Table S1: Analysis of log response times. Results from linear mixed effects model including as fixed effects the interaction terms TMS site (aIFG, pIFG, vertex) * decision type (syntactic, semantic) and focus position (subject, object) * decision type. Random effects included by-subject random slopes for the interaction between decision type and TMS site and for focus position, and random intercepts for subject and items. Model formula: log(RT) ~ decision type * TMS site + decision type * focus position + (1 + decision type * TMS site + focus position | subject) + (1 | item)

fixed effect name	estimate	SE	t
(Intercept)	6.615	0.027	247.648
decision.syntactic	-0.103	0.017	-5.882
TMS.pIFG	-0.023	0.028	-0.824
TMS.aIFG	-0.007	0.028	-0.251
foc.subject	0.001	0.004	0.235
decision.syntactic:TMS.pIFG	-0.027	0.014	-1.933
decision.syntactic:TMS.aIFG	-0.017	0.011	-1.493
decision.syntactic:foc.subject	0.012	0.002	5.590

random effect group	random effect name	SD	correlations					
item	(Intercept)	0.038						
subj	(Intercept)	0.142						
	decision.syntactic	0.093	0.030					
	TMS.pIFG	0.153	0.199	0.091				
	TMS.aIFG	0.148	0.136	0.100	0.455			
	foc.subject	0.017	-0.306	0.048	0.258	0.063		
	decision.syntactic:TMS.pIFG	0.077	0.365	-0.343	0.139	0.243	-0.100	
	decision.syntactic:TMS.aIFG	0.055	0.218	-0.318	0.345	0.261	-0.367	0.515
Residual		0.253						

13 **Table S2:** Analysis of accuracy rates. Results from generalized linear mixed effects model including as
14 fixed effects the interaction terms TMS site (aIFG, pIFG, vertex) * decision type (syntactic, semantic)
15 and focus position (subject, object) * decision type. Random effects included intercepts for subjects
16 and items, and by-subject slopes for decision type and TMS site. Model formula: response ~ decision
17 type * TMS + decision type * focus position + (1 + decision type + TMS site | subject) + (1 | item)
18

fixed effect			*estimate*	*SE*	*z*	*p*
(Intercept)			2.368	0.189	12.560	<.001
decision.syntactic			0.153	0.068	2.253	0.024
TMS.pIFG			-0.391	0.155	-2.531	0.011
TMS.aIFG			-0.156	0.146	-1.070	0.285
foc.subject			0.108	0.023	4.608	<.001
decision.syntactic:TMS.pIFG			0.001	0.060	0.013	0.989
decision.syntactic:TMS.aIFG			0.020	0.061	0.334	0.738
decision.syntactic:foc.subject			-0.076	0.023	-3.236	0.001
random effect group	*random effect name*	*SD*	*correlations*			
item	(Intercept)	0.280				
subj	(Intercept)	0.966				
	decision.syntactic	0.268	0.747			
	TMS.pIFG	0.756	-0.408	-0.352		
	TMS.aIFG	0.689	-0.189	-0.206	0.524	

19
20

Table S3: Analysis of log response times in function of electric field (Efield) strength. Results from linear mixed effects model including as fixed effects the interaction terms Efield-aIFG * decision type (syntactic, semantic), Efield-pIFG * decision type, decision type * focus position (subject, object), and session number as main effect. Random effects included intercepts for subjects and items, and by-subject slopes for decision type and focus position. Model formula: log(RT) = Efield-aIFG * decision type + Efield-pIFG * decision type + decision type * focus position + session number + (1 + decision type + focus position | subject) + (1 | item).

fixed effect	estimate	SE	t
(Intercept)	6.701	0.038	176.274
Efield.aIFG	0.001	0.009	0.065
decision.syntactic	-0.118	0.020	-5.800
Efield.pIFG	-0.017	0.005	-3.333
sess.no2	-0.101	0.007	-14.732
sess.no3	-0.192	0.007	-27.604
foc.subject	-0.001	0.004	-0.049
Efield.aIFG:decision.syntactic	-0.043	0.008	-5.395
decision.syntactic:Efield.pIFG	-0.010	0.005	-2.020
decision.syntactic:foc.subject	0.010	0.002	4.221

random effect group	random effect name	SD	correlations	
item	(Intercept)	0.036		
subj	(Intercept)	0.204		
	decision.syntactic	0.109	0.382	
	foc.subject	0.015	-0.093	-0.080
Residual		0.260		

