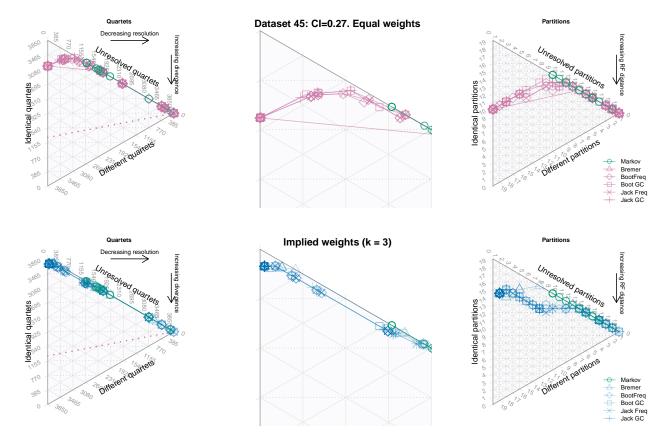


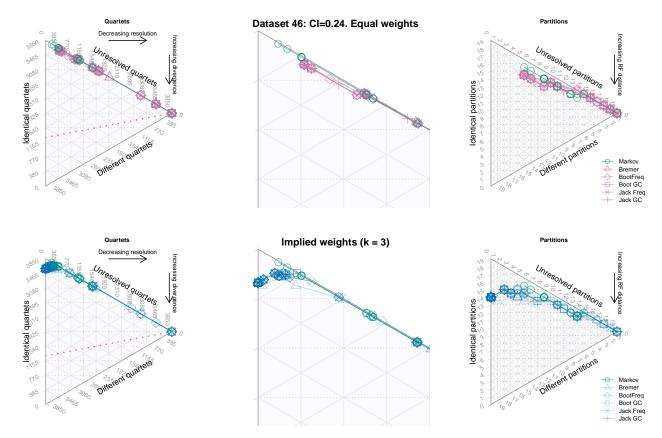


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

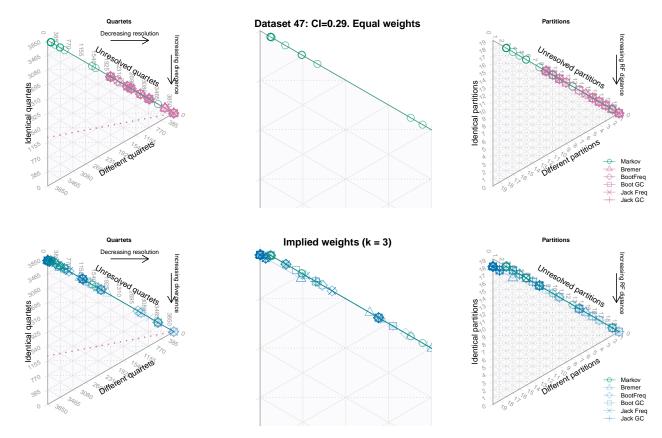


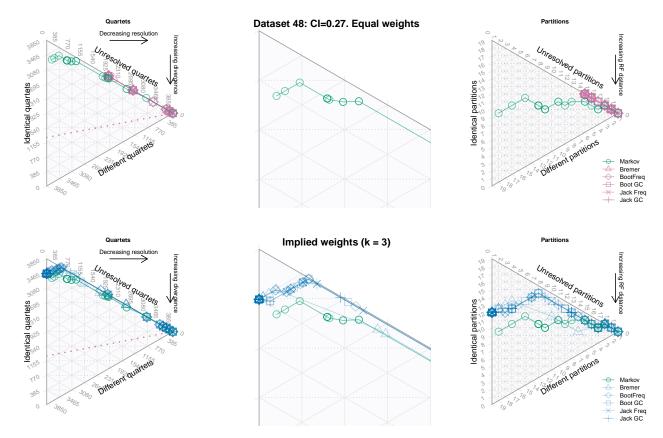




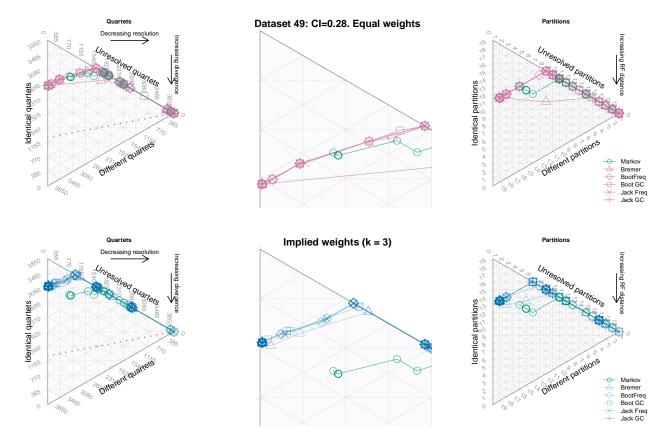


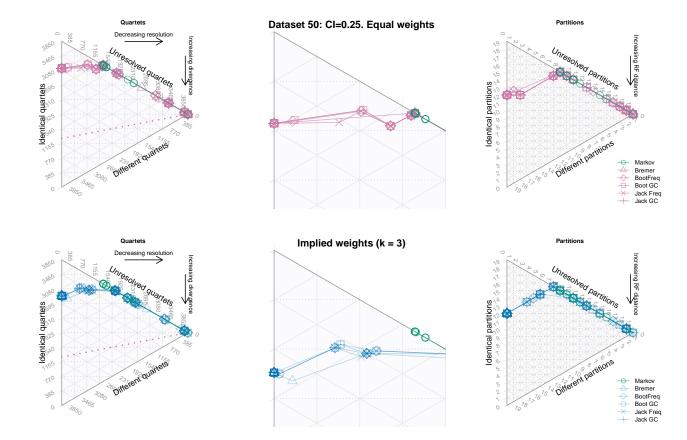
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



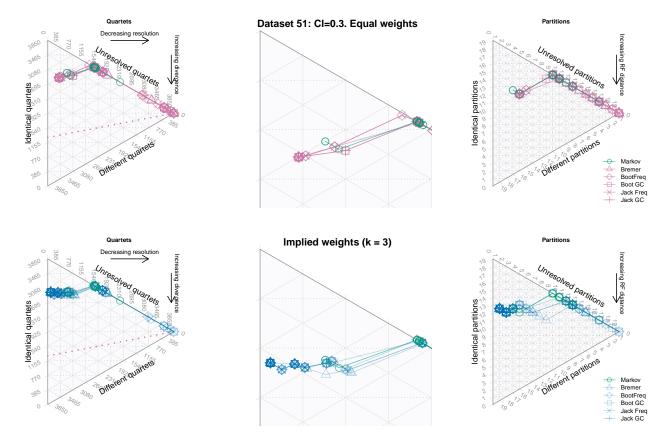


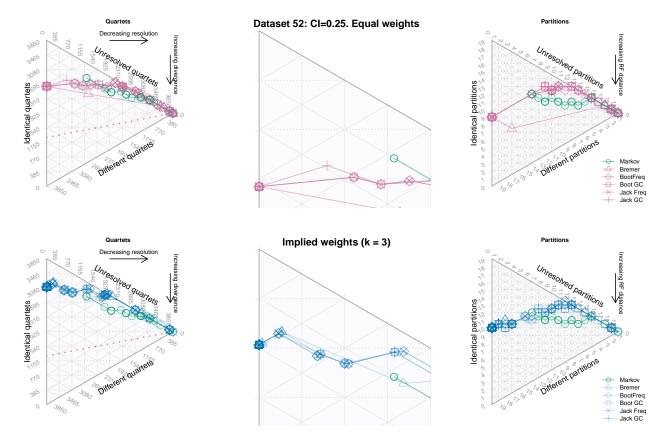
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



