

Four Pieces for Recorded Percussion (Il faut attendre)

Michael Pisaro

(a normal amount of time)

*let the mint sit
from the conversations
in a
poem*

for a normal amount of time

*the idea
came from a bell while we were
sleeping*

[Julia Holter, *Conversations*]

for Greg Stuart

The performance procedure of these pieces is the recording of individual layers of a multi-part situation by a single player. These layers are coordinated not by playing back one layer while another is being recorded (i.e., one does not listen to previously recorded tracks while recording a new one), but assembled by aligning in various ways, the recorded tracks. The piece is constructed as a record of the kinds of minute, unintentional, organic shifts in pulse timing that occur.

Rhythmic indications have been given in counts—that is, the number of units counted internally by the player. The duration of the count is within an approximate range of .7 to 1.3 seconds (between 85 and 46 beats per minute), and is determined intuitively by the performer at the time of recording (again without looking at a watch). The general procedure of the recording process is described in the instructions for each piece below.¹

The recording can be easily played back with four channels (though more could be used if this is possible, but maintaining the general positioning suggested). A stereo mix, interpreting the four-channel placement with panning is potentially also possible.

The four pieces may be played back individually or in grouping. If more than one is played, they should follow the order given.

I.) **Whirlpools, Tide-pools** (*to Gilles Deleuze*) (10 minutes)

There are twenty sections, one per page (see charts following). Each section is 30 seconds long. The sound part of the section may last between about three seconds to about eighteen. Sounds always begin at about two seconds into the unit. Sections may be played back in any order.

Whirlpools move (sounds move from one location to another). In the tide-pool sections the sounds remain fixed in location.

Sounds have been indicated with a code:

The first *Number* is the sound-number (there are 48 sounds—a list of these sounds can be found on chart 18).

Duration

- o (long) : ca. 4 to 6 counts in a whirlpool, and up to 18 counts in a tide-pool.
- (short) : ca. 1 to 2 counts

Method of *excitation* (free choice of materials to let fall, create friction, tap or bow)

G : gravity or letting something fall

F : friction or rubbing (but not with a bow)

T : tapping or striking (potentially including tremolo for longer sounds)

B : bowing (any kind of bow)

¹ These pieces attempt to understand the recording procedure itself as being partially under the domain of the score. However, a live or performing version of the piece could potentially be made with the collaboration of the composer.

Kind of *material* (12 materials) (Objects indicated produce different sounds.)

m (metal/pitched) (3 objects or sounds)

w (wood) (2 objects or sounds)

s (skin or membrane, pitch possible) (3 objects or sounds)

c (ceramic or glass, some sense of pitch) (2 objects or sounds)

st (stone) (2 objects or sounds)

Thus 5•Gs3 means: sound number 5, short, using gravity on a membrane (the third of three objects).

Sounds are placed on the chart by their location (location numbers and order numbers are also given). There are four directional fields, centered on the four corners of the square (which may be aligned to channels) in order to guide the panning. If the playback is in four channels the fields represent individual speakers (or panning mixtures between pairs of speakers). A stereo mix will have to further condense this into a 1 to 4 channel panning. Where more channels are available the chart indicates more precise locations.

In a *whirlpool* section, sounds are (potentially) used multiple times. A line with an arrow indicates the order of the sounds (each sound beginning so as to overlap, or in the case of shorter sounds, connect with the previous iteration of the sound). There can be up to four simultaneous layers (or swirls) in each section, with each one indicated with a different color. Layers all begin at the same time. Total duration must be within 30 seconds (but may be considerable less).

In a *tide-pool* section, sounds do not change their location. Sustained sounds last the whole duration of the tide-pool (which may be anywhere from 3 to 18 seconds, determined by the performer). Each sustained sound begins with the beginning of the section (at two seconds). Short sounds occur twice, randomly placed within the duration of the sustained sounds.

II.) **Chamber Music** (to *Henri Lefebvre* and *Henri Bergson*) (about 20 minutes)

Four sections: Each section is about four to five minutes long and they are separated by fifteen seconds of silence.

In each section there are layers of short sounds in the foreground and of sustained sounds in the background.

The subtitles are more for that player's reference than for the listener.

1.) *Zen Tinnitus*

Short

Four distinct combinations of stones—pairs of stones that when struck together make a sound that can be clearly distinguished from the others. Each pair is in a different channel.

The sound of the strike is relatively loud (*mf*) and always very clear.

This pattern occurs six times with each pairing of stones: count to 20, imagining a very high sound, strike the two stones, allowing the sound to fade in your mind for five counts and follow with a silence of five counts.

The four parts enter in canon, at a distance of 30 counts (or seconds) and will end one by one.

Long

Paired with each set of two stones there are two very high tones, perhaps bowed crotales, close to the same pitch, each lasting about 25 counts and beginning together (fading in for the first five counts and out over the last five). There is a five-count silence after each bowed sound. They are significantly softer than the sound of the stones. (Each pair is lined up to *end* when a pair of stones is struck.)

2.) *String Membrane*

Short

The sound is a light finger tap on a (large) drum.

In each channel one sound is played nineteen times—the four sounds should be differentiated.

The taps are lined up to begin together. The numbers (following the roman numerals indicating individual channels) give the (silent) counts between taps (except at the end, where this is the duration before the recording stops).

Tap no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<i>Counts following each tap</i>																				
I and III	13	14	12	15	11	16	10	17	9	18	8	19	7	20	6	21	5	22	4	(247)
II and IV	13	15	11	17	9	19	7	21	5	4	22	6	20	8	18	10	16	12	14	(247)

Long

The low *Ab* string (below contra C) is bowed on a (grand) piano, using rosined fish line, up and down in a continuous motion, producing a grainy or raw sounding drone. In each of the four channels this sound tone occurs twice, very softly, each time lasting between thirty seconds and one minute (the durations are not measured with a watch or counted, they are estimated by the performer). The sounds are placed within the time used by the short sounds using a chance procedure (in one channel sounds do not overlap, that is, there should be some space between them).

3.) *Midstream*

Short

Four distinct, fairly fast (lasting no more than two counts), clear, ripping or tearing sounds—tearing paper or perhaps a leaf. Each sound is recorded twice in each channel.

There are fourteen rips in each of the parts. The chart below indicates the counting patterns between the rips. For example, for each part in channel I: there is a count of 10, then the first rip, a count of 27, the second rip, a count of 10 again, and so on, in each part.

