

Table S3. Correlation matrices for Ca after detrending.

	No detrending	Hugershof	Smooth spline	Derivatives																																																																																																				
pine #1	<table> <tr><th></th><th>Ca_eas</th><th>Ca_wes</th><th>Ca_nor</th><th>Ca_sou</th></tr> <tr><th>Ca_eas</th><td>1</td><td></td><td></td><td></td></tr> <tr><th>Ca_wes</th><td>0.763</td><td>1</td><td></td><td></td></tr> <tr><th>Ca_nor</th><td>0.763</td><td>0.904</td><td>1</td><td></td></tr> <tr><th>Ca_sou</th><td>0.787</td><td>0.904</td><td>0.895</td><td>1</td></tr> </table>		Ca_eas	Ca_wes	Ca_nor	Ca_sou	Ca_eas	1				Ca_wes	0.763	1			Ca_nor	0.763	0.904	1		Ca_sou	0.787	0.904	0.895	1	<table> <tr><th></th><th>Ca_eas</th><th>Ca_wes</th><th>Ca_nor</th><th>Ca_sou</th></tr> <tr><th>Ca_eas</th><td>1</td><td></td><td></td><td></td></tr> <tr><th>Ca_wes</th><td>-0.039</td><td>1</td><td></td><td></td></tr> <tr><th>Ca_nor</th><td>0.193</td><td>0.407</td><td>1</td><td></td></tr> <tr><th>Ca_sou</th><td>-0.119</td><td>0.516</td><td>0.628</td><td>1</td></tr> </table>		Ca_eas	Ca_wes	Ca_nor	Ca_sou	Ca_eas	1				Ca_wes	-0.039	1			Ca_nor	0.193	0.407	1		Ca_sou	-0.119	0.516	0.628	1	<table> <tr><th></th><th>Ca_eas</th><th>Ca_wes</th><th>Ca_nor</th><th>Ca_sou</th></tr> <tr><th>Ca_eas</th><td>1</td><td></td><td></td><td></td></tr> <tr><th>Ca_wes</th><td>0.211</td><td>1</td><td></td><td></td></tr> <tr><th>Ca_nor</th><td>0.347</td><td>0.373</td><td>1</td><td></td></tr> <tr><th>Ca_sou</th><td>0.102</td><td>0.317</td><td>0.303</td><td>1</td></tr> </table>		Ca_eas	Ca_wes	Ca_nor	Ca_sou	Ca_eas	1				Ca_wes	0.211	1			Ca_nor	0.347	0.373	1		Ca_sou	0.102	0.317	0.303	1	<table> <tr><th></th><th>Ca_eas</th><th>Ca_wes</th><th>Ca_nor</th><th>Ca_sou</th></tr> <tr><th>Ca_eas</th><td>1</td><td></td><td></td><td></td></tr> <tr><th>Ca_wes</th><td>0.187</td><td>1</td><td></td><td></td></tr> <tr><th>Ca_nor</th><td>0.336</td><td>0.449</td><td>1</td><td></td></tr> <tr><th>Ca_sou</th><td>0.142</td><td>0.381</td><td>0.424</td><td>1</td></tr> </table>		Ca_eas	Ca_wes	Ca_nor	Ca_sou	Ca_eas	1				Ca_wes	0.187	1			Ca_nor	0.336	0.449	1		Ca_sou	0.142	0.381	0.424	1
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Bold font = significant at $p < 0.001$
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