**Supplementary Fig. S1 (pp. 1-8)**: Maps of accumulated *F* values across all time points of event-related response for the main effect of *Lmono* and *Rmono* (A), *LRbin*, *L-R500*, and *R-L500* (B), and *LRbin*, *L-R500*, and *R-L500* (C) for subjects 1 to 11 (panel C is shown only for subjects 7 to 11). Figure for the subject 12 is shown as Fig. 3 in the main text. Conventions are the same as in Fig. 3 in the main text.

Subject 3

(A)

(B)

Subject 4

(A)

(B)

2

Subject 5

(A)

(B)

Subject 6

(A)

(B)

Subject 7

(A)

Accumulated F value
342
0

voxel 1   voxel 2   voxel 3   voxel 4

Lmono
Rmono

(B)

104
0

voxel 5   voxel 6   voxel 7   voxel 8

LRbin
L−R500
R−L500

(C)

97
0

voxel 9   voxel 10   voxel 11   voxel 12

LRbin
L−R100
R−L100

4

Subject 8

(A)

voxel 1 voxel 2 voxel 3 voxel 4

Lmono
Rmono

(B)

voxel 5 voxel 6 voxel 7 voxel 8

LRbin
L–R500
R–L500

(C)

voxel 9 voxel 10 voxel 11 voxel 12

LRbin
L–R100
R–L100

5

Subject 9

(A)

voxel 1   voxel 2   voxel 3   voxel 4

Lmono
Rmono

(B)

voxel 5   voxel 6   voxel 7   voxel 8

LRbin
L−R500
R−L500

(C)

voxel 9   voxel 10   voxel 11   voxel 12

LRbin
L−R100
R−L100

6

Subject 10

Subject 11

(A)

voxel 1   voxel 2   voxel 3   voxel 4

Lmono
Rmono

(B)

voxel 5   voxel 6   voxel 7   voxel 8

LRbin
L-R500
R-L500

(C)

voxel 9   voxel 10   voxel 11   voxel 12

LRbin
L-R100
R-L100

8

Supplementary Fig. S2 (pp. 9-26): Maps of the weight of support vector machine classifier for Lmono:Rmono (A), L-R500:R-L500 (B), L-R500:LRbin (C), R-L500:LRbin (D) , L-R100:R-L100 (E), L-R100:LRbin (F), and R-L100:LRbin (G) (panels E to G are shown only for subjects 7 to 11). Conventions are the same as in Fig. 8 in the main text.

Subject 2

(A) Lmono:Rmono

(B) L-R500:R-L500

(C) L-R500:LRbin

(D) R-L500:LRbin

Subject 3

(A) Lmono:Rmono

voxel 1 | voxel 2 | voxel 3 | voxel 4

Lmono
Rmono

(B) L–R500:R–L500

voxel 5 | voxel 6 | voxel 7 | voxel 8

L–R500
R–L500

(C) L–R500:LRbin

voxel 9 | voxel 10 | voxel 11 | voxel 12

L–R500
LRbin

(D) R–L500:LRbin

voxel 13 | voxel 14 | voxel 15 | voxel 16
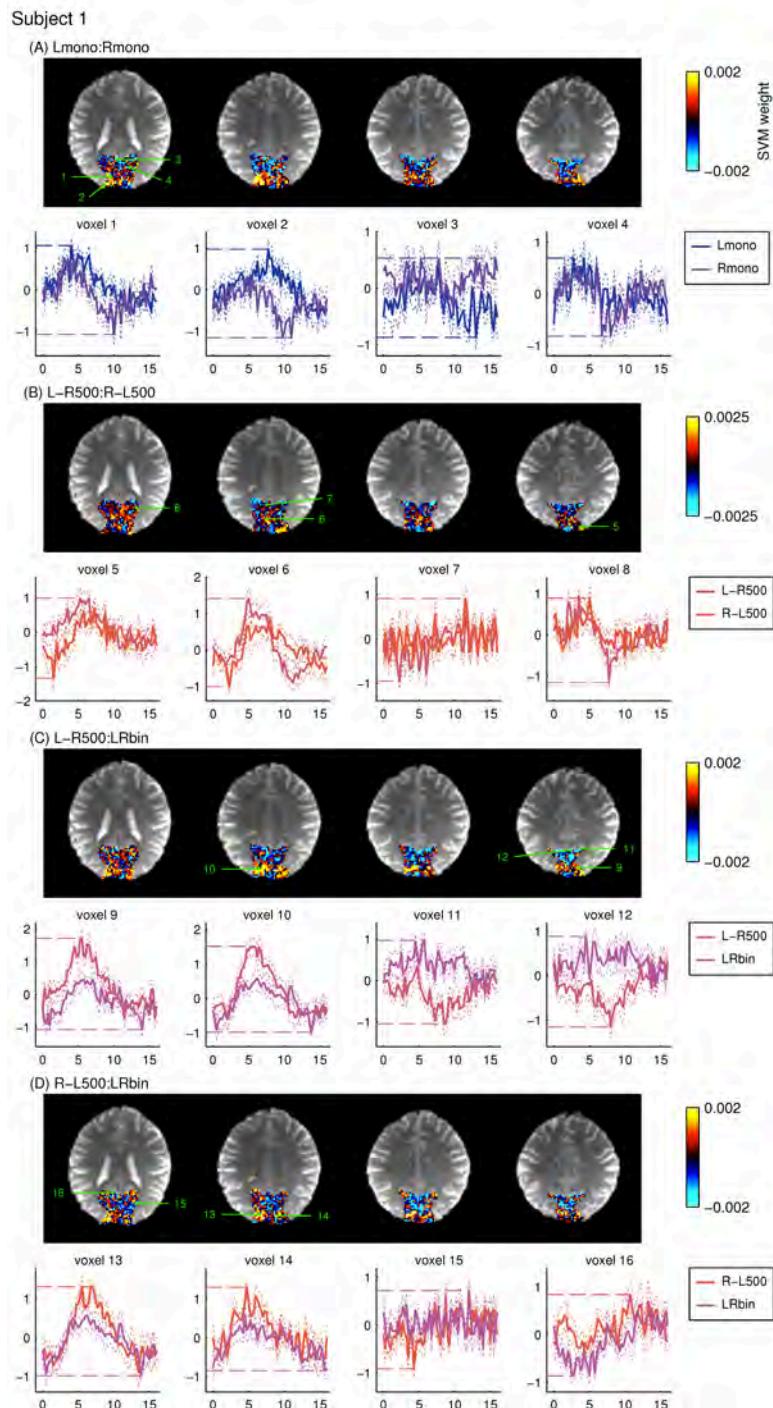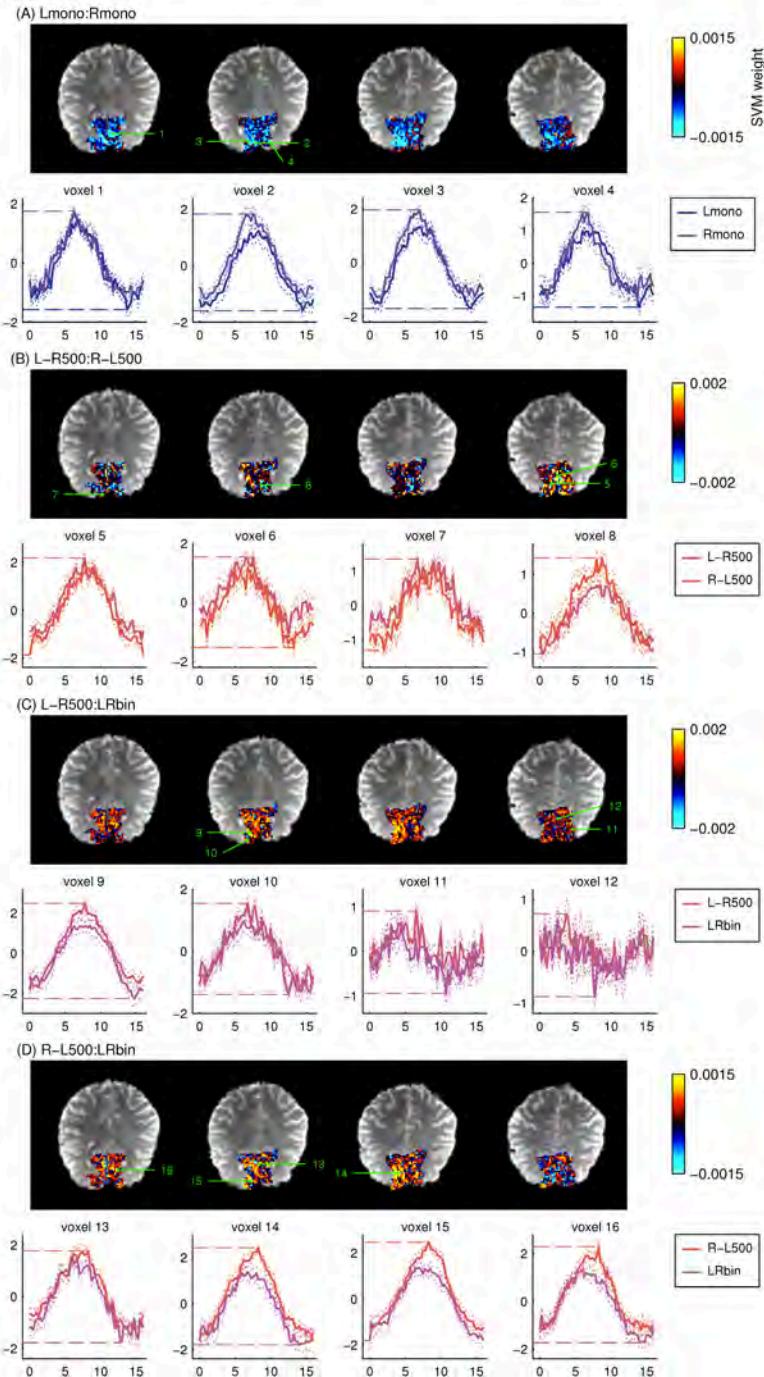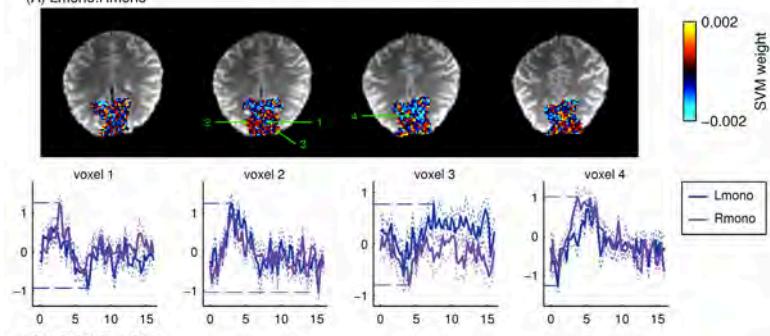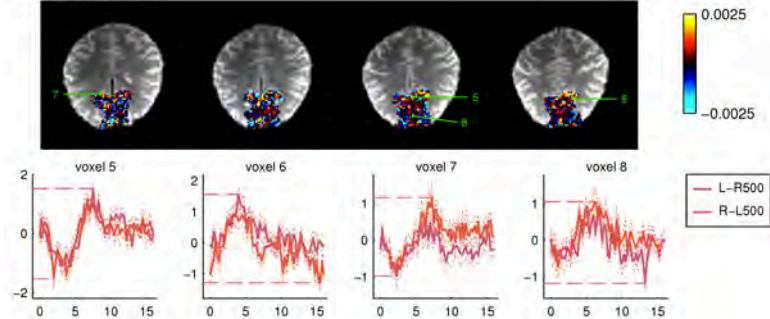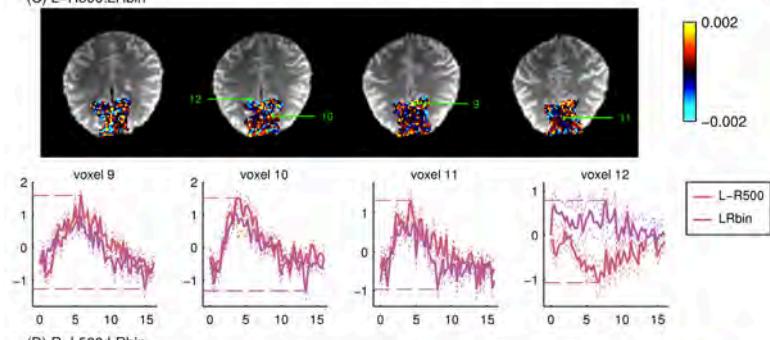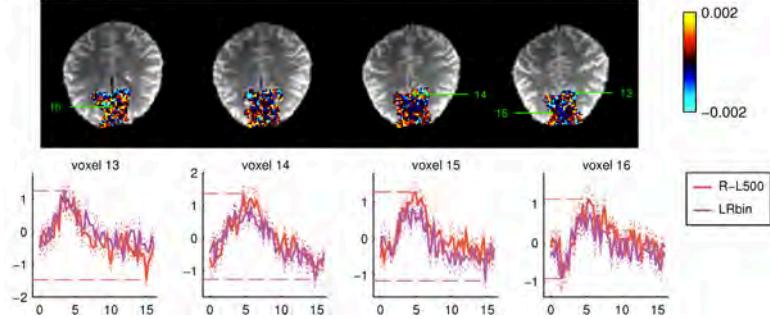
R–L500
LRbin