Rip no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<i>Counts between rips</i>															
I (x2)	10	27	10	30	10	29	10	28	10	25	10	28	10	22	10
II (x2)	10	15	10	19	10	29	10	20	10	20	10	20	10	29	10
III (x2)	10	29	10	22	10	26	10	28	10	18	10	26	10	29	10
IV (x2)	10	20	10	22	10	29	10	29	10	22	10	15	10	15	10

Long

After this recording is made a second layer of eight high, dense, constant, sustained “rice streams” is made as follows:

Rice is allowed to fall at a steady rate on eight different materials selected by the performer (e.g., metal, ceramic, glass, plastic, leaves, stones, tile, a drum, vibraphone keys, crotales, etc.). For each stream four recordings are made on the same material and these are mixed together to make a soft, dense and constant stream of sound.

The eight streams are then edited so that they can be placed concurrent with each of the eight ripping parts (or tracks). For example, stream 1 will begin simultaneous with the first rip (in the first part) of channel 1 and end simultaneous with the second rip, 27 counts later. There will be a 10-count pause, and then this stream will start again with the third rip and last 30 counts, until the fourth rip.

4.) *Trees exhale CO² in the night*

Short

Sixteen parts, grouped into four pulse patterns. (Each part is recorded four separate times.) The groups of four are placed near to each other in the spatial field.

In each part, one stick is broken at the given regular pulse (one stick per pulse).

	Pulse	No. of Repetitions	Sound/Silence Ratio (for the Wood Blocks)
I	29	8	17 / 11
II	16	15	3 / 13
III	30	8	7 / 23
IV	24	10	19 / 5

Long

Sixteen wood blocks, each with a different sound when bowed, are found. Each one is paired with one of the sixteen tracks. The sound begins with the breaking of a stick and lasts the duration of the first number of counts of the Sound/Silence Ratio (fading out over the last few seconds of this duration).

III.) **A Cloud drifting over the Plain** (to Bruce Conner, Robert Barry and Allen Ginsberg) (about 30 minutes)

Short

There are up to forty distinct sounds involving water dripping.

Single drops of water (or some other liquid) perhaps from an eye-dropper, falling on different surfaces (drums, tiles, metal bowls, containers, etc.).

At least one third of the containers should contain liquid already.

The *raindrop* chart at the end of the score lists 40 parts, with parts listed from left to right and count numbers being read from top to bottom. Each part has a distinct number of drops. The distance (in counts) following each drop is given on the chart. All the rates start and end at 20 counts, speed up and then slow down over the course of their duration.

Once all the parts are recorded, the longest is used as the total duration of the piece. The other parts are placed randomly within the duration of the longest part.

Long

A brush, a towel (and/or) branch with leaves rubbed across a large bass drum (gentle rushing sound). Two sustained sounds, of around 20 counts, one for every raindrop parts used (in a specific panning location)—randomly placed over the duration created by the whole duration of the section.

IV.) **The Bell-Maker** (to *Andrei Tarkovsky* and *Julia Holter*)

Search for bells.

What is a bell? A metal object that rings with a somewhat inharmonic tuning?

How many bells did you find?

When you have 40 or more, record each and listen to its duration.

The piece is made as follows:

The total number of bells will indicate the highest number of strikes.

Use a (random?) procedure to give each bell a number of strikes from 1 to this highest number (using all the numbers in between).

Record each part separately. Each bell is struck softly, but loud enough so that a characteristic resonance occurs. It is allowed to die away, more or less completely, and then re-struck, until the total number has been reached.

The total duration of the piece will be the longest track (plus 20 seconds of silence before and after).

Place each of the other tracks at some randomly chosen starting point that fits within the duration of the longest track.

The longer the track, the softer the volume should be set. The longest track will barely be audible, the shortest track should be perceived as a comfortable *p*.

The individual tracks are panned (by chance or choice) within the multi-channel space. Each bell emanates from a single location—the whole is like an evening full of stars.

Very occasionally (perhaps five times, spread out over the duration of the piece), a gust of wind, fairly long, blows through the piece. This may be produced by blowing into a resonator softly (and recording it) or by some other means that creates the sense of a wind blowing through the piece.

Spring–Fall, 2008

Whirlpool and Tide-pool Charts

Charts indicate the sounds used and their placement within the spatial field.
They may be played in any order, including the one given.

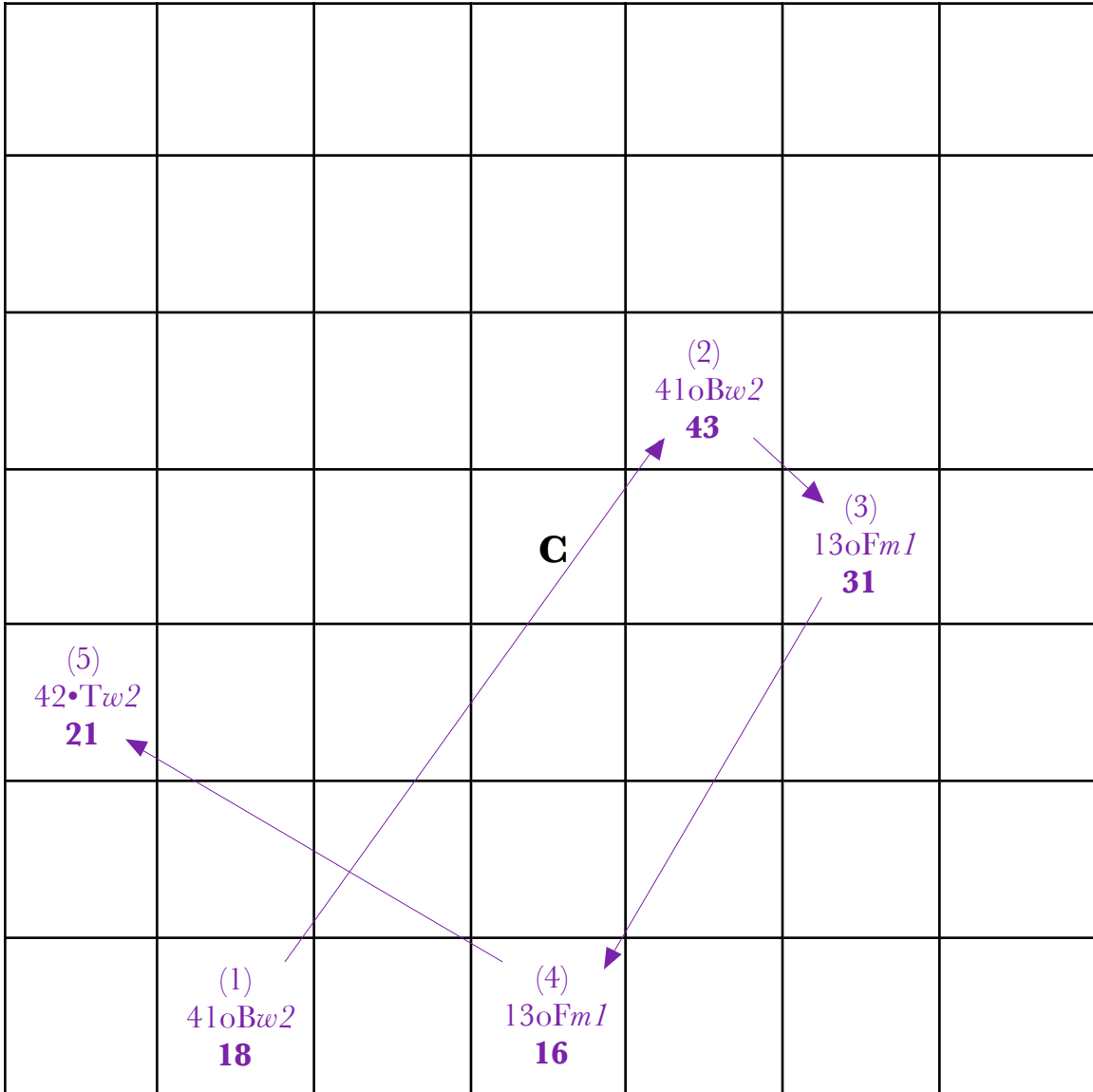
In the whirlpool charts, simultaneous “pools” or movements of sound may be indicated.

