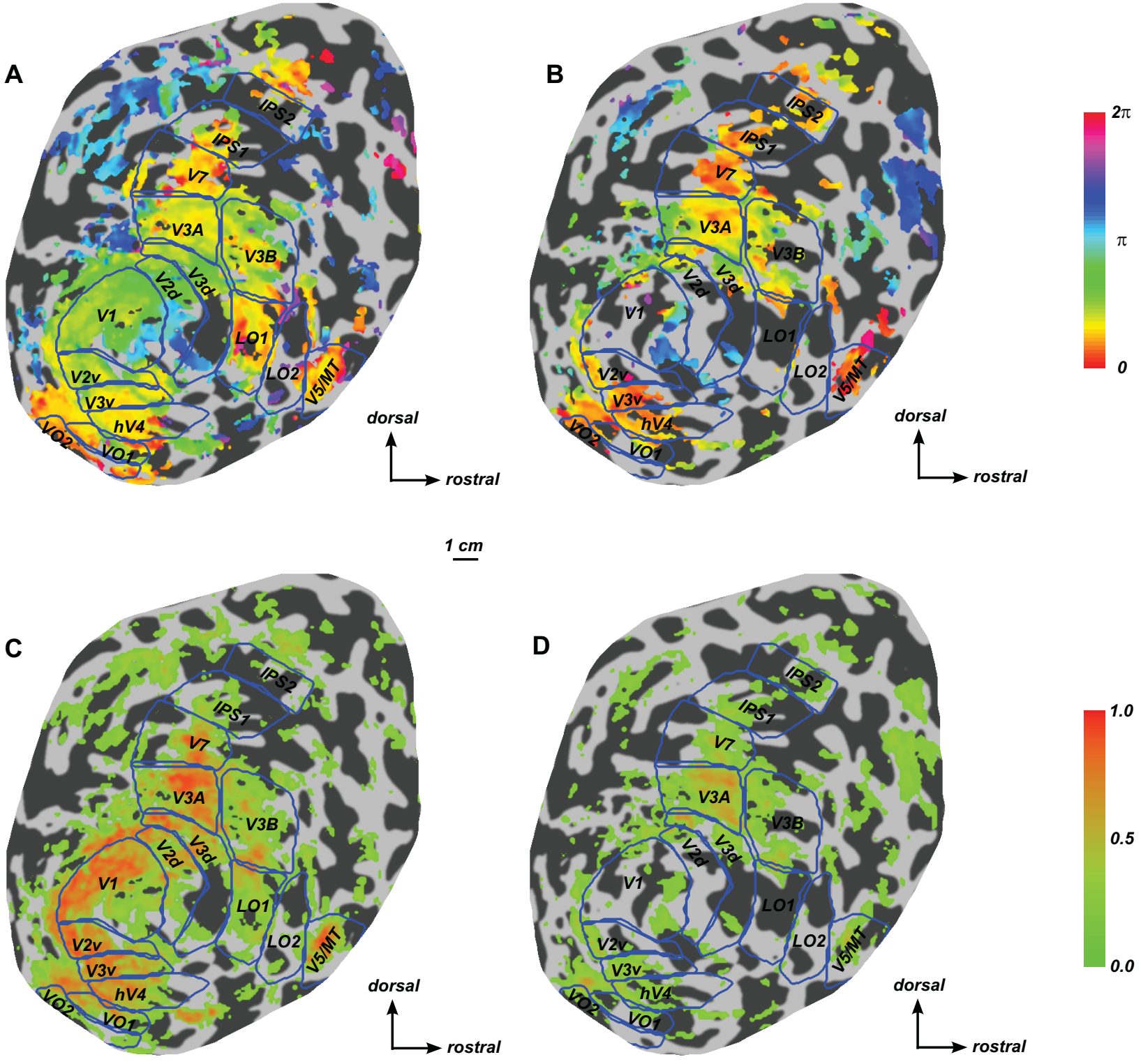
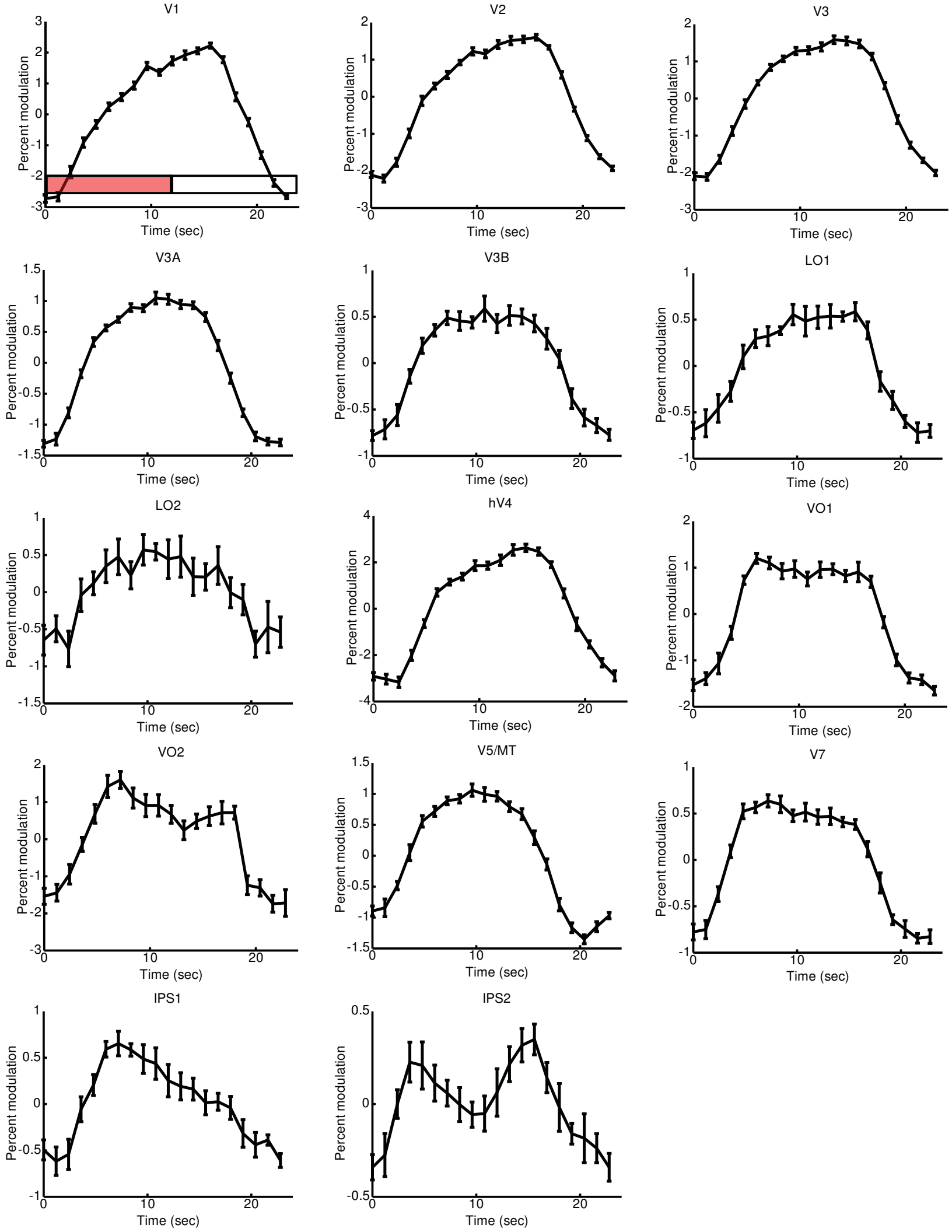

