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Influence of Choices of Statistical Models on Neural Spike Trend

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Abstract: The Center for Neural Interface Design of the Biodesign Institute at Arizona State University conducted an experiment to investigate how the central nervous system controls hand orientation and movement direction during reach-to-grasp movements. ANOVA (Analysis of Variance), a conventional data analysis widely used in neural science, was performed to categorized different neural activities. Some preliminary studies on data analysis methods have shown that the principal assumption of ANOVA is violated and some characteristics of data are missing from taking the ratio of recorded data. To compensate the deficiency of ANOVA, ANCOVA (Analysis of covariance) is introduced in this paper. By considering neural firing counts and temporal intervals respectively, we expect to extract more useful information for determining the correlations among different types of neurons with motor behavior. Comparing to ANOVA, ANCOVA can be one step further to identify which direction or orientation is favored during which epoch. We find that a considerable number of neurons are involved in movement direction, hand orientation, or both combined, and some are significant in more than one epoch, which indicates there exists a network with unknown pathways connecting neurons in motor cortex throughout the entire movement. For the future studies we suggest to integrate this study into neural networking in order to simulate the whole reach-to-grasp process.

Key words: ANCOVA, central nervous system, neural networking.

1. Introduction

Patients suffering from neurological diseases and injuries such as stroke and neural trauma may lose voluntary muscle control in the upper extremity. Developing a cortically controlled neuroprosthetic system for rehabilitation and recovery of arm control becomes more urgent and demanding for these people to live independently with a higher quality of life. Therefore, The Center for Neural Interface Design of the Biodesign Institute at Arizona State University

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conducted an experiment to investigate how the central nervous system (CNS) controls hand orientation and movement direction during reach-to-grasp movements. Researchers recorded the activity of 906 motor cortical cells in a monkey trained to reach and grasp one of two targets oriented at various angles. Analysis of Variance(ANOVA), a conventional data analysis widely used in neural science, was performed to categorize different neural activities. Some preliminary studies on data analysis methods have shown that the principal assumption of ANOVA is violated. Also ANOVA loses some characteristics of data due to taking the ratio of recorded data. To compensate the deficiency of ANOVA, Analysis of covariance (ANCOVA) is introduced in this project. By considering neural firing counts and temporal intervals respectively, we expect to extract more useful information for determining the correlations among different types of neurons with motor behavior. The objective of this project is to explore the possible methods of data analysis which would easily be accepted and be applied by the neuroscientists. ANCOVA is a merger of ANOVA and serves as the vanguard in this project. There are some other models like neural network which can be studied in future works. This research will advance our knowledge on the cortical control of hand orientation and arm movement, and provide information to develop a robust extraction algorithm to decode neural signals so as to control a neuroprosthetic device under real life reach-to grasp situations.

2. Data Description

2.1 Methodology

A. Experimental Apparatus and Design

The experimental protocol for surgical procedure, animal training and care, data collection and analyses reported in this paper is reviewed and approved by the Institutional Animal Use and Care Committee of Arizona State University. The experimental apparatus consists of a central holding pad and two rectangular targets (Figure 1(a)). Two touch sensors are fitted on opposite sides of each target for detecting a truly firm grasp. A successful trial is produced by grasping the target firmly using a power grip, making contact with both sensors. The monkey was trained to perform reach and grasp any one of the two targets (left target 1, right target 2) at a given orientation (45°, 90°, or 135°) as instructed. The sequence of events for the reach-to-grasp task is shown in Figure 1(b). Each trial started with central light on, cueing the monkey to place its hand on the central holding pad. After a random center holding time (CHT), a target light came on, cueing the monkey to reach for the indicated target and make a firm grasp. The target light would go off after a minimum target hold period post the target hit.

The monkey would return the hand to the central pad and wait for the next trial (Figure 1(b)).

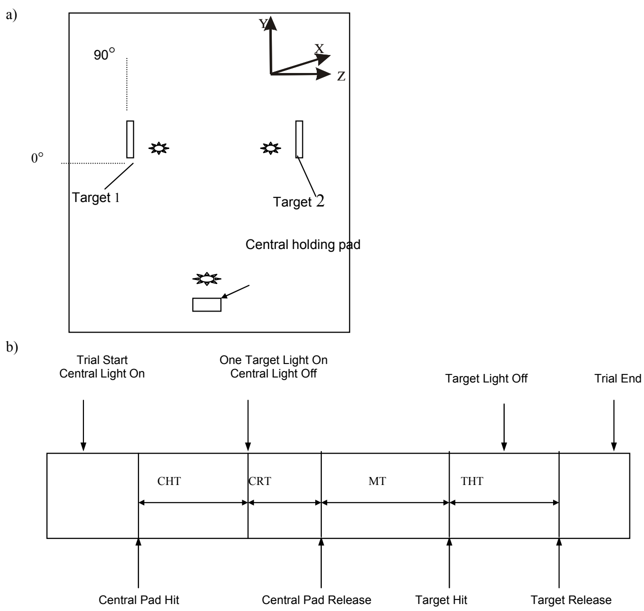

Figure 1: Experimental setup. (a) The front view of the apparatus and the target orientation definition. (b) The sequence of events for the reach-to-grasp task and the trial epochs. The cue reaction time (CRT) was defined as the time from target light on to central pad release; the movement time (MT) was defined as the time from central pad release to target hit; the target holding time (THT) was defined as the time from target hit to target release

B. Data Collection

A recording chamber was placed on the contralateral hemisphere of the performing arm (left hemisphere in this case) over the area of motor cortex, targeting the forearm and hand control areas. The electrical activity of single motor cortical neurons was recorded with five independently driven microelectrodes (Thomas Recording). The penetrations covered the hand representation area of M1, and some of PMd and PMv. Each electrode made one penetration a day, and the recording depth would be adjusted for new neurons after every 108 successful trials (18 trials to each target condition: 3 angles of each target for 2 targets) to record different cells. Figure 2 shows the locations of the recorded neurons.

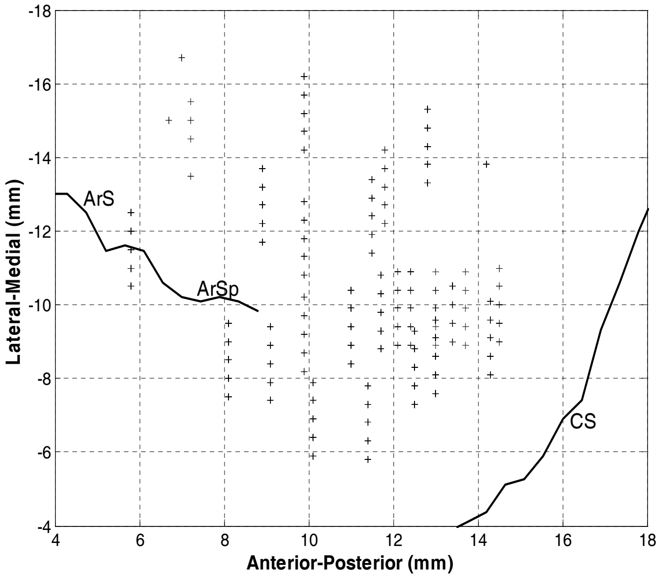

Figure 2: Top view of the recording location based on the chamber's coordinates. Each cross represents an electrode penetration. The recording location in the chamber's coordinates was recorded everyday before cortical signal recording. The chamber location in the stereotaxic coordinates was measured during the surgery. The rotation matrix from the stereotaxic coordinates to the chamber's coordinates was calculated. Then we converted the coordinates of the major landmarks (ArS, ArSp, and CS) in the stereotaxic coordinates into that in the chamber's coordinates. ArS: arcuate sulcus, ArSp: arcuate sulcus spar, CS: central sulcus

C. Data Analysis from Previous Studies

Spike data were obtained by performing off-line sorting using the Neural Explore program from Plexon. A total number of 979 motor cortical cells was recorded totally. A two-way analysis of variance (ANOVA) was used to evaluate whether changes in the average cell discharge were significantly modulated by target orientation, or movement direction, or their interaction effect ($P < 0.05$). The firing rates during CHT were considered as the baseline firing rates. For 105 out of 979 (10.7%) neurons, their neuronal discharge frequencies within CHT were significantly altered by target orientation. During CHT, the monkey's hand was resting on the central holding pad, the target was not presented and movement had not started. There were two reasons that could account for the changes: one was the visual input of different target orientations, the other was movement preparation. We also found 22 (2.3%) sensory cells in the motor cortex. These cells showed significant higher firing frequency during the CHT, CRT and THT when the monkey's hand was either touching the central holding pad or holding the target, but lower firing frequency during MT when there was no cutaneous sensory input. The next step was to find task-related cells. We define a cell as task-related if its average firing rates within any of the last three epochs was at least 2SDs greater than its baseline firing rate. Another 284 neurons (29%) showed no significant increase of discharge frequency during any of the last three epochs. The remaining 568 out of 979 neurons (58%) were found to be task-related and were further classified.

2.2 Results from Previous Studies

A. Hand Kinematics

The features of the experiment paradigm are that hand orientation is determined by the target orientation (Figure 3(a)); movement direction is determined by the left/right target; transport velocity profiles show no dependence on target orientation (Figure 3(b)).

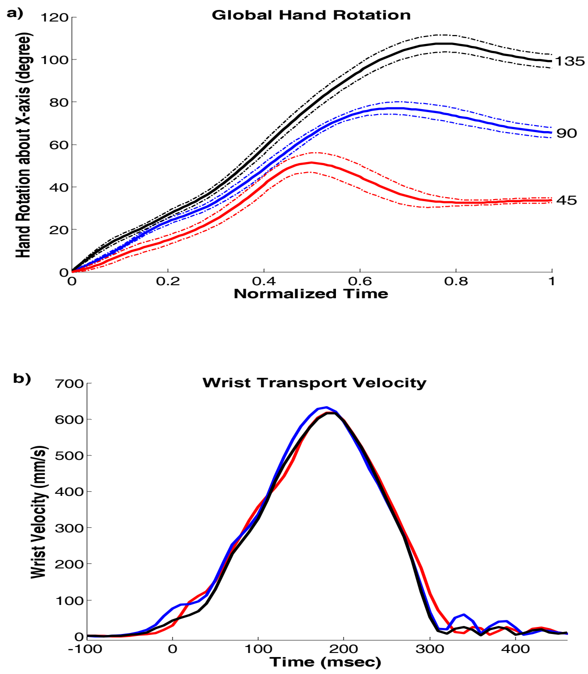

Figure 3: Dependence of movement parameters on target orientation. (a) Averaged hand rotation trajectories (solid) +/− SDs (dashed) during movements to targets oriented at 45 (red), 90 (blue), 135 (black). Each solid curve is averaged from all trials of movements to the same target fixed at the same orientation in one day. (b) Averaged wrist transport velocity profiles to different orientations. The color index is the same as plot (a). Time zero is aligned at central pad release

B. General Nature of Orientation-related-only Cells

Figure 4 shows perievent histograms of an exemplary motor cortical neuron. The left column shows the cell's activity during movements to the left target; the right column shows the cell's activity during movements to the right target. The three rows correspond to three levels of target orientations. Each raster illustrates the firing pattern of the cell during 18 trials of movements to the same target condition. The neuron began to fire approximately 100-msec before movement onset. The effect of target orientation caused a significant change in the overall level of cell activity before, during and after movements (ANOVA, $P < 0.05$). The changes in firing activity caused by target orientation were consistently observed among movements to the two targets, and no clear difference was observed between firing patterns to the two targets.

