Supplementary information for "Cortical time-course of evidence accumulation during semantic processing"

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Supplementary Table 1: Linguistic properties of words corresponding to the visual stimuli.

Finnish word	English translation	Category	Letter count	Lemma freq.
koira	dog	animal	5	1148512
hevonen	horse	animal	7	600026
kissa	cat	animal	5	410397
hiiri	mouse	animal	5	118922
lammas	sheep	animal	6	79046
karhu	bear	animal	5	78634
leijona	lion	animal	7	58120
ankka	duck	animal	5	20623
kotka	eagle	animal	5	14917
käsi	hand	body part	4	1881198
silmä	eye	body part	5	1221875
jalka	foot	body part	5	921001
suu	mouth	body part	3	520459
selkä	back	body part	5	422099
korva	ear	body part	5	341449
sormi	finger	body part	5	231641
nenä	nose	body part	4	148989
varvas	toe	body part	6	72551
kirkko	church	building	6	965363
tie	road	building	3	834283
kirjasto	library	building	8	375156
museo	museum	building	5	197654
tehdas	factory	building	6	174675
linna	castle	building	5	116508
vankila	prison	building	7	113426
silta	bridge	building	5	110498
torni	tower	building	5	68817
lapsi	child	character	5	3775414
opettaja	teacher	character	8	613284
lääkäri	doctor	character	7	582297
poliisi	police	character	7	517522
kuningas	king	character	8	254286
pappi	priest	character	5	205756
tuomari	judge	character	7	195403
sotilas	soldier	character	7	139619
vanki	prisoner	character	5	105450
saari	island	nature	5	294931
meri	sea	nature	4	293854
puisto	park	nature	6	156118
joki	river	nature	4	151140
vuori	mountain	nature	5	133552
pilvi	cloud	nature	5	117759
pesä	nest	nature	4	99988
aalto	wave	nature	5	77540
kallio	rock	nature	6	66610
kirja	book	tool	5	1687530
pallo	ball	tool	5	342738
sormus	ring	tool	6	46015
saha	saw	tool	4	35625
lusikka	spoon	tool	7	32322
haarukka	fork	tool	8	23395
sakset	scissors	tool	6	21218
lapio	shovel	tool	5	13855
kampa	comb	tool	5	12664
auto	car	vehicle	4	1773191
juna	train	vehicle	4	239963
bussi	bus	vehicle	5	220867
laiva	ship	vehicle	5	219676
vene	boat	vehicle	4	205989
rekka	truck	vehicle	5	30658