Each pool is given with a different color.
The colors indicate to some degree the character of a pool:
Purple = Mixed
Blue = Only one material is used.
Red = Only one method of excitation is used.
Green = Only one sound is used.

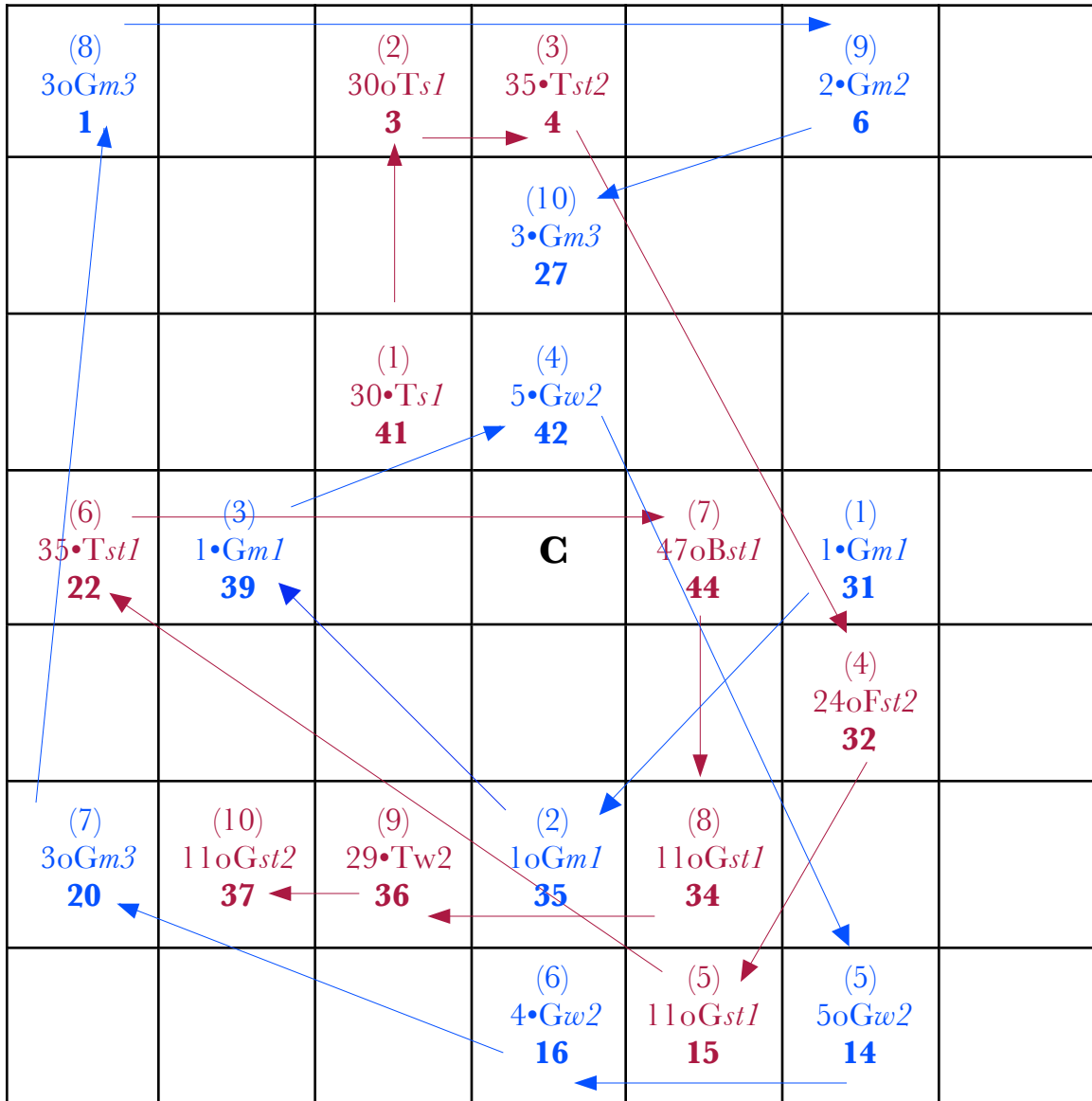
In chart 12, since there are four single sounds used (in motion), four different colors have been selected.

On the tide-pool charts, the two colors have been used to reinforce the durations (red for long, blue for short). In the tide-pools the number of the sound and the location are the same.