Table S4: Analysis of accuracy rates in function of electric field (Efield) strength. Results from generalised linear mixed effects model including as fixed effects the interaction terms Efield-aIFG * decision type (syntactic, semantic), Efield-pIFG * decision type, decision type * focus position (subject, object), and session number as main effect. Random effects included intercepts for subjects and items. Model formula: response = Efield-aIFG * decision type + Efield-pIFG * decision type + decision type * focus position + session number + (1 + decision type + violation type | subject) + (1 | item)

fixed effect	estimate	SE	z	p
(Intercept)	1.538	0.199	7.719	<.001
Efield.aIFG	0.007	0.097	0.076	0.939
decision.syntactic	0.176	0.061	2.859	0.004
Efield.pIFG	-0.159	0.066	-2.417	0.016
sess.no2	0.580	0.080	7.277	<.001
sess.no3	0.982	0.087	11.322	<.001
foc.subject	0.021	0.083	0.260	0.795
Efield.aIFG:decision.syntactic	-0.014	0.052	-0.266	0.790
decision.syntactic:Efield.pIFG	-0.036	0.053	-0.687	0.492
decision.syntactic:foc.subject	-0.064	0.029	-2.221	0.026

random effect group	random effect name	SD	correlations	
item	(Intercept)	0.246		
subj	(Intercept)	1.004		
	decision.syntactic	0.240	0.814	
	foc.subject	0.413	-0.272	-0.090

Table S5: Acoustic analysis of the experimental stimuli. For each noun phrase, minimum and maximum pitch and mean intensity were extracted (measured across the duration of the noun phrase). The means (and standard deviations) across all stimuli are displayed here. Note the marked differences in pitch and intensity when each noun phrase was in focus as compared to when the noun phrase was not in focus. These differences were significant for the pitch differences (subject noun phrase: $z = -5.84$, $p<.001$; object noun phrase $z = -5.81$, $p<.001$) as well as for intensity (subject: $t(44) = 5.42$, $p<.001$; object: $t(44) = -11.63$, $p<.001$). The effect for intensity was tested using a paired t-test, whereas pitch differences were tested with a Wilcoxon paired rank test because normality assumptions were not met.

Noun phrase	Focus	ΔPitch (Hz)	Intensity (Db)
subject	subject	103,6 (14,0)	61,7 (1,9)
subject	object	49,1 (11,0)	60,7 (1,9)
object	subject	31,2 (21,4)	58,8 (2,1)
object	object	108,5 (15,4)	61,9 (2,0)
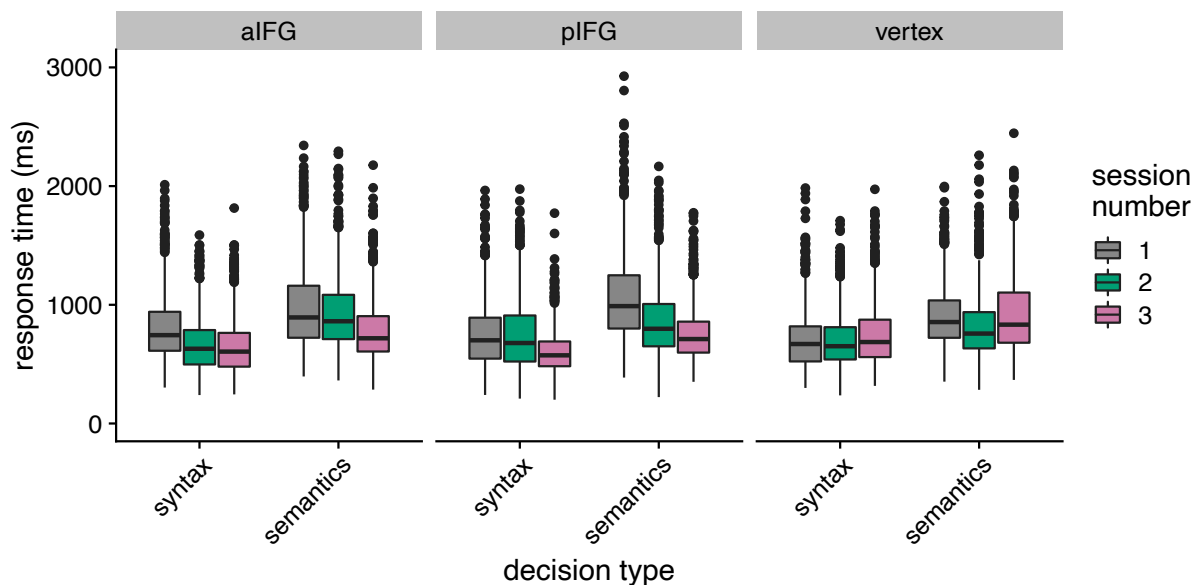
Supplementary Figure 1 Response times for both tasks and all TMS conditions, separately for each experimental session.
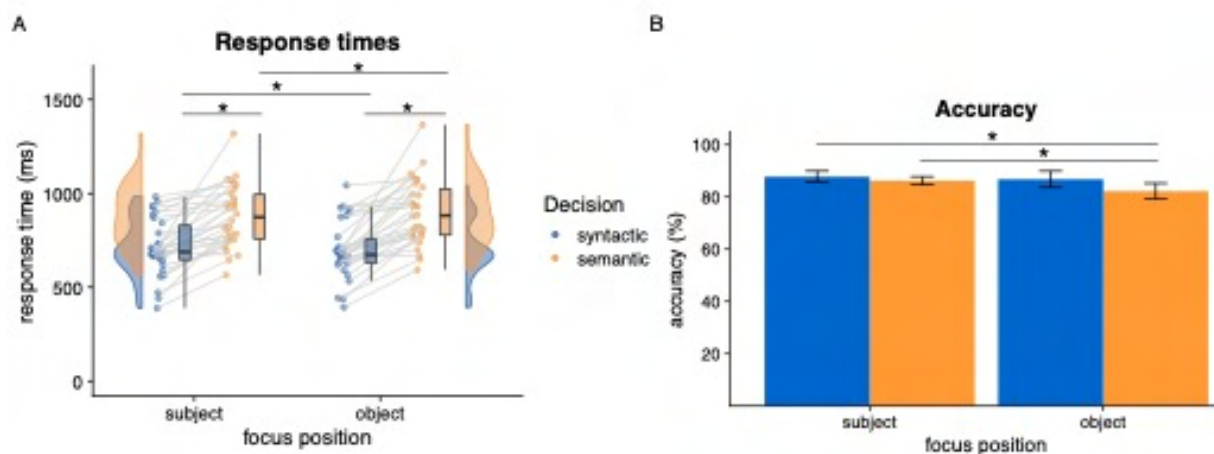
Supplementary Figure 2 Response times and accuracy rates in function of decision type and focus position, across all TMS sessions.