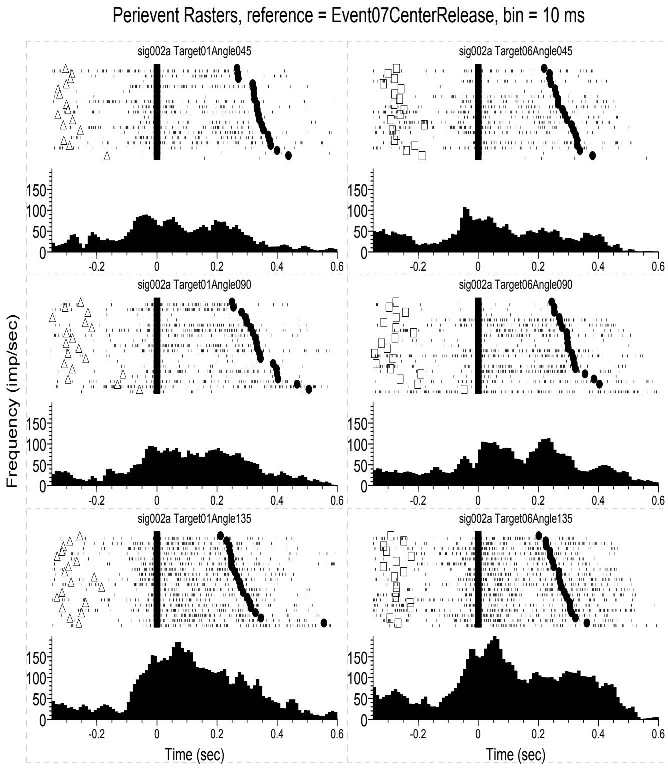

Figure 4: Perievent histogram of a motor cortical cell encoding hand orientation during reaching and grasping the targets oriented at three different angles. Time zero is aligned at central pad release (movement onset). The empty triangles represent left target light on; the empty squares represent right target light on; the solid diamonds represent target hit. The raster are ordered by ascending movement duration. The histograms were calculated with the bin of 10-msec and smoothed using a Gaussian filter with filter width of 3 bins

C. Direction-related-only Cells

We also found some direction-related-only cells. For these neurons, the discharge frequency during movement to one of the target was significantly higher (ANOVA, effect of movement direction, $P < 0.05$) than that to the other target. And the difference in the neuronal discharge patterns caused by movement direction was consistently observed across movements to the three different target orientations.

D. Orientation-direction-interaction Cells

Another type of cells was found to have significant orientation-direction-interaction effect ($P < 0.05$). Figure 5 shows perievent histograms of an illustrative cell. We noticed that most orientation-direction-interaction cells better encode target hit than central pad release, so we aligned the raster at target hit. A significant orientation-direction interaction effect indicates that the orientation effect was not uniform between both targets. There might be a shift in the orientation preference between two movement directions. Note that in the illustrative cell (Figure 5), for the left target, the neuron's discharge frequencies during movements to 90° and 135° target are higher than that during movements to 45° target; while for the right target, it is the firing during movements to the 45° target that has the greatest discharge frequency.

2.3 Discussion from Previous Studies

The present study was conducted to examine the motor cortical control of hand orientation during reach-to-grasp. We fixed initial hand position and target locations to keep the movement directions fixed, and investigated reach-to-grasp movements to targets oriented at various angles. We found single motor cortical neurons contributed to the control of hand orientation. Changes in hand orientation altered the discharge activity of motor cortical neurons before, during and after reach-to-grasp movements.

The present findings reveal that the discharge of a lot of single motor cortical neurons co-varied only with hand orientation independent of movement direction during reach-to-grasp movements. This is in contradiction to the suggestion that the position and orientation of the hand in space are unlikely to be controlled through separate independent neural pathways [12]. Our result shows that hand orientation constitutes an important control parameter of 3-D prehension movements, and any hypothesis proposed for prehension movement that does not take into account hand orientation as a constraint is inadequate. At the same time, we found significant amount of orientation-direction-interaction cells, and there

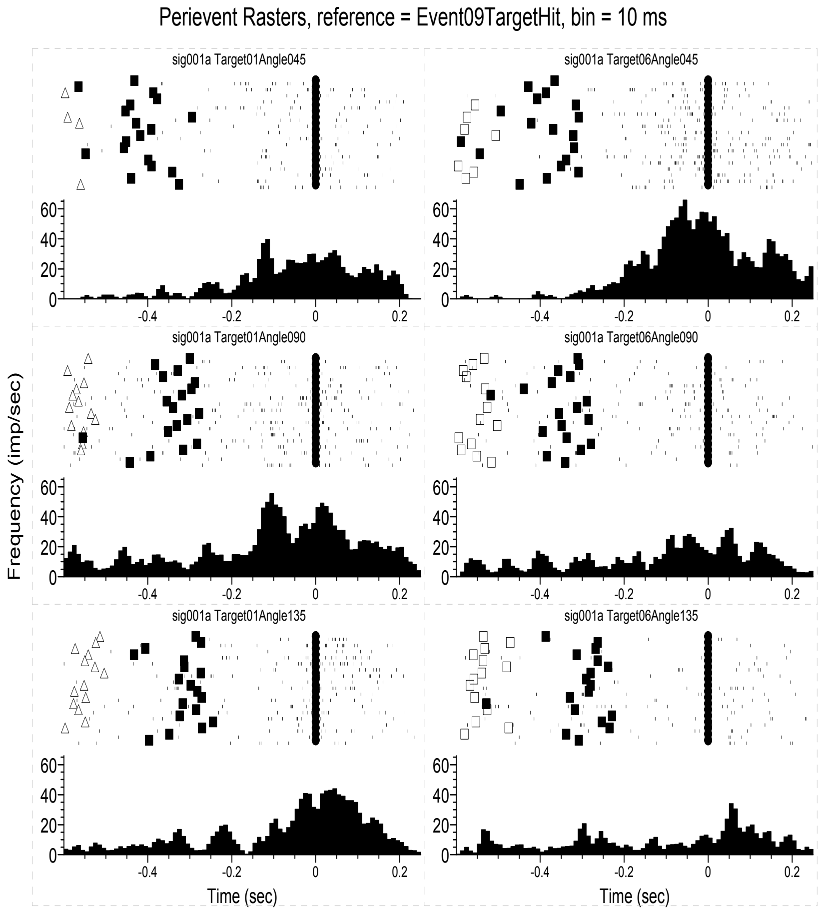

Figure 5: Perievent histogram of a motor cortical cell encoding orientation-direction-interaction during reach-to-grasp. The raster were grouped in the same way as we did in Figure 4. Time zero is aligned at target hit. The empty triangles represent left target light on; the empty squares represent right target light on; the solid squares represent central pad release. The raster are ordered by the trial sequence

is also a motor cortical area in which we found both cells encode only hand orientation and cells encode only movement direction, which indicate there probably exists a common pathway in M1 that controls both parameters.

3. Methodology

Observed from the behavior of neurons in our study, most neurons will not fire in a specified tiny time interval, says, of length 40-msec, but will fire in many other 40-msec time intervals.

Among 18 replicates of each neuron, we did find that some neurons might not fire at first few 40-msec, usually the first one or two 40-msec intervals. We observed the mean firing counts per 40-msec time interval of 18 replicates is either flat (a constant), or a linear trend over these 40-msec time intervals. We can regard 40-msec as per unit time interval.

Let t_0 be the time from zero no firing counts being observed, and MT be the whole time of a specified action for a neuron.

Case I: All time intervals have constant firing count c except the first few time intervals. Then the total firing counts of a neuron over the time MT is

$$tc = \int_0^{t_0} 0dt + \int_{t_0}^{MT} cdt = c(MT - t_0) = \alpha_0 + c * MT. \tag{3.1}$$

Here, α_0 might be zero. If it is zero, the total firing counts over the time MT will be reasonably expressed as a ratio, tc/MT.

Anyway, the total firing counts over the time MT can be represented as a linear function of time MT. It makes no sense that c is negative as c, being counts, is either zero or positive.

Case II: The firing counts have a linear trend over those 40-msec time intervals. Then the total firing counts of a neuron over the time MT is

$$tc = \int_0^{t_0} 0dt + \int_{t_0}^{a+bt} dt = \alpha_0 + a * MT + \frac{b}{2} * MT^2. \tag{3.2}$$

The total firing counts over the time MT will be a quadratic function of time MT as long as b is not zero. If the neuron is firing increasingly or decreasingly along 40-msec time intervals, the linear trend $a + b * t$ will have a non-zero slope b.

Thus, if the total firing count is a quadratic function of the time MT with statistically significant positive coefficient of MT^2, the neuron is firing more and more along the time. If the total firing count is a quadratic function of the time MT with statistically significant negative coefficient of MT^2, the neuron is firing less and less along the time.

If the neuron is firing more and more or less and less, it seems much likely it is involving some action. On the contrary, if the neuron is firing constantly along the time, it seems the neuron is just firing spontaneously. That is, the firing counts are some noises. If this is true, we are supposed to looking for functioning neurons is to find out neuron's total firing count being a quadratic function of time MT.

For neurons firing increasingly (decreasingly) in the early period of the whole time interval of length MT, then firing decreasingly (increasingly) in the late period, it can be shown the total firing count is again a quadratic function of the time MT, too. The coefficient of MT^2 of this function is determined by the linear trend of firing in the late period.

The real neuron firing count when it functions along the time might be a high order polynomial of time, or a nonlinear function. Our approach is that we approximate this complicate function by its first order Taylor expansion. Under this approach, we can directly examine whether the relationship between the total firing count and the time MT is a quadratic or not.

4. Results

We did ANCOVA analysis described in Section 3. To support our proposed analysis, we investigated the neuron firing behavior by performing the perievent histogram of a motor cortical cell encoding orientation-direction-interaction during reach-to-grasp using NeuroExplorer. The raster were grouped in the same way as we described in the previous section. Time zero is aligned at Central Pad Release. The blue triangles represent the target light on and central light off. The raster are ordered by the trial sequence. Figure 6 is the perievent histograms for Neuron ID Aug12set7_sig004a. The left column shows the cell's activity during

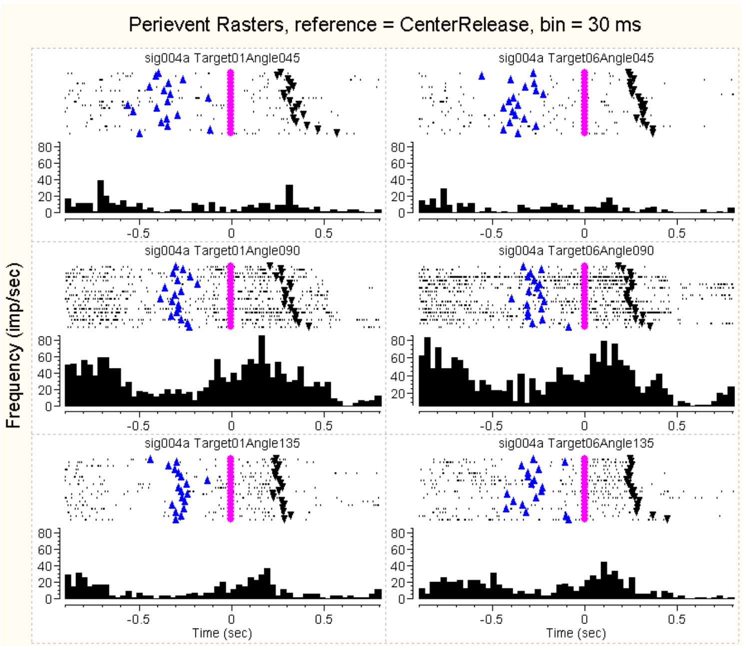

Figure 6: Neuron ID Aug12set7_sig004a. Perievent histogram of a motor cortical cell encoding orientation-direction-interaction during reach-to-grasp. The raster were grouped in the same way as we did in previous Figures. Time zero is aligned at Central Pad Release. The blue triangles represent the target light on and central light off. The raster are ordered by the trial sequence

movements to the left target; the right column shows the cell's activity during movements to the right target. The three rows correspond to three levels of target orientations. Each raster illustrates the firing pattern of the cell during 18 trials of movements to the same target condition. The effect of target 90° orientation has quadratic effect significantly (ANCOVA, $P < 0.05$). Also the interaction of T_6 and Orientation 90° has quadratics effect. No clear difference was observed between firing patterns to the two targets. The scatter plots and fitted lines of Neuron ID Aug12set7_sig004a are presented in Figures 7, 8, and 9.