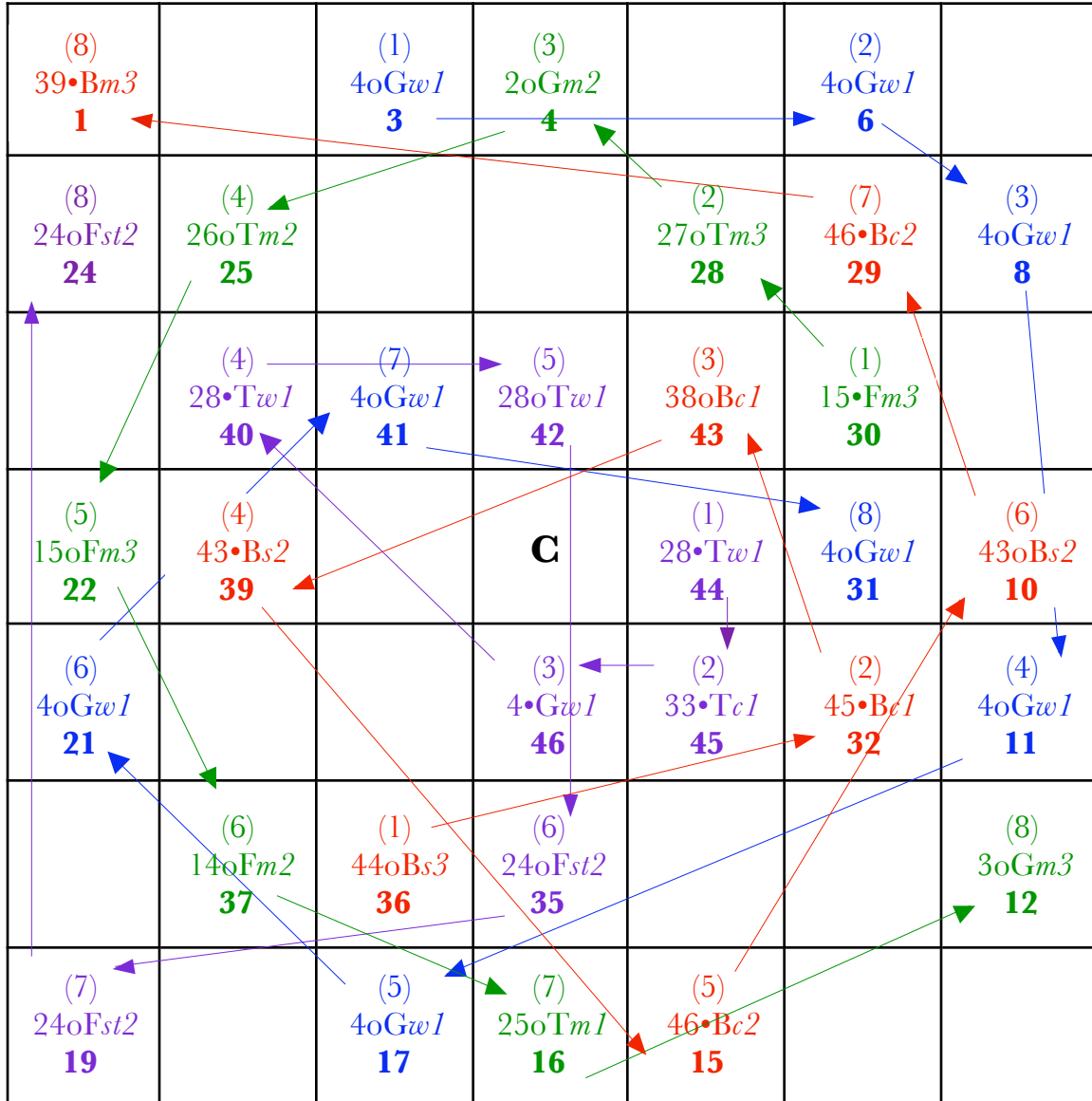
I.1
(whirlpool)



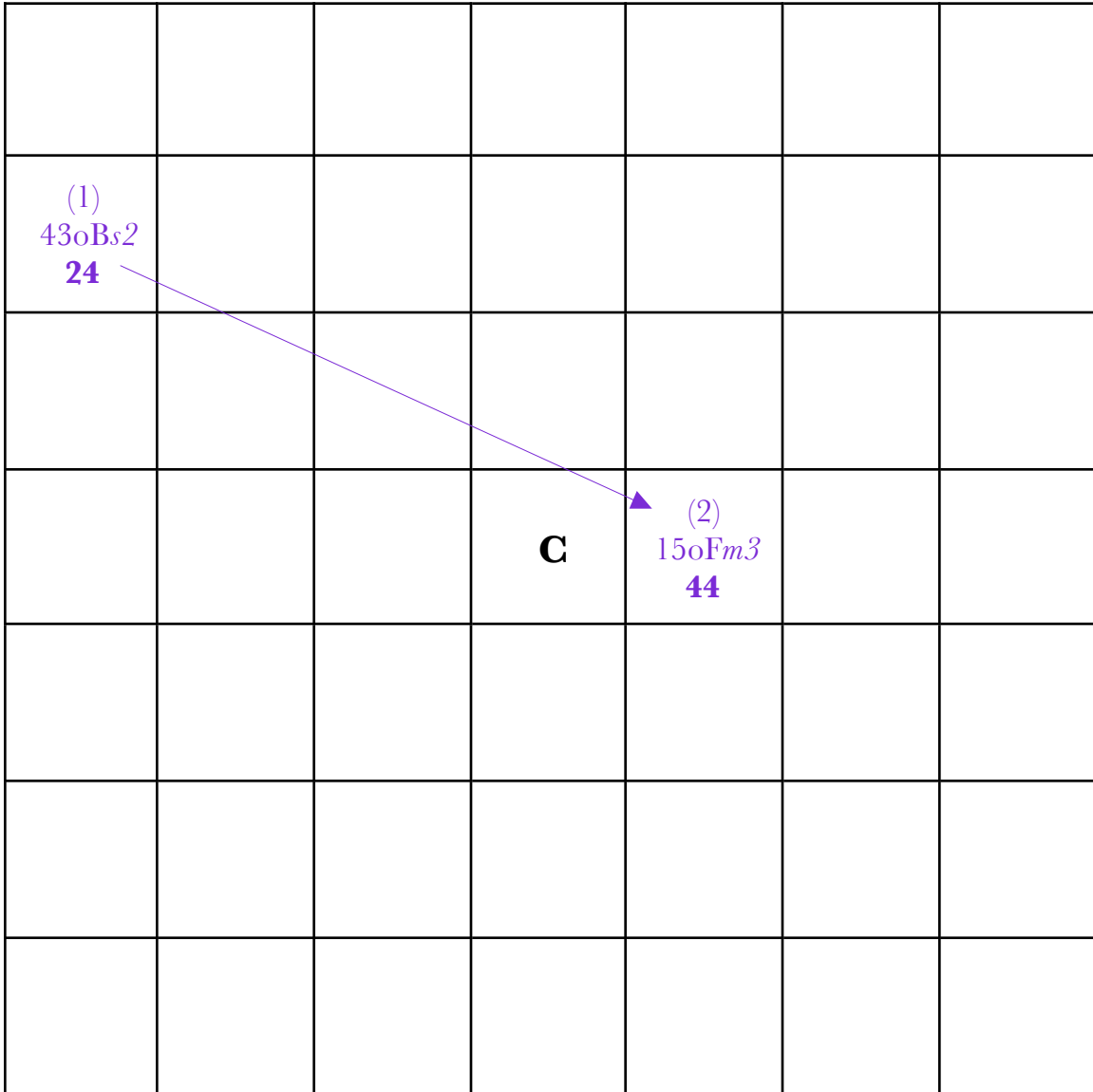
I.2
(whirlpool)