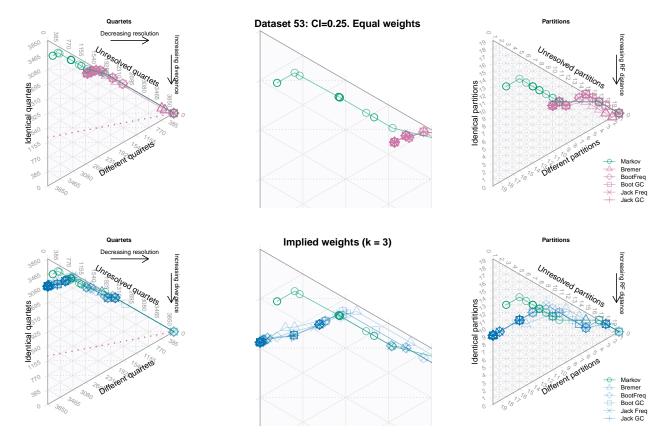


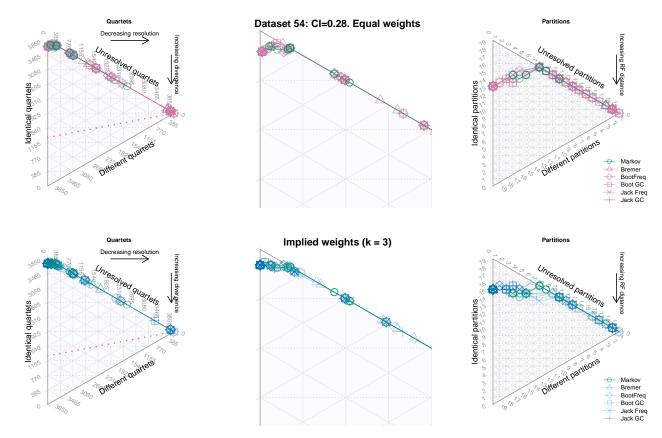
0.7 Trees 51-60

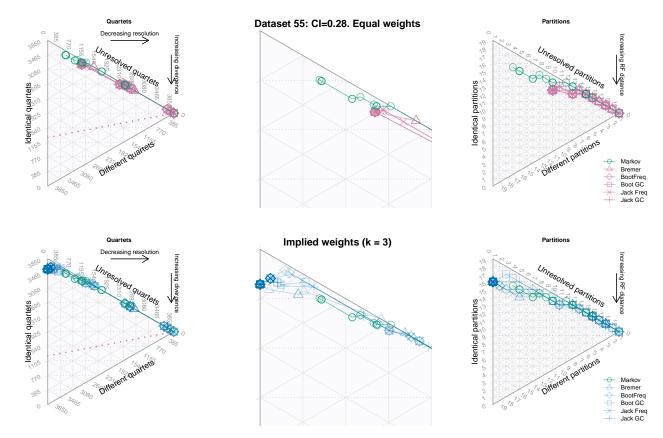




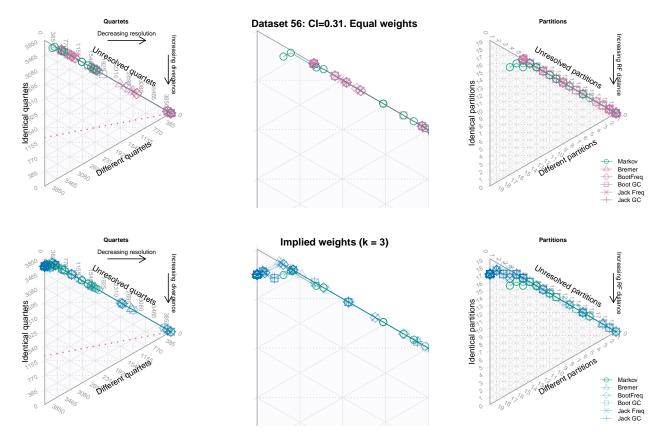
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