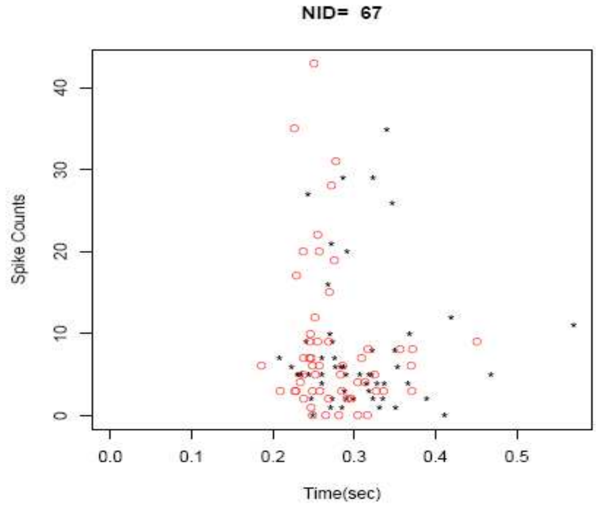

Figure 7: The scatter plots and fitted line from ANCOVA model consider Direction only for Neuron ID Aug12set7_sig004a

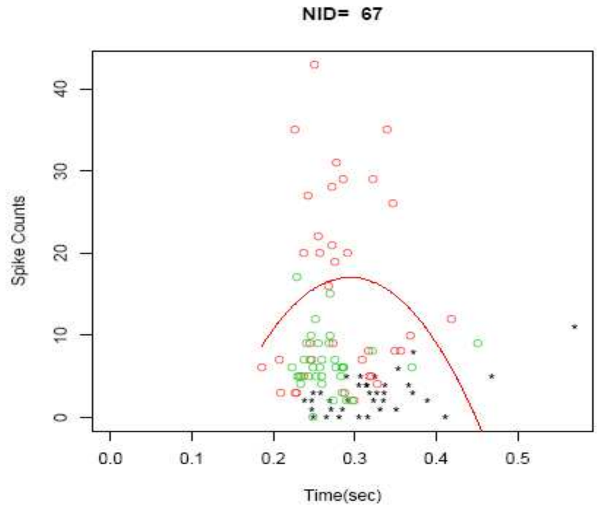

Figure 8: The scatter plots and fitted line from Orientation only ANCOVA model for Neuron ID Aug12set7_sig004a

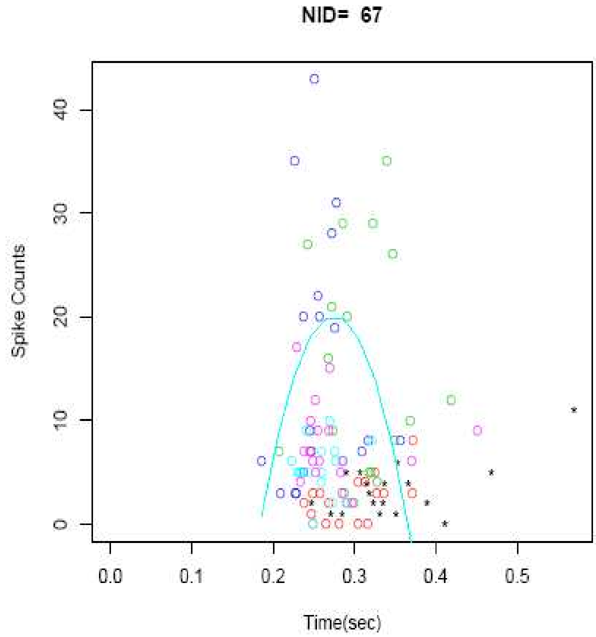

Figure 9: The scatter plots and fitted line from ANCOVA model considering interaction for Neuron ID Aug12set7_sig004a

Figure 10 shows the perievent histograms for Neuron ID Aug12set7_sig004b. The effects of target 45° orientation, and the interaction of the right direction and target 45° orientation have linear effect. The effect of target 90° orientation, and the interactions of left direction and 45°, left direction and 90°, right direction and 90° have quadratics effect. No statistically significant difference was observed between firing patterns to the two targets. The scatter plots and fitted lines of Neuron ID Aug12set7_sig004b are shown in Figures 11, 12 and 13.

A. Summary of the results from the direction only model:

Using the notations of T_1 for the left target, and T_6 for the right target, Table 1 shows the summary of the results from the ANCOVA analysis for the neuron activities in all intervals. The first column is for the T_1 effect and the second column is for the T_6 effect. In the first two columns, the symbol "2" indicates there is significant quadratic effect and "0" indicates there is no effect. The fifth column is the number of neurons overlapped between CHT and CRT, the seventh column is the number of neurons overlapped between CRT and MT, and the ninth column is the number of neurons overlapped between MT and THT. From Table 1, the first row shows that among 979 neurons, one neuron in CHT interval, 5 neurons in CRT, 11 in MT and 2 in THT have significant equal T_1^2 effect and T_6^2 effect. There is no overlapped neuron between two adjacent time intervals.

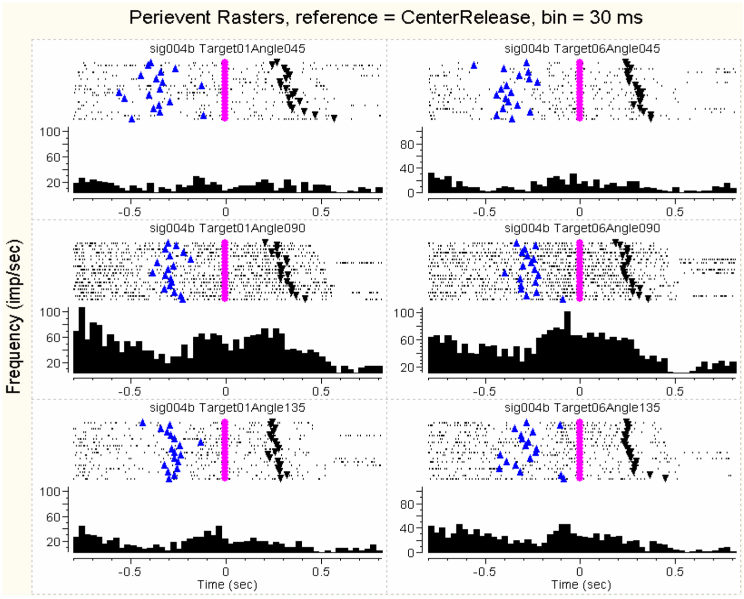

Figure 10: Neuron ID Aug12set7_sig004b. Perievent histogram of a motor cortical cell encoding orientation-direction-interaction during reach-to-grasp. The raster were grouped in the same way as we did in previous Figures. Time zero is aligned at Central Pad Release. The blue triangles represent the target light on and central light off. The raster are ordered by the trial sequence

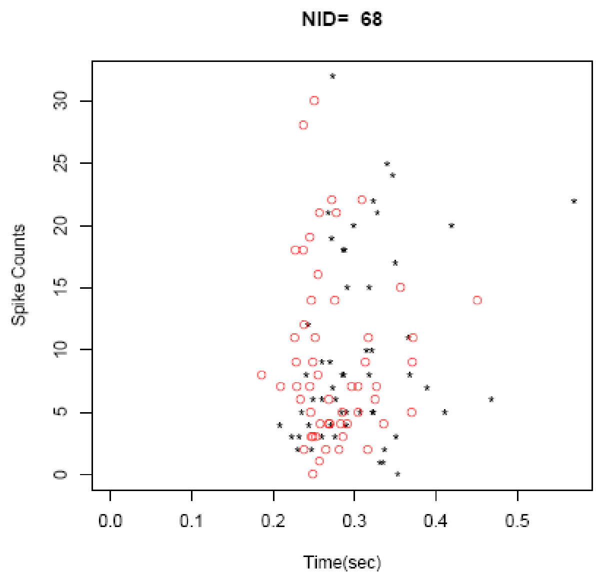

Figure 11: The scatter plots and fitted line from ANCOVA model consider Direction only for Neuron ID Aug12set7_sig004b

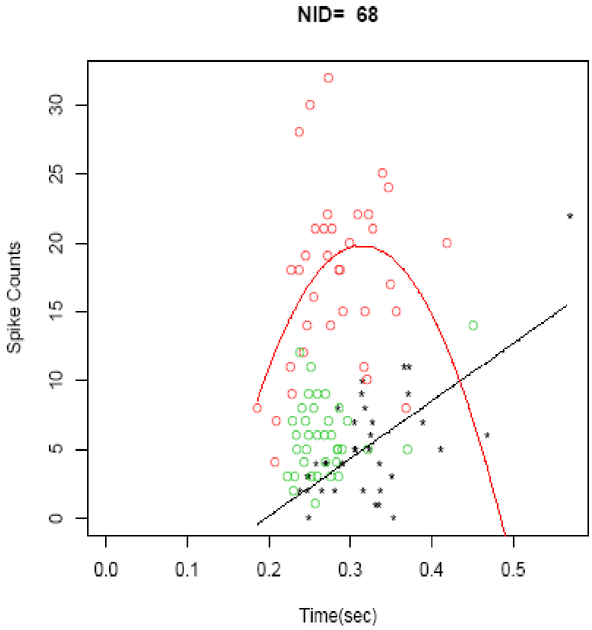

Figure 12: The scatter plots and fitted line from ANCOVA model consider Orientation only for Neuron ID Aug12set7_sig004b

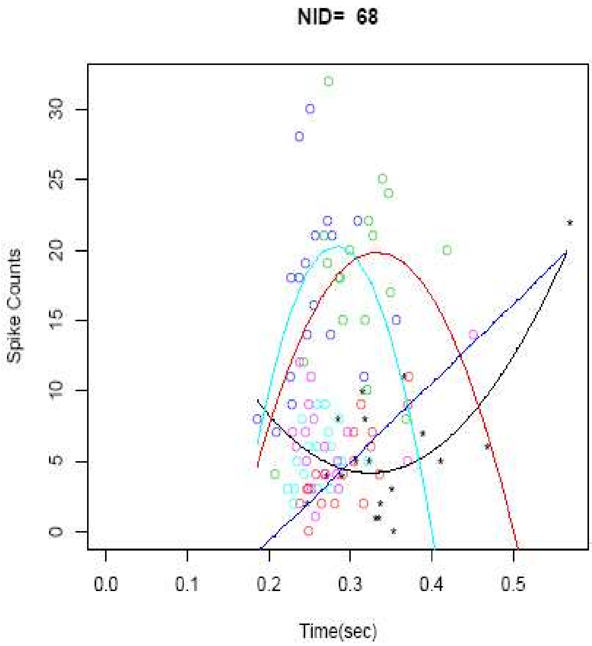

Figure 13: The scatter plots and fitted line from ANCOVA model considering interaction for Neuron ID Aug12set7_sig004b

Table 1: Summarized results of the ANCOVA analysis for the neuron firing activities

T_1	T_6	equal or not	CHT	overlap	CRT	overlap	MT	overlap	THT
2	2	$T_1{=}T_6$	1	0	5	0	11	0	2
2	2	$T_1 \neq T_6$	2	0	3	0	7	0	2
2	1 or 0	NA	38	3	74	10	99	4	49
1 or 0	2	NA	37	4	73	10	98	8	53
1	1	$T_1{=}T_6$	609	322	405	217	390	60	102
1	1	$T_1 \neq T_6$	30	0	12	0	0	0	1
1	0	NA	49	11	129	21	108	11	125
0	0	NA	73	31	100	33	90	55	397

B. Summary for the results from the orientation only model:

Table 2 shows the summary of the results from the ANCOVA analysis for the neuron activities in all intervals. The first column is for the target 45° orientation effect, the second column is for the target 90° orientation, the third column is for the target 135° orientation. In the first three columns, the symbol "2" indicates there is significant quadratic effect, and "0" indicates there is no effect. From Table 2, the first row shows that among 979 neurons, none in CHT interval, none in CRT, two neurons in MT and none in THT have significant quadratic effects for orientation 45°, 90° and 135°. There is no overlapped neuron between two adjacent time intervals.