Subject 4

(A) Lmono:Rmono
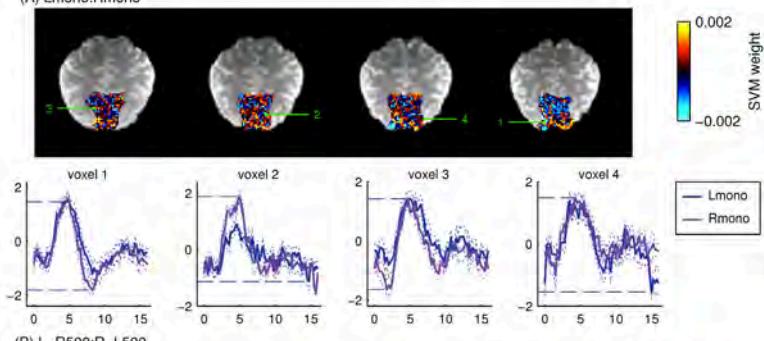
(B) L−R500:R−L500
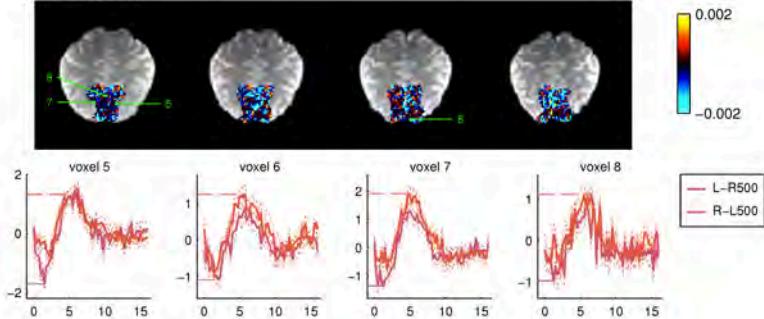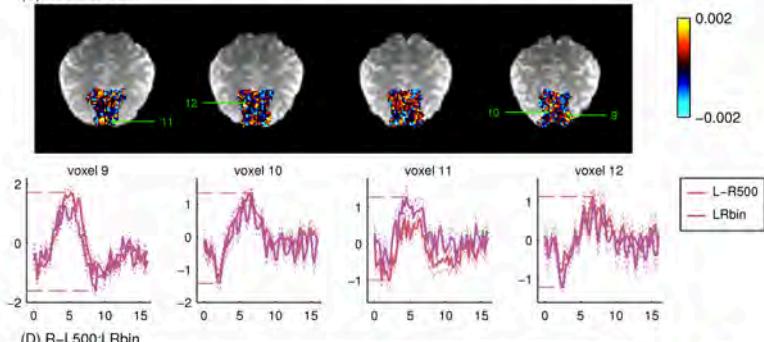
(C) L−R500:LRbin
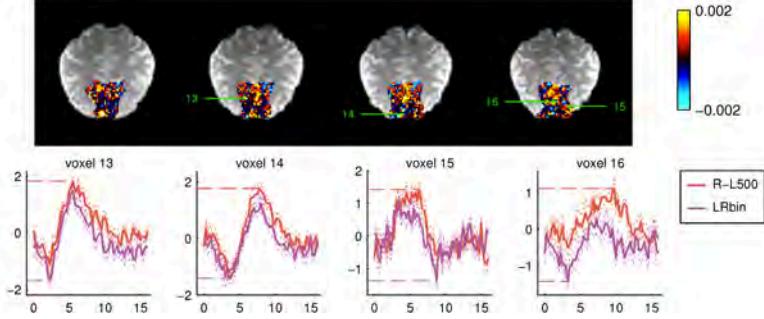
(D) R−L500:LRbin

