

Timestep: 0

Timestep: 1

$\partial_1 \quad \partial_2 \quad \partial_3 \quad \partial_4 \quad \partial_5 \quad \partial_6 \quad \partial_7 \quad \partial_8 \quad \partial_9 \quad \partial_{10} \quad \partial_{11} \quad \partial_{12} \quad \partial_{13} \quad \partial_{14} \quad \partial_{15} \quad \partial_{16}$

o o o o o o o o o o o o o o o o o o o

$$O \quad O \quad P_z(2a) \; P_x(5a) \quad O \quad O \quad O \quad O \quad O \quad P_z(2d) \; P_x(5d) \quad O \quad O \quad O \quad O$$

$$O \quad O \quad O \quad P_x(7a) \; P_z(1a) \quad O \quad O \quad O \quad O \quad O \quad P_x(7d) \; P_z(1d) \quad O \quad O \quad O$$

$$O \quad O \quad O \quad P_z(4a) \; P_x(6a) \quad O \quad O \quad O \quad O \quad O \quad P_z(4d) \; P_x(6d) \quad O \quad O \quad O$$

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

o o o o o o o o o o o o o o o o o o

o o o o o o o o o o o o o o o o

$$0 \quad 0 \quad P_z(2b) \quad P_x(5b) \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad P_z(2c) \quad P_x(5c) \quad 0 \quad 0 \quad 0 \quad 0$$

$$0 \quad 0 \quad 0 \quad I_x(10) \quad I_z(10) \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad I_x(1c) \quad I_z(1c) \quad 0 \quad 0 \quad 0$$

$$0 \quad 0 \quad 0 \quad -\mathbf{r}_z(10) \cdot \mathbf{r}_x(50) \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad -\mathbf{r}_z(10) \cdot \mathbf{r}_x(50) \quad 0 \quad 0 \quad 0$$

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Timestep: 2

$\theta_1 \quad \theta_2 \quad \theta_3 \quad \theta_4 \quad \theta_5 \quad \theta_6 \quad \theta_7 \quad \theta_8 \quad \theta_9 \quad \theta_{10} \quad \theta_{11} \quad \theta_{12} \quad \theta_{13} \quad \theta_{14} \quad \theta_{15}$

o o o o o o o o o o o o o o o o o o o

$$O \quad O \quad 2a \longleftarrow 5a \quad P_z(3a)P_z(c5a) \quad O \quad O \quad O \quad O \quad 2d \longleftarrow 5d \quad P_z(3d)P_z(c5d) \quad O \quad O$$

$$O \quad O \quad O \quad 4a \quad \overset{\wedge}{\underset{||}{6a}} \quad P_x(c4a) \quad O \quad O \quad O \quad O \quad O \quad 4d \quad \overset{\wedge}{\underset{||}{6d}} \quad P_x(c4d) \quad O \quad O$$

$$O \quad O \quad O \quad \begin{array}{c} \uparrow\downarrow \\ 7a \end{array} \quad \begin{array}{c} \downarrow \\ 1a \end{array} \quad O \quad O \quad O \quad O \quad O \quad O \quad \begin{array}{c} \uparrow\downarrow \\ 7d \end{array} \quad \begin{array}{c} \downarrow \\ 1d \end{array} \quad O \quad O \quad O$$

O O O O O O O O O O O O O O O O O O

o o o o o o o o o o o o o o o o o o

o o o o o o o o o o o o o o o o o o o

$$O \quad O \quad 2b \longleftarrow 5b \quad P_z(3b) \, P_z(c5b) \quad O \quad O \quad O \quad O \quad 2c \longleftarrow 5c \quad P_z(3c) \, P_z(c5c) \quad O \quad O$$

$$O \quad O \quad O \quad 4b \quad 6b \quad F_x(c4b) \quad O \quad O \quad O \quad O \quad O \quad 4c \quad 6c \quad F_x(c4c) \quad O \quad O$$