Table 2: Summarized results of the ANCOVA analysis for the neuron firing activities

45^0	90^0	135^0	CHT	overlap	CRT	overlap	MT	overlap	THT
2	2	2	0	0	0	0	2	0	0
2	2	1 or 0	3	0	7	0	10	0	0
2	1 or 0	2	0	0	5	0	10	0	1
1 or 0	2	2	6	0	5	0	11	0	1
2	1 or 0	1 or 0	40	3	55	3	81	4	49
1 or 0	2	1 or 0	49	8	63	5	72	2	43
1 or 0	1 or 0	2	43	5	69	5	89	4	39
1	1	1	458	167	236	104	221	8	22
1	1	0	51	0	39	4	67	3	34
1	0	1	56	7	79	9	64	3	25
0	1	1	37	2	81	13	81	4	46
1	0	0	27	3	57	6	47	2	74
0	1	0	27	5	51	5	43	6	92
0	0	1	37	4	64	6	40	2	93
0	0	0	72	26	95	18	68	31	387

C. Summary for the results from the interaction model:

In this section, we briefly summarize our findings into two parts, direction specific and orientation specific. Here we will only show the results for MT interval. For the other intervals, details are shown in the Appendix.

i. Direction Specific:

Tables 3, 4 and 5 show the results of direction given 45°, 90°, and 135° orientation, respectively. Among 979 neurons, there are 12 neurons showing significant quadratic T_1 and T_6 effects at 45° orientation; 6 at 90° orientation and 14 at 135° orientation.

Table 3: The results of interaction model − direction effect with orientation-45° specific

T_1	T_6	Number of neurons
2	2	12
2	0	88
0	2	60

Table 4: The results of interaction model − direction effect with orientation-90° specific

T_1	T_6	Number of neurons
2	2	6
2	0	77
0	2	39

Table 5: The results of interaction model − direction effect with orientation-135° specific

T_1	T_6	Number of neurons
2	2	14
2	0	60
0	2	88

Table 6 shows the results of the numbers of overlapped neurons under different conditions. For instance, the first row shows that for those neurons with quadratic T_1 and T_6 effects, there is 1 neuron that performs significantly both in the direction only and the condition of orientation 45° specific; 1 neuron that performs significantly both in the direction only and the condition of orientation 90° specific; and 2 neurons that performs significantly both in the direction only and the condition of orientation 135° specific.

Table 6: The results of interaction model – direction effect with non-orientation-specific part

T_1	T_6	overlap with 45° specific	overlap with 90° specific	overlap with 135° specific
2	2	1	1	2
2	0	23	26	17
0	2	14	12	23

Table 7 shows the results of the numbers of overlapped neurons between direction effect given orientation 45° and other given orientation. For instance, the first row shows that for those neurons with quadratic T_1 and T_6 effects, there is 1 neuron that performs significantly both in the direction effect given orientation 45° and the direction effect given orientation 90° specific; and 0 neuron that performs significantly both in the direction given orientation 45° and the direction effect given orientation 135°.

Table 7: The results of interaction model – direction effect given the orientation-45° specific

T_1	T_6	overlap with 90° specific	overlap with 135° specific
2	2	1	0
2	0	5	4
0	2	3	9

Table 8 shows the numbers of overlapped neurons between the direction effects given orientation 45° and given orientation 135°. For instance, the first row shows that for those neurons with quadratic T_1 and T_6 effects, there is 1 neuron that performs significantly both in the direction effect given orientation 90° and the direction effect given orientation 135° specific.

Table 8: The results of interaction model – direction effect given the orientation-90° specific

T_1	T_6	overlap with 135° specific
2	2	0
2	0	8
0	2	6

ii. Orientation Specific:

Tables 9 and 10 show the results of orientation effects, given T_1 and T_6 direction, respectively. For example, the first row of Table 9 shows that among 979 neurons, there is 1 neuron showing significant quadratic 45°, 90°, and 135° effects on T_1 direction specifically.

Table 9: The results of interaction model − orientation effect given direction-T_1 specific

45°	90°	135°	Number of neurons
2	2	2	1
2	2	0	8
2	0	2	7
0	2	2	10
2	0	0	84
0	2	0	64
0	0	2	56

Table 10: The results of interaction model − orientation effect given direction-T_6 specific

45°	90°	135°	Number of neurons
2	2	2	1
2	2	0	3
2	0	2	15
0	2	2	7
2	0	0	53
0	2	0	34
0	0	2	79

Tables 11 and 12 are the results of the number of overlapped significant functioning neurons. The first row in Table 11 shows that among those neurons with quadratic 45°, 90°, and 135° effects, 0 neuron performs significantly both in the cases of the orientation effect only and in the orientation effect given direction T_1; and 0 neuron performs significantly both in the cases of the orientation effect only and in the orientation effect given direction T_6.

Table 11: The number of overlapped significant functioning neurons between non_dir_specific and direction T_1 and T_6

45°	90°	135°	non_dir_specific overlap T_1 specific	non_dir_specific overlap T_6 specific
2	2	2	0	0
2	2	0	1	0
2	0	2	0	4
0	2	2	2	1
2	0	0	36	15
0	2	0	24	9
0	0	2	23	32

Table 12: The number of overlapped significant functioning neurons between T_1 specific and T_6 specific

45°	90°	135°	T_1 specific overlap T_6 specific
2	2	2	0
2	2	0	0
2	0	2	0
0	2	2	0
2	0	0	4
0	2	0	4
0	0	2	7

For the results of other intervals can be found in the Appendix.

5. Discussion

Previous studies have shown that single motor cortical neurons commonly engage several motoneuronal pools rather than just one and that, within a particular pool that is engaged, the connections of the corticomotoneuronal cell are widespread. This one-to-several relation between motor cortical neurons and motoneuronal pools, and the reasonable assumption that a particular motor cortical neuron could engage different pools at different strengths, may explain the observation of our present study that the preferred directions or orientations of single motor cortical neurons differ among different cells. That is similar to what people have found in the reaching experiments, that the preferred directions of single motor cortical cells differ among different cells. Their suggestion was that single cells may relate to groups of muscles, so that a particular cell may engage several motoneuronal pools in a weighted fashion. The movement of the arm is regarded as the outcome of the coactivation of many muscle groups, each of which is being controlled as a separate functional unit. Their suggestion matched with our observations in this study.

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Appendix

Table 13: The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug09set1-sig001a	1	10	6	4.0	Aug10set4-sig002a	37	14	13	1.8	Aug13set1-sig005a	73	10	8	1.0
Aug09set1-sig002a	2	11	6	4.2	Aug10set4-sig003a	38	14	13	1.4	Aug13set1-sig005b	74	10	8	1.0
Aug09set1-sig003a	3	12	6	3.9	Aug10set4-sig004a	39	15	13	2.0	Aug13set2-sig001a	75	8	8	1.6
Aug09set1-sig004a	4	12	6	2.8	Aug10set4-sig004b	40	15	13	2.0	Aug13set2-sig002a	76	8	8	2.0
Aug09set1-sig004b	5	12	6	2.8	Aug10set4-sig005a	41	15	13	1.5	Aug13set2-sig003a	77	8	8	1.9
Aug09set1-sig005a	6	12	6	2.4	Aug10set4-sig005b	42	15	13	1.5	Aug13set2-sig003b	78	8	8	1.9
Aug09set1-sig005b	7	12	6	2.4	Aug10set5-sig001a	43	13	13	1.7	Aug13set2-sig004a	79	9	8	1.2
Aug09set1-sig005c	8	12	6	2.4	Aug10set5-sig001b	44	13	13	1.7	Aug13set2-sig005a	80	10	8	1.0
Aug09set3-sig001a	9	10	6	4.6	Aug10set5-sig002a	45	14	13	1.8	Aug13set2-sig005b	81	10	8	1.2
Aug09set3-sig002a	10	11	6	4.9	Aug10set5-sig003a	46	14	13	1.4	Aug13set3-sig001a	82	8	8	1.9
Aug09set3-sig003a	11	12	6	4.8	Aug10set5-sig004a	47	15	13	2.0	Aug13set3-sig002a	83	8	8	2.0
Aug09set3-sig004a	12	12	6	2.9	Aug10set5-sig004b	48	15	13	2.0	Aug13set3-sig003a	84	8	8	2.0
Aug09set3-sig005a	13	12	6	2.4	Aug10set5-sig005a	49	15	13	1.6	Aug13set3-sig004a	85	9	8	1.9
Aug09set3-sig005b	14	12	6	2.4	Aug10set5-sig005b	50	15	13	1.6	Aug13set3-sig005a	86	10	8	1.1
Aug09set3-sig005c	15	12	6	2.4	Aug10set5-sig005c	51	15	13	1.6	Aug13set3-sig005b	87	10	8	1.1
Aug09set4-sig001a	16	10	6	4.9	Aug11set2-sig001a	52	9	13	4.7	Aug13set4-sig001a	88	8	8	2.1
Aug09set4-sig002a	17	11	6	4.2	Aug11set2-sig002a	53	10	13	4.5	Aug13set4-sig002a	89	8	8	2.0
Aug09set4-sig003a	18	12	6	4.9	Aug11set2-sig003a	54	10	13	4.3	Aug13set4-sig002b	90	8	8	2.0
Aug09set4-sig004a	19	12	6	2.9	Aug11set2-sig004a	55	10	13	4.5	Aug13set4-sig003a	91	8	8	2.0
Aug09set4-sig005a	20	12	6	2.5	Aug11set5-sig004a	56	10	13	4.8	Aug13set4-sig004a	92	9	8	1.2
Aug09set4-sig005b	21	12	6	2.5	Aug11set5-sig004b	57	10	13	4.8	Aug13set4-sig005a	93	10	8	1.1
Aug10set2-sig001a	22	13	13	1.6	Aug11set7-sig004a	58	10	13	4.8	Aug13set5-sig001a	94	8	8	2.2
Aug10set2-sig001b	23	13	13	1.6	Aug12set1-sig004a	59	14	14	3.0	Aug13set5-sig002a	95	8	8	2.1
Aug10set2-sig002a	24	14	13	1.7	Aug12set2-sig004a	60	14	14	3.0	Aug13set5-sig003a	96	8	8	2.0
Aug10set2-sig003a	25	14	13	1.4	Aug12set4-sig004a	61	14	14	3.5	Aug13set5-sig004a	97	9	8	1.2
Aug10set2-sig004a	26	15	13	1.4	Aug12set4-sig004b	62	14	14	3.5	Aug13set5-sig005a	98	10	8	1.1
Aug10set2-sig004b	27	15	13	1.9	Aug12set5-sig004a	63	14	14	3.6	Aug13set5-sig005b	99	10	8	1.1