Subject 5

(A) Lmono:Rmono

(B) L-R500:R-L500

(C) L-R500:LRbin

(D) R-L500:LRbin
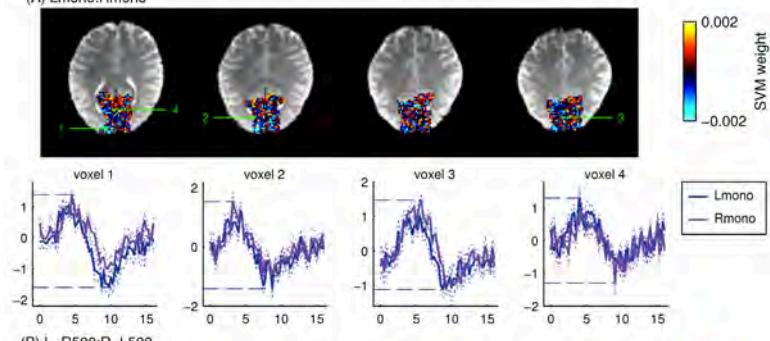
Subject 6
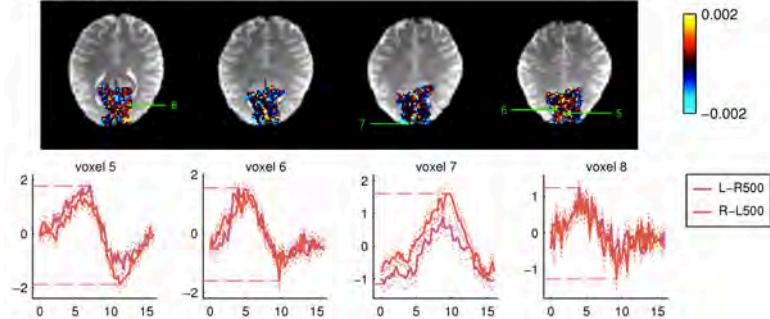
(A) Lmono:Rmono
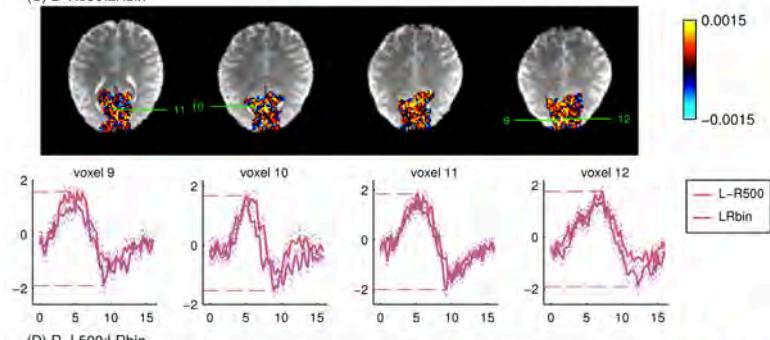
(B) L−R500:R−L500
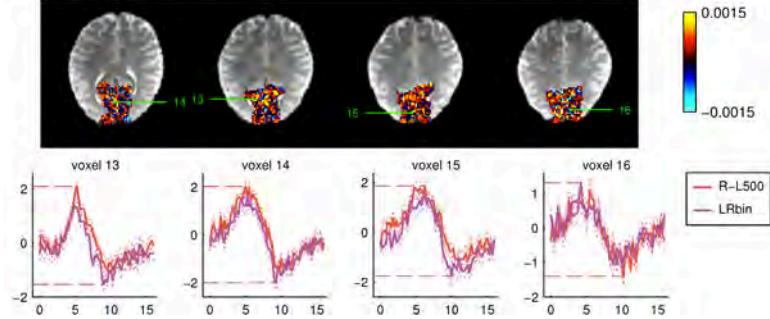
(C) L−R500:LRbin
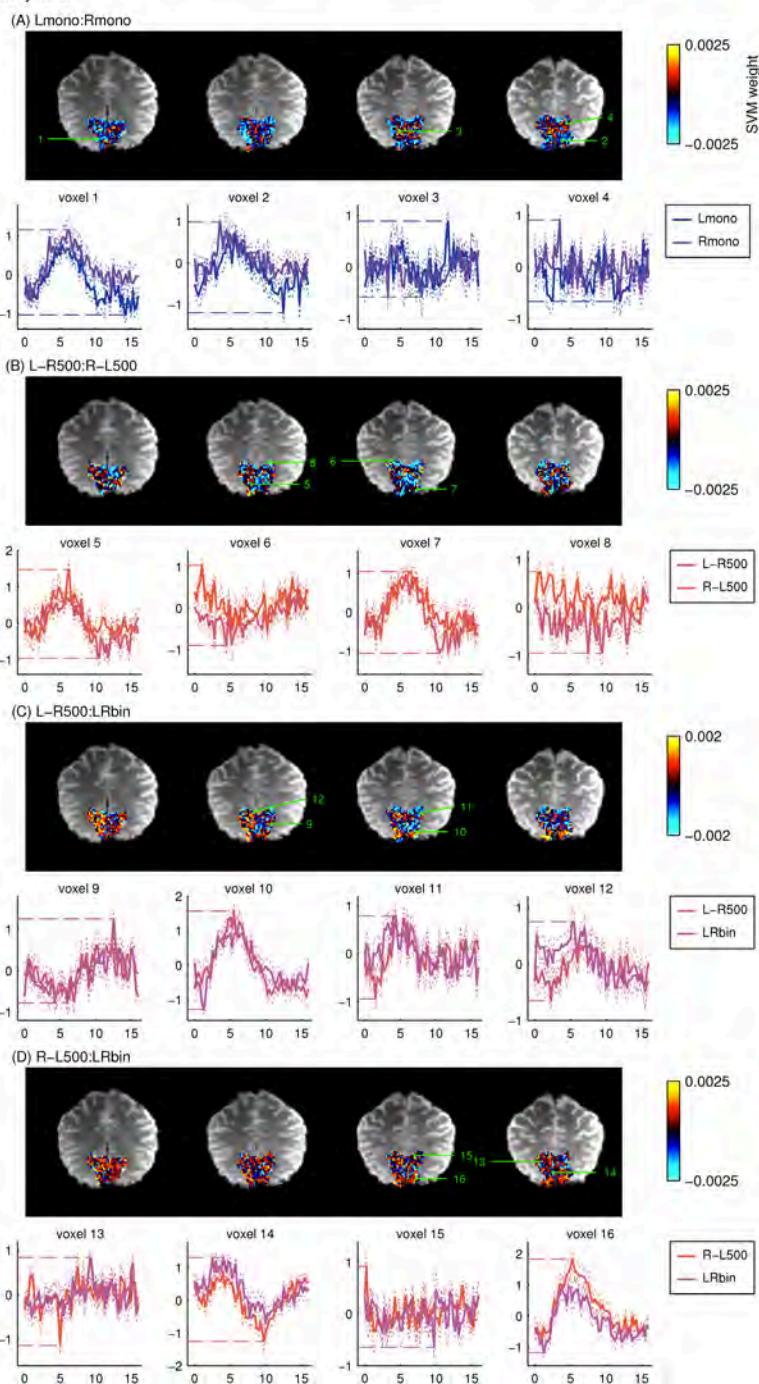
(D) R−L500:LRbin