$$O \quad O \quad O \quad 7b \quad \downarrow \quad 1b \quad O \quad O \quad O \quad O \quad O \quad O \quad 7c \quad \downarrow \quad 1c \quad O \quad O \quad O$$

o o o o o o o o o o o o o o o o o o o

o o o o o o o o o o o o o o o o o

Timestep: 3

Timestep: 4

Timestep: 5

Timestep: 6

Timestep: 7

Timestep: 8

$\theta_1 \quad \theta_2 \quad \theta_3 \quad \theta_4 \quad \theta_5 \quad \theta_6 \quad \theta_7 \quad \theta_8 \quad \theta_9 \quad \theta_{10} \quad \theta_{11} \quad \theta_{12} \quad \theta_{13} \quad \theta_{14} \quad \theta_{15} \quad \theta_{16}$

o o o o o o o o o o o o o o o o o o o

$$O \quad O \quad 2a \leftarrow 5a \quad P_z(3a)P_z(c5a) \quad O \quad O \quad O \quad 2d \leftarrow 5d \quad P_z(3d)P_z(c5d) \quad O \quad O$$

$$O \quad O \quad O \quad 4a \quad \begin{smallmatrix} 6a \\ \hat{a} \\ \parallel \end{smallmatrix} \quad P_x(c4a) \quad O \quad O \quad O \quad O \quad O \quad \begin{smallmatrix} 4d \\ \hat{a} \\ \parallel \end{smallmatrix} \quad 6d \quad P_x(c4d) \quad O \quad O$$

o o o $7a$ $1a$ o o o o o $7d$ $1d$ o o o

0 0 0 0 0 0 0 0 0 0 0 0 0 0

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$$0 \quad 0 \quad z_0 \xleftarrow{\text{30}} 30 \quad T_z(30) \quad T_z(150) \quad 0 \quad 0 \quad 0 \quad 0 \quad z_c \xleftarrow{\text{30}} 30 \quad T_z(30) \quad T_z(150) \quad 0 \quad 0$$

↑ || x()

