A) Stimulus-driven temporal evolution of HbO, Hb, HbT

Stimulus

0s 2s 4s 6s 8s 10s 12s

HbO

Hb

HbT

500µ

-0.25% 0 0.25%

C) Haemodynamic Response Function

BOLD response

Peak amplitude

FWHM

Peak time

Undershoot

Time (s)

B) Spontaneous temporal evolution of GCaMP fluorescence and haemodynamic activity

22.9s 23.5s 24.1s 24.7s 25.3s 25.9s 26.5s 27.1s

GCaMP6f ΔF/F(%)

Δ[HbT] (µM)