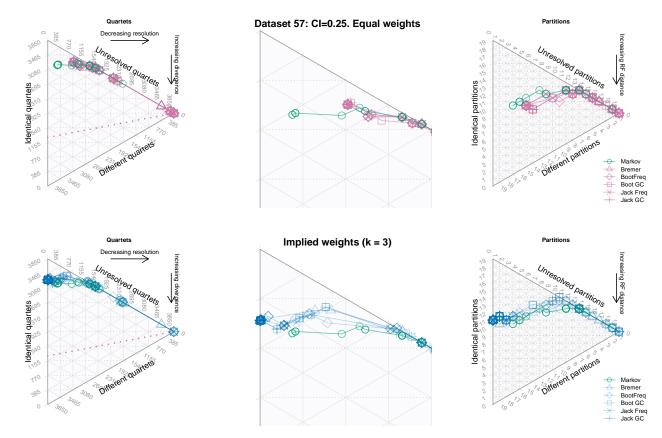


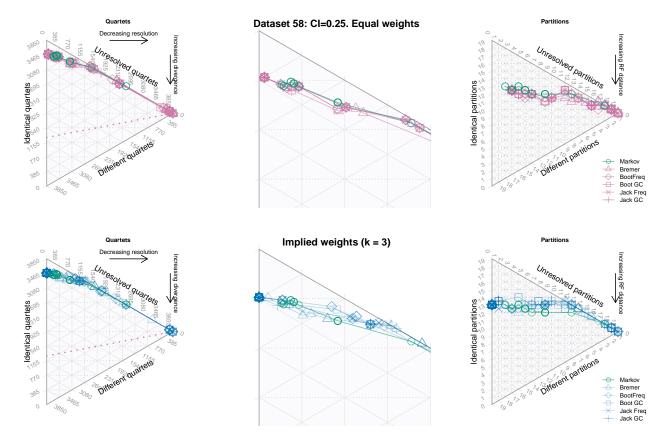


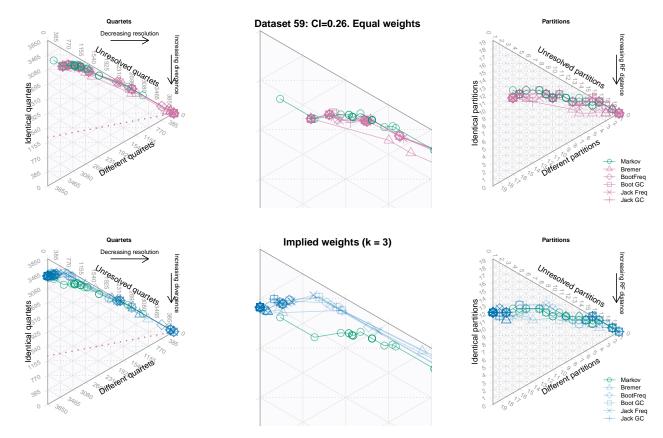


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

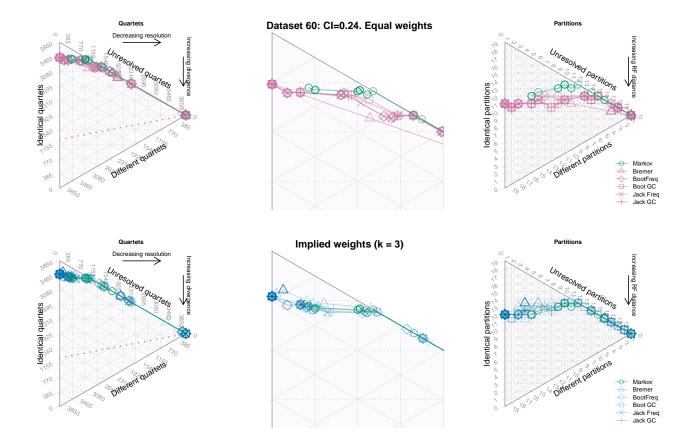






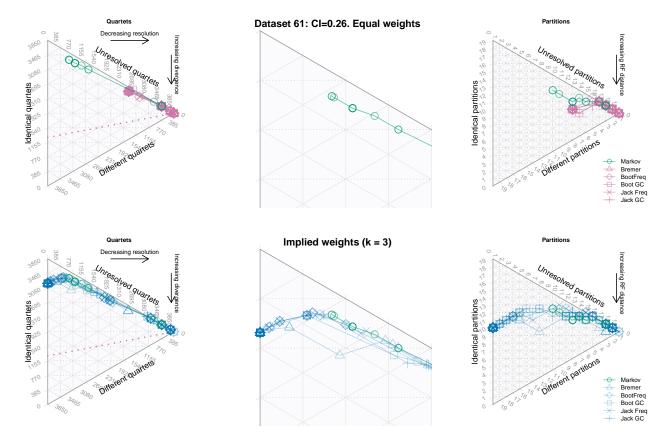


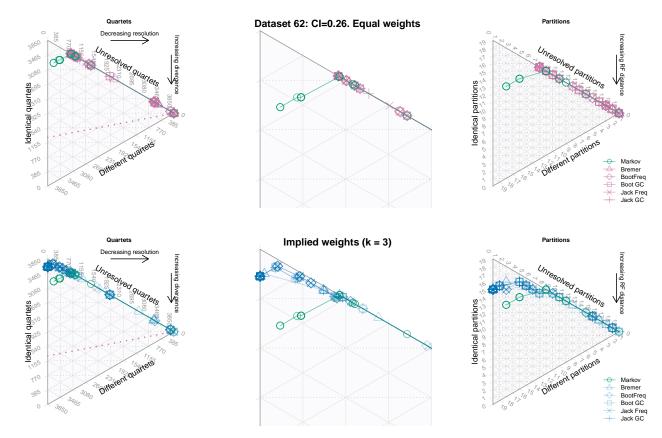
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

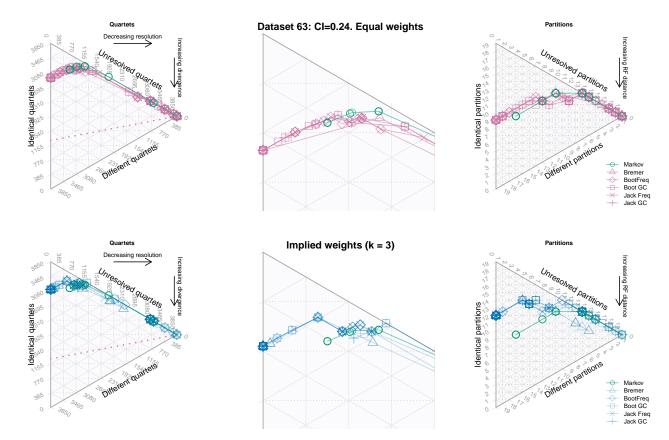


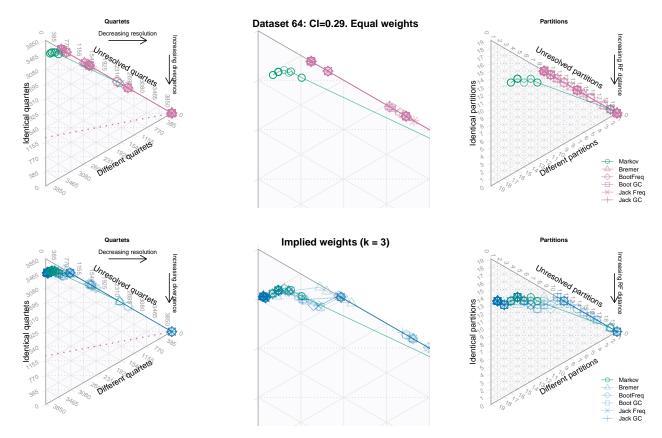
0.8 Trees 61-70

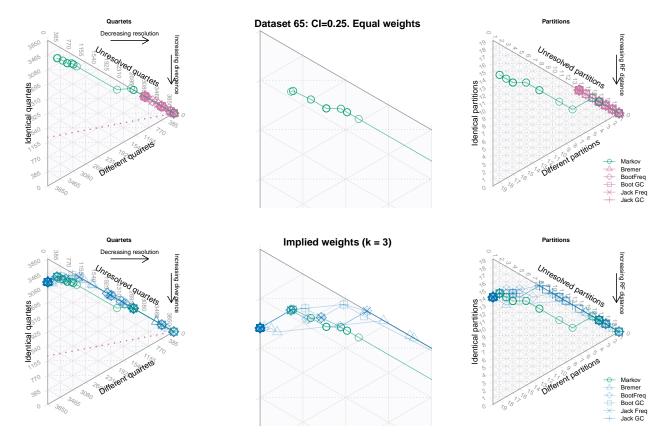
- ## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
 ## reports request to set locale to "English_United Kingdom.1252" cannot be
- ## honored