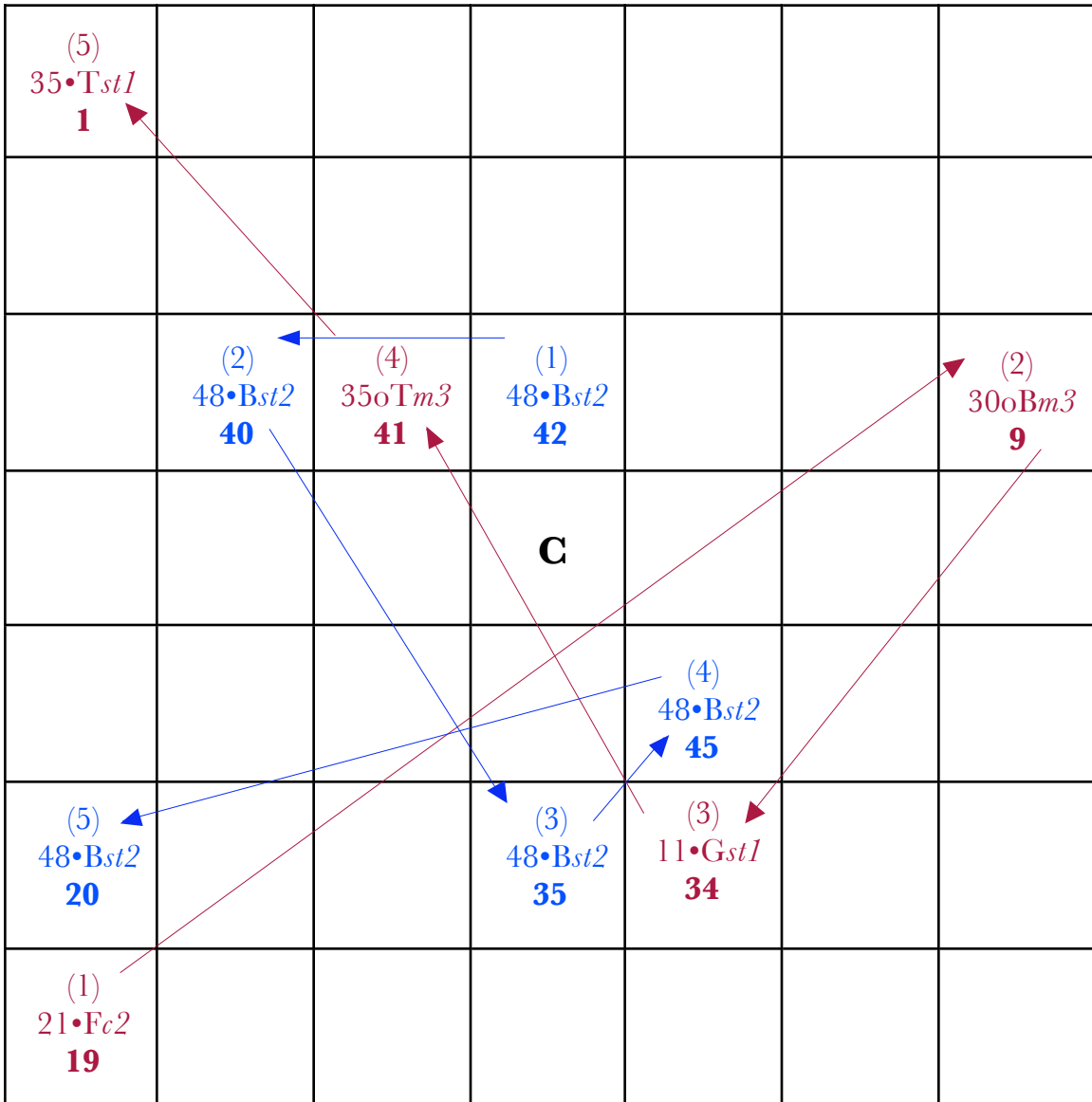
I.3
(whirlpool)



I.4
(whirlpool)