Supplementary Fig. 1: Distance between predictions and targets over time in individual participants for V1 visual model.
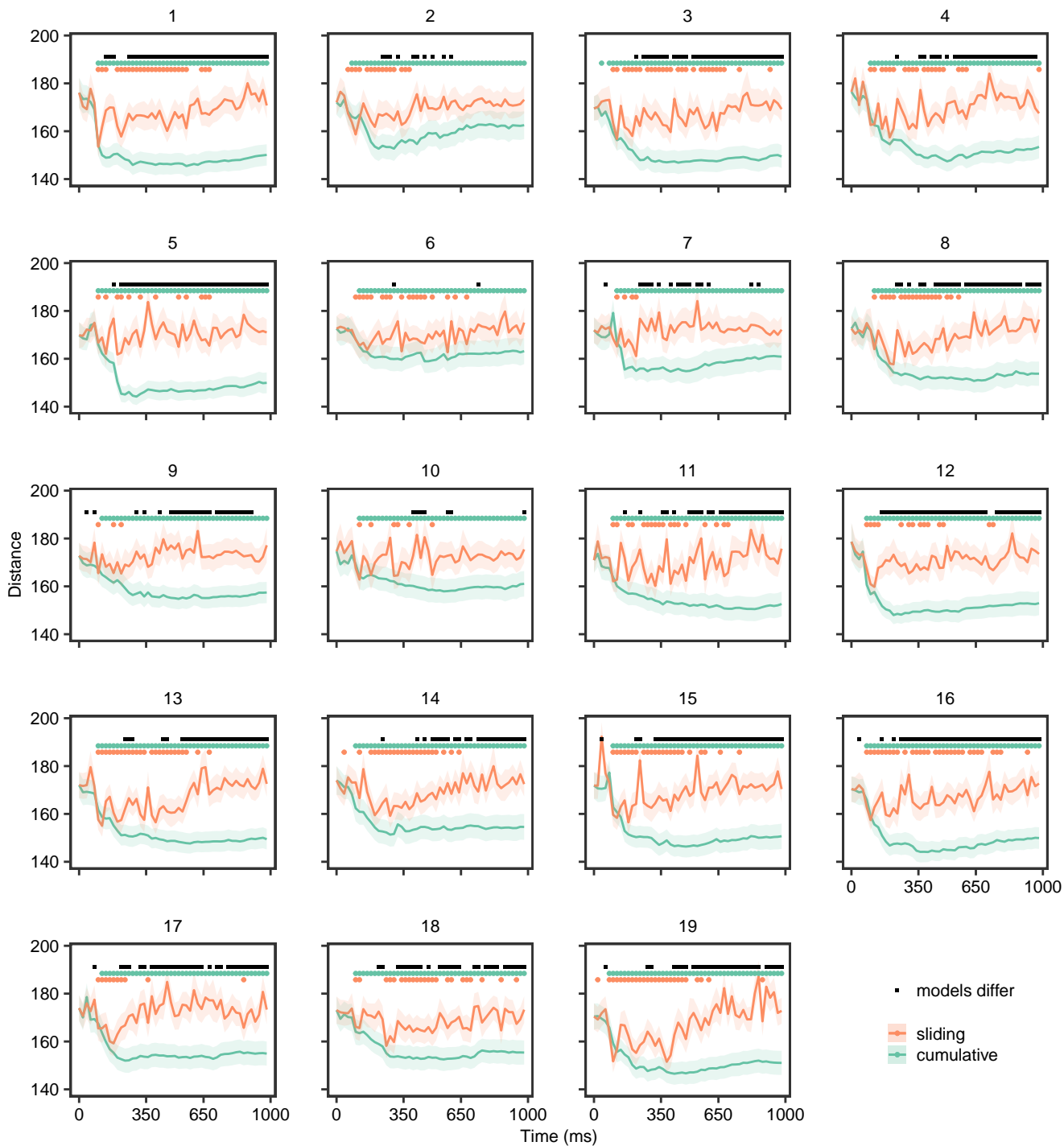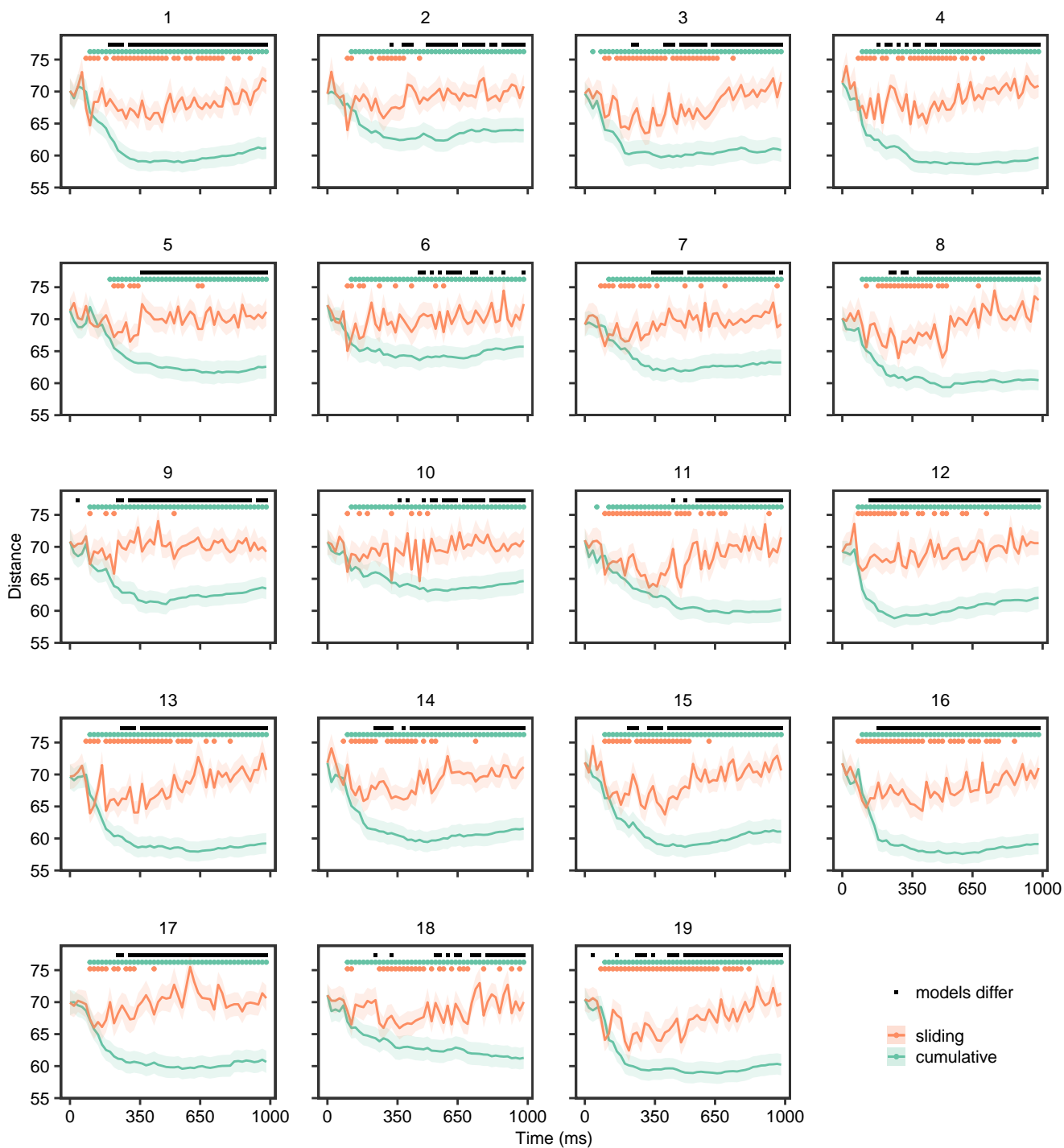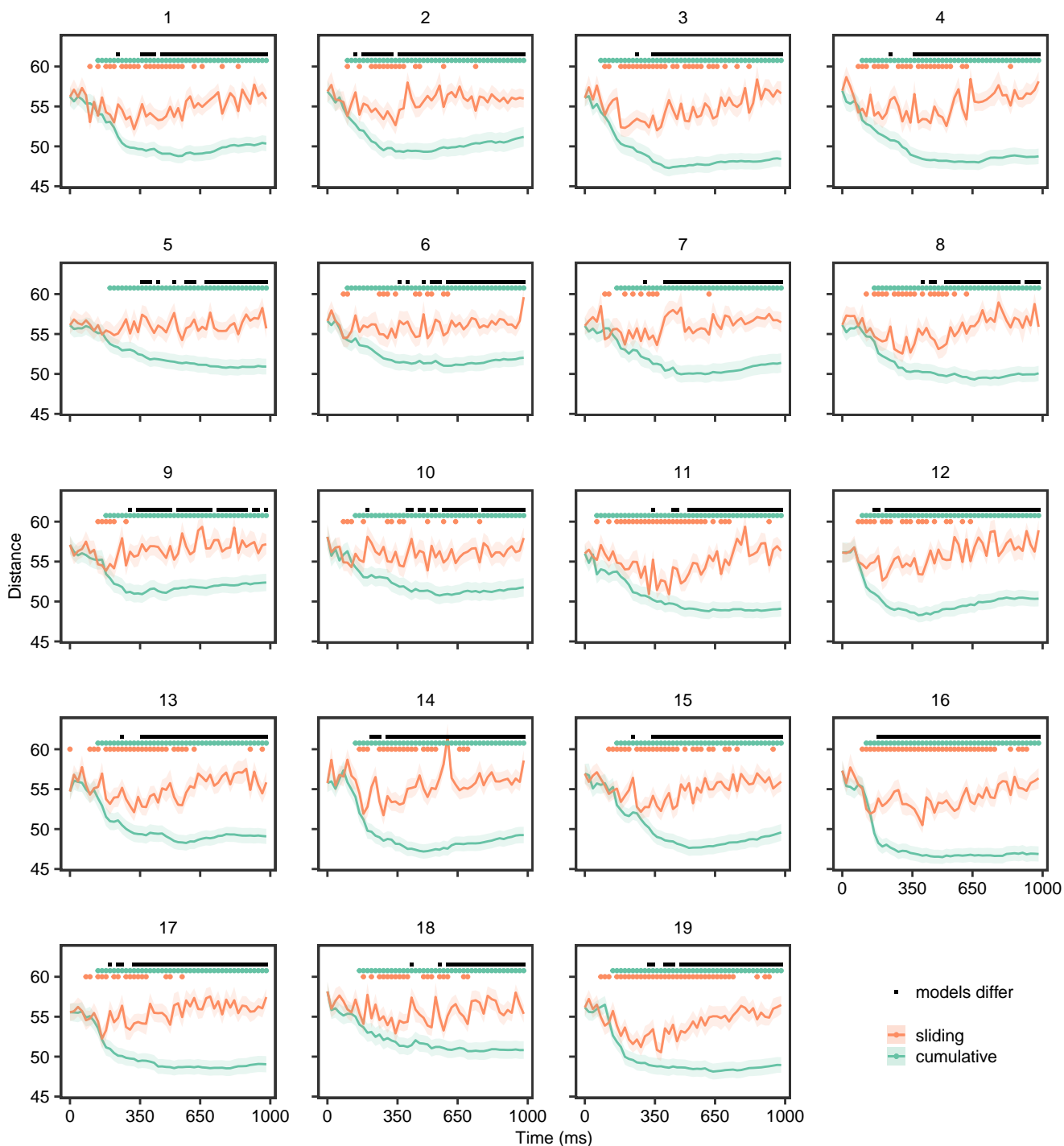