Electrical field strength | E | (V/m)
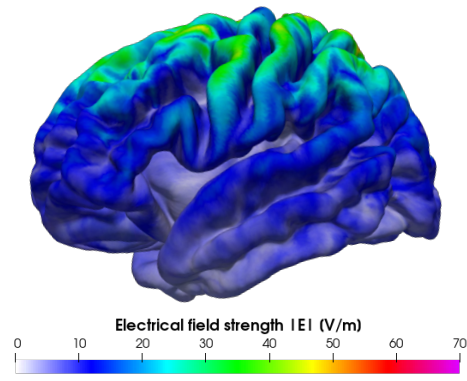
55
56   **Supplementary Figure 3** Electric field induced by TMS for the vertex stimulation condition in a
57   representative sample subject.

aIFG session

pIFG session

subject 1

subject 2

subject 3

Electric field strength |E| [V/m]
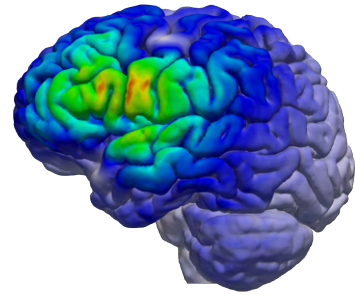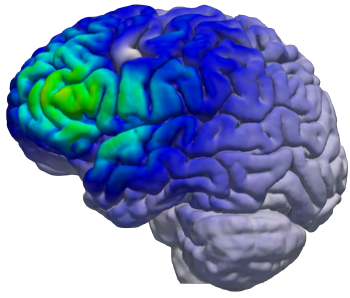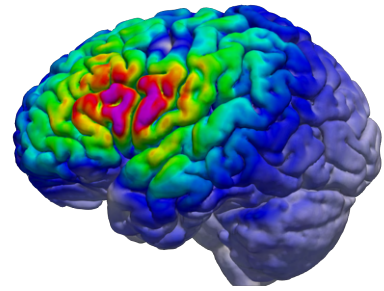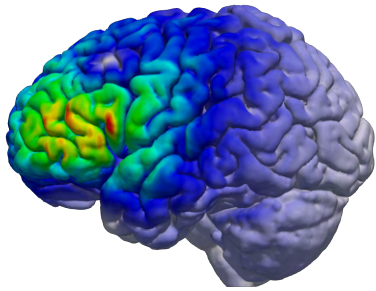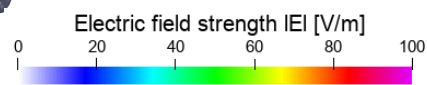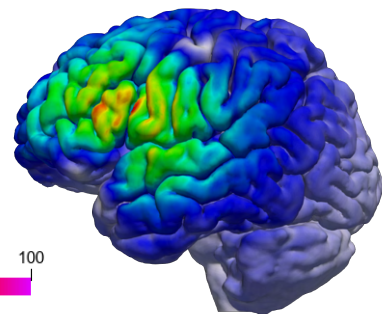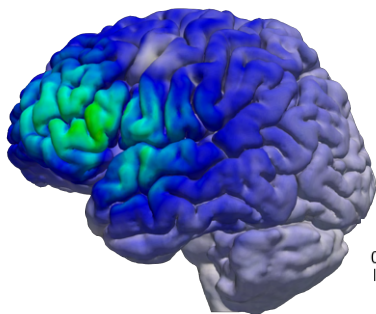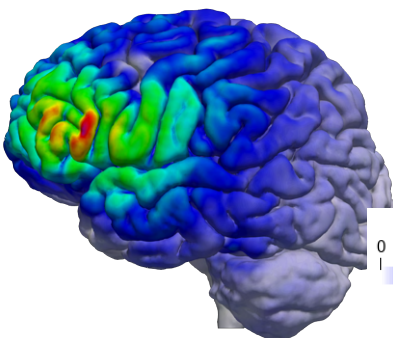
0   20   40   60   80   100