Timestep: 9

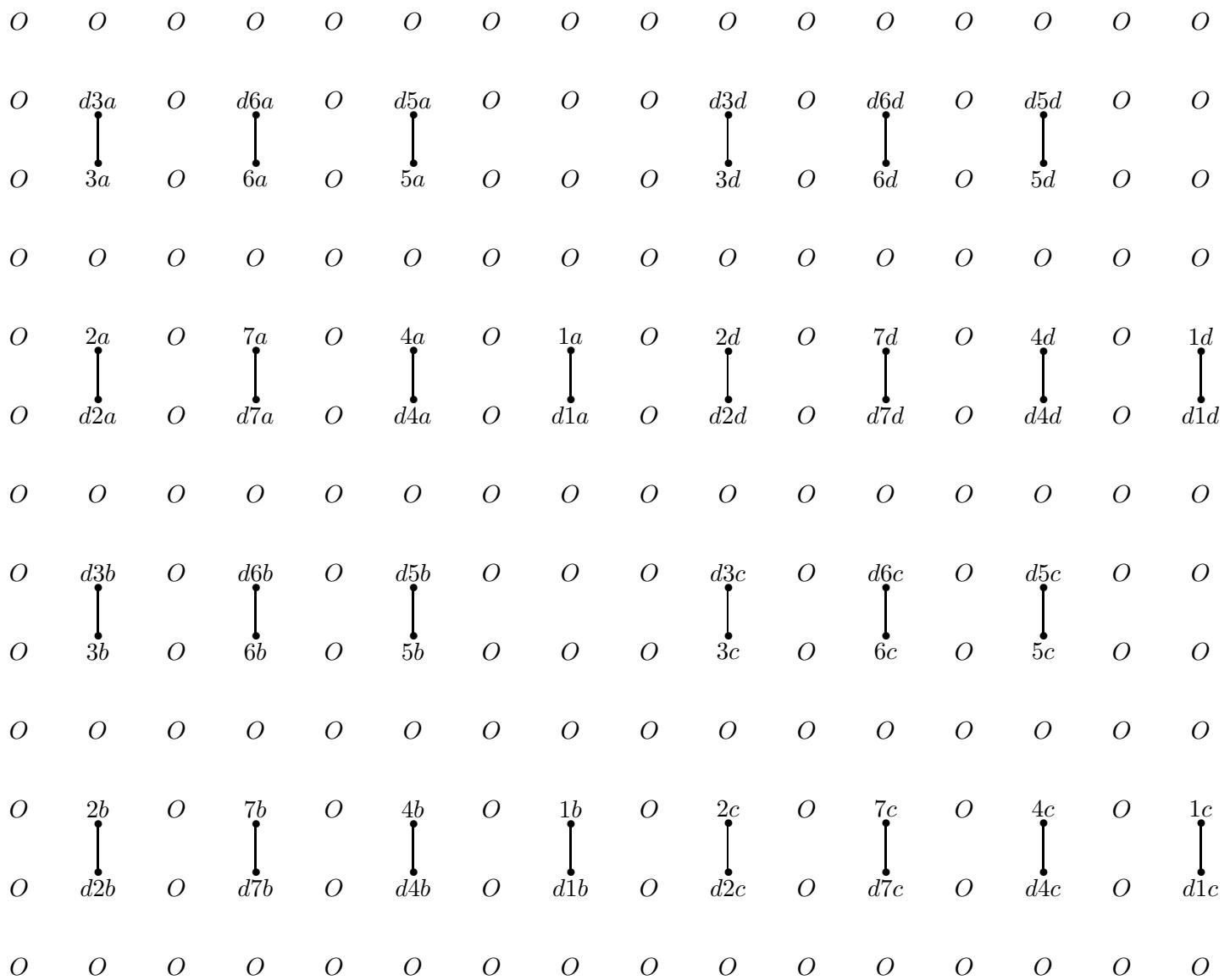
Timestep: 10

Timestep: 11

Timestep: 12

Timestep: 13

Timestep: 14



Timestep: 15

Timestep: 16

Timestep: 17

Timestep: 18

Timestep: 19

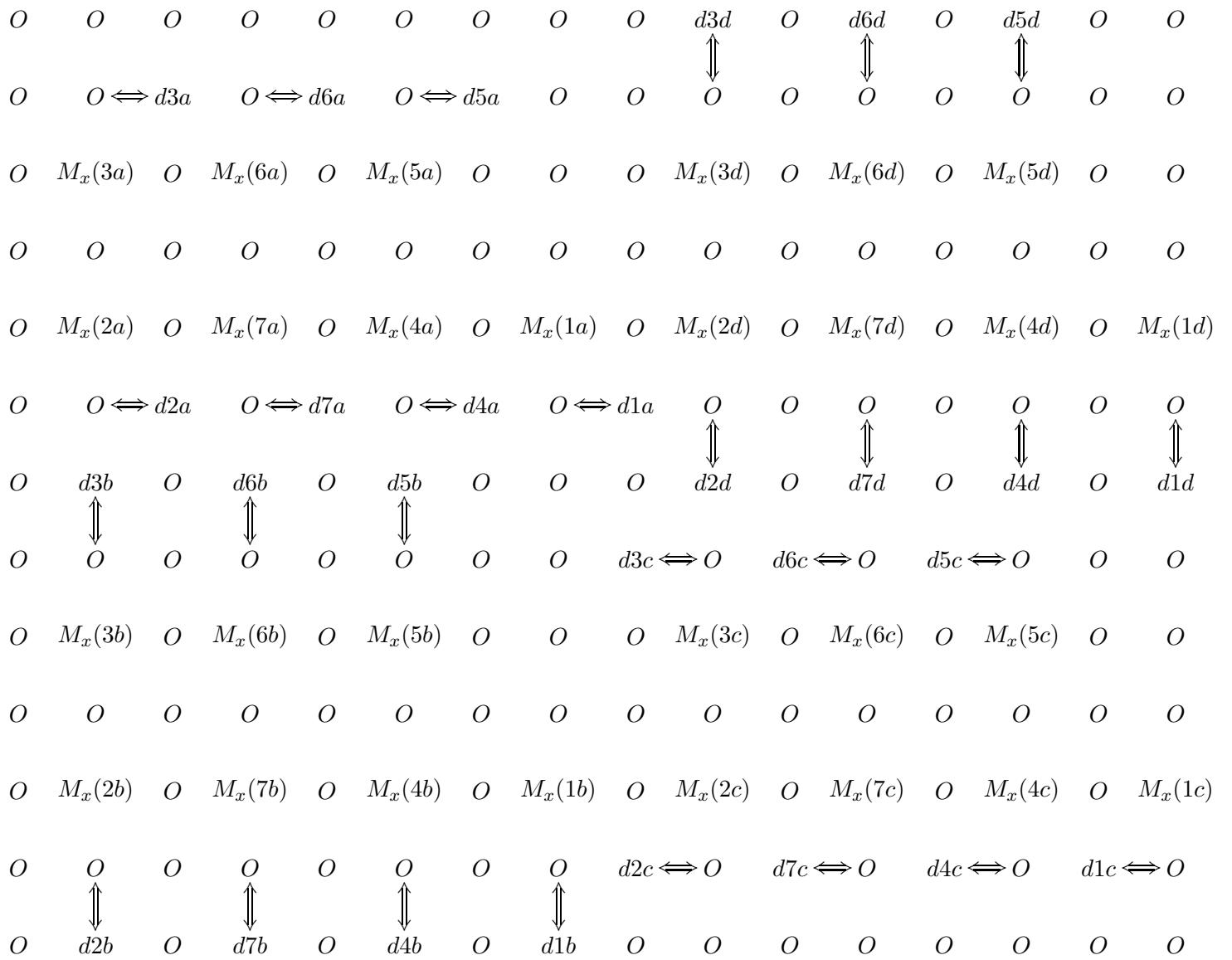
Timestep: 20

Timestep: 21

Timestep: 22

Timestep: 23

Timestep: 24



Timestep: 25

O	O	O	O	O	O	O	O	$d3d \Leftrightarrow O$	$d6d \Leftrightarrow O$	$d5d \Leftrightarrow O$	O	O
O	O	$O \Leftrightarrow d3a$		$O \Leftrightarrow d6a$		$O \Leftrightarrow d5a$	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	$O \Leftrightarrow d2a$		$O \Leftrightarrow d7a$		$O \Leftrightarrow d4a$	$O \Leftrightarrow d1a$	O	O	O	O	O
O	O	$O \Leftrightarrow d3b$		$O \Leftrightarrow d6b$		$O \Leftrightarrow d5b$	O	$d2d \Leftrightarrow O$	$d7d \Leftrightarrow O$	$d4d \Leftrightarrow O$	$d1d \Leftrightarrow O$	
O	O	O	O	O	O	O	$d3c \Leftrightarrow O$	$d6c \Leftrightarrow O$	$d5c \Leftrightarrow O$	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	$d2c \Leftrightarrow O$	$d7c \Leftrightarrow O$	$d4c \Leftrightarrow O$	$d1c \Leftrightarrow O$	O	
O	O	O	O	O	O	O	$d2c \Leftrightarrow O$	$d7c \Leftrightarrow O$	$d4c \Leftrightarrow O$	$d1c \Leftrightarrow O$	O	