Distance between predictions and targets over time on individual participant data, using two different types of models: a sliding model taking one 20-ms time point at a time, without overlap, and a cumulative window with width increasing at 20-ms increments. The lines represent the mean across concepts, and the shaded areas indicate plus and minus one standard error. The dots above each line plot indicate time points with statistically significant differences ($p < 0.05$, based on permutation tests with 1000 permutations, FDR corrected).

Supplementary Fig. 2: Distance between predictions and targets over time in individual participants for V2 visual model.
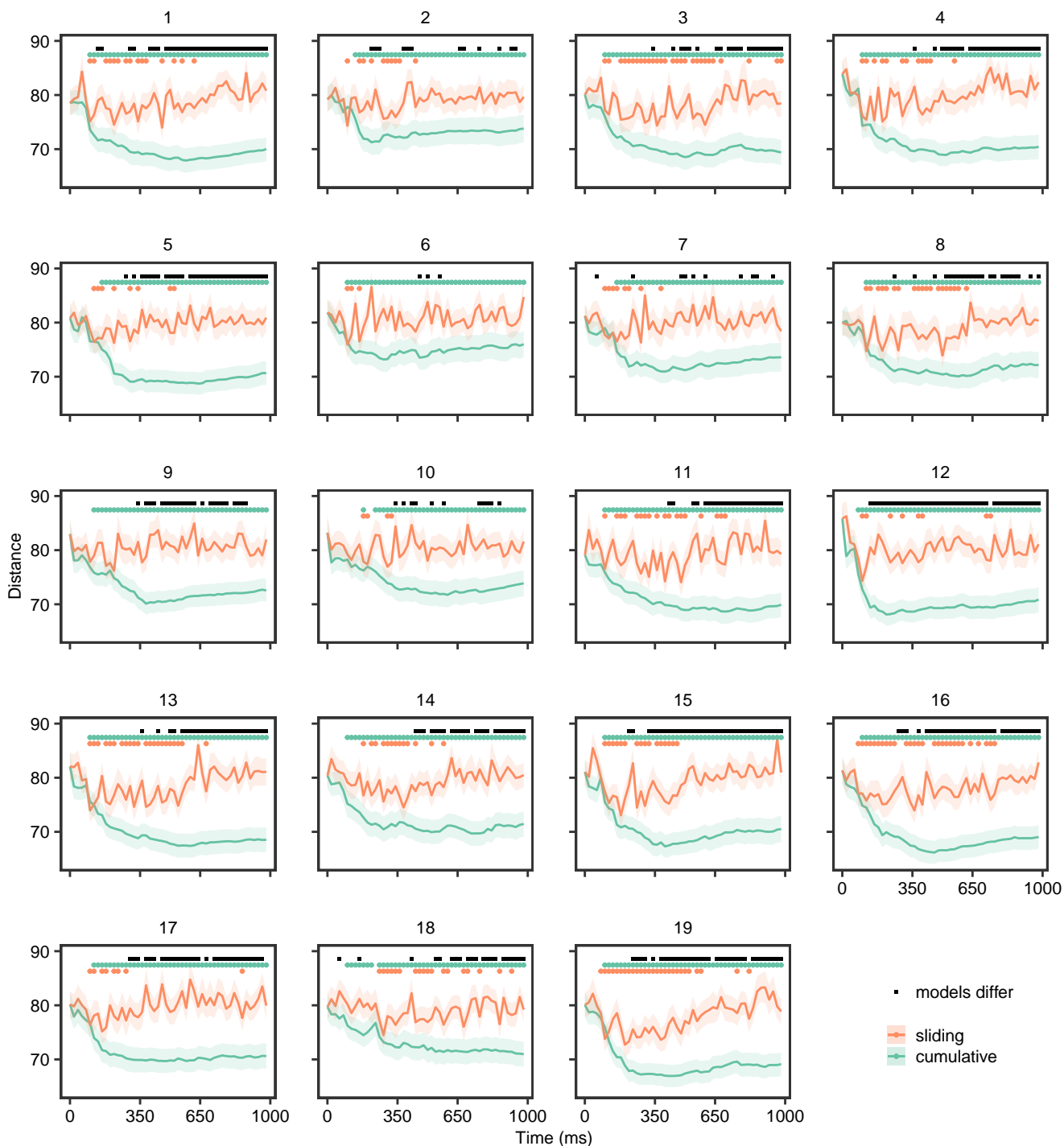