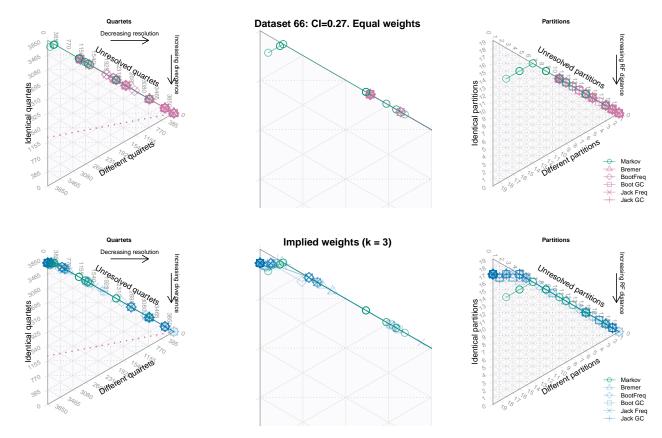


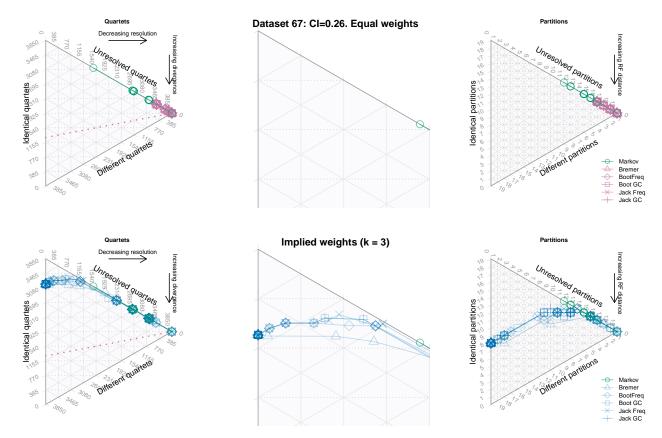




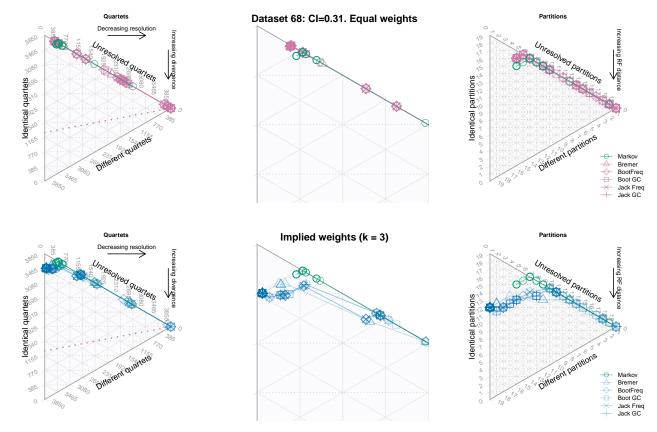


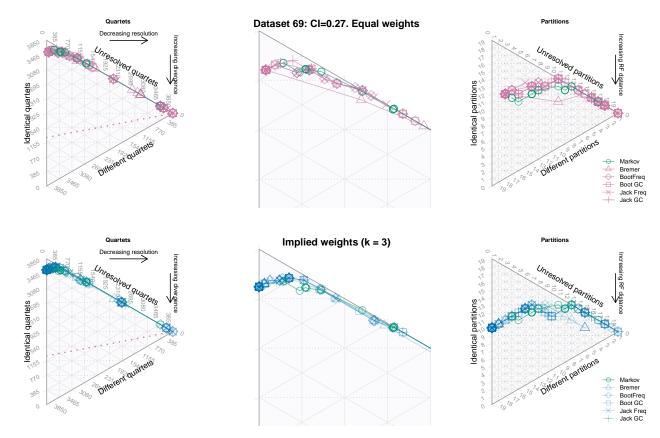


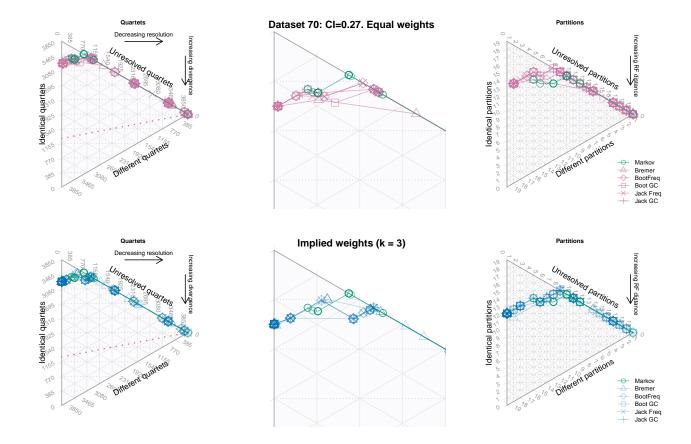




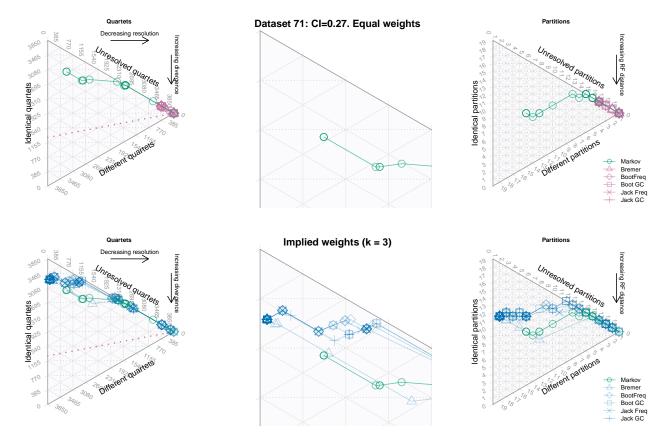
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

