

$N$	$\mathbf{A}$	First columns of matrices $\mathbf{C}_{\alpha\beta}$	$\mathbf{L}$
100	0.0763	0.0183	0.00610
400	1.22	0.0744	0.0248
2,500	48	0.458	0.1528
10,000	763	1.831	0.6104
40,000	12,207	7.32	2.4416
250,000	476,837	45.768	15.3
500,000	1,907,349	91.56	30.518
1,000,000	7,629,395	183.096	61.035

RAM-usage This table shows the computer memory usage (in Megabytes) for storing the whole  $N \times N$  matrix  $\mathbf{A}$  (equation 13), the first columns of the BCCB matrices  $\mathbf{C}_{\alpha\beta}$  (equation A-6) (both need 8 bytes per element) and the matrix  $\mathbf{L}$  (equation A-18) (16 bytes per element).