Distance between predictions and targets over time on individual participant data, using two different types of models: a sliding model taking one 20-ms time point at a time, without overlap, and a cumulative window with width increasing at 20-ms increments. The lines represent the mean across concepts, and the shaded areas indicate plus and minus one standard error. The dots above each line plot indicate time points with statistically significant differences ($p < 0.05$, based on permutation tests with 1000 permutations, FDR corrected).

Supplementary Fig. 3: Distance between predictions and targets over time in individual participants for V4 visual model.


Distance between predictions and targets over time on individual participant data, using two different types of models: a sliding model taking one 20-ms time point at a time, without overlap, and a cumulative window with width increasing at 20-ms increments. The lines represent the mean across concepts, and the shaded areas indicate plus and minus one standard error. The dots above each line plot indicate time points with statistically significant differences ($p < 0.05$, based on permutation tests with 1000 permutations, FDR corrected).

Supplementary Fig. 4: Distance between predictions and targets over time in individual participants for IT visual model.

Distance between predictions and targets over time on individual participant data, using two different types of models: a sliding model taking one 20-ms time point at a time, without overlap, and a cumulative window with width increasing at 20-ms increments. The lines represent the mean across concepts, and the shaded areas indicate plus and minus one standard error. The dots above each line plot indicate time points with statistically significant differences ($p < 0.05$, based on permutation tests with 1000 permutations, FDR corrected).