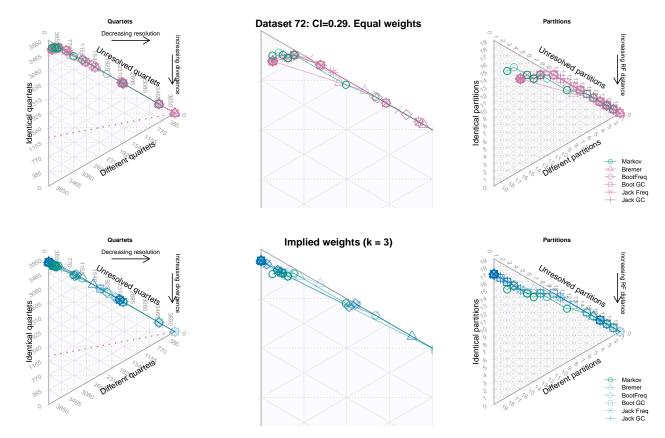


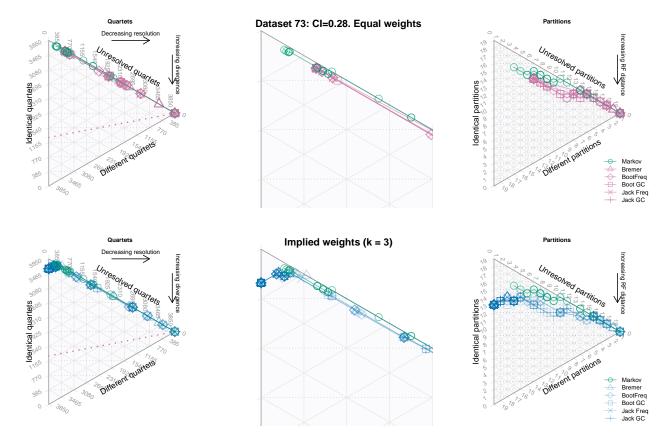


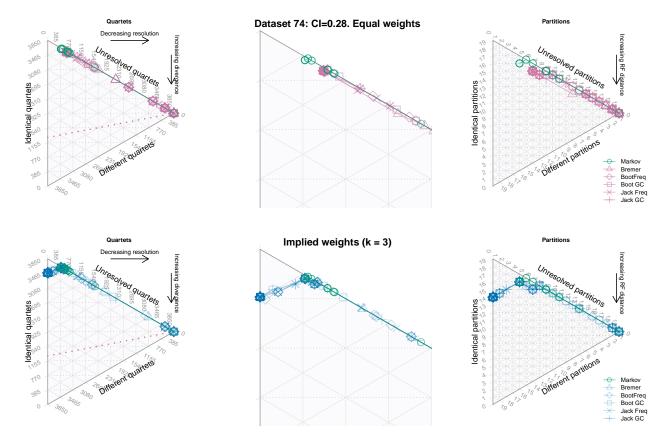


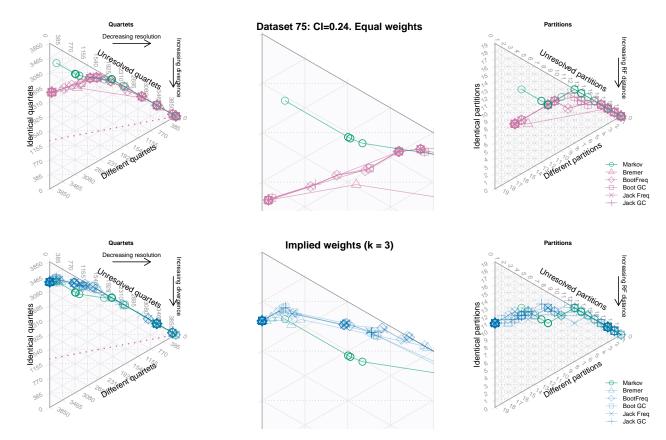
0.9 Trees 71–80

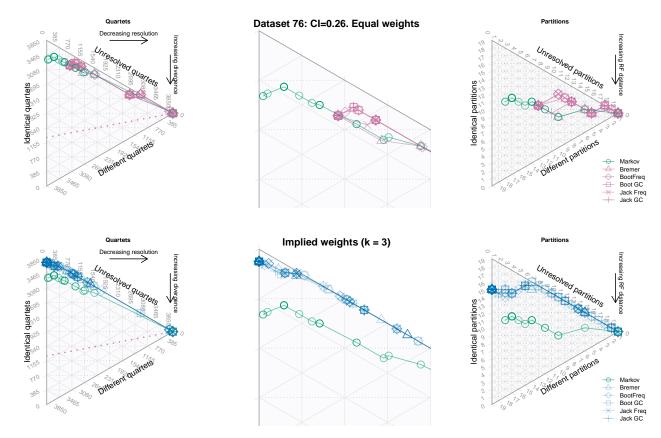


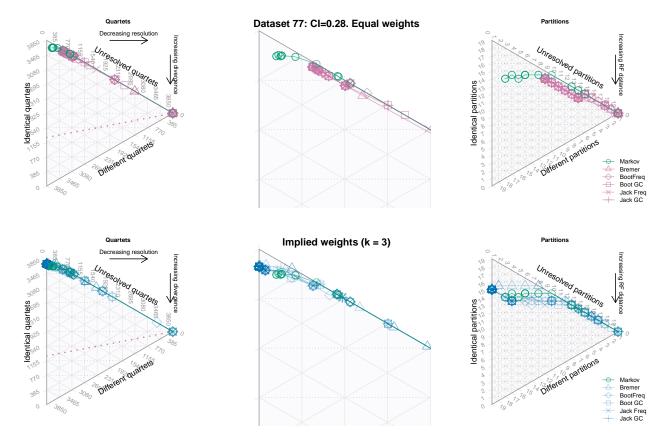


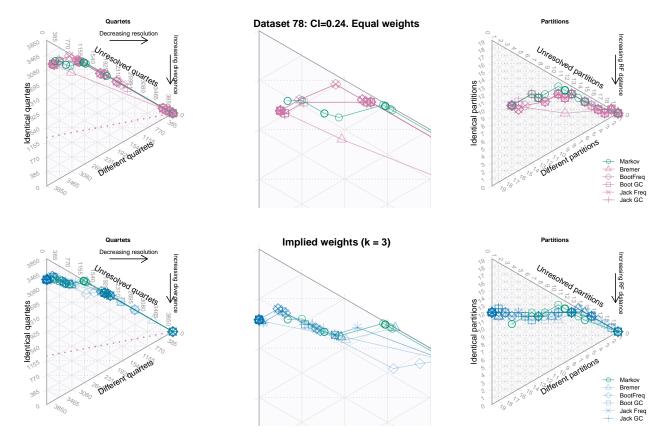


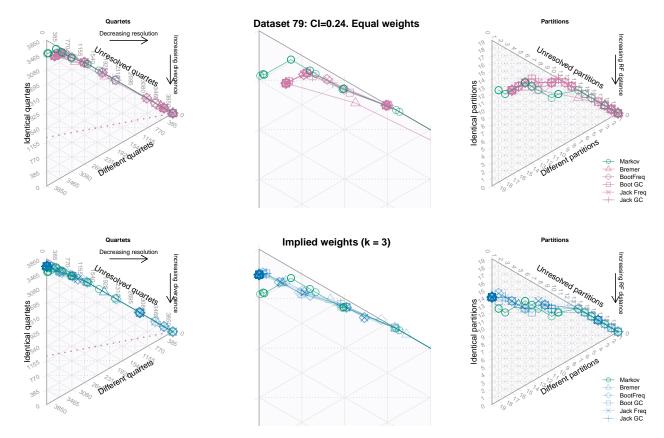




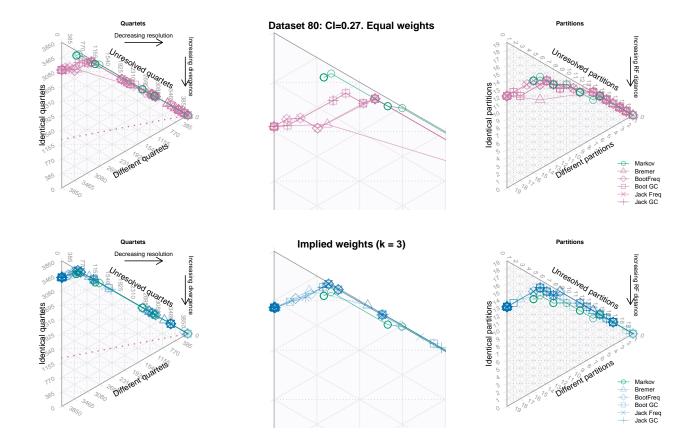






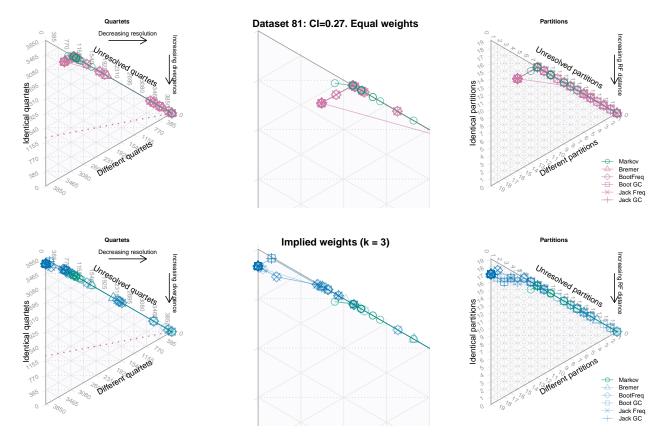


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

