

Supplementary table S4 to Maffei, Jackson and Livermore: *Characterisation of columnar inertial modes in rapidly rotating spheres and spheroids*

$m \backslash N$	1	3	10	15
1	-11.233	-244.818	-6521.6	-20685
2	-28.4259	-350.66	-7439.76	-22663.2
4	-80.856	-613.553	-9439.77	-26863.4
6	-157.352	-944.787	-11658.1	-31388.6
10	-382.487	-1812.32	-16749.7	-41413.6
15	-799.076	-3281.22	-24342.4	-55767.1
20	-1365.79	-5177.27	-33299.8	-71801.8

**Table S4:** Some values of the decay factor  $\tau$  due to stress-free boundary condition calculated for different values of  $N$  and  $m$  for the 3D inertial modes with the lowest vertical complexity and with the smallest (in absolute value) eigenfrequency.