aIFG session

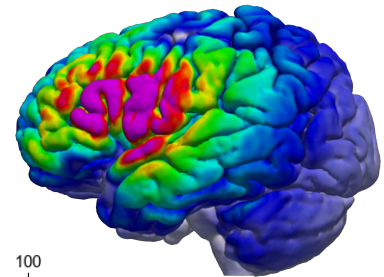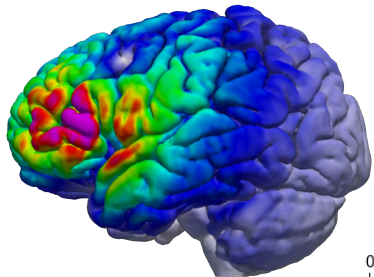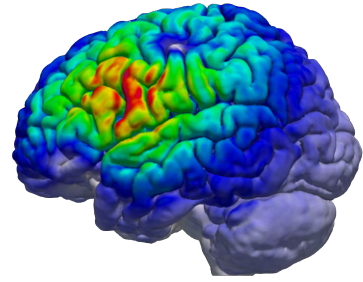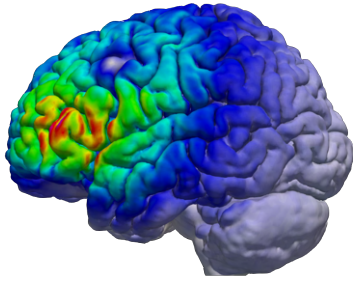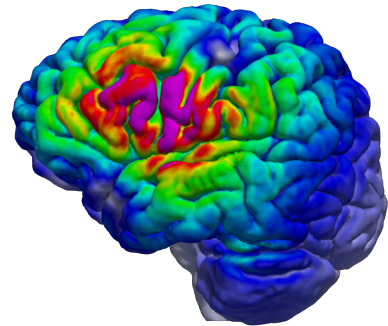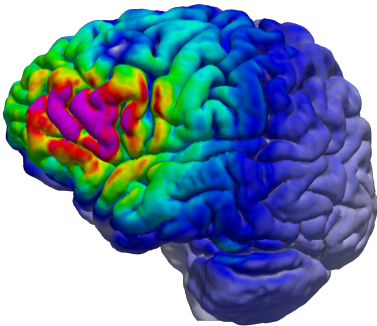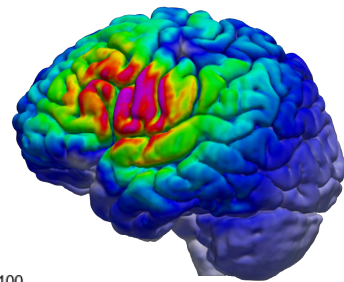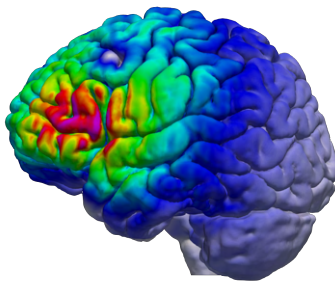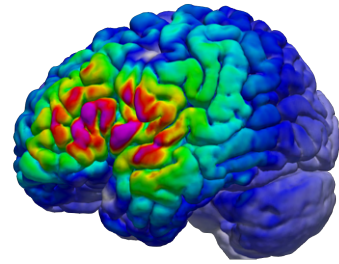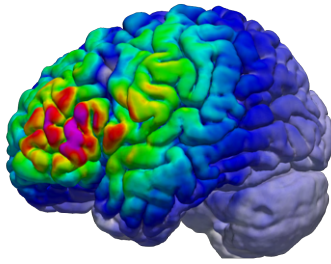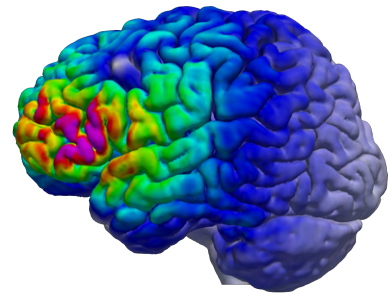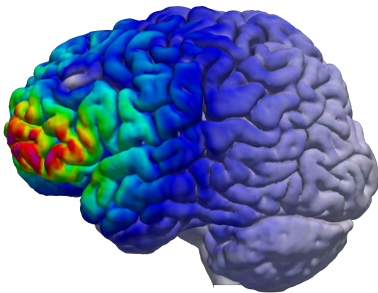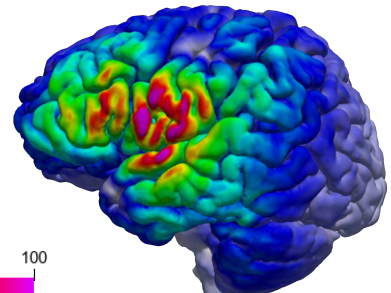pIFG session