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug10set2-sig005a	28	15	13	1.5	Aug12set5-sig004b	64	14	14	3.6	Aug13set6-sig001a	100	8	8	2.3
Aug10set2-sig005b	29	15	13	1.5	Aug12set6-sig004a	65	14	14	3.8	Aug13set6-sig002a	101	8	8	2.1
Aug10set3-sig001a	30	13	13	1.6	Aug12set6-sig004b	66	14	14	3.8	Aug13set6-sig003a	102	8	8	2.0
Aug10set3-sig002a	31	14	13	1.8	Aug12set7-sig004a	67	14	14	3.1	Aug13set6-sig004a	103	9	8	1.2
Aug10set3-sig003a	32	14	13	1.4	Aug12set7-sig004b	68	14	14	3.1	Aug13set6-sig005a	104	10	8	1.2
Aug10set3-sig004a	33	15	13	2.0	Aug13set1-sig001a	69	8	8	1.5	Aug13set6-sig005b	105	10	8	1.2
Aug10set3-sig005a	34	15	13	1.5	Aug13set1-sig002a	70	8	8	2.0	Aug13set6-sig005c	106	10	8	1.2
Aug10set3-sig005b	35	15	13	1.5	Aug13set1-sig003a	71	8	8	1.8	Aug13set6-sig005d	107	10	8	1.2
Aug10set4-sig001a	36	13	13	1.6	Aug13set1-sig004a	72	9	8	1.2	Aug14set2-sig001a	108	7	9	2.4
Aug14set2-sig002a	109	8	9	2.7	Aug17set1-sig005a	145	11	14	2.1	Aug17set7-sig001a	182	9	14	1.9
Aug14set2-sig003a	110	8	9	2.5	Aug17set2-sig001a	147	9	14	1.8	Aug17set7-sig002a	183	10	14	2.0
Aug14set2-sig004a	111	9	9	1.8	Aug17set2-sig001b	148	9	14	1.8	Aug17set7-sig002b	184	10	14	2.0
Aug14set2-sig005a	112	9	9	2.0	Aug17set2-sig002a	149	10	14	1.7	Aug17set7-sig003a	185	10	14	1.9
Aug14set3-sig001a	113	7	9	2.5	Aug17set2-sig003a	150	10	14	1.9	Aug17set7-sig003b	186	10	14	1.9
Aug14set3-sig002a	114	8	9	2.9	Aug17set2-sig004a	151	10	14	2.5	Aug17set7-sig003c	187	10	14	1.9
Aug14set3-sig003a	115	8	9	2.5	Aug17set2-sig005a	152	11	14	2.6	Aug17set7-sig004a	188	10	14	2.6
Aug14set3-sig004a	116	9	9	1.9	Aug17set2-sig005b	153	11	14	2.6	Aug17set7-sig005a	189	11	14	2.2
Aug14set3-sig005a	117	9	9	2.3	Aug17set3-sig001a	154	9	14	1.8	Aug17set7-sig005b	190	11	14	2.2
Aug14set4-sig001a	118	7	9	2.7	Aug17set3-sig001b	155	9	14	1.8	Aug17set8-sig001a	191	9	14	2.0
Aug14set4-sig002a	119	8	9	2.9	Aug17set3-sig002a	156	10	14	1.8	Aug17set8-sig001b	192	9	14	2.0
Aug14set4-sig003a	120	8	9	2.5	Aug17set3-sig003a	157	10	14	1.9	Aug17set8-sig002a	193	10	14	2.1
Aug14set4-sig004a	121	9	9	1.9	Aug17set3-sig003b	158	10	14	1.9	Aug17set8-sig003a	194	10	14	2.0
Aug14set4-sig005a	122	9	9	2.3	Aug17set3-sig004a	159	10	14	2.6	Aug17set8-sig003b	195	10	14	2.0
Aug14set5-sig001a	123	7	9	2.9	Aug17set3-sig005a	160	11	14	2.1	Aug17set8-sig003c	196	10	14	2.0
Aug14set5-sig002a	124	8	9	3.1	Aug17set3-sig005b	161	11	14	2.1	Aug17set8-sig004a	197	10	14	2.6
Aug14set5-sig003a	125	8	9	2.6	Aug17set4-sig001a	162	9	14	1.8	Aug17set8-sig005a	198	11	14	2.2
Aug14set5-sig004a	126	9	9	2.0	Aug17set4-sig002a	163	10	14	1.8	Aug17set8-sig005b	199	11	14	2.2

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug14set5-sig005a	127	9	9	2.4	Aug17set4-sig003a	164	10	14	1.9	Aug17set8-sig005c	200	11	14	2.2
Aug14set6-sig001a	128	7	9	2.9	Aug17set4-sig004a	165	10	14	2.6	Aug18set1-sig001a	201	8	15	3.2
Aug14set6-sig002a	129	8	9	3.1	Aug17set4-sig005a	166	11	14	2.1	Aug18set1-sig002a	202	9	15	3.5
Aug14set6-sig003a	130	8	9	2.6	Aug17set4-sig005b	167	11	14	2.1	Aug18set1-sig003a	203	9	15	4.2
Aug14set6-sig004a	131	9	9	2.1	Aug17set5-sig001a	168	9	14	1.8	Aug18set1-sig004a	204	10	15	3.5
Aug14set6-sig005a	132	9	9	2.4	Aug17set5-sig002a	169	10	14	1.9	Aug18set1-sig005a	205	10	15	3.9
Aug14set7-sig001a	133	7	9	3.0	Aug17set5-sig003a	170	10	14	2.0	Aug18set2-sig001a	206	8	15	3.3
Aug14set7-sig002a	134	8	9	3.2	Aug17set5-sig003b	171	10	14	2.0	Aug18set2-sig002a	207	9	15	3.5
Aug14set7-sig003a	135	8	9	2.6	Aug17set5-sig004a	172	10	14	2.6	Aug18set2-sig003a	208	9	15	4.3
Aug14set7-sig004a	136	9	9	2.2	Aug17set5-sig005a	173	11	14	2.1	Aug18set2-sig004a	209	10	15	3.6
Aug14set7-sig005a	137	9	9	2.6	Aug17set6-sig001a	174	9	14	1.9	Aug18set2-sig005a	210	10	15	3.9
Aug17set1-sig001a	138	9	14	1.8	Aug17set6-sig002a	175	10	14	2.0	Aug18set3-sig001a	211	8	15	3.4
Aug17set1-sig001b	139	9	14	1.8	Aug17set6-sig002b	176	10	14	2.0	Aug18set3-sig002a	212	9	15	3.5
Aug17set1-sig002a	140	10	14	1.3	Aug17set6-sig003a	177	10	14	1.9	Aug18set3-sig003a	213	9	15	4.4
Aug17set1-sig002b	141	10	14	1.7	Aug17set6-sig003b	178	10	14	1.9	Aug18set3-sig004a	214	10	15	3.7
Aug17set1-sig003a	142	10	14	1.9	Aug17set6-sig004a	179	10	14	3.0	Aug18set3-sig005a	215	10	15	4.0
Aug17set1-sig003b	143	10	14	1.9	Aug17set6-sig005a	180	11	14	2.8	Aug18set4-sig001a	216	8	15	3.4
Aug17set1-sig004a	144	10	14	2.5	Aug17set6-sig005b	181	11	14	2.8	Aug18set4-sig002a	217	9	15	3.6
Aug18set4-sig003a	218	9	15	2.7	Aug19set2-sig003a	254	10	12	1.5	Aug19set6-sig001a	290	9	12	1.2
Aug18set4-sig004a	219	10	15	2.5	Aug19set2-sig003b	255	10	12	1.5	Aug19set6-sig001b	291	9	12	1.2
Aug18set4-sig005a	220	10	15	1.8	Aug19set2-sig004a	256	10	12	1.8	Aug19set6-sig002a	292	9	12	1.3
Aug18set5-sig001a	221	8	15	2.0	Aug19set2-sig005a	257	11	12	2.3	Aug19set6-sig002b	293	9	12	1.3
Aug18set5-sig002a	222	9	15	2.5	Aug19set3-sig001a	258	9	12	1.2	Aug19set6-sig002c	294	9	12	1.3
Aug18set5-sig003a	223	9	15	2.9	Aug19set3-sig001b	259	9	12	1.2	Aug19set6-sig003a	295	10	12	1.5
Aug18set5-sig004a	224	10	15	2.5	Aug19set3-sig001c	260	9	12	1.2	Aug19set6-sig003b	296	10	12	1.5
Aug18set5-sig005a	225	10	15	1.9	Aug19set3-sig002a	261	9	12	1.3	Aug19set6-sig003c	297	10	12	1.5
Aug18set6-sig001a	226	8	15	2.3	Aug19set3-sig002b	262	9	12	1.3	Aug19set6-sig004a	298	10	12	2.0

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug18set6-sig002a	227	9	15	2.7	Aug19set3-sig002c	263	9	12	1.3	Aug19set6-sig005a	299	11	12	2.3
Aug18set6-sig003a	228	9	15	2.9	Aug19set3-sig002d	264	9	12	1.3	Aug19set7-sig001a	300	9	12	1.3
Aug18set6-sig004a	229	10	15	2.5	Aug19set3-sig003a	265	10	12	1.7	Aug19set7-sig001b	301	9	12	1.3
Aug18set6-sig005a	230	10	15	1.9	Aug19set3-sig003b	266	10	12	1.7	Aug19set7-sig002a	302	9	12	1.3
Aug18set7-sig001a	231	8	15	2.3	Aug19set3-sig004a	267	10	12	1.8	Aug19set7-sig002b	303	9	12	1.3
Aug18set7-sig002a	232	9	15	2.9	Aug19set3-sig005a	268	11	12	2.8	Aug19set7-sig002c	304	9	12	1.3
Aug18set7-sig003a	233	9	15	3.1	Aug19set4-sig001a	269	9	12	1.4	Aug19set7-sig003a	305	10	12	1.5
Aug18set7-sig004a	234	10	15	2.6	Aug19set4-sig001b	270	9	12	1.4	Aug19set7-sig003b	306	10	12	1.5
Aug18set7-sig005a	235	10	15	2.0	Aug19set4-sig001c	271	9	12	1.4	Aug19set7-sig004a	307	10	12	2.0
Aug19set1-sig001a	236	9	12	2.4	Aug19set4-sig002a	272	9	12	1.4	Aug19set7-sig005a	308	11	12	2.3
Aug19set1-sig001b	237	9	12	2.9	Aug19set4-sig002b	273	9	12	1.4	Aug19set8-sig001a	309	9	12	1.4
Aug19set1-sig001c	238	9	12	3.1	Aug19set4-sig002c	274	9	12	1.4	Aug19set8-sig001b	310	9	12	1.4
Aug19set1-sig001d	239	9	12	2.6	Aug19set4-sig003a	275	10	12	1.8	Aug19set8-sig001c	311	9	12	1.4
Aug19set1-sig002a	240	9	12	2.1	Aug19set4-sig003b	276	10	12	1.8	Aug19set8-sig002a	312	9	12	1.3
Aug19set1-sig002b	241	9	12	2.4	Aug19set4-sig003c	277	10	12	1.8	Aug19set8-sig002b	313	9	12	1.3
Aug19set1-sig002c	242	9	12	3.0	Aug19set4-sig004a	278	10	12	1.8	Aug19set8-sig002c	314	9	12	1.3
Aug19set1-sig002d	243	9	12	3.2	Aug19set4-sig004b	279	10	12	1.8	Aug19set8-sig003a	315	10	12	1.6
Aug19set1-sig003a	244	10	12	2.6	Aug19set4-sig005a	280	11	12	2.9	Aug19set8-sig003b	316	10	12	1.9
Aug19set1-sig004a	245	10	12	2.2	Aug19set4-sig005b	281	11	12	2.9	Aug19set8-sig003c	317	10	12	1.9
Aug19set1-sig005a	246	11	12	2.6	Aug19set5-sig001a	282	9	12	1.2	Aug19set8-sig003d	318	10	12	1.9
Aug19set2-sig001a	247	9	12	1.8	Aug19set5-sig002a	283	9	12	1.3	Aug19set8-sig004a	319	10	12	2.0
Aug19set2-sig001b	248	9	12	1.8	Aug19set5-sig002b	284	9	12	1.3	Aug19set8-sig004b	320	10	12	2.0
Aug19set2-sig001c	249	9	12	1.3	Aug19set5-sig003a	285	10	12	1.5	Aug19set8-sig005a	321	11	12	2.4
Aug19set2-sig002a	250	9	12	1.7	Aug19set5-sig003b	286	10	12	1.5	Aug20set1-sig001a	322	8	11	2.0
Aug19set2-sig002b	251	9	12	1.9	Aug19set5-sig003c	287	10	12	1.5	Aug20set1-sig001b	323	8	11	2.0
Aug19set2-sig002c	252	9	12	1.9	Aug19set5-sig004a	288	10	12	1.9	Aug20set1-sig002a	324	9	11	3.4
Aug19set2-sig002d	253	9	12	2.5	Aug19set5-sig005a	289	11	12	2.3	Aug20set1-sig003a	325	9	11	2.6
Aug20set1-sig004a	326	10	11	1.2	Aug20set6-sig001a	362	8	11	2.5	Aug23set3-sig005a	398	11	12	2.3