Supplementary Fig. 5: Correlations between estimated plateau points for different feature models, for each participant.
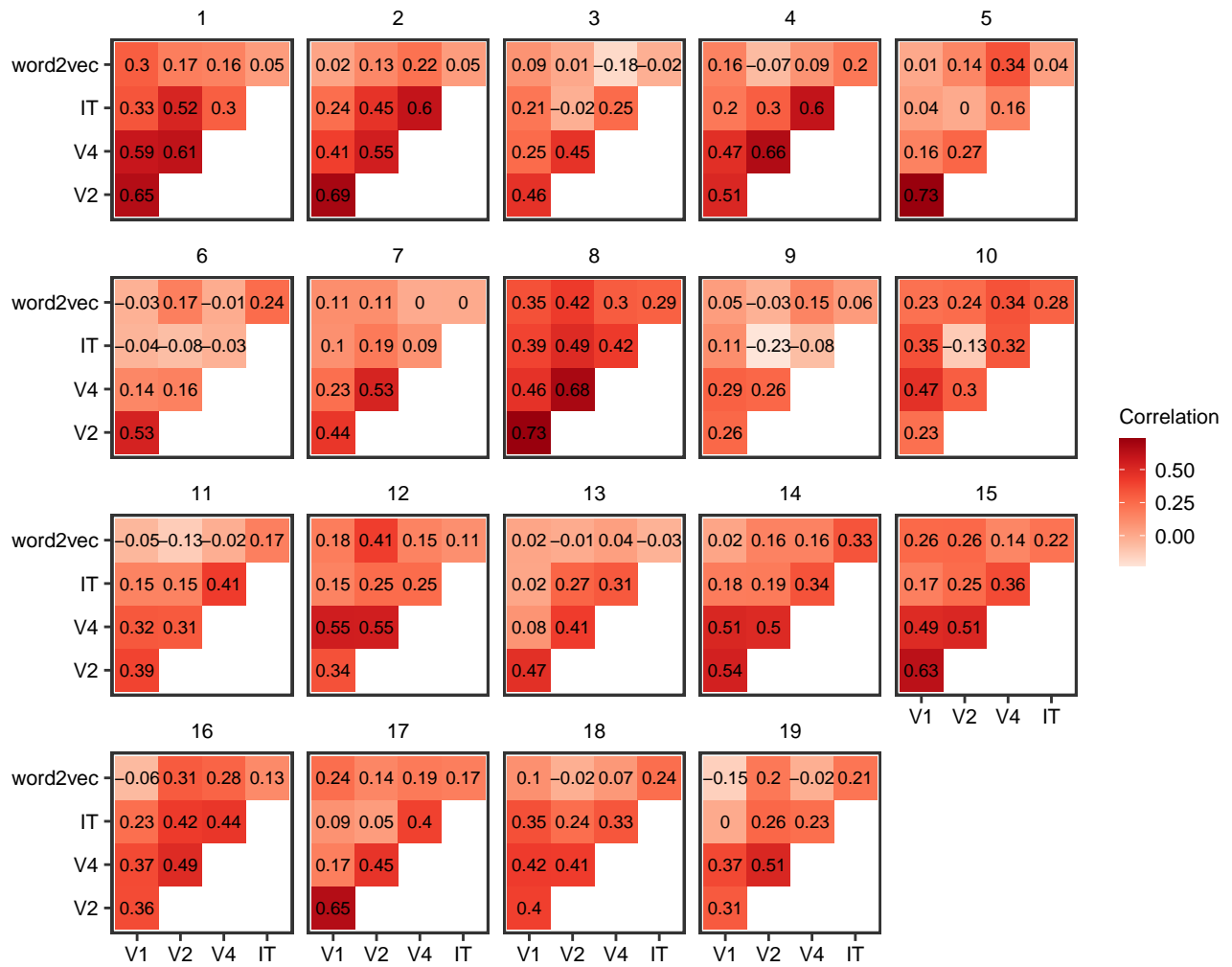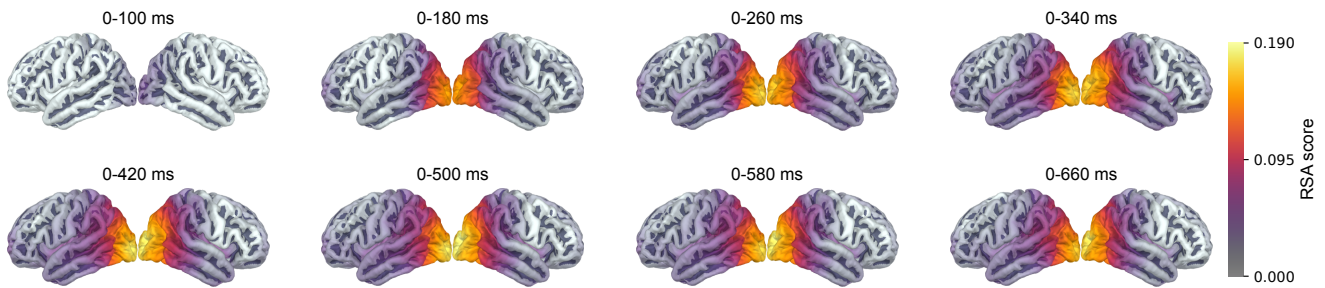
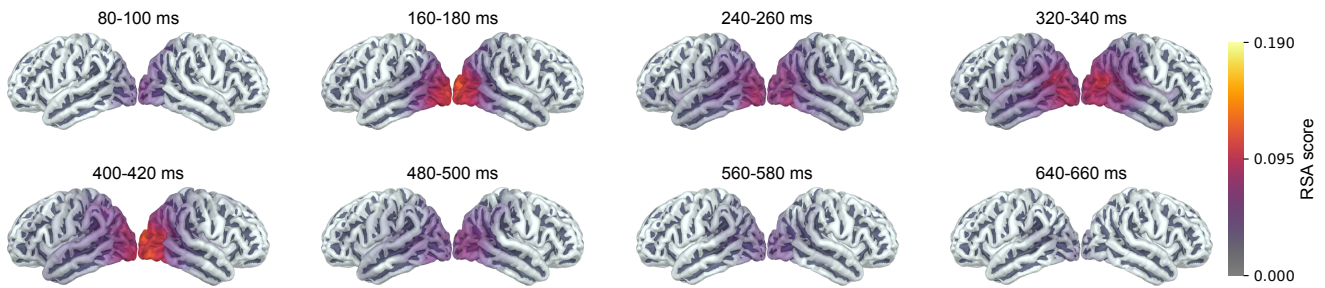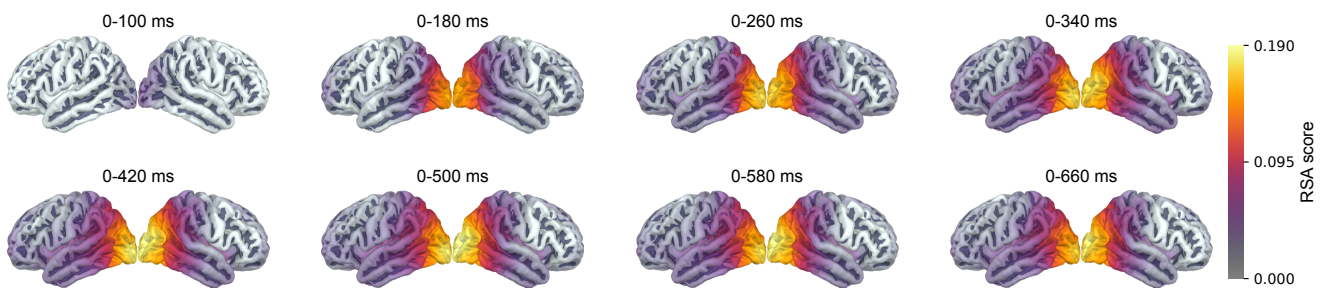**Supplementary Fig. 6: RSA maps for the visual feature model V1.**