Timestep: 26

Timestep: 27

Timestep: 28

Timestep: 29

Timestep: 30

Timestep: 31

O	O	O	O	O	O	O	O	d3d ↑	O	d6d ↑	O	d5d ↑	O	O	O
O	O	O	O	O	O	O	O	d3a	O	d6a	O	d5a	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	d2a ↓	O	d7a ↓	O	d4a ↓	O	d1a ↓	O
O	O	d3b ↓	O	d6b ↓	O	d5b ↓	O	d2d	O	d7d ↓	O	d4d ↓	O	d1d ↓	O
O	O	d3c	O	d6c	O	d5c	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
O	O	d2c ↑	O	d7c ↑	O	d4c ↑	O	d1c ↑	O	O	O	O	O	O	O
O	O	d2b	O	d7b	O	d4b	O	d1b	O	O	O	O	O	O	O

Timestep: 32

Timestep: 33

Timestep: 34

Timestep: 35

$$\partial_1 \quad \partial_2 \quad \partial_3 \quad \partial_4 \quad \partial_5 \quad \partial_6 \quad \partial_7 \quad \partial_8 \quad \partial_9 \quad d^{3d} \quad \partial_{10} \quad d^{6d} \quad \partial_{11} \quad d^{5d} \quad \partial_{12} \quad \partial_{13}$$

$$Q_1 \quad Q_2 \quad Q_3 \quad Q_4 \quad d3a \Longleftrightarrow Q_5 \quad d6a \Longleftrightarrow Q_6 \quad d5a \Longleftrightarrow Q_7 \quad Q_8 \quad Q_9 \quad Q_{10} \quad Q_{11} \quad Q_{12} \quad Q_{13}$$

$$O \quad O \quad O \quad 3a \quad 5a \quad c5a \quad O \quad O \quad O \quad O \quad O \quad 3d \quad 5d \quad c5d \quad O \quad O$$

C_2 C_2 C_2 C_6C_2 C_4C_2 C_2 C_2 C_2 C_2 C_2 C_6C_2 C_4C_2 C_2 C_2

Figure 1. Schematic diagram of the experimental setup for the measurement of the thermal conductivity of the samples.

$$O \quad O \quad 2a \quad 7a \quad 1a \quad c1a \quad O \quad O \quad O \quad O \quad 2d \quad 7d \quad 1d \quad c1d \quad O \quad O$$

$$O \quad O \quad O \quad O \quad d2a \iff O \quad d7a \iff O \quad d4a \iff O \quad d1a \iff O \quad O \quad O \quad O \quad O$$

O *d3b* *O* *d6b* *O* *d5b* *O* *O* *O* *d2d* *O* *d7d* *O* *d4d* *O* *d1d*

$$O \quad O \quad O \quad O \quad O \quad O \iff d3c \quad O \iff d6c \quad O \iff d5c \quad O \quad O \quad O \quad O \quad O$$

$$\Omega_1 \quad \Omega_2 \quad \Omega_3 \quad \Omega_4 \quad \Omega_5 \quad \Omega_6 \quad \Omega_7 \quad \Omega_8 \quad \Omega_9 \quad \Omega_{10} \quad \Omega_{11} \quad \Omega_{12} \quad \Omega_{13} \quad \Omega_{14} \quad \Omega_{15} \quad \Omega_{16}$$

Figure 1. Schematic diagram of the experimental setup for the measurement of the thermal conductivity of the samples.

\circ \circ \circ \uparrow 60 40 $c40$ \circ \circ \circ \circ \circ \uparrow $6c$ $4c$ $c4c$ \circ \circ

↓ ↓ ↓ ↓

Timestep: 36

Timestep: 37

Timestep: 38

Timestep: 39

Timestep: 40

$\theta_1 \quad \theta_2 \quad \theta_3 \quad \theta_4 \quad \theta_5 \quad \theta_6 \quad \theta_7 \quad \theta_8 \quad \theta_9 \quad \theta_{10} \quad \theta_{11} \quad \theta_{12} \quad \theta_{13} \quad \theta_{14} \quad \theta_{15} \quad \theta_{16}$

