

Supplementary Movie 1. Light stimulation triggers glutamatergic waves. Related to Figure 1 Left: $\Delta F/F$ movie of RGC activity in response to a light stimulus in the bottom half of FOV (see Figure 1e). In this case, no glutamatergic wave was triggered by the light stimulus. Scale bar = 100 μm . Right: Same as left but with an example of a triggered glutamatergic wave. Notice the wave spreads to regions of the retina that were not stimulated by light.

Supplementary Movie 2. 3D reconstruction of light-sheet imaging of cleared brains. Related to Figure 4 , S3 and S4 Left: Retinal ganglion cell projections to the thalamus (zona incerta, ventral and dorsal lateral geniculate nucleus) coming from the contralateral eye. Middle: Same region as left but depicting RGC projections from the ipsilateral eye. Right: Merge of contra- and ipsi-lateral projections. Scale bar = 300 μm .

Supplementary Movie 3. Serial coronal sections of eye-specific segregation in the LGN. Related to Figure 4 , S3 and S4 Left: Retinal ganglion cell projections to the thalamus (zona incerta, ventral and dorsal lateral geniculate nucleus) coming from the contralateral eye. Middle: Same region as left but depicting RGC projections from the ipsilateral eye. Right: Merge of contra- and ipsi-lateral projections. Scale bar = 300 μm .