a
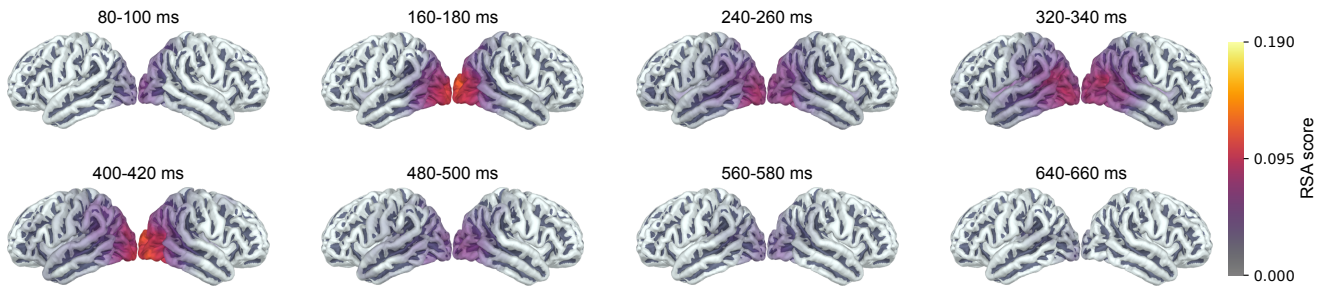
b

RSA maps illustrating the statistically significant clusters for different time windows, with (**a**) the sliding fixed-length approach and (**b**) the cumulative approach. Significance was determined using a cluster permutation test

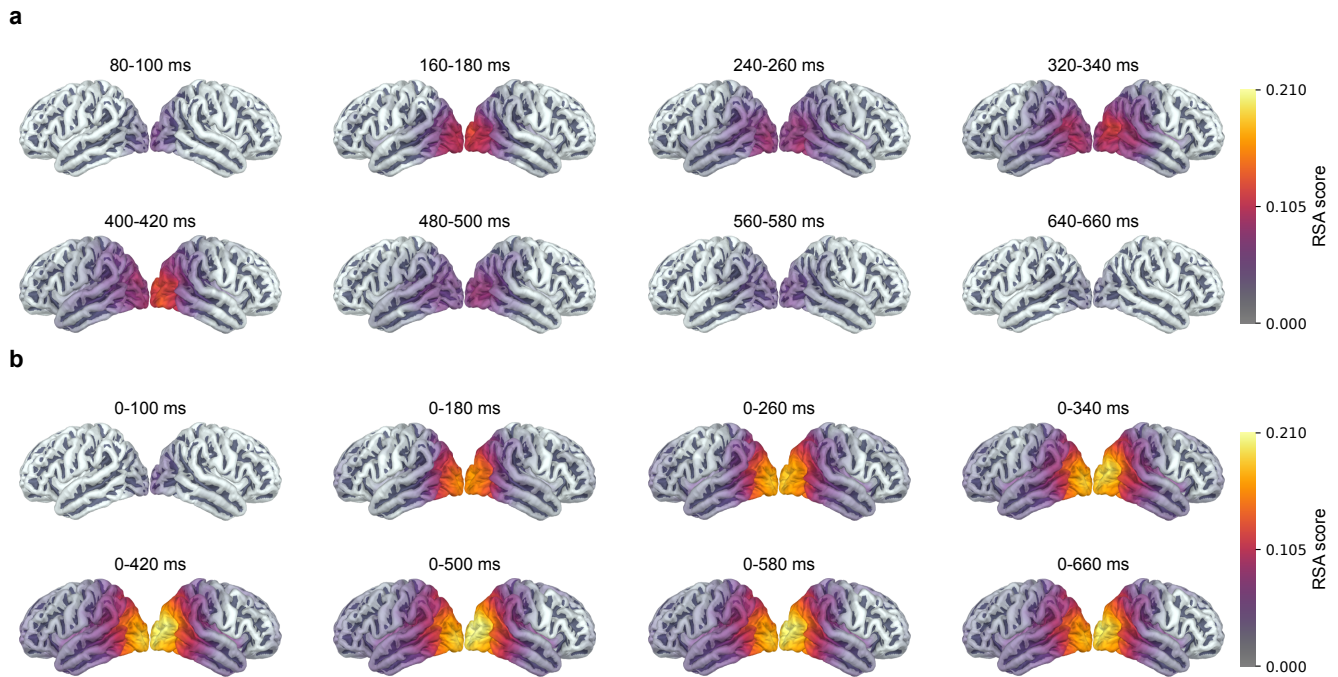**Supplementary Fig. 7: RSA maps for the visual feature model V2.**