A
B
C
D
IPS2
IPS1
V7
V3A
V3B
V2d
V3d
V1
LO1
LO2
V5/MT
V2v
V3v
hV4
VO2
VO1
dorsal
rostral
1 cm
2π
π
0
1.0
0.5
0.0


V1
V2
V3
V3A
V3B
LO1
LO2
hV4
VO1
VO2
V5/MT
V7
IPS1
IPS2
Percent modulation
Time (sec)

Supplementary Figure 1. *Localizer-activity flatmap for a representative subject.* ***A.*** *Temporal phase of fMRI response to motion-boundary stimuli relative to a blank screen thresholded at a coherence of 0.2 and overlaid on the computationally flattened occipital cortical surface of the right hemisphere (light gray - gyri, dark gray - sulci). Red, yellow and green colors indicate response phases corresponding to a visually evoked response increase; blue and cyan indicate a visually evoked response reduction (negative BOLD). Blue contours, boundaries of visual areas (labels of visual areas in black). For the ROI analysis (see Methods), the ROIs were restricted to include only those voxels within each visual area that responded strongly (coherence>=0.2) and in phase with visual stimulation.* ***B.*** *Temporal phase of fMRI response to motion-boundary stimuli relative to transparent-motion control stimuli (KO localizer contrast). Color scale and labels as in panel A.*

C. *Same data as in panel A, but red-green colors indicate coherence (thresholded at a coherence=0.2) of fMRI response to motion-boundary stimuli relative to a blank screen. Labels as in A.* ***D.*** *Same data as in panel B, but colors indicate coherence (thresholded at a coherence=0.2) of fMRI response to motion-boundary stimuli relative to a transparent-motion control stimuli. Color scale and labels as in panel C.*

Supplementary Figure 2. *Time courses of average fMRI responses in the localizer experiment for all ROIs for a representative subject (same subject as in supplementary Fig. 1). Data points, mean response averaged across voxels within each ROI and averaged across repeated blocks. Error bars, standard error of the mean across repeated blocks. Red bar in top left panel indicates period of stimulus presentation. Responses in IPS1 and IPS2 are dominated by strong transients corresponding to the onset (and, in IPS2, offset) of visual stimulation; other areas show a strong sustained visually evoked response.*