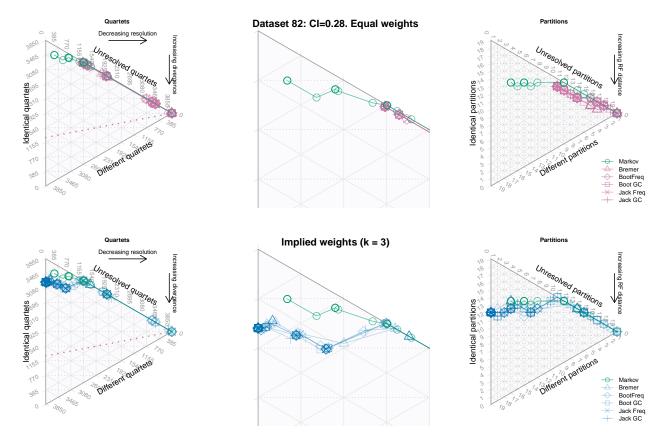


0.10 Trees 81–90

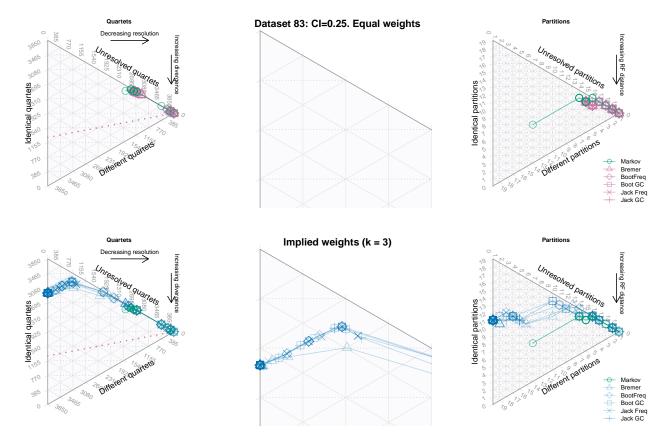
- ## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
 ## reports request to set locale to "English_United Kingdom.1252" cannot be
- ## honored

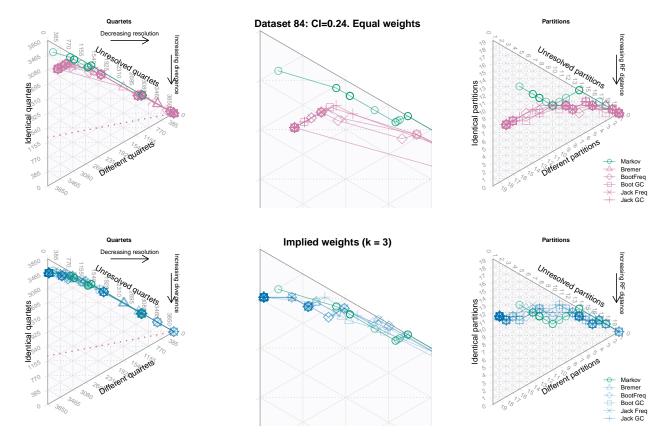


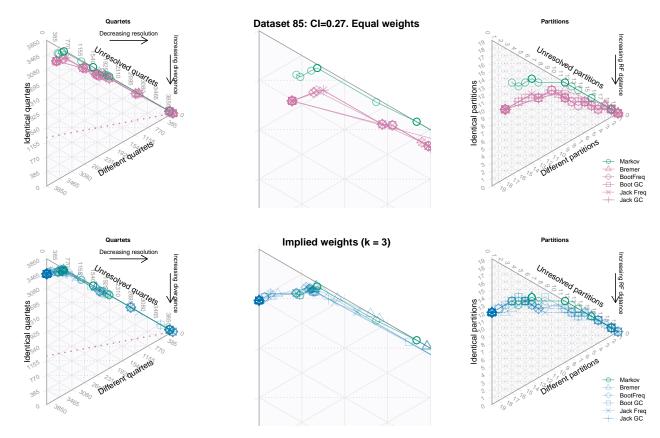
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



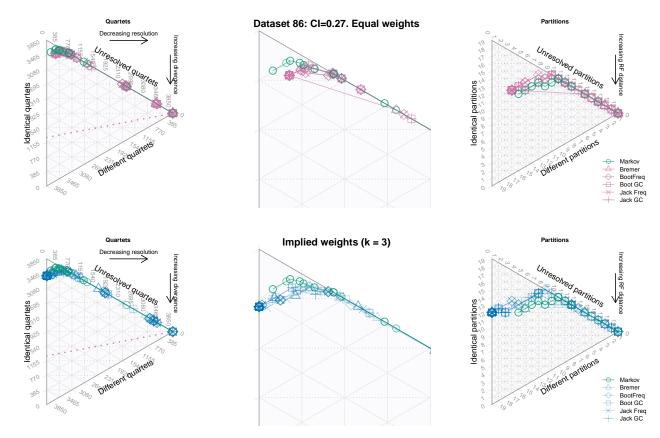
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