Subject 7 (1)
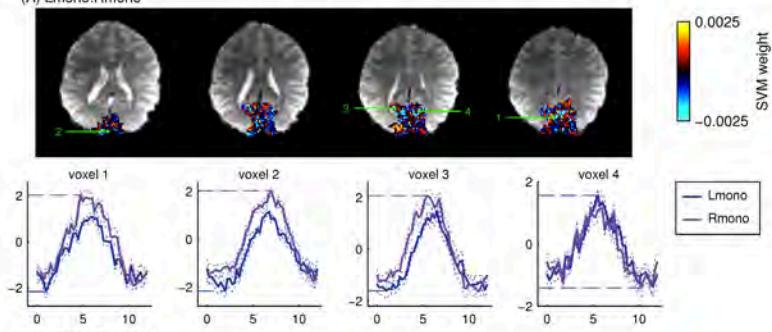
(A) Lmono:Rmono

(B) L−R500:R−L500
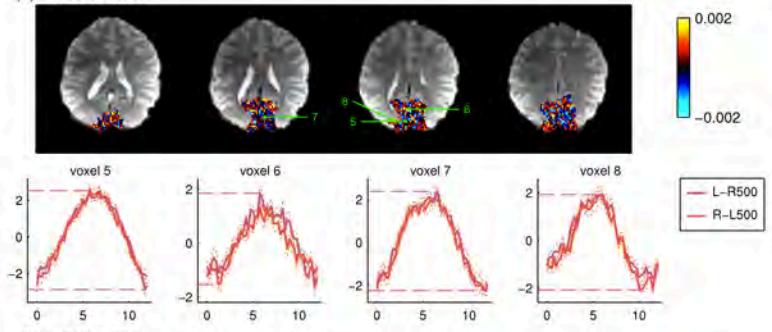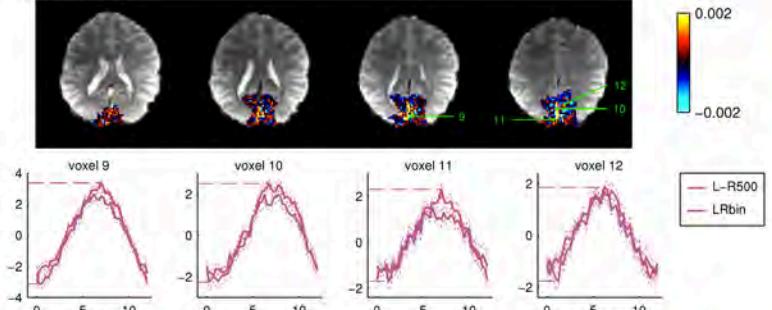
(C) L−R500:LRbin

(D) R−L500:LRbin

Subject 7 (2)

(E) L−R100:R−L100

voxel 17 voxel 18 voxel 19 voxel 20

— L−R100
— R−L100

(F) L−R100:LRbin

voxel 21 voxel 22 voxel 23 voxel 24

— L−R100
— LRbin

(G) R−L100:LRbin

voxel 25 voxel 26 voxel 27 voxel 28
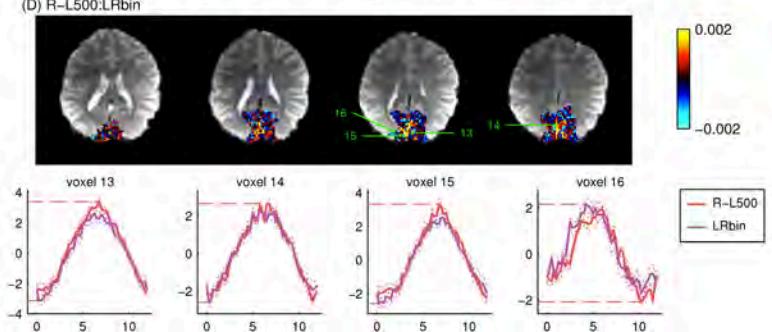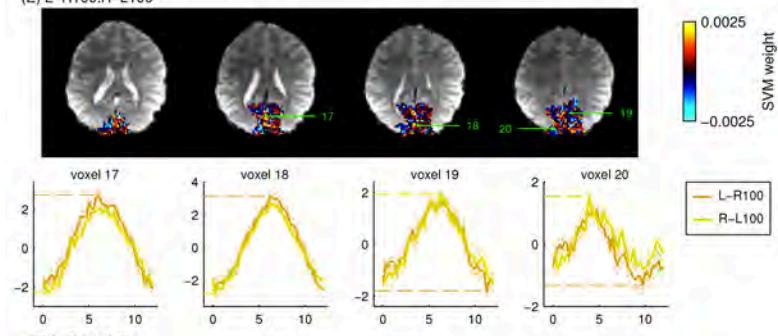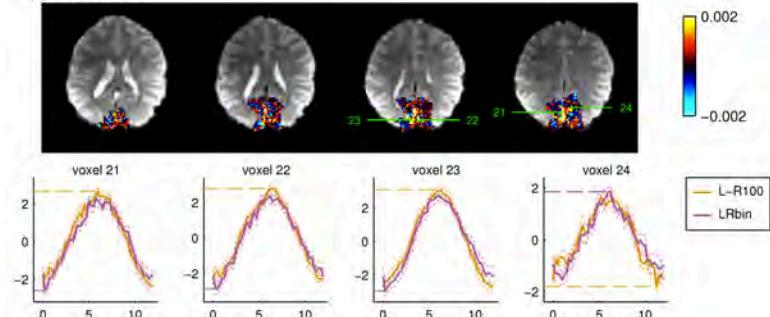
— R−L100
— LRbin

Subject 8 (1)

(A) Lmono:Rmono

voxel 1 voxel 2 voxel 3 voxel 4

— Lmono
— Rmono

(B) L−R500:R−L500

voxel 5 voxel 6 voxel 7 voxel 8

— L−R500
— R−L500

(C) L−R500:LRbin

voxel 9 voxel 10 voxel 11 voxel 12

— L−R500
— LRbin

(D) R−L500:LRbin

voxel 13 voxel 14 voxel 15 voxel 16

— R−L500
— LRbin

17

Subject 8 (2)

(E) L–R100:R–L100

voxel 17 voxel 18 voxel 19 voxel 20

L–R100
R–L100

(F) L–R100:LRbin

voxel 21 voxel 22 voxel 23 voxel 24

L–R100
LRbin

(G) R–L100:LRbin

voxel 25 voxel 26 voxel 27 voxel 28
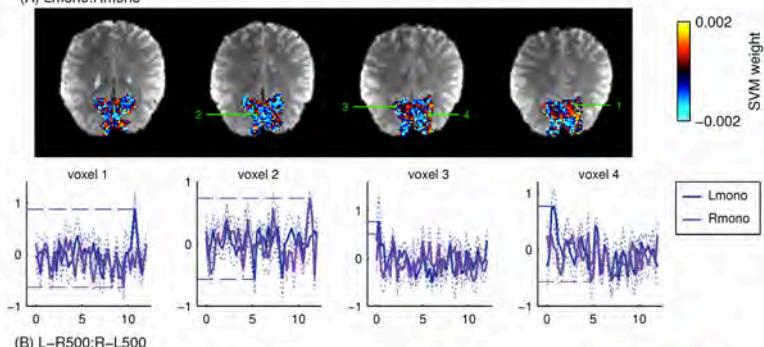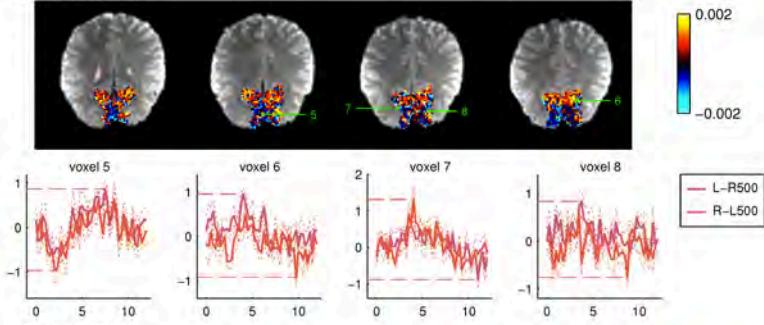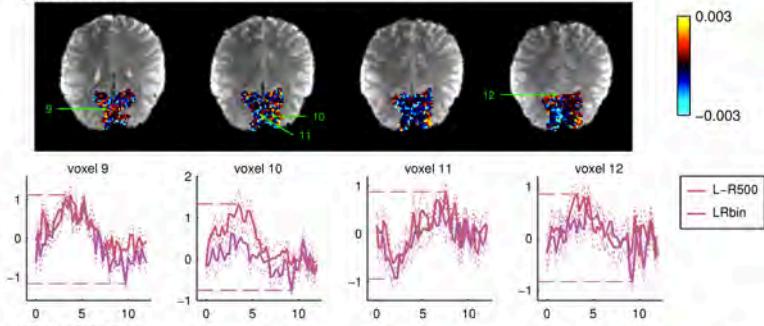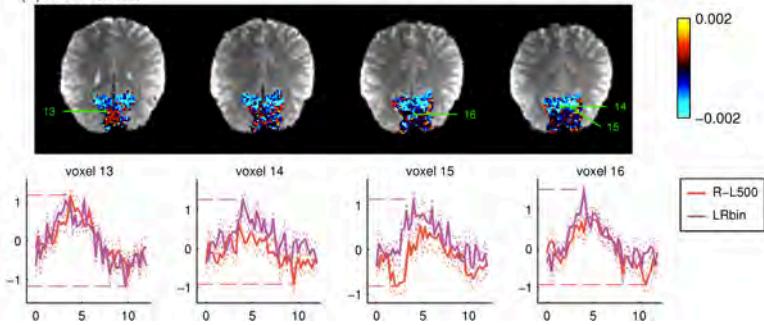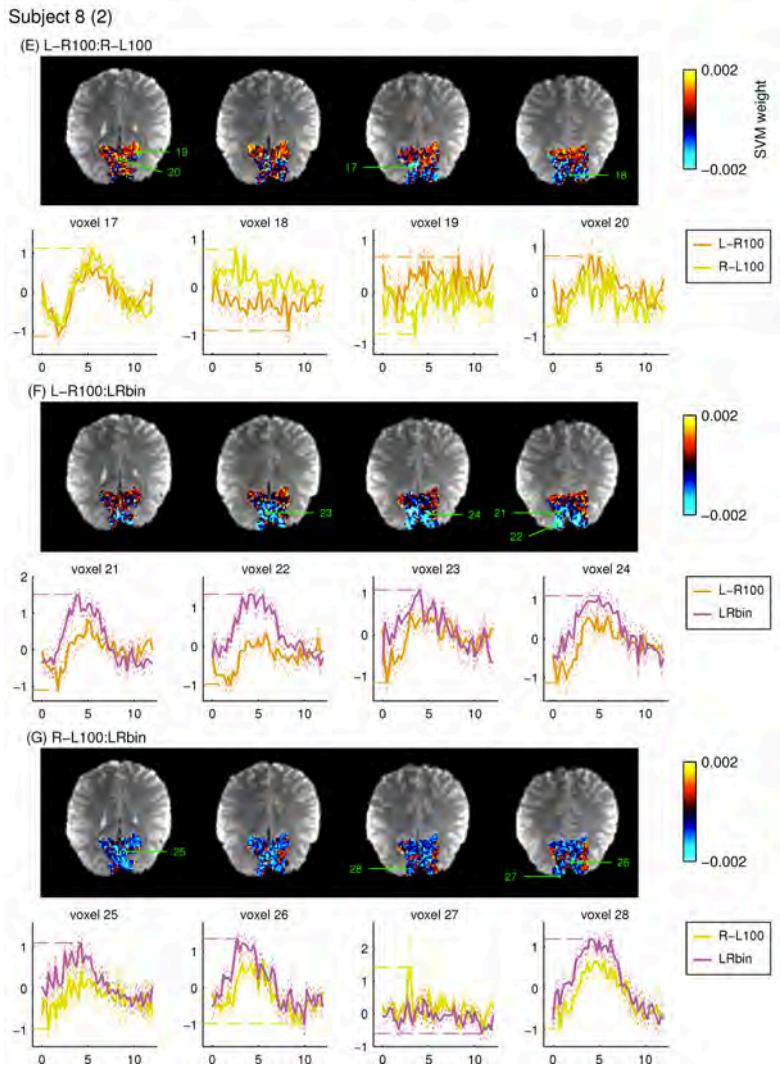
R–L100
LRbin