subject 4

subject 5

subject 6

Electric field strength |E| [V/m]
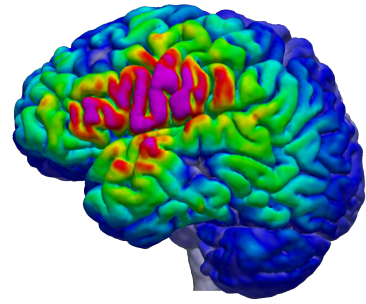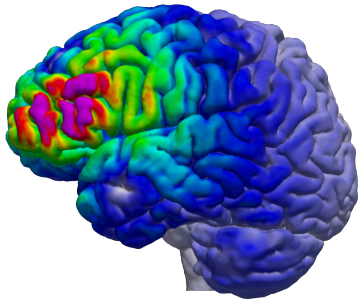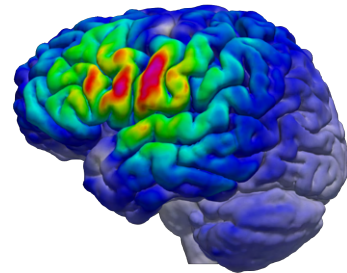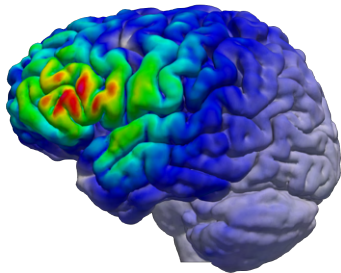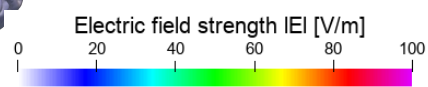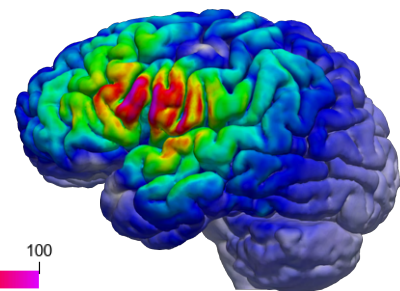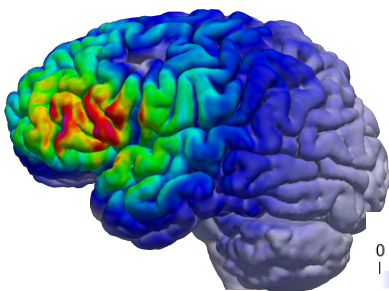
0   20   40   60   80   100

aIFG session | pIFG session
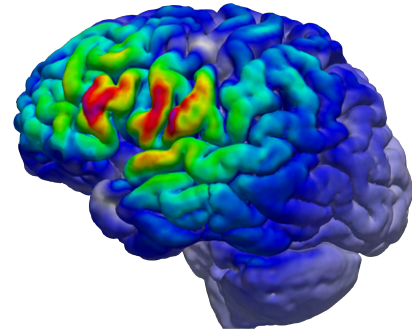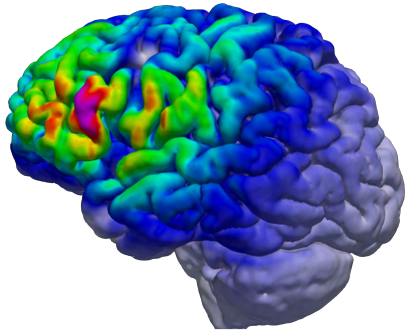
subject 7