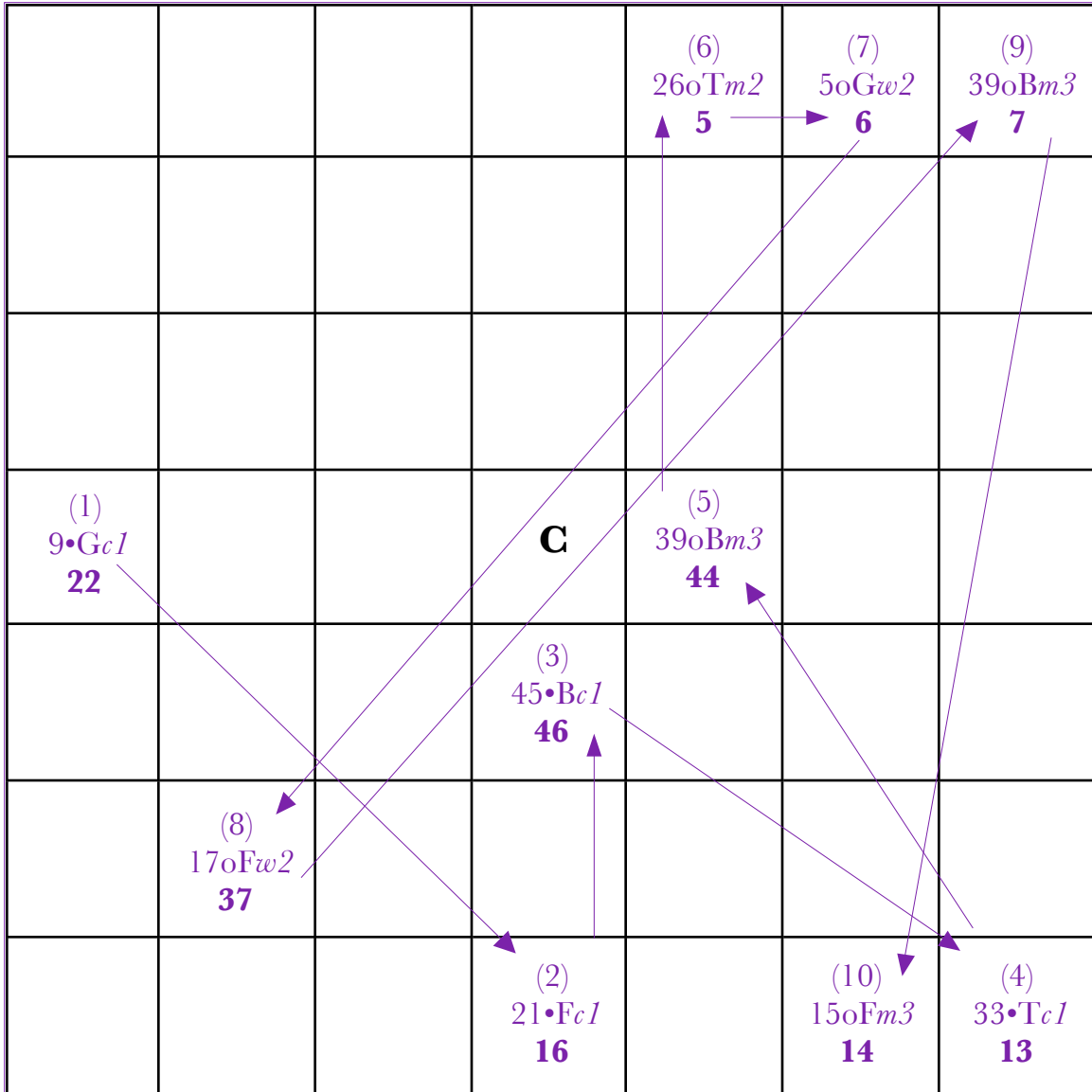
I.5
(whirlpool)



I.6
(tide-pool)

			4•Gw1 4			
	25oTm1 25					8•Gs3 8
	40oBw1 40	41oBw2 41				9•Gc1 9
			C			
	38•Bm2 38			45oBc1 45	32oTs3 32	
20•Fs3 20		36oTst2 36				
			16•Fw1 16			

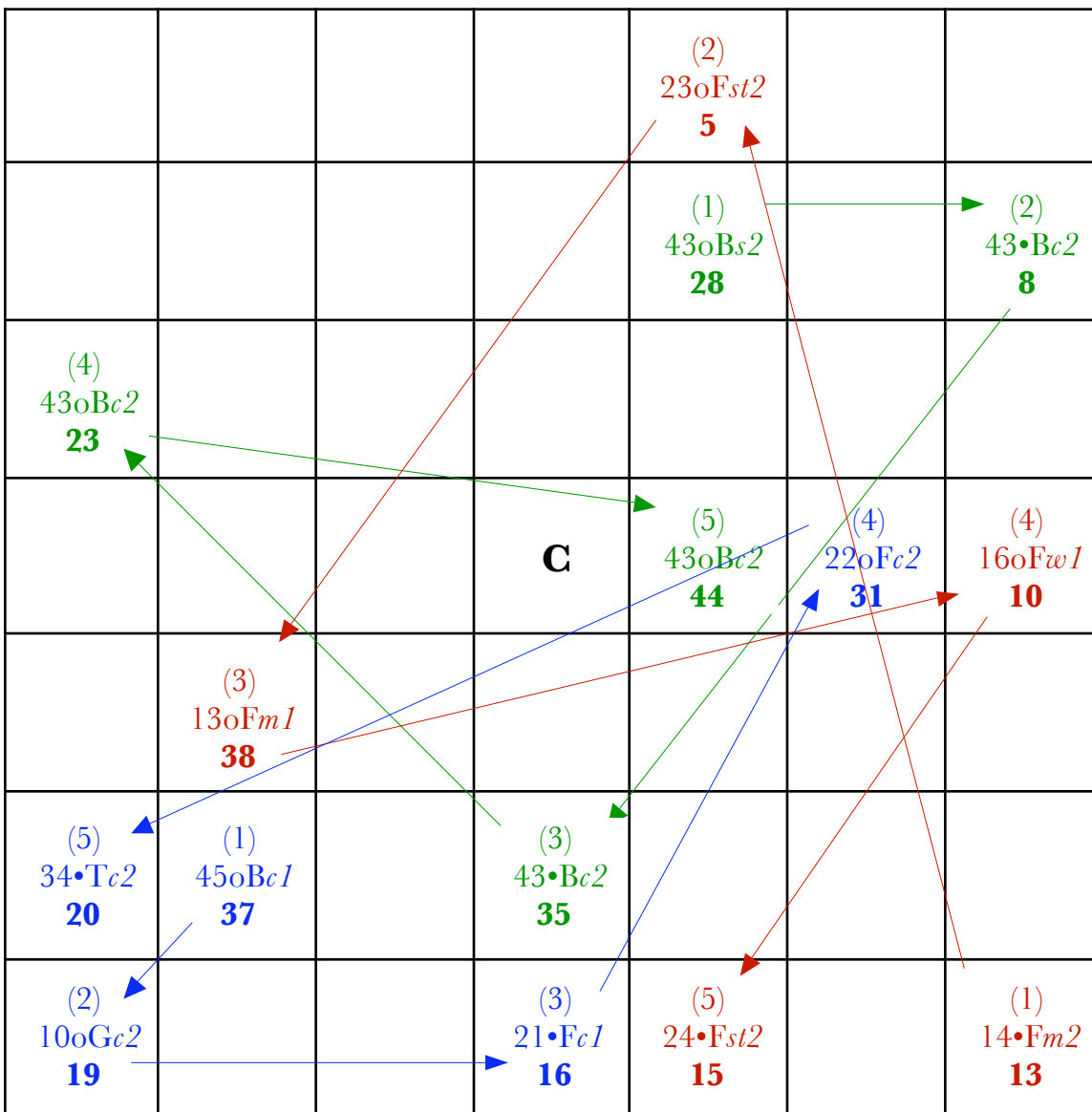
I.7
(whirlpool)