Subject 9 (1)

(A) Lmono:Rmono

(B) L−R500:R−L500

(C) L−R500:LRbin

(D) R−L500:LRbin

19

Subject 9 (2)

(E) L–R100:R–L100

voxel 17 voxel 18 voxel 19 voxel 20

L–R100
R–L100

(F) L–R100:LRbin

voxel 21 voxel 22 voxel 23 voxel 24

L–R100
LRbin

(G) R–L100:LRbin


voxel 25 voxel 26 voxel 27 voxel 28
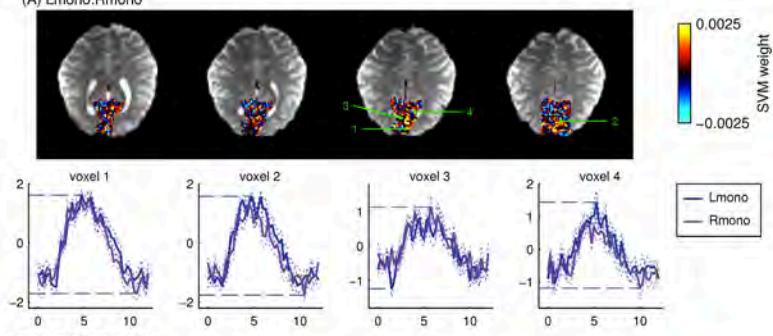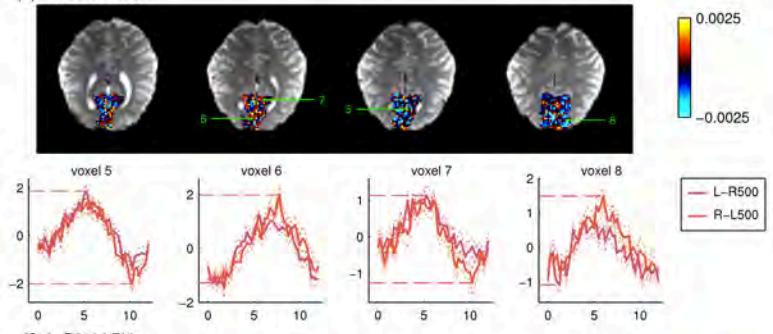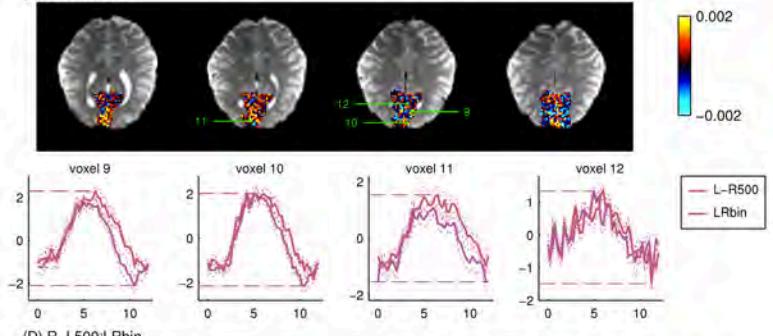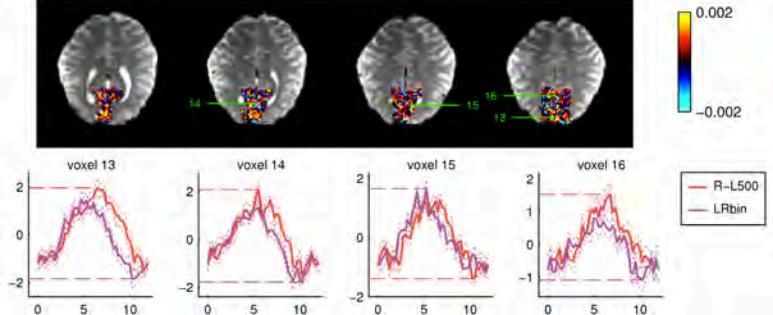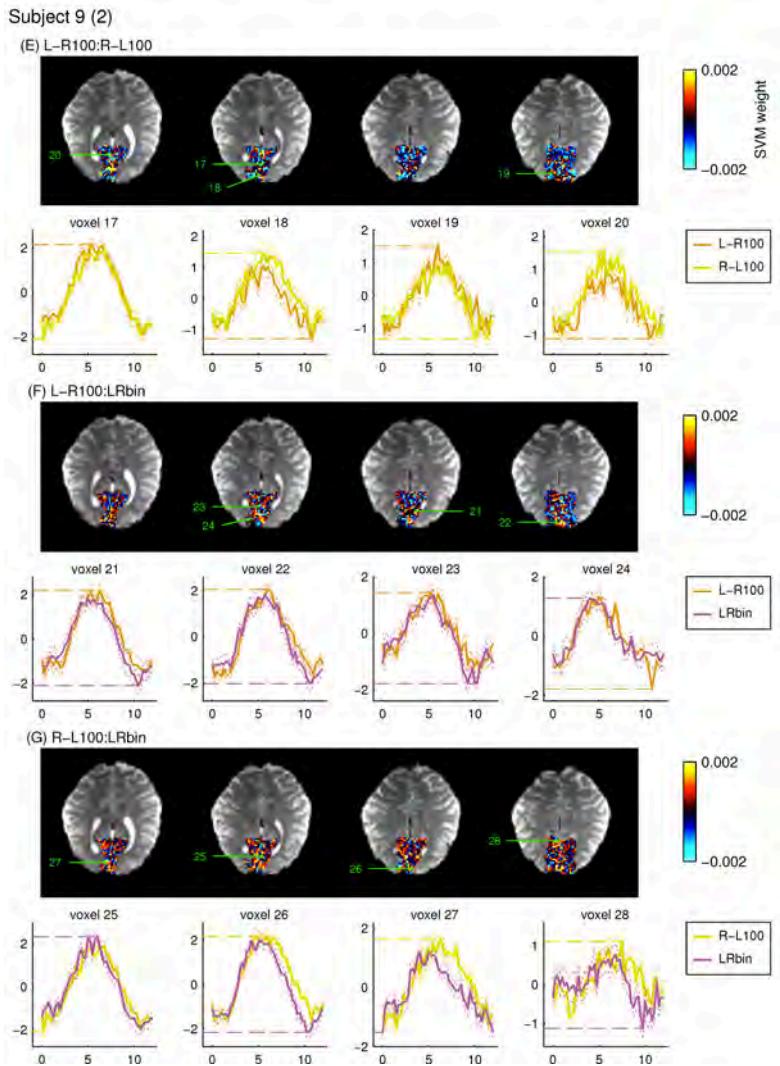
R–L100
LRbin