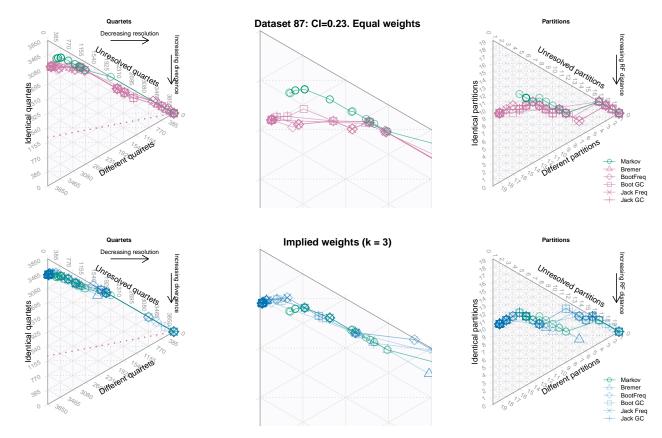


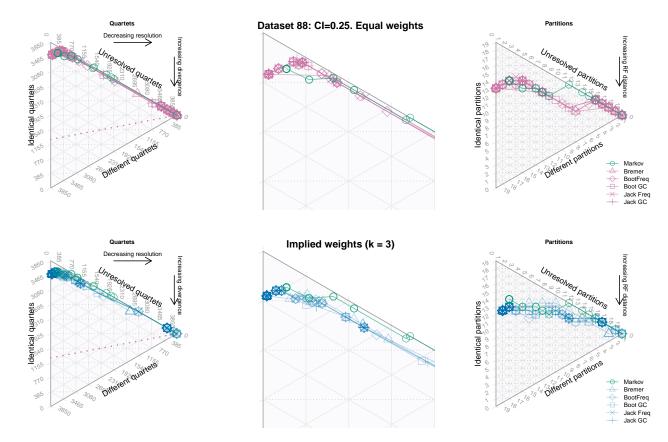


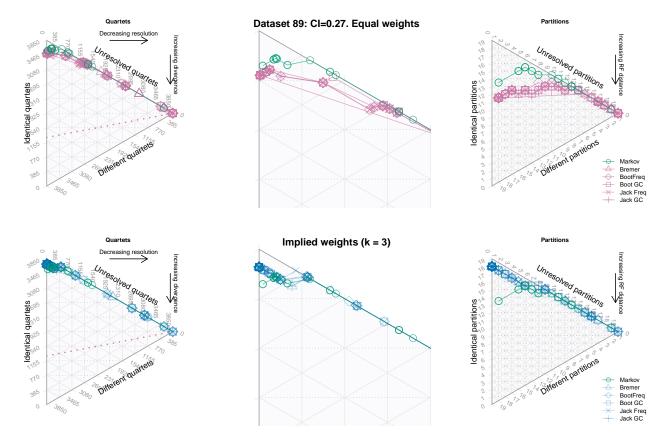
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored