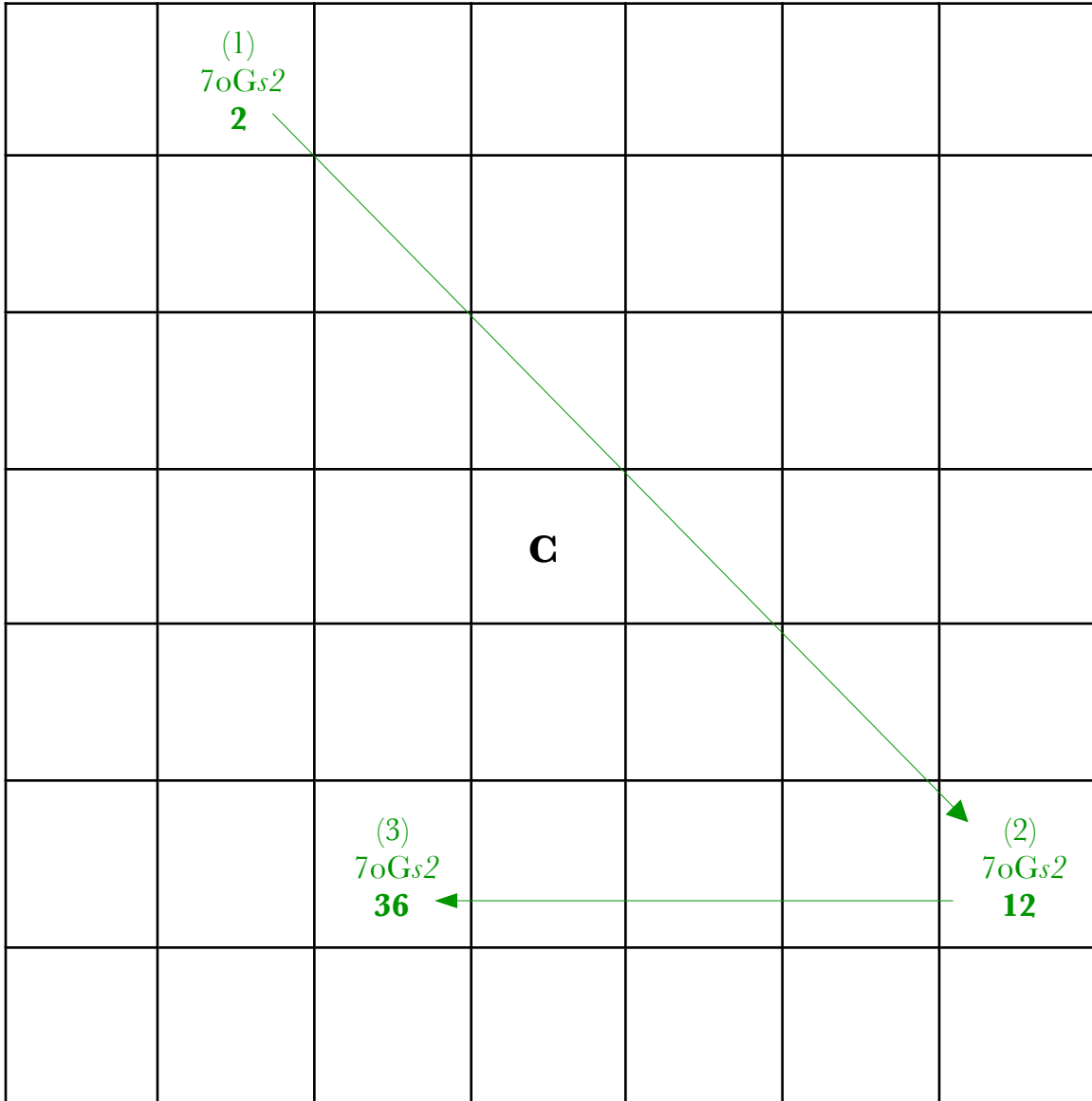
I.8
(tide-pool)

						<i>7oGs3</i> 7
<i>23oFst2</i> 23						
<i>22oFc2</i> 22		<i>48oBst2</i> 48	C			
					<i>33•Tcl</i> 33	
<i>19•Fs2</i> 19						