Subject 10 (1)

(A) Lmono:Rmono
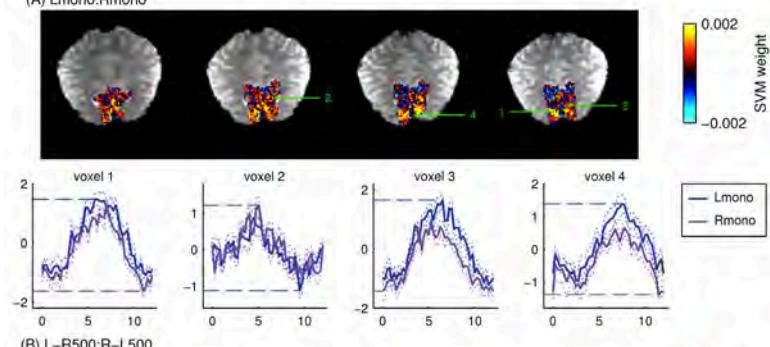
(B) L–R500:R–L500
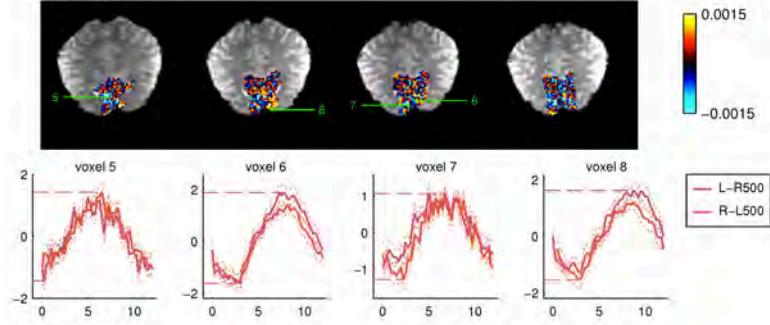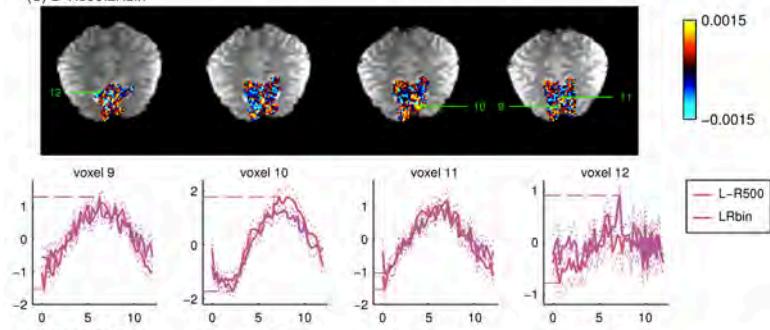
(C) L–R500:LRbin
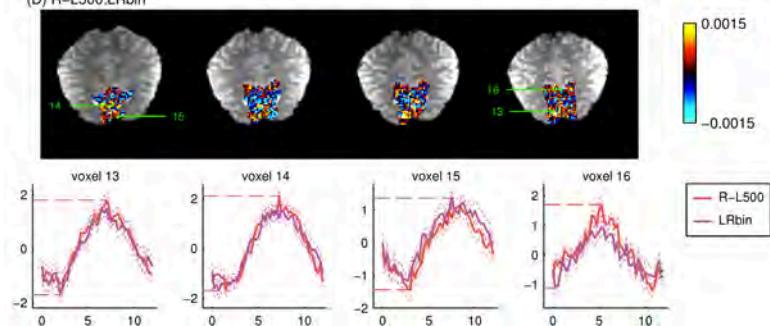
(D) R–L500:LRbin

Subject 10 (2)

(E) L−R100:R−L100

SVM weight
0.0015
−0.0015

voxel 17 voxel 18 voxel 19 voxel 20

L−R100
R−L100

(F) L−R100:LRbin

0.002
−0.002

voxel 21 voxel 22 voxel 23 voxel 24

L−R100
LRbin

(G) R−L100:LRbin

0.0015
−0.0015

voxel 25 voxel 26 voxel 27 voxel 28

R−L100
LRbin

Subject 11 (1)

(A) Lmono:Rmono
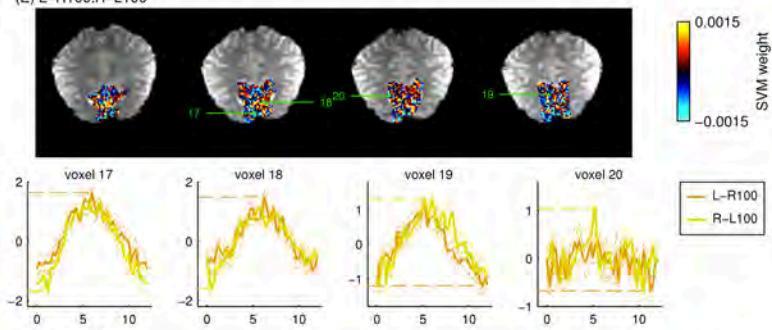
(B) L−R500:R−L500
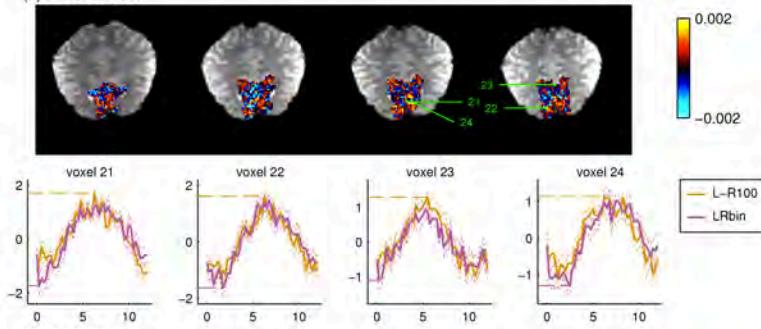
(C) L−R500:LRbin
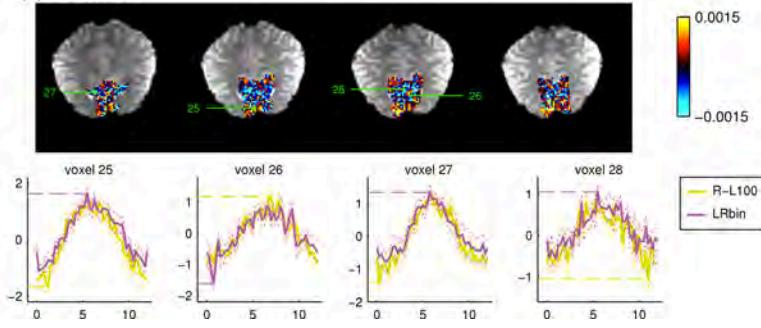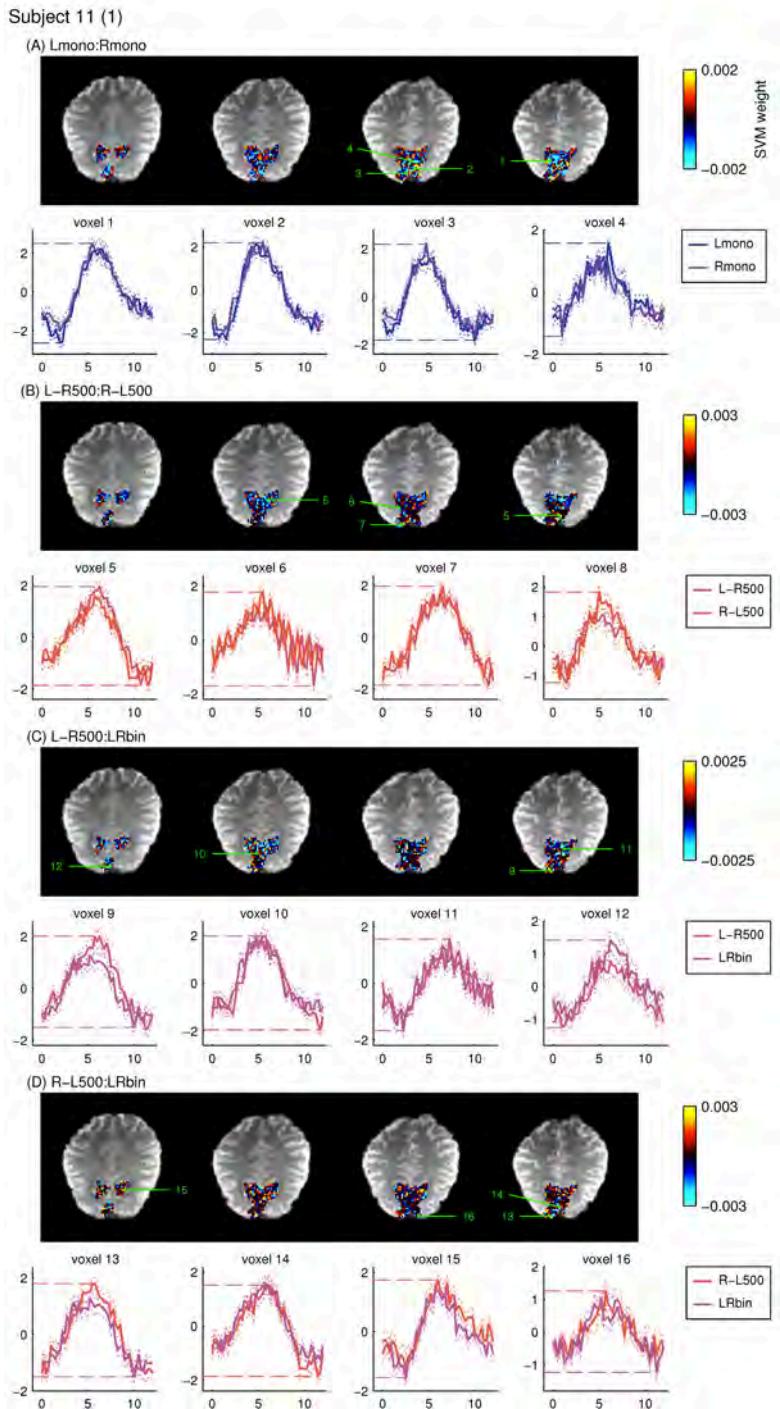
(D) R−L500:LRbin