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug20set1-sig005a	327	10	11	1.6	Aug20set6-sig002a	363	9	11	1.9	Aug23set4-sig001a	399	9	12	1.3
Aug20set1-sig005b	328	10	11	1.6	Aug20set6-sig003a	364	9	11	3.1	Aug23set4-sig001b	400	9	12	1.3
Aug20set1-sig005c	329	10	11	1.6	Aug20set6-sig004a	365	10	11	1.5	Aug23set4-sig001c	401	9	12	1.3
Aug20set2-sig001a	330	8	11	2.0	Aug20set6-sig004b	366	10	11	1.5	Aug23set4-sig001d	402	9	12	1.3
Aug20set2-sig002a	331	9	11	3.0	Aug20set6-sig004c	367	10	11	1.5	Aug23set4-sig002a	403	9	12	1.4
Aug20set2-sig003a	332	9	11	2.6	Aug20set6-sig005a	368	10	11	1.4	Aug23set4-sig002b	404	9	12	1.4
Aug20set2-sig003b	333	9	11	2.6	Aug20set6-sig005b	369	10	11	1.4	Aug23set4-sig002c	405	9	12	1.4
Aug20set2-sig004a	334	10	11	1.3	Aug20set6-sig005c	370	10	11	1.4	Aug23set4-sig003a	406	10	12	1.8
Aug20set2-sig004b	335	10	11	1.3	Aug20set6-sig005d	371	10	11	1.4	Aug23set4-sig004a	407	10	12	2.4
Aug20set2-sig005a	336	10	11	1.7	Aug23set1-sig001a	372	9	12	1.1	Aug23set4-sig005a	408	11	12	2.3
Aug20set2-sig005b	337	10	11	1.7	Aug23set1-sig001b	373	9	12	1.1	Aug23set5-sig001a	409	9	12	1.3
Aug20set2-sig005c	338	10	11	1.7	Aug23set1-sig002a	374	9	12	1.4	Aug23set5-sig001b	410	9	12	1.3
Aug20set3-sig001a	339	8	11	2.1	Aug23set1-sig003a	375	10	12	1.2	Aug23set5-sig001c	411	9	12	1.3
Aug20set3-sig002a	340	9	11	2.8	Aug23set1-sig004a	376	10	12	2.2	Aug23set5-sig001d	412	9	12	1.3
Aug20set3-sig003a	341	9	11	2.7	Aug23set1-sig005a	377	11	12	2.1	Aug23set5-sig002a	413	9	12	1.4
Aug20set3-sig004a	342	10	11	1.3	Aug23set2-sig001a	378	9	12	1.3	Aug23set5-sig002b	414	9	12	1.4
Aug20set3-sig005a	343	10	11	1.7	Aug23set2-sig001b	379	9	12	1.3	Aug23set5-sig002c	415	9	12	1.4
Aug20set3-sig005b	344	10	11	1.7	Aug23set2-sig001c	380	9	12	1.3	Aug23set5-sig003a	416	10	12	1.9
Aug20set3-sig005c	345	10	11	1.7	Aug23set2-sig001d	381	9	12	1.3	Aug23set5-sig004a	417	10	12	2.5
Aug20set4-sig001a	346	8	11	3.0	Aug23set2-sig002a	382	9	12	1.4	Aug23set5-sig005a	418	11	12	2.6
Aug20set4-sig002a	347	9	11	2.2	Aug23set2-sig002b	383	9	12	1.4	Aug23set6-sig001a	419	9	12	1.3
Aug20set4-sig003a	348	9	11	3.0	Aug23set2-sig002c	384	9	12	1.4	Aug23set6-sig001b	420	9	12	1.3
Aug20set4-sig004a	349	10	11	1.4	Aug23set2-sig003a	385	10	12	1.4	Aug23set6-sig001c	421	9	12	1.3
Aug20set4-sig005a	350	10	11	1.7	Aug23set2-sig003b	386	10	12	1.4	Aug23set6-sig001d	422	9	12	1.3
Aug20set4-sig005b	351	10	11	1.7	Aug23set2-sig004a	387	10	12	2.3	Aug23set6-sig002a	423	9	12	1.4
Aug20set4-sig005c	352	10	11	1.7	Aug23set2-sig005a	388	11	12	2.2	Aug23set6-sig002b	424	9	12	1.4
Aug20set4-sig005d	353	10	11	1.7	Aug23set3-sig001a	389	9	12	1.3	Aug23set6-sig002c	425	9	12	1.4

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug20set5-sig001a	354	8	11	2.1	Aug23set3-sig001b	390	9	12	1.3	Aug23set6-sig003a	426	10	12	1.9
Aug20set5-sig002a	355	9	11	2.1	Aug23set3-sig001c	391	9	12	1.3	Aug23set6-sig004a	427	10	12	2.5
Aug20set5-sig003a	356	9	11	3.1	Aug23set3-sig001d	392	9	12	1.3	Aug23set6-sig005a	428	11	12	2.6
Aug20set5-sig004a	357	10	11	1.4	Aug23set3-sig002a	393	9	12	1.4	Aug23set7-sig001a	429	9	12	1.4
Aug20set5-sig005a	358	10	11	1.7	Aug23set3-sig002b	394	9	12	1.4	Aug23set7-sig001b	430	9	12	1.4
Aug20set5-sig005b	359	10	11	1.7	Aug23set3-sig002c	395	9	12	1.4	Aug23set7-sig001c	431	9	12	1.4
Aug20set5-sig005c	360	10	11	1.7	Aug23set3-sig003a	396	10	12	1.6	Aug23set7-sig001d	432	9	12	1.4
Aug20set5-sig005d	361	10	11	1.7	Aug23set3-sig004a	397	10	12	2.4	Aug23set7-sig002a	433	9	12	1.5
Aug23set7-sig002b	434	9	12	1.5	Aug31set1-sig003a	470	9	13	2.5	Aug31set4-sig002b	506	8	13	2.6
Aug23set7-sig002c	435	9	12	1.5	Aug31set1-sig003b	471	9	13	1.9	Aug31set4-sig002c	507	8	13	2.6
Aug23set7-sig003a	436	10	12	1.9	Aug31set1-sig004a	472	9	13	3.1	Aug31set4-sig003a	508	9	13	2.5
Aug23set7-sig004a	437	10	12	2.6	Aug31set1-sig004b	473	9	13	1.5	Aug31set4-sig003b	509	9	13	2.5
Aug23set7-sig005a	438	11	12	2.7	Aug31set1-sig005a	474	10	13	1.5	Aug31set4-sig004a	510	9	13	2.6
Aug24set5-sig001a	439	6	10	1.1	Aug31set1-sig005b	475	10	13	1.5	Aug31set4-sig004b	511	9	13	2.6
Aug24set5-sig002a	440	6	10	0.9	Aug31set2-sig001a	476	8	13	1.4	Aug31set4-sig004c	512	9	13	2.6
Aug24set5-sig002b	441	6	10	0.9	Aug31set2-sig002a	477	8	13	1.4	Aug31set4-sig005a	513	10	13	2.6
Aug24set5-sig003a	442	7	10	0.8	Aug31set2-sig002b	478	8	13	1.4	Aug31set4-sig005b	514	10	13	2.6
Aug24set5-sig003b	443	7	10	0.8	Aug31set2-sig003a	479	9	13	1.4	Aug31set4-sig005c	515	10	13	2.6
Aug24set5-sig004a	444	7	10	1.0	Aug31set2-sig003b	480	9	13	1.1	Aug31set4-sig005d	516	10	13	2.6
Aug24set5-sig005a	445	8	10	0.8	Aug31set2-sig003c	481	9	13	1.1	Aug31set5-sig001a	517	8	13	2.6
Aug24set5-sig005b	446	8	10	0.8	Aug31set2-sig003d	482	9	13	1.4	Aug31set5-sig002a	518	8	13	2.7
Aug26set3-sig001a	447	12	12	0.5	Aug31set2-sig004a	483	9	13	1.2	Aug31set5-sig002b	519	8	13	2.7
Aug26set3-sig001b	448	12	12	0.5	Aug31set2-sig004b	484	9	13	2.2	Aug31set5-sig002c	520	8	13	2.7
Aug26set3-sig002a	449	13	12	0.6	Aug31set2-sig004c	485	9	13	2.1	Aug31set5-sig003a	521	9	13	2.5
Aug26set3-sig003a	450	13	12	1.4	Aug31set2-sig005a	486	10	13	1.3	Aug31set5-sig003b	522	9	13	2.5
Aug26set3-sig003b	451	13	12	1.4	Aug31set2-sig005b	487	10	13	1.3	Aug31set5-sig003c	523	9	13	2.5
Aug26set3-sig004a	452	14	12	1.7	Aug31set2-sig005c	488	10	13	1.3	Aug31set5-sig003d	524	9	13	2.5
Aug26set3-sig005a	453	14	12	1.3	Aug31set3-sig001a	489	8	13	1.3	Aug31set5-sig004a	525	9	13	2.6

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug26set4-sig001a	454	12	12	0.5	Aug31set3-sig002a	490	8	13	1.4	Aug31set5-sig004b	526	9	13	2.6
Aug26set4-sig001b	455	12	12	0.5	Aug31set3-sig002b	491	8	13	1.4	Aug31set5-sig004c	527	9	13	2.6
Aug26set4-sig002a	456	13	12	0.6	Aug31set3-sig002c	492	8	13	1.4	Aug31set5-sig004d	528	9	13	2.6
Aug26set4-sig002b	457	13	12	0.6	Aug31set3-sig003a	493	9	13	1.4	Aug31set5-sig005a	529	10	13	2.6
Aug26set4-sig003a	458	13	12	1.4	Aug31set3-sig003b	494	9	13	1.4	Aug31set5-sig005b	530	10	13	2.6
Aug26set4-sig003b	459	13	12	1.4	Aug31set3-sig003c	495	9	13	2.3	Aug31set5-sig005c	531	10	13	2.6
Aug26set4-sig003c	460	13	12	1.4	Aug31set3-sig003d	496	9	13	2.2	Aug31set5-sig005d	532	10	13	2.6
Aug26set4-sig004a	461	14	12	1.8	Aug31set3-sig004a	497	9	13	1.3	Aug31set6-sig001a	533	8	13	2.7
Aug26set4-sig005a	462	14	12	1.5	Aug31set3-sig004b	498	9	13	1.3	Aug31set6-sig002a	534	8	13	2.7
Aug30set1-sig001a	463	11	12	1.7	Aug31set3-sig004c	499	9	13	1.3	Aug31set6-sig002b	535	8	13	2.7
Aug30set1-sig002a	464	12	12	1.0	Aug31set3-sig005a	500	10	13	1.3	Aug31set6-sig002c	536	8	13	2.7
Aug30set1-sig003a	465	12	12	0.6	Aug31set3-sig005b	501	10	13	1.4	Aug31set6-sig003a	537	9	13	2.6
Aug30set1-sig004a	466	13	12	1.1	Aug31set3-sig005c	502	10	13	1.4	Aug31set6-sig003b	538	9	13	2.6
Aug30set1-sig005a	467	13	12	1.4	Aug31set3-sig005d	503	10	13	1.4	Aug31set6-sig003c	539	9	13	2.6
Aug31set1-sig002a	468	8	13	2.6	Aug31set4-sig001a	504	8	13	1.6	Aug31set6-sig003d	540	9	13	2.6
Aug31set1-sig002b	469	8	13	2.6	Aug31set4-sig002a	505	8	13	2.4	Aug31set6-sig004a	541	9	13	2.6
Aug31set6-sig004b	542	9	13	2.6	Aug31set8-sig005a	578	10	13	2.6	Sep01set3-sig005a	614	9	12	2.8
Aug31set6-sig004c	543	9	13	2.6	Aug31set8-sig005b	579	10	13	2.6	Sep01set3-sig005b	615	9	12	2.8
Aug31set6-sig004d	544	9	13	2.6	Aug31set8-sig005c	580	10	13	2.6	Sep01set4-sig001a	616	7	12	2.9
Aug31set6-sig005a	545	10	13	2.6	Aug31set8-sig005d	581	10	13	2.6	Sep01set4-sig002a	617	8	12	2.6
Aug31set6-sig005b	546	10	13	2.6	Sep01set1-sig001a	582	7	12	2.3	Sep01set4-sig002b	618	8	12	2.6
Aug31set6-sig005c	547	10	13	2.6	Sep01set1-sig001b	583	7	12	2.3	Sep01set4-sig003a	619	8	12	2.5
Aug31set6-sig005d	548	10	13	2.6	Sep01set1-sig002a	584	8	12	2.4	Sep01set4-sig003b	620	8	12	2.5
Aug31set7-sig001a	549	8	13	2.7	Sep01set1-sig002b	585	8	12	2.4	Sep01set4-sig003c	621	8	12	2.5
Aug31set7-sig002a	550	8	13	2.9	Sep01set1-sig002c	586	8	12	2.4	Sep01set4-sig004a	622	9	12	2.7
Aug31set7-sig002b	551	8	13	2.7	Sep01set1-sig003a	587	8	12	2.0	Sep01set4-sig004b	623	9	12	2.7
Aug31set7-sig002c	552	8	13	2.7	Sep01set1-sig004a	588	9	12	2.5	Sep01set4-sig004c	624	9	12	2.7