subject 8
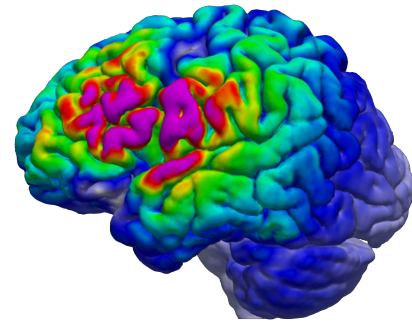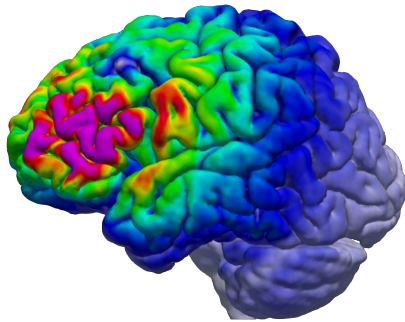
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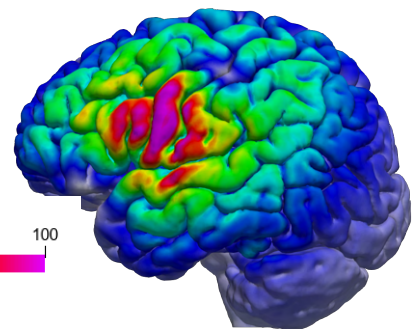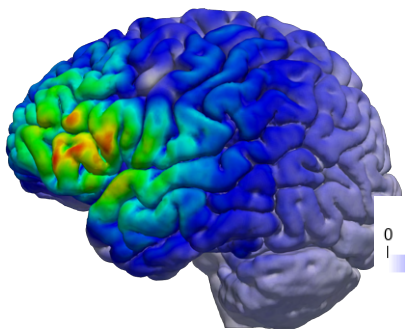
Electric field strength |E| [V/m]

0   20   40   60   80   100

aIFG session

pIFG session

subject 10

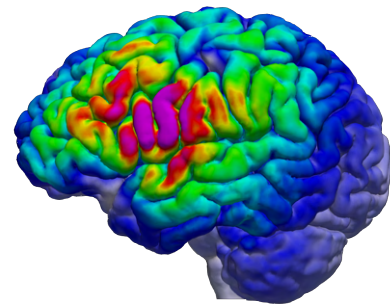subject 11

subject 12

Electric field strength |E| [V/m]
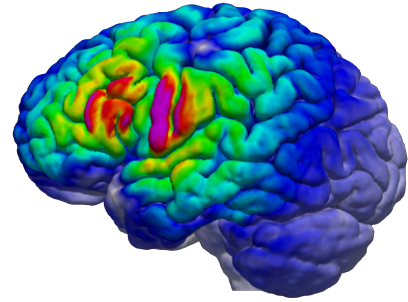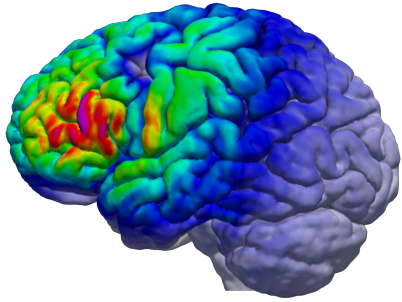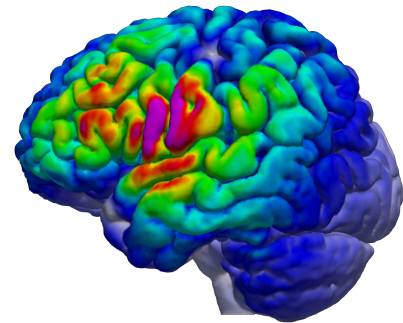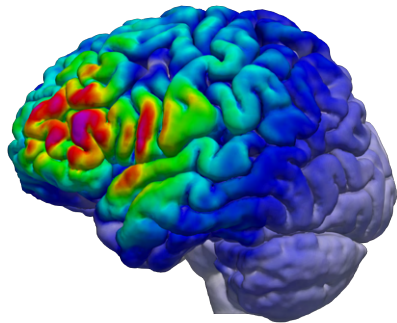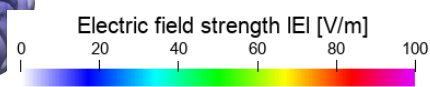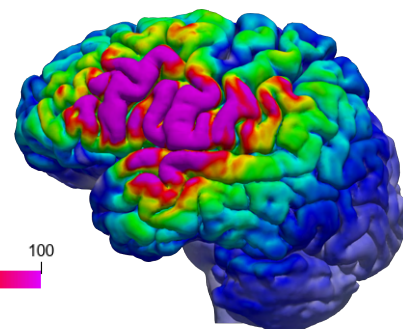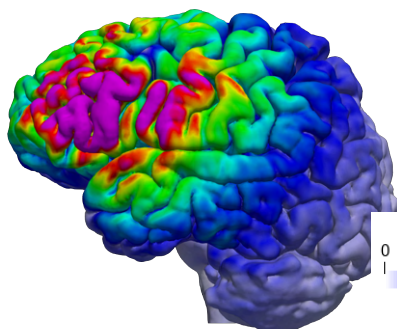
0   20   40   60   80   100