Subject 11 (2)

(E) L–R100:R–L100

voxel 17   voxel 18   voxel 19   voxel 20

L–R100
R–L100

(F) L–R100:LRbin

voxel 21   voxel 22   voxel 23   voxel 24

L–R100
LRbin

(G) R–L100:LRbin

voxel 25   voxel 26   voxel 27   voxel 28
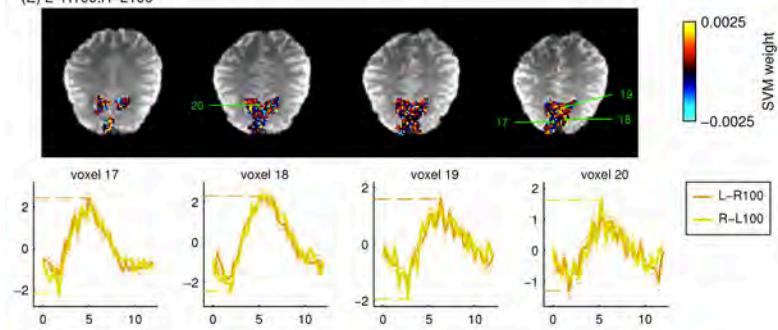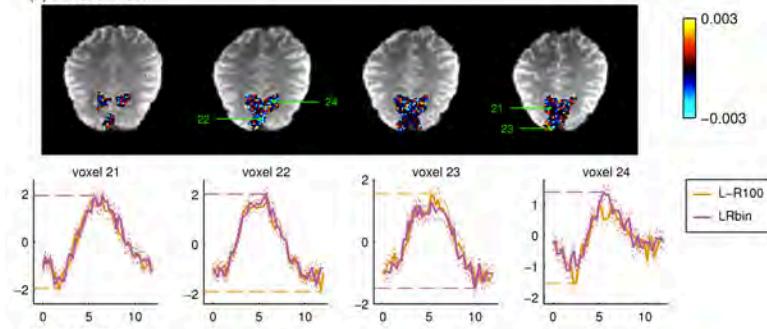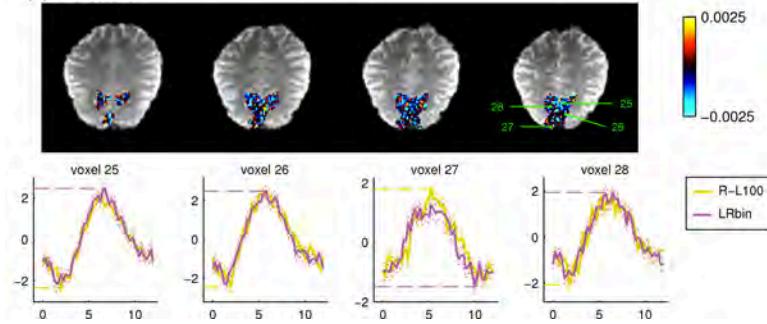
R–L100
LRbin

Subject 12 (1)

(A) Lmono:Rmono

(B) L−R500:R−L500

(C) L−R500:LRbin

(D) R−L500:LRbin

25
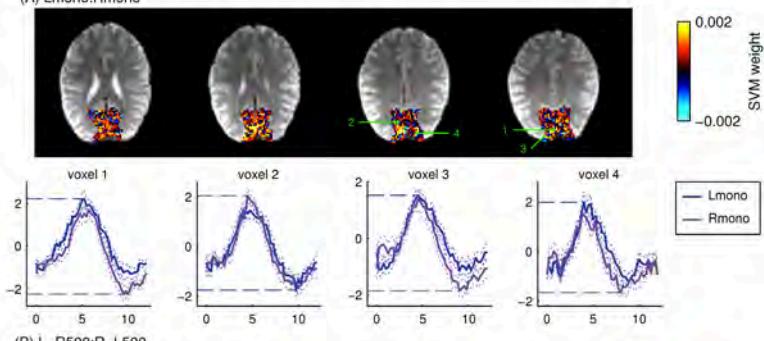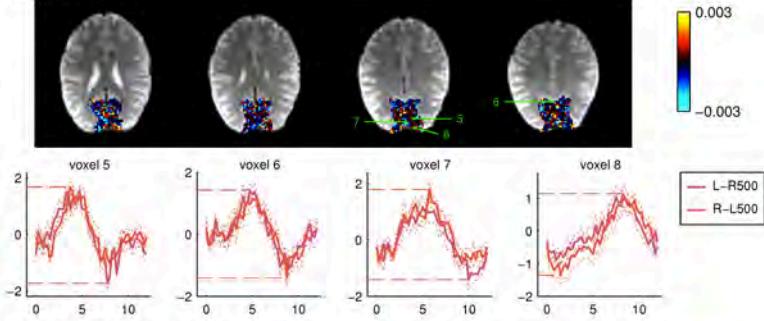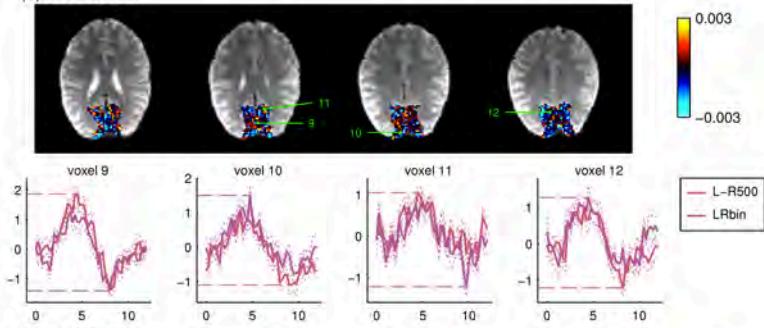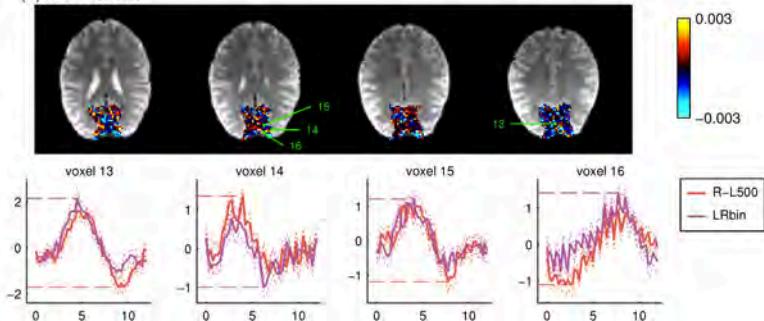
Subject 12 (2)