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug31set7-sig003a	553	9	13	2.6	Sep01set1-sig004b	589	9	12	2.5	Sep01set4-sig005a	625	9	12	2.8
Aug31set7-sig003b	554	9	13	2.6	Sep01set1-sig005a	590	9	12	2.5	Sep01set4-sig005b	626	9	12	2.8
Aug31set7-sig003c	555	9	13	2.6	Sep01set1-sig005b	591	9	12	2.5	Sep01set4-sig005c	627	9	12	2.8
Aug31set7-sig003d	556	9	13	2.6	Sep01set2-sig001a	592	7	12	2.8	Sep01set5-sig001a	628	7	12	3.0
Aug31set7-sig004a	557	9	13	2.7	Sep01set2-sig001b	593	7	12	2.8	Sep01set5-sig001b	629	7	12	3.0
Aug31set7-sig004b	558	9	13	2.7	Sep01set2-sig001c	594	7	12	2.8	Sep01set5-sig002a	630	8	12	2.6
Aug31set7-sig004c	559	9	13	2.7	Sep01set2-sig002a	595	8	12	2.6	Sep01set5-sig002b	631	8	12	2.6
Aug31set7-sig004d	560	9	13	2.7	Sep01set2-sig002b	596	8	12	2.6	Sep01set5-sig003a	632	8	12	2.5
Aug31set7-sig005a	561	10	13	2.6	Sep01set2-sig002c	597	8	12	2.6	Sep01set5-sig003b	633	8	12	2.5
Aug31set7-sig005b	562	10	13	2.6	Sep01set2-sig003a	598	8	12	2.5	Sep01set5-sig004a	634	9	12	2.7
Aug31set7-sig005c	563	10	13	2.6	Sep01set2-sig004a	599	9	12	2.7	Sep01set5-sig004b	635	9	12	2.7
Aug31set8-sig001a	564	8	13	2.7	Sep01set2-sig004b	600	9	12	2.7	Sep01set5-sig005a	636	9	12	2.9
Aug31set8-sig001b	565	8	13	2.7	Sep01set2-sig004c	601	9	12	2.7	Sep01set5-sig005b	637	9	12	2.9
Aug31set8-sig001c	566	8	13	2.7	Sep01set2-sig005a	602	9	12	2.8	Sep01set6-sig001a	638	7	12	2.9
Aug31set8-sig002a	567	8	13	2.7	Sep01set2-sig005b	603	9	12	2.8	Sep01set6-sig001b	639	7	12	2.9
Aug31set8-sig002b	568	8	13	2.8	Sep01set3-sig001a	604	7	12	2.6	Sep01set6-sig001c	640	7	12	2.9
Aug31set8-sig002c	569	8	13	2.8	Sep01set3-sig001b	605	7	12	2.9	Sep01set6-sig002a	641	8	12	2.7
Aug31set8-sig003a	570	9	13	2.8	Sep01set3-sig002a	606	8	12	2.6	Sep01set6-sig002b	642	8	12	2.7
Aug31set8-sig003b	571	9	13	2.8	Sep01set3-sig002b	607	8	12	2.6	Sep01set6-sig003a	643	8	12	2.5
Aug31set8-sig003c	572	9	13	2.8	Sep01set3-sig002c	608	8	12	2.6	Sep01set6-sig003b	644	8	12	2.5
Aug31set8-sig003d	573	9	13	2.8	Sep01set3-sig003a	609	8	12	2.5	Sep01set6-sig003c	645	8	12	2.5
Aug31set8-sig004a	574	9	13	2.8	Sep01set3-sig003b	610	8	12	2.5	Sep01set6-sig004a	646	9	12	2.7
Aug31set8-sig004b	575	9	13	2.7	Sep01set3-sig004a	611	9	12	2.7	Sep01set6-sig004b	647	9	12	2.7
Aug31set8-sig004c	576	9	13	2.7	Sep01set3-sig004b	612	9	12	2.7	Sep01set6-sig005a	648	9	12	2.9
Aug31set8-sig004d	577	9	13	2.7	Sep01set3-sig004c	613	9	12	2.7	Sep01set6-sig005b	649	9	12	2.9
Aug31set6-sig004b	542	9	13	2.6	Aug31set8-sig005a	578	10	13	2.6	Sep01set7-sig001a	650	7	12	2.9
Aug31set6-sig004c	543	9	13	2.6	Aug31set8-sig005b	579	10	13	2.6	Sep01set7-sig001b	651	7	12	2.9
Aug31set6-sig004d	544	9	13	2.6	Aug31set8-sig005c	580	10	13	2.6	Sep01set7-sig001c	652	7	12	2.9

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug31set6-sig005a	545	10	13	2.6	Aug31set8-sig005d	581	10	13	2.6	Sep01set7-sig002a	653	8	12	2.7
Aug31set6-sig005b	546	10	13	2.6	Sep01set1-sig001a	582	7	12	2.3	Sep01set7-sig002b	654	8	12	2.7
Aug31set6-sig005c	547	10	13	2.6	Sep01set1-sig001b	583	7	12	2.3	Sep01set7-sig003a	655	8	12	2.5
Aug31set6-sig005d	548	10	13	2.6	Sep01set1-sig002a	584	8	12	2.4	Sep01set7-sig003b	656	8	12	2.5
Aug31set7-sig001a	549	8	13	2.7	Sep01set1-sig002b	585	8	12	2.4	Sep01set7-sig003c	657	8	12	2.5
Aug31set7-sig002a	550	8	13	2.9	Sep01set1-sig002c	586	8	12	2.4	Sep01set7-sig004a	658	9	12	2.8
Aug31set7-sig002b	551	8	13	2.7	Sep01set1-sig003a	587	8	12	2.0	Sep01set7-sig004b	659	9	12	2.8
Aug31set7-sig002c	552	8	13	2.7	Sep01set1-sig004a	588	9	12	2.5	Sep01set7-sig004c	660	9	12	2.8
Aug31set7-sig003a	553	9	13	2.6	Sep01set1-sig004b	589	9	12	2.5	Sep01set7-sig005a	661	9	12	2.8
Aug31set7-sig003b	554	9	13	2.6	Sep01set1-sig005a	590	9	12	2.5	Sep01set7-sig005b	662	9	12	2.8
Aug31set7-sig003c	555	9	13	2.6	Sep01set1-sig005b	591	9	12	2.5	Sep01set7-sig005c	663	9	12	2.8
Aug31set7-sig003d	556	9	13	2.6	Sep01set2-sig001a	592	7	12	2.8	Sep01set8-sig001a	664	7	12	3.0
Aug31set7-sig004a	557	9	13	2.7	Sep01set2-sig001b	593	7	12	2.8	Sep01set8-sig001b	665	7	12	3.0
Aug31set7-sig004b	558	9	13	2.7	Sep01set2-sig001c	594	7	12	2.8	Sep01set8-sig001c	666	7	12	3.0
Aug31set7-sig004c	559	9	13	2.7	Sep01set2-sig002a	595	8	12	2.6	Sep01set8-sig002a	667	8	12	2.7
Aug31set7-sig004d	560	9	13	2.7	Sep01set2-sig002b	596	8	12	2.6	Sep01set8-sig002b	668	8	12	2.7
Aug31set7-sig005a	561	10	13	2.6	Sep01set2-sig002c	597	8	12	2.6	Sep01set8-sig002c	669	8	12	2.7
Aug31set7-sig005b	562	10	13	2.6	Sep01set2-sig003a	598	8	12	2.5	Sep01set8-sig003a	670	8	12	2.6
Aug31set7-sig005c	563	10	13	2.6	Sep01set2-sig004a	599	9	12	2.7	Sep01set8-sig003b	671	8	12	2.6
Aug31set8-sig001a	564	8	13	2.7	Sep01set2-sig004b	600	9	12	2.7	Sep01set8-sig003c	672	8	12	2.6
Aug31set8-sig001b	565	8	13	2.7	Sep01set2-sig004c	601	9	12	2.7	Sep01set8-sig004a	673	9	12	2.8
Aug31set8-sig001c	566	8	13	2.7	Sep01set2-sig005a	602	9	12	2.8	Sep01set8-sig004b	674	9	12	2.8
Aug31set8-sig002a	567	8	13	2.7	Sep01set2-sig005b	603	9	12	2.8	Sep01set8-sig004c	675	9	12	2.8
Aug31set8-sig002b	568	8	13	2.8	Sep01set3-sig001a	604	7	12	2.6	Sep01set8-sig005a	676	9	12	2.9
Aug31set8-sig002c	569	8	13	2.8	Sep01set3-sig001b	605	7	12	2.9	Sep01set8-sig005b	677	9	12	2.9
Aug31set8-sig003a	570	9	13	2.8	Sep01set3-sig002a	606	8	12	2.6	Sep01set9-sig001a	678	7	12	3.3
Aug31set8-sig003b	571	9	13	2.8	Sep01set3-sig002b	607	8	12	2.6	Sep01set9-sig001b	679	7	12	3.3