aIFG session

pIFG session
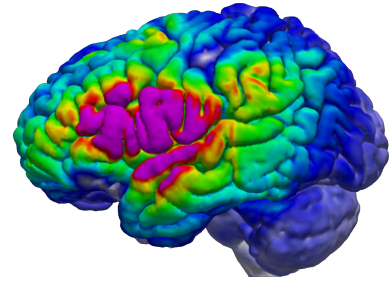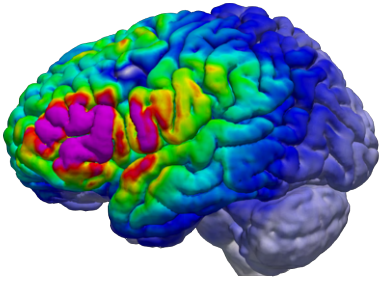
subject 13

subject 14
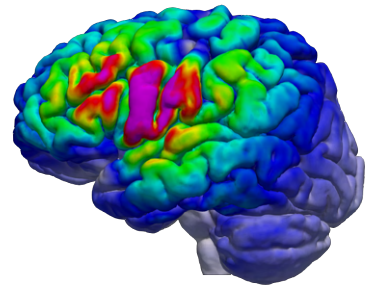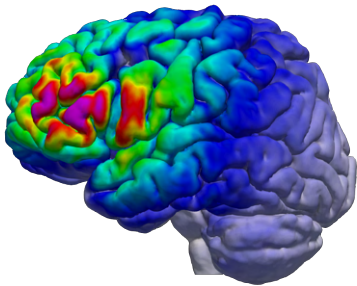
subject 15

Electric field strength |E| [V/m]

0   20   40   60   80   100
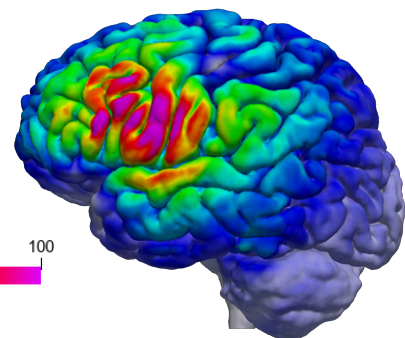
aIFG session

pIFG session

subject 16

subject 17

subject 18

Electric field strength |E| [V/m]

0   20   40   60   80   100
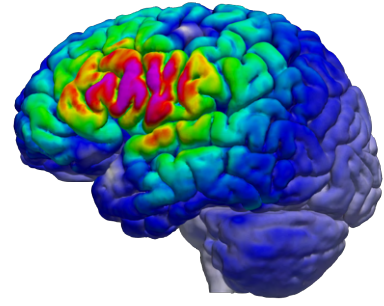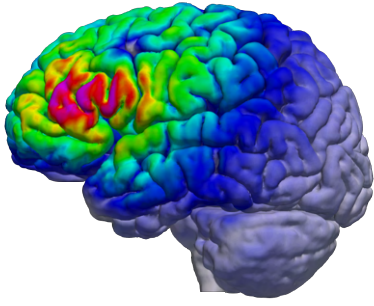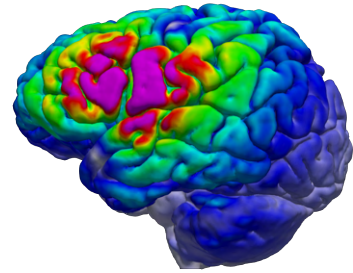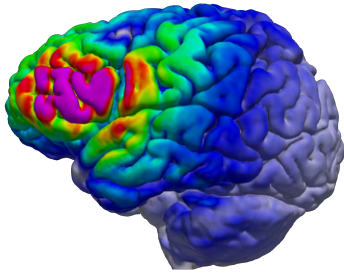
aIFG session

pIFG session

subject 19

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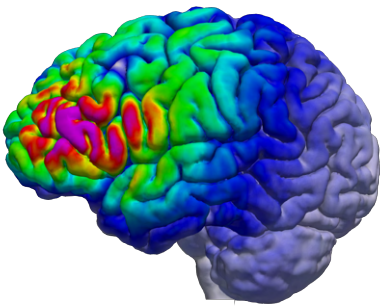
subject 21

Electric field strength |E| [V/m]