(E) L−R100:R−L100

voxel 17 voxel 18 voxel 19 voxel 20

L−R100
R−L100

(F) L−R100:LRbin

voxel 21 voxel 22 voxel 23 voxel 24

L−R100
LRbin

(G) R−L100:LRbin

voxel 25 voxel 26 voxel 27 voxel 28
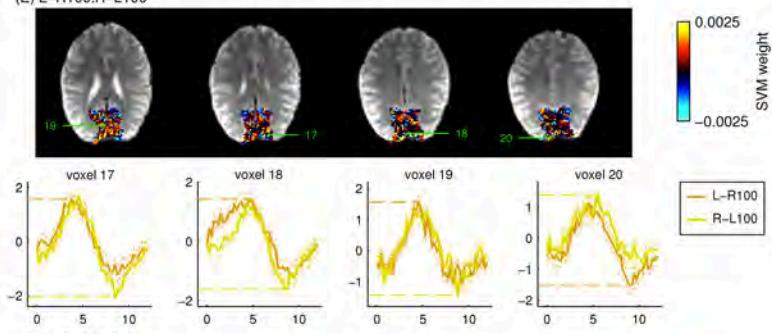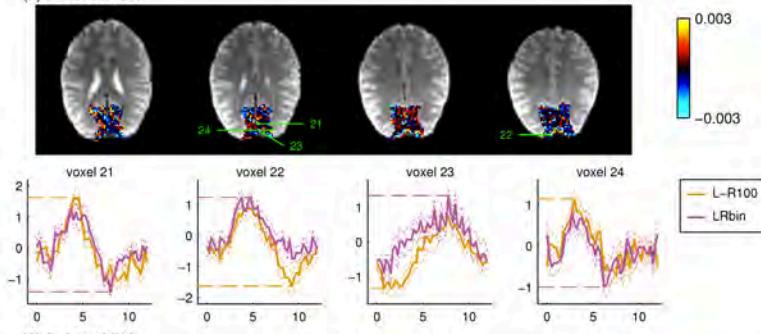
R−L100
LRbin
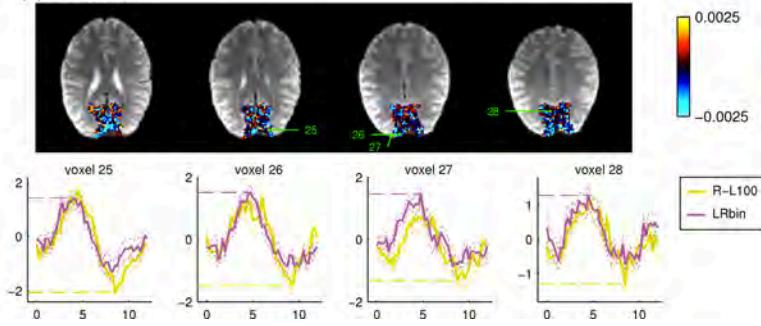
Supplementary Fig. S3: Maps of *t* values for the ocular dominance response contrast (Lmono – Rmono) for subjects 1 to 12.
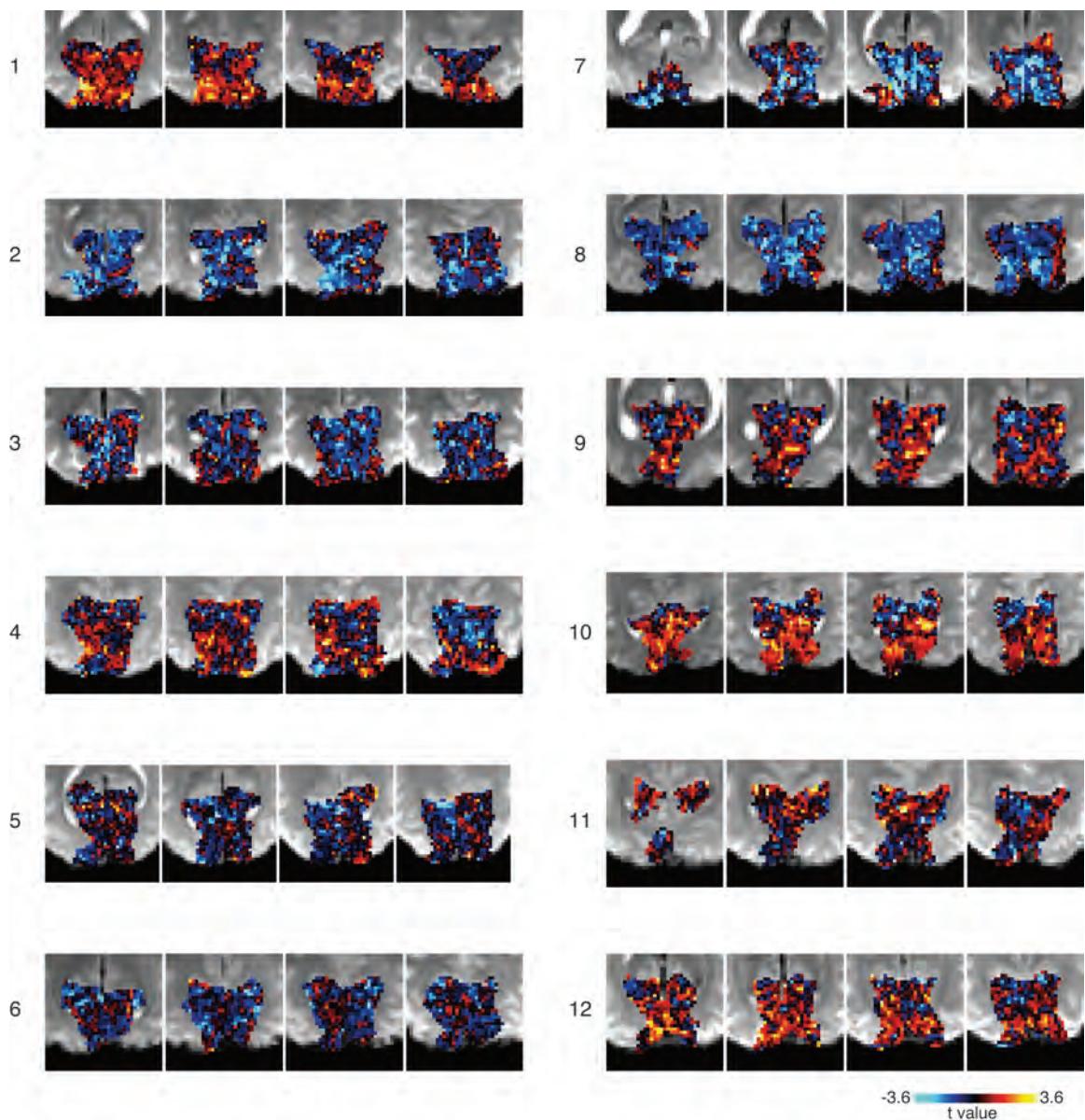
Supplementary Table. S1: Correlations between *t* values of ocular dominance contrast (Lmono - Rmono) and absolute weights of the support vector machine classifiers.

| Subject	SVM classification contrast						
	Lmono: Rmono	L-R500: R-L500	L-R500: LRbin	R-L500: LRbin	L-R100: R-L100	L-R100: LRbin	R-L100: LRbin
1	0.466	0.058	0.192	0.097			
2	0.249	0.064	0.017	-0.065			
3	0.370	-0.066	0.100	0.152			
4	0.469	-0.085	-0.045	0.028			
5	0.360	0.008	0.022	0.010			
6	0.318	0.014	0.031	-0.009			
7	0.441	0.007	-0.095	-0.083	-0.111	-0.079	0.032
8	0.442	0.001	0.073	0.056	-0.084	0.044	0.112
9	0.428	0.033	0.077	0.057	0.088	0.055	-0.028
10	0.378	0.027	-0.040	-0.065	0.049	0.015	-0.018
11	0.506	-0.047	0.017	0.077	-0.034	0.073	0.095
12	0.539	0.051	0.013	-0.042	0.105	-0.033	-0.141