O $d3a$ O $d6a$ O $d5a$ O O O $d3d$ O $d6d$ O $d5d$ O O

$$\begin{array}{ccccccccc}
 O & O & O & 3a \leftarrow\!\!\!= 5a & c5a & O & O & O & O \\
 & & \updownarrow & & \uparrow & & & & \updownarrow \\
 O & O & 2a & 6a \Longrightarrow 4a & c4a & O & O & O & 2d \\
 & & & & & & & & 6d \Longrightarrow 4d \\
 & & & & & & & & c4d
 \end{array}$$

$$O \quad O \quad O \quad 7a \longrightarrow 1a \quad P_z(c1a) \quad O \quad O \quad O \quad O \quad O \quad 7d \longrightarrow 1d \quad P_z(c1d) \quad O \quad O$$

O *d2a* *O* *d7a* *O* *d4a* *O* *d1a* *O* *d2d* *O* *d7d* *O* *d4d* *O* *d1d*

o o o o o o o o o o o o o o o o o o o

$$O \quad d3b \quad O \quad d6b \quad O \quad d5b \quad O \quad O \quad O \quad d3c \quad O \quad d6c \quad O \quad d5c \quad O \quad O$$

$$O \quad O \quad O \quad 7b \longrightarrow 1b \quad P_z(c1b) \quad O \quad O \quad O \quad O \quad O \quad 7c \longrightarrow 1c \quad P_z(c1c) \quad O \quad O$$

