



**SUPPLEMENTARY FIG. S3.** Comparison of OIS signal change within pial vessels under visual stimulation at 620 nm (blue bar) and 700 nm (red bar). Signal change is greater than that observed in brain tissue excluding blood vessels (Fig. 2) for both wavelengths. However, their difference was larger at 620 nm than at 700 nm, suggesting that blood vessel artifacts are more likely at this wavelength.