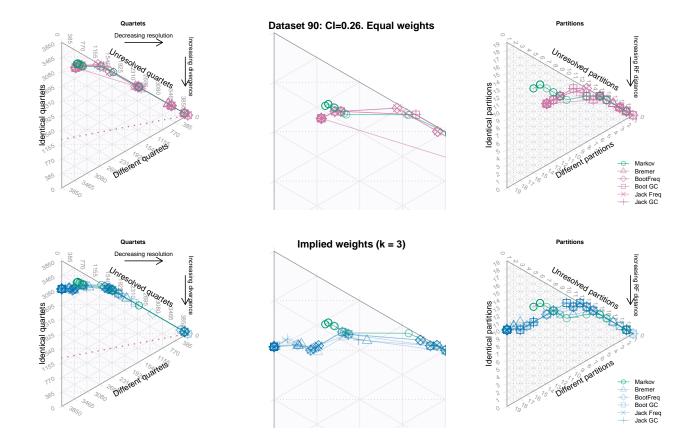


Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



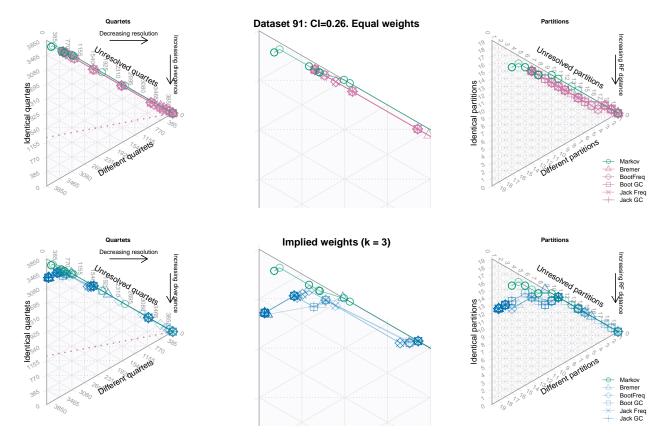


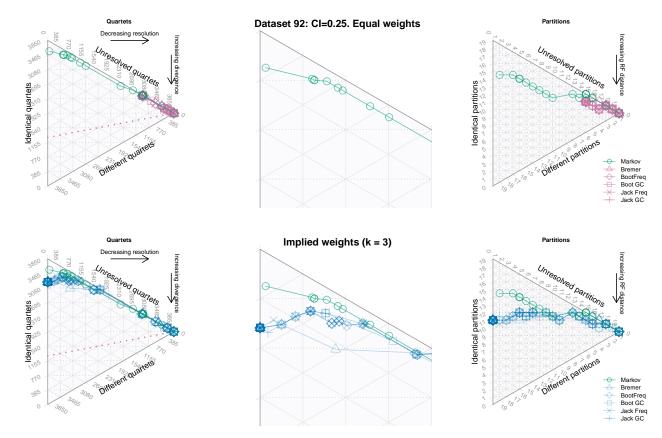


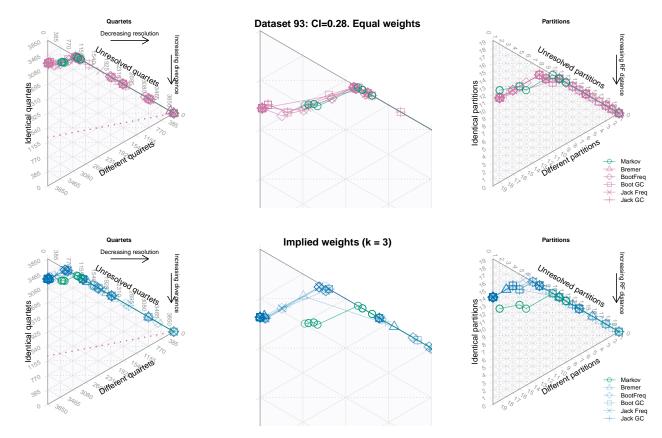


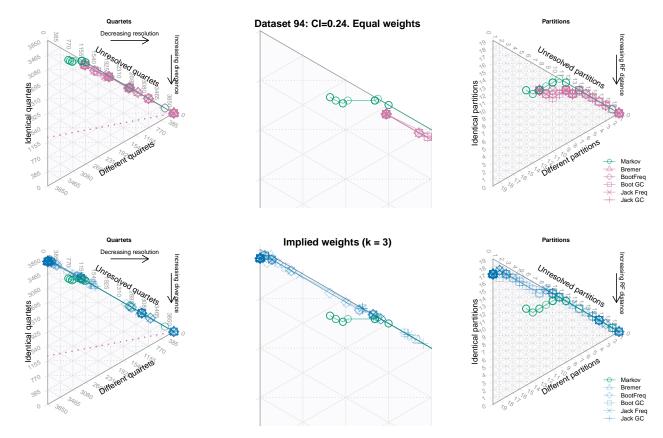
0.11 Trees 91–100

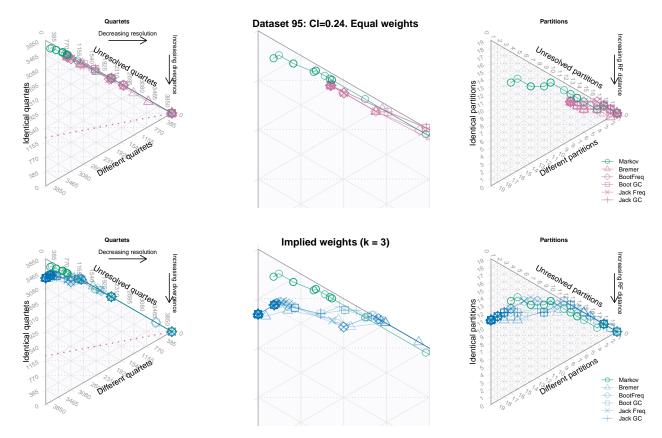
- ## Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
 ## reports request to set locale to "English_United Kingdom.1252" cannot be
- ## honored



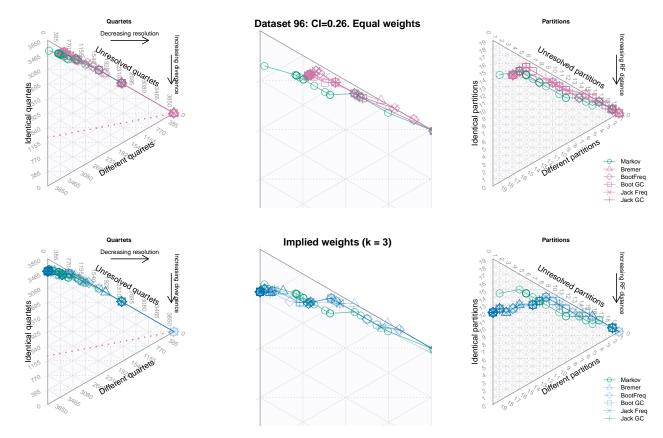


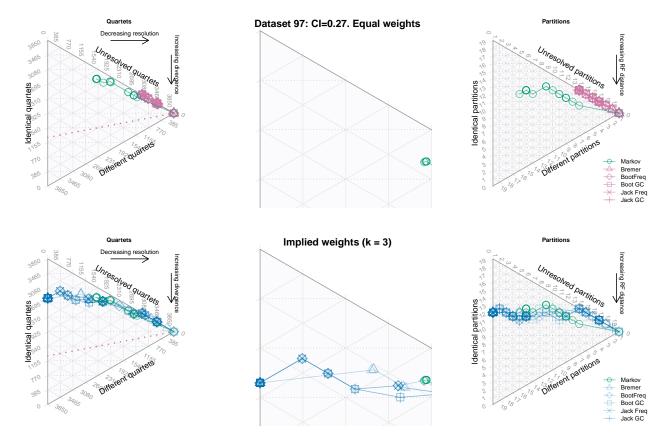


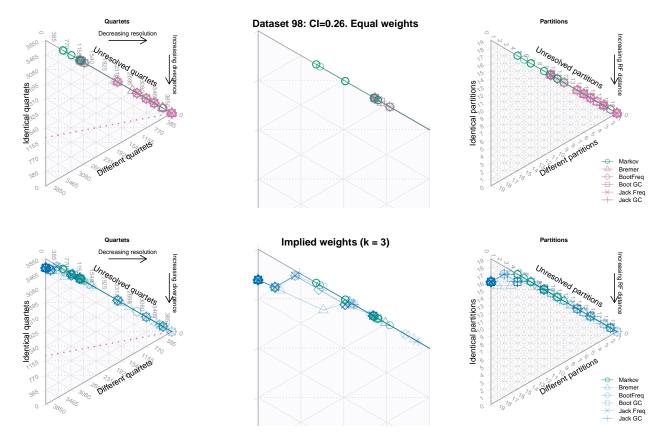




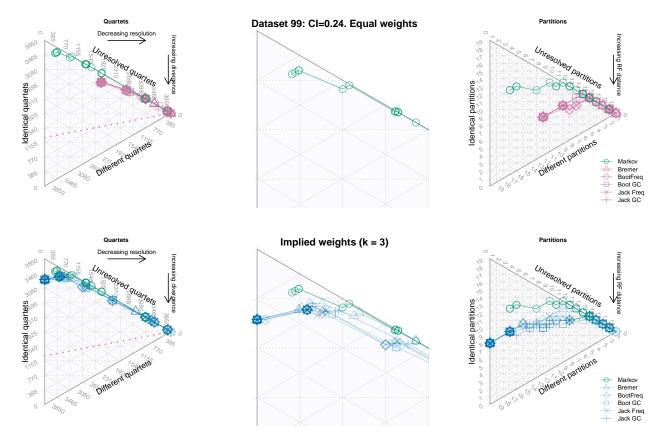
Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



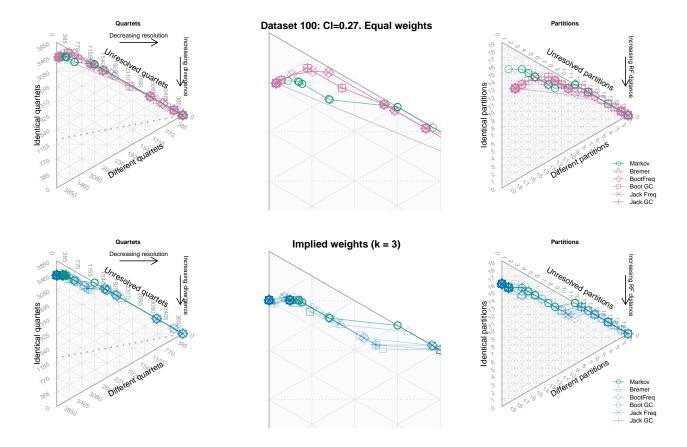




Warning in Sys.setlocale("LC_ALL", "English_United Kingdom.1252"): OS
reports request to set locale to "English_United Kingdom.1252" cannot be
honored



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



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. $Biology\ Letters;\ preprint\ at\ BioRxiv\ (doi:10.1101/227942)$