O *d2b* *O* *d7b* *O* *d4b* *O* *d1b* *O* *d2c* *O* *d7c* *O* *d4c* *O* *d1c*

o o o o o o o o o o o o o o o o

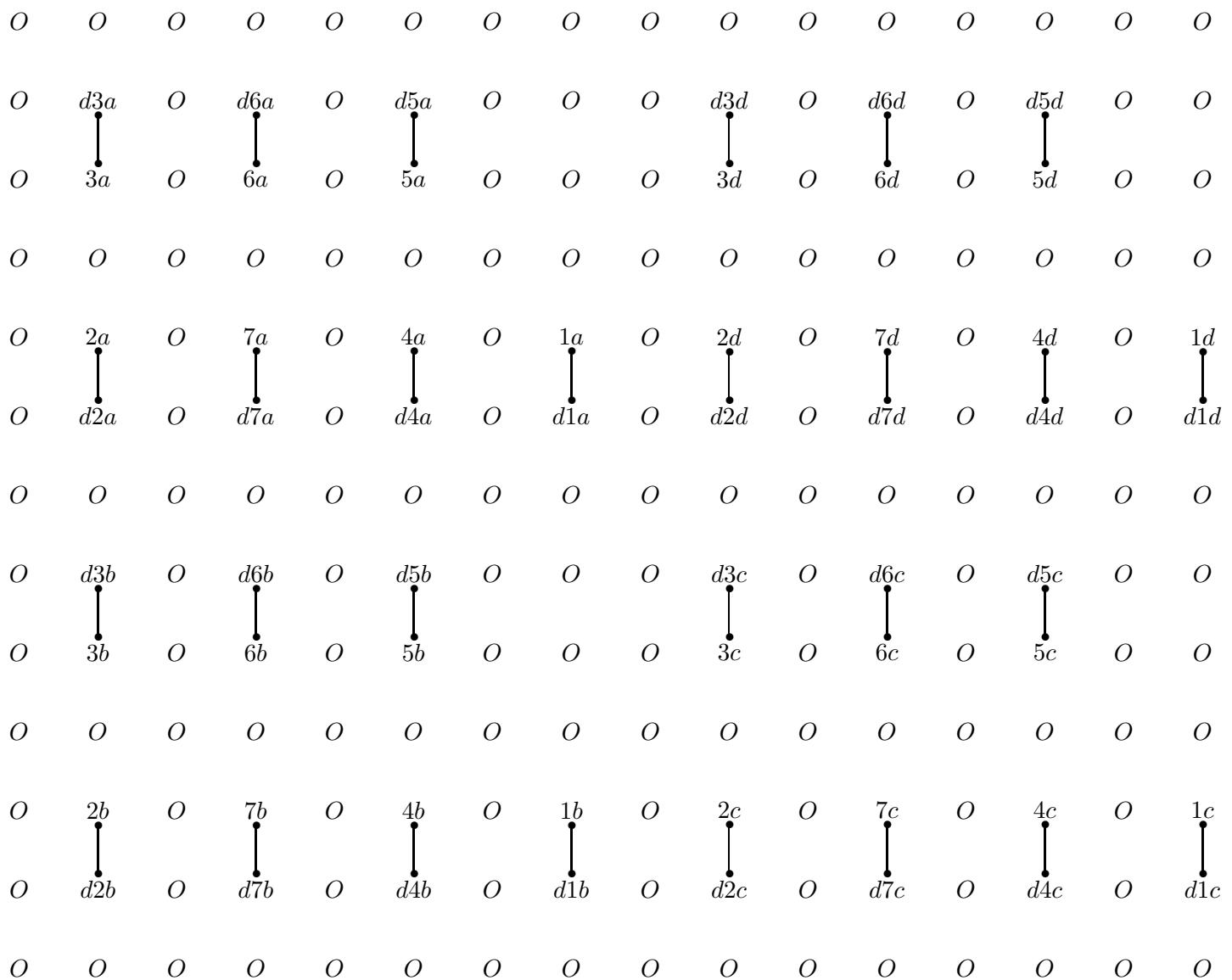
Timestep: 41

Timestep: 42

Timestep: 43

Timestep: 44

Timestep: 45



Timestep: 46

Timestep: 47

Timestep: 48

$\theta_1 \quad \theta_2 \quad \theta_3 \quad \theta_4 \quad \theta_5 \quad \theta_6 \quad \theta_7 \quad \theta_8 \quad \theta_9 \quad \theta_{10} \quad \theta_{11} \quad \theta_{12} \quad \theta_{13} \quad \theta_{14} \quad \theta_{15} \quad \theta_{16}$

O *d3a* *O* *d6a* *O* *d5a* *O* *O* *O* *d3d* *O* *d6d* *O* *d5d* *O* *O*

$$O \quad O \quad 2a \leftarrow 5a \quad P_z(3a)P_z(c5a) \quad O \quad O \quad O \quad 2d \leftarrow 5d \quad P_z(3d)P_z(c5d) \quad O \quad O$$

$$O \quad O \quad O \quad 4a \quad \overset{\wedge}{6a} \quad P_x(c4a) \quad O \quad O \quad O \quad O \quad O \quad 4d \quad \overset{\wedge}{6d} \quad P_x(c4d) \quad O \quad O$$

$$O \quad O \quad O \quad 7a \quad 1a \quad O \quad O \quad O \quad O \quad O \quad 7d \quad 1d \quad O \quad O \quad O$$

O *d2a* *O* *d7a* *O* *d4a* *O* *d1a* *O* *d2d* *O* *d7d* *O* *d4d* *O* *d1d*

o o o o o o o o o o o o o o o o o o o

O *d3b* *O* *d6b* *O* *d5b* *O* *O* *O* *d3c* *O* *d6c* *O* *d5c* *O* *O*

$$O \quad O \quad 2b \leftarrow 5b \quad P_z(3b)P_z(c5b) \quad O \quad O \quad O \quad O \quad 2c \leftarrow 5c \quad P_z(3c)P_z(c5c) \quad O \quad O$$

$$O \quad O \quad O \quad 4b \quad 6b \quad P_x(c4b) \quad O \quad O \quad O \quad O \quad O \quad 4c \quad 6c \quad P_x(c4c) \quad O \quad O$$

\uparrow \parallel

b *c* *c* *c* *c*

α_{20} α_{30} α_{40} α_{10} α_{20c} α_{1c} α_{4c} α_{11c}

Timestep: 49

Timestep: 50

Timestep: 51

Timestep: 52

Timestep: 53

Timestep: 54

Timestep: 55