0   20   40   60   80   100
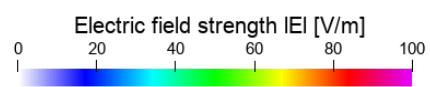
aIFG session   pIFG session

subject 22

subject 23

subject 24

Electric field strength |E| [V/m]
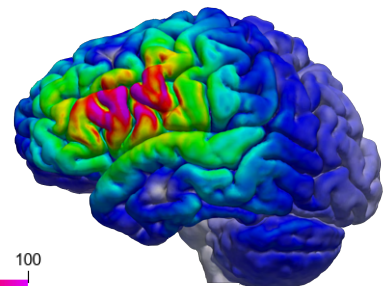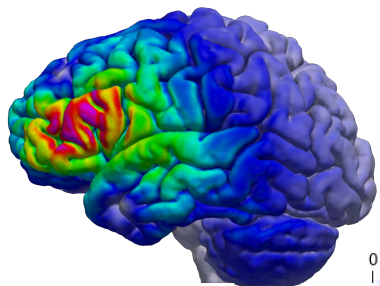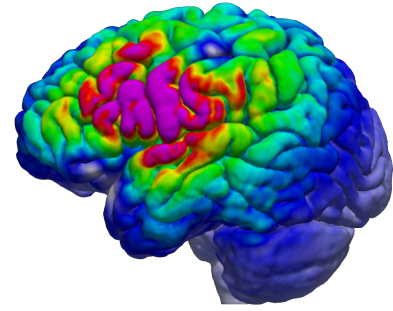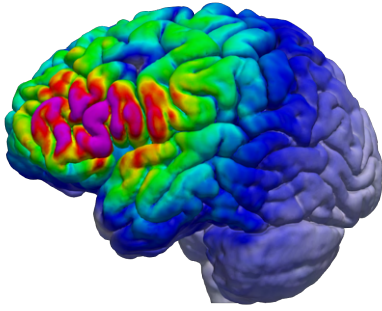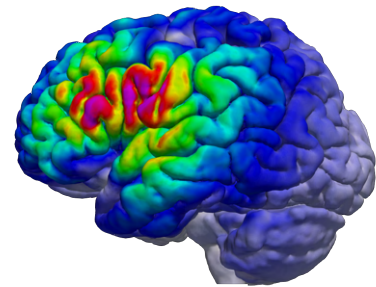
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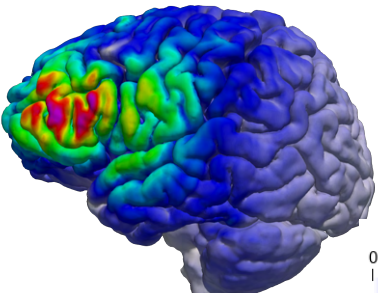
aIFG session

pIFG session

subject 25

subject 26

subject 27

Electric field strength |E| [V/m]
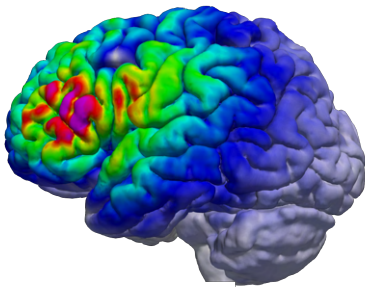
0   20   40   60   80   100
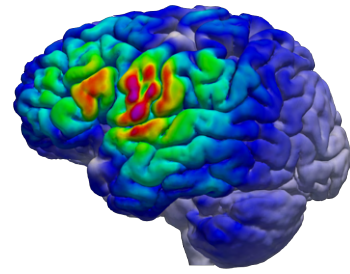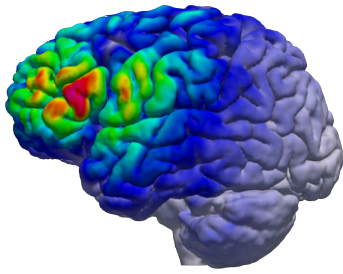
aIFG session   pIFG session

subject 28

subject 29

subject 30

Electric field strength |E| [V/m]

0   20   40   60   80   100
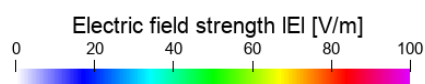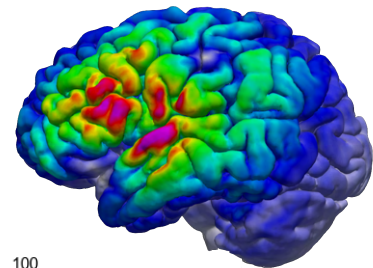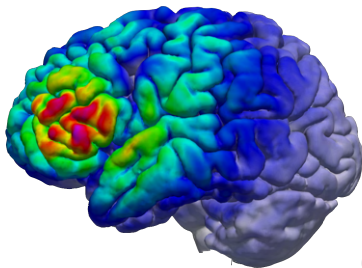
Supplementary Figure 4: Electric fields induced by TMS for the aIFG and pIFG stimulation conditions for each experimental subject. The legend shows induced electrical fields (V/m).