SUPPLEMENT - FISSA: A neuropil decontamination toolbox for calcium imaging signals

Sander W. Keemink^{1,2 ζ *}, Scott C. Lowe^{1,3 ζ}, Janelle M.P. Pakan³, Evelyn Dylda³, Mark C.W. van Rossum^{1†}and Nathalie L. Rochefort^{3†*}

13th February 2018

¹Institute for Adaptive and Neural Computation, School of Informatics, University of Edinburgh, Edinburgh EH8 9AB, UK

²Bernstein Center Freiburg, Faculty of Biology, University of Freiburg, 79104 Freiburg, Germany ³Centre for Discovery Brain Sciences, Biomedical Sciences, University of Edinburgh, Edinburgh, EH8 9XD, UK

*corresponding authors: swkeemink@scimail.eu, n.rochefort@ed.ac.uk $^{\zeta}$ Shared first authors †Shared last authors



Supplementary Figure 1: Comparison of the NMF method used in FISSA to the equivalent ICA method. Same example case and legend as Fig. 2C. Results obtained with FISSA using ICA are shown in dark green. Occasionally ICA can lead to negative signals (as shown in panel B) leading to a larger variance in performance. Error bars indicate standard deviation. *: p<0.05; Wilcoxon signed-rank test, n = 10 simulations of 120 s each. FISSA (NMF) vs: measured p = 0.0051, subtraction p = 0.0051, FISSA (ICA) p = 0.0051.