

Quantitative laser speckle auto-inverse covariance imaging for robust estimation of blood flow: supplement

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Supplement DOI: <https://doi.org/10.6084/m9.figshare.14510721>

Parent Article DOI: <https://doi.org/10.1364/OL.422062>

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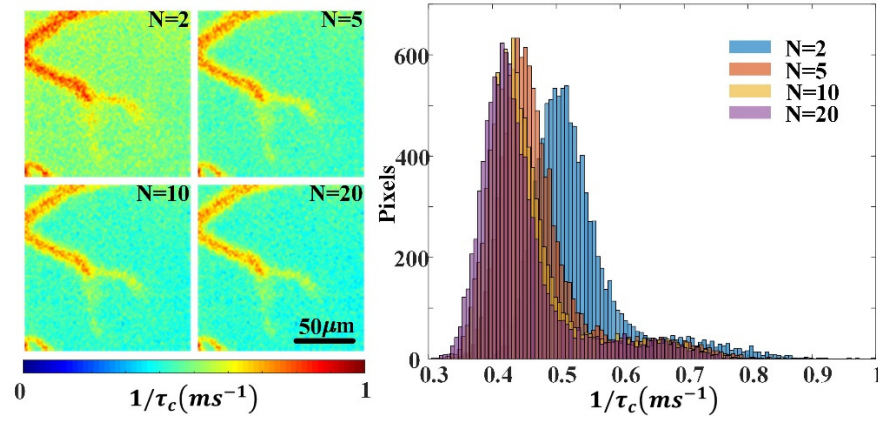


Fig. S1. Dependence of speckle contrast on statistical sample size. Left: the averaged $1/\tau_c$ images estimated by speckle contrast with different statistical sample size N . Right: the pixel intensity histogram per each image in Left.

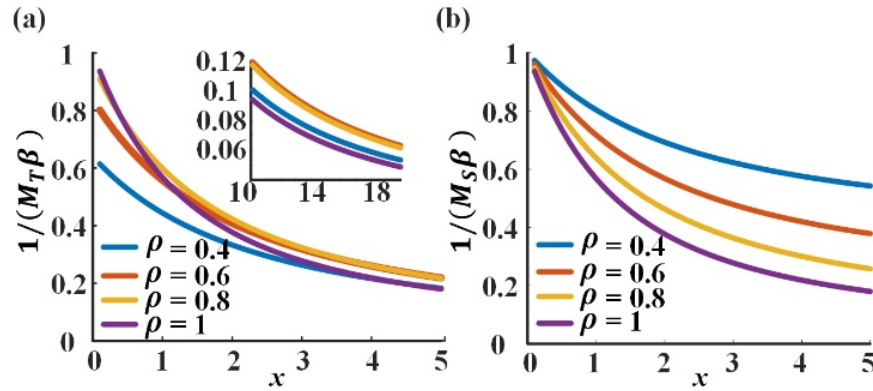


Fig. S2. Comparison of the impact of static scattering on the qAC in the temporal and spatial domains. (a) Temporal domain: $1/(M_T\beta) = f(x, \rho)$. (b) Spatial domain: $1/(M_S\beta) = f(x, \rho) + (1 - \rho)^2$.

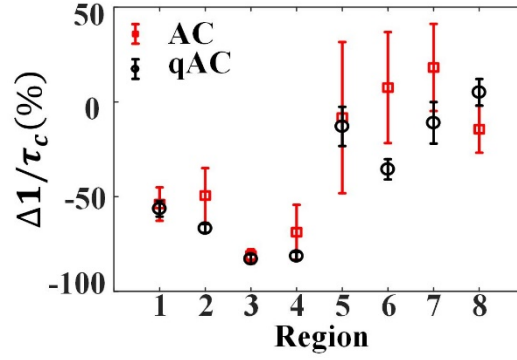


Fig. S3. The relative changes of the $1/\tau_c$ before and after MCAO in the ROIs 1-8 shown in Fig. 5 (b), respectively. The errorbars are the pixel intensity variance in a local 10×10 pixels region of $1/\tau_c$ image from one mice.

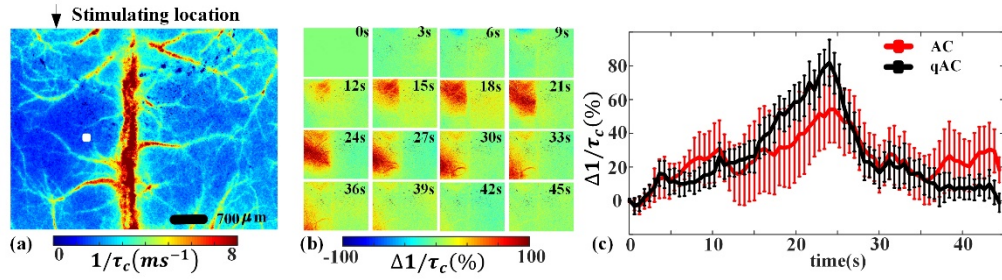


Fig. S4. Cortical spreading depression. (a) The reciprocal decorrelation time $1/\tau_c$ of the mouse cortex with in intact skull obtained by qAC. The arrow indicates the stimulating location. (b) The propagating changes of $1/\tau_c$ obtained by the qAC during CSD. (c) The relative changes of the $1/\tau_c$ in the white rectangle ROI marked in (a) obtained by the AC and qAC, respectively.