a

b

RSA maps illustrating the statistically significant clusters for different time windows, with (**a**) the sliding fixed-length approach and (**b**) the cumulative approach. Significance was determined using a cluster permutation test.

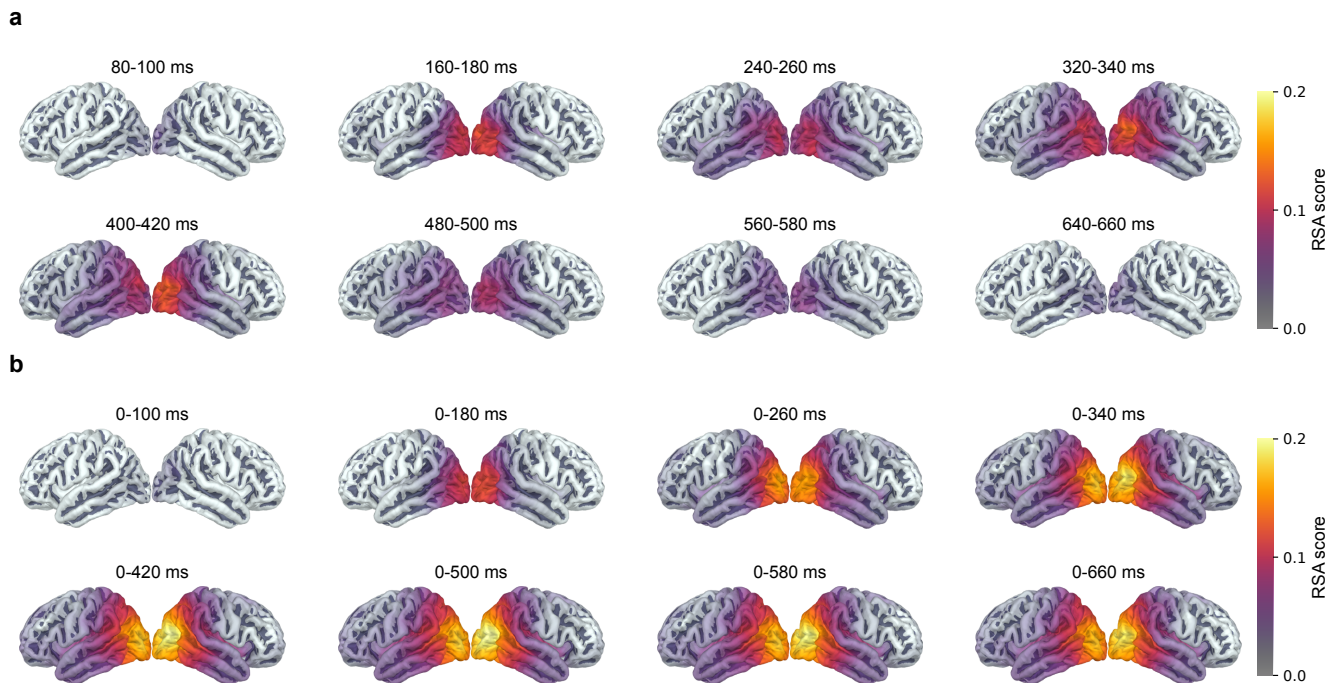**Supplementary Fig. 8: RSA maps for the visual feature model V4.**

a

b

RSA maps illustrating the statistically significant clusters for different time windows, with (**a**) the sliding fixed-length approach and (**b**) the cumulative approach. Significance was determined using a cluster permutation test.

Supplementary Fig. 9: RSA maps for the visual feature model IT.

a

b

RSA maps illustrating the statistically significant clusters for different time windows, with (**a**) the sliding fixed-length approach and (**b**) the cumulative approach. Significance was determined using a cluster permutation test.