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Aug31set8-sig003c	572	9	13	2.8	Sep01set3-sig002c	608	8	12	2.6	Sep01set9-sig001c	680	7	12	3.3
Aug31set8-sig003d	573	9	13	2.8	Sep01set3-sig003a	609	8	12	2.5	Sep01set9-sig002a	681	8	12	3.0
Aug31set8-sig004a	574	9	13	2.8	Sep01set3-sig003b	610	8	12	2.5	Sep01set9-sig002b	682	8	12	3.0
Aug31set8-sig004b	575	9	13	2.7	Sep01set3-sig004a	611	9	12	2.7	Sep01set9-sig002c	683	8	12	3.0
Aug31set8-sig004c	576	9	13	2.7	Sep01set3-sig004b	612	9	12	2.7	Sep01set9-sig003a	684	8	12	2.8
Aug31set8-sig004d	577	9	13	2.7	Sep01set3-sig004c	613	9	12	2.7	Sep01set9-sig003b	685	8	12	2.8
Sep01set9-sig003c	686	8	12	2.8	Sep02set8-sig002a	722	15	10	1.5	Sep07set6-sig005a	758	14	9	0.6
Sep01set9-sig004a	687	9	12	2.9	Sep02set8-sig003a	723	15	10	1.8	Sep07set7-sig001a	759	12	9	0.5
Sep01set9-sig004b	688	9	12	2.9	Sep02set8-sig004a	724	16	10	1.3	Sep07set7-sig002a	760	12	9	0.5
Sep01set9-sig004c	689	9	12	2.9	Sep02set8-sig004b	725	16	10	1.3	Sep07set7-sig003a	761	13	9	0.6
Sep01set9-sig005a	690	9	12	3.0	Sep02set8-sig005a	726	16	10	1.4	Sep07set7-sig003b	762	13	9	0.6
Sep01set9-sig005b	691	9	12	3.0	Sep02set8-sig005b	727	16	10	1.4	Sep07set7-sig004a	763	13	9	0.8
Sep02set1-sig001a	692	14	10	0.7	Sep07set1-sig001a	728	12	9	0.3	Sep07set7-sig005a	764	14	9	0.8
Sep02set1-sig002a	693	15	10	1.0	Sep07set1-sig002a	729	12	9	0.4	Sep07set8-sig001a	765	12	9	0.5
Sep02set1-sig003a	694	15	10	1.0	Sep07set1-sig003a	730	12	9	0.5	Sep07set8-sig002a	766	12	9	0.5
Sep02set1-sig004a	695	16	10	1.0	Sep07set1-sig003b	731	13	9	0.5	Sep07set8-sig002b	767	12	9	0.5
Sep02set1-sig004b	696	16	10	1.0	Sep07set1-sig004a	732	13	9	0.5	Sep07set8-sig003a	768	12	9	0.7
Sep02set1-sig005a	697	16	10	1.2	Sep07set1-sig005a	733	14	9	0.4	Sep07set8-sig003b	769	13	9	0.7
Sep02set1-sig005b	698	16	10	1.2	Sep07set1-sig005b	734	14	9	0.4	Sep07set8-sig004a	770	13	9	1.0
Sep02set1-sig005c	699	16	10	1.2	Sep07set2-sig001a	735	12	9	0.3	Sep07set8-sig005a	771	14	9	0.9
Sep02set4-sig001a	700	14	10	1.1	Sep07set2-sig002a	736	12	9	0.4	Sep08set4-sig001a	772	11	10	1.3
Sep02set4-sig002a	701	15	10	1.2	Sep07set2-sig003a	737	13	9	0.5	Sep08set4-sig002a	773	11	10	1.6
Sep02set4-sig003a	702	15	10	1.1	Sep07set2-sig004a	738	13	9	0.6	Sep08set4-sig002b	774	11	10	1.6
Sep02set4-sig004a	703	16	10	1.1	Sep07set2-sig005a	739	14	9	0.4	Sep08set4-sig003a	775	12	10	1.8
Sep02set4-sig004b	704	16	10	1.1	Sep07set3-sig001a	740	12	9	0.3	Sep08set4-sig004a	776	12	10	1.8
Sep02set4-sig005a	705	16	10	1.3	Sep07set3-sig002a	741	12	9	0.4	Sep08set4-sig005a	777	13	10	1.3
Sep02set4-sig005b	706	16	10	1.3	Sep07set3-sig003a	742	13	9	0.6	Sep08set5-sig001a	778	11	10	1.3

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Sep02set5-sig001a	707	14	10	1.2	Sep07set3-sig004a	743	13	9	0.6	Sep08set5-sig002a	779	11	10	1.6
Sep02set5-sig002a	708	15	10	1.2	Sep07set3-sig005a	744	14	9	0.5	Sep08set5-sig003a	780	12	10	1.9
Sep02set5-sig003a	709	15	10	1.3	Sep07set4-sig001a	745	12	9	0.4	Sep08set5-sig004a	781	12	10	1.9
Sep02set5-sig004a	710	16	10	1.1	Sep07set4-sig002a	746	12	9	0.5	Sep08set5-sig005a	782	13	10	1.3
Sep02set5-sig004b	711	16	10	1.1	Sep07set4-sig002b	747	12	9	0.5	Sep08set6-sig001a	783	11	10	1.4
Sep02set5-sig005a	712	16	10	1.3	Sep07set4-sig003a	748	13	9	0.6	Sep08set6-sig002a	784	11	10	1.6
Sep02set5-sig005b	713	16	10	1.3	Sep07set4-sig003b	749	13	9	0.6	Sep08set6-sig003a	785	12	10	1.9
Sep02set5-sig005c	714	16	10	1.3	Sep07set4-sig004a	750	13	9	0.6	Sep08set6-sig004a	786	12	10	2.0
Sep02set7-sig001a	715	14	10	1.9	Sep07set4-sig005a	751	14	9	0.5	Sep08set6-sig005a	787	13	10	1.4
Sep02set7-sig002a	716	15	10	1.7	Sep07set4-sig005b	752	14	9	0.5	Sep08set7-sig001a	788	11	10	1.7
Sep02set7-sig003a	717	15	10	2.4	Sep07set6-sig001a	753	12	9	0.4	Sep08set7-sig001b	789	11	10	1.7
Sep02set7-sig004a	718	16	10	1.8	Sep07set6-sig002a	754	12	9	0.5	Sep08set7-sig002a	790	11	10	1.7
Sep02set7-sig005a	719	16	10	1.7	Sep07set6-sig003a	755	13	9	0.6	Sep08set7-sig003a	791	12	10	2.0
Sep02set7-sig005b	720	16	10	1.7	Sep07set6-sig003b	756	13	9	0.6	Sep08set7-sig004a	792	12	10	2.2
Sep02set8-sig001a	721	14	10	1.6	Sep07set6-sig004a	757	13	9	0.8	Sep08set7-sig005a	793	13	10	1.8
Sep09set1-sig001a	794	8	10	2.0	Sep12set1-sig005a	830	8	11	0.4	Sep14set1-sig004a	866	10	14	1.7
Sep09set1-sig002a	795	9	10	1.9	Sep12set1-sig005b	831	8	11	0.4	Sep14set1-sig005a	867	11	14	2.1
Sep09set1-sig002b	796	9	10	1.9	Sep12set2-sig001a	832	6	11	2.0	Sep15set1-sig001a	868	9	12	2.6
Sep09set1-sig003a	797	9	10	2.3	Sep12set2-sig002a	833	6	11	1.9	Sep15set1-sig002a	869	9	12	1.3
Sep09set1-sig004a	798	10	10	1.5	Sep12set2-sig002b	834	6	11	1.9	Sep15set1-sig003a	870	10	12	1.4
Sep09set1-sig005a	799	10	10	1.1	Sep12set2-sig003a	835	7	11	1.0	Sep15set1-sig003b	871	10	12	1.4
Sep09set2-sig001a	800	8	10	1.4	Sep12set2-sig004a	836	7	11	0.7	Sep15set1-sig003c	872	10	12	1.4
Sep09set2-sig002a	801	9	10	2.1	Sep12set2-sig005a	837	8	11	0.4	Sep15set1-sig004a	873	10	12	0.9
Sep09set2-sig003a	802	9	10	2.9	Sep12set3-sig001a	838	6	11	2.0	Sep15set1-sig004b	874	10	12	0.9
Sep09set2-sig004a	803	10	10	1.9	Sep12set3-sig002a	839	6	11	1.9	Sep15set1-sig004c	875	10	12	0.9
Sep09set2-sig005a	804	10	10	1.1	Sep12set3-sig003a	840	7	11	1.0	Sep15set1-sig004d	876	10	12	0.9
Sep09set3-sig001a	805	8	10	2.6	Sep12set3-sig004a	841	7	11	0.7	Sep15set1-sig005a	877	11	12	0.7

Table 13: (continued) The summary of neuron position

Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth	Neurons	ID	M-L	A-P	Depth
Sep09set3-sig002a	806	9	10	2.3	Sep12set3-sig005a	842	8	11	0.4	Sep15set1-sig005b	878	11	12	0.7
Sep09set3-sig003a	807	9	10	2.9	Sep12set3-sig005b	843	8	11	0.4	Sep15set1-sig005c	879	11	12	0.7
Sep09set3-sig004a	808	10	10	2.3	Sep12set4-sig001a	844	6	11	2.1	Sep15set1-sig005d	880	11	12	0.7
Sep09set3-sig005a	809	10	10	1.4	Sep12set4-sig002a	845	6	11	2.0	Sep15set2-sig001a	881	9	12	2.6
Sep09set4-sig001a	810	8	10	2.9	Sep12set4-sig003a	846	7	11	1.0	Sep15set2-sig002a	882	9	12	1.4
Sep09set4-sig002a	811	9	10	2.5	Sep12set4-sig003b	847	7	11	1.0	Sep15set2-sig002b	883	9	12	1.4
Sep09set4-sig003a	812	9	10	3.2	Sep12set4-sig004a	848	7	11	0.8	Sep15set2-sig002c	884	9	12	1.4
Sep09set4-sig004a	813	10	10	2.9	Sep12set4-sig004b	849	7	11	0.8	Sep15set2-sig003a	885	10	12	1.4
Sep09set4-sig005a	814	10	10	2.1	Sep12set4-sig004c	850	7	11	0.8	Sep15set2-sig003b	886	10	12	1.4
Sep09set5-sig001a	815	8	10	3.0	Sep12set4-sig005a	851	8	11	0.5	Sep15set2-sig003c	887	10	12	1.4
Sep09set5-sig002a	816	9	10	2.5	Sep13set1-sig001a	852	9	13	2.1	Sep15set2-sig004a	888	10	12	1.0
Sep09set5-sig003a	817	9	10	3.2	Sep13set1-sig002a	853	9	13	1.0	Sep15set2-sig004b	889	10	12	1.0
Sep09set5-sig004a	818	10	10	2.9	Sep13set1-sig003a	854	10	13	1.2	Sep15set2-sig004c	890	10	12	1.0
Sep09set5-sig005a	819	10	10	2.1	Sep13set1-sig003b	855	10	13	1.3	Sep15set2-sig004d	891	10	12	1.0
Sep09set6-sig001a	820	8	10	3.0	Sep13set1-sig003c	856	10	13	1.3	Sep15set2-sig005a	892	11	12	0.7
Sep09set6-sig002a	821	9	10	2.5	Sep13set1-sig004a	857	10	13	1.0	Sep15set2-sig005b	893	11	12	0.7
Sep09set6-sig003a	822	9	10	3.4	Sep13set1-sig004b	858	10	13	1.0	Sep15set2-sig005c	894	11	12	0.7
Sep09set6-sig004a	823	10	10	3.3	Sep13set1-sig004c	859	10	13	1.1	Sep15set2-sig005d	895	11	12	0.7
Sep09set6-sig005a	824	10	10	2.4	Sep13set1-sig004d	860	10	13	1.1	Sep15set3-sig001a	896	9	12	2.9
Sep12set1-sig001a	825	6	11	2.0	Sep13set1-sig005a	861	11	13	0.7	Sep15set3-sig002a	897	9	12	1.5
Sep12set1-sig001b	826	6	11	2.0	Sep13set1-sig005b	862	11	13	0.7	Sep15set3-sig003a	898	10	12	1.6
Sep12set1-sig002a	827	6	11	1.9	Sep14set1-sig001a	863	9	14	1.4	Sep15set3-sig003b	899	10	12	1.6
Sep12set1-sig003a	828	7	11	0.9	Sep14set1-sig002a	864	9	14	1.8	Sep15set3-sig004a	900	10	12	1.2
Sep12set1-sig004a	829	7	11	0.6	Sep14set1-sig003a	865	10	14	1.9	Sep15set3-sig004b	901	10	12	1.2

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