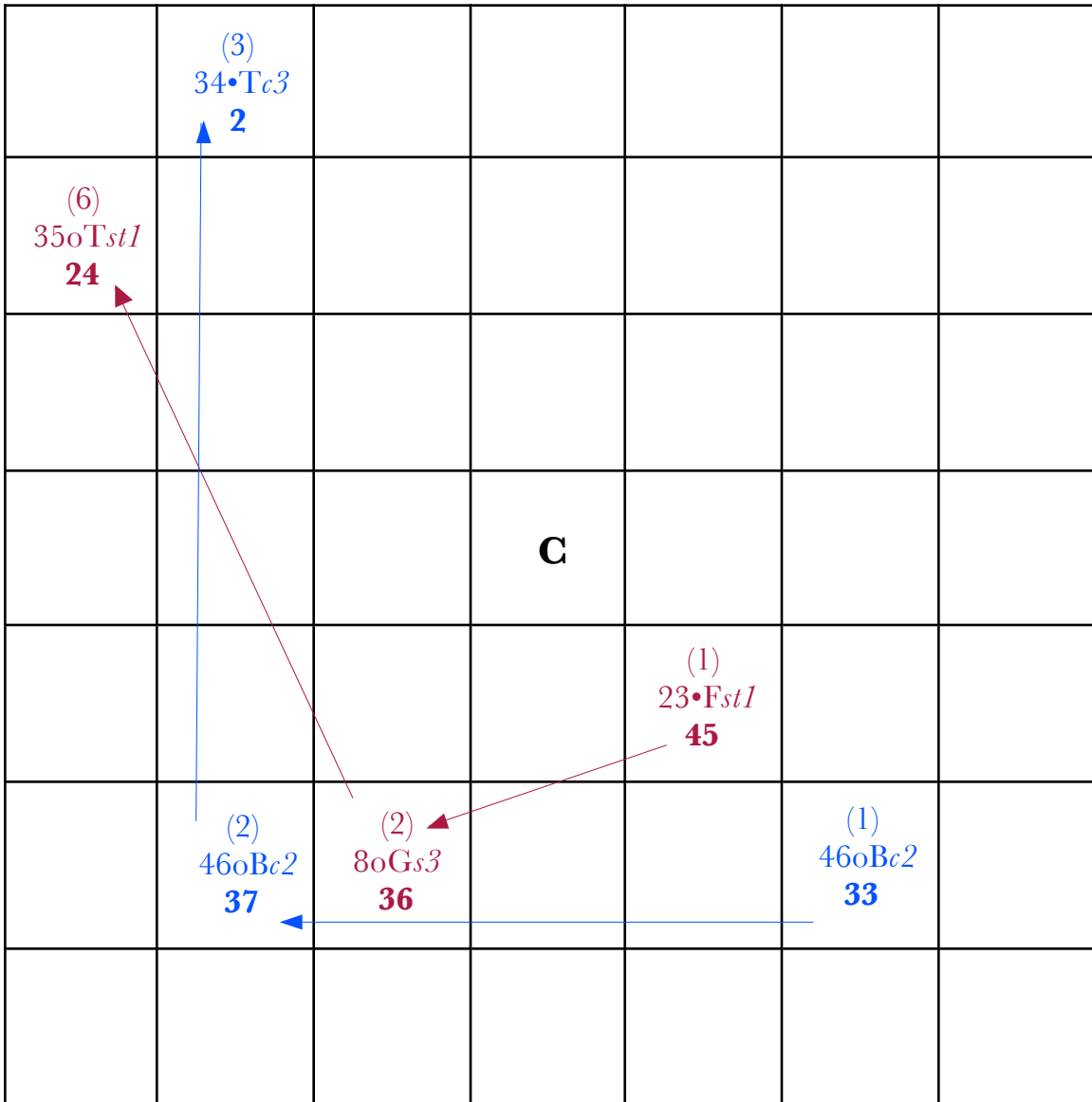
I.9 (whirlpool)



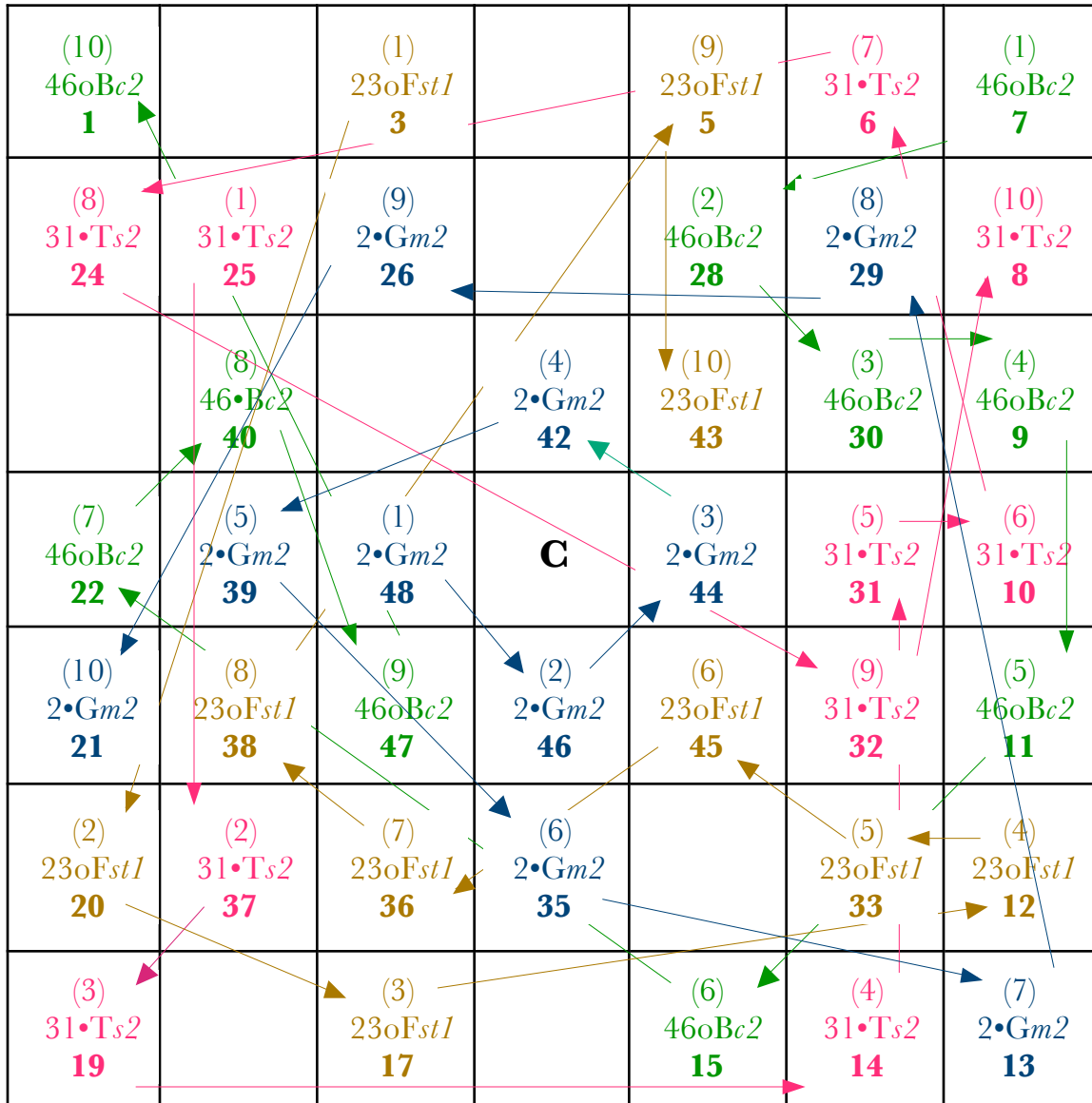
I.10
(whirlpool)



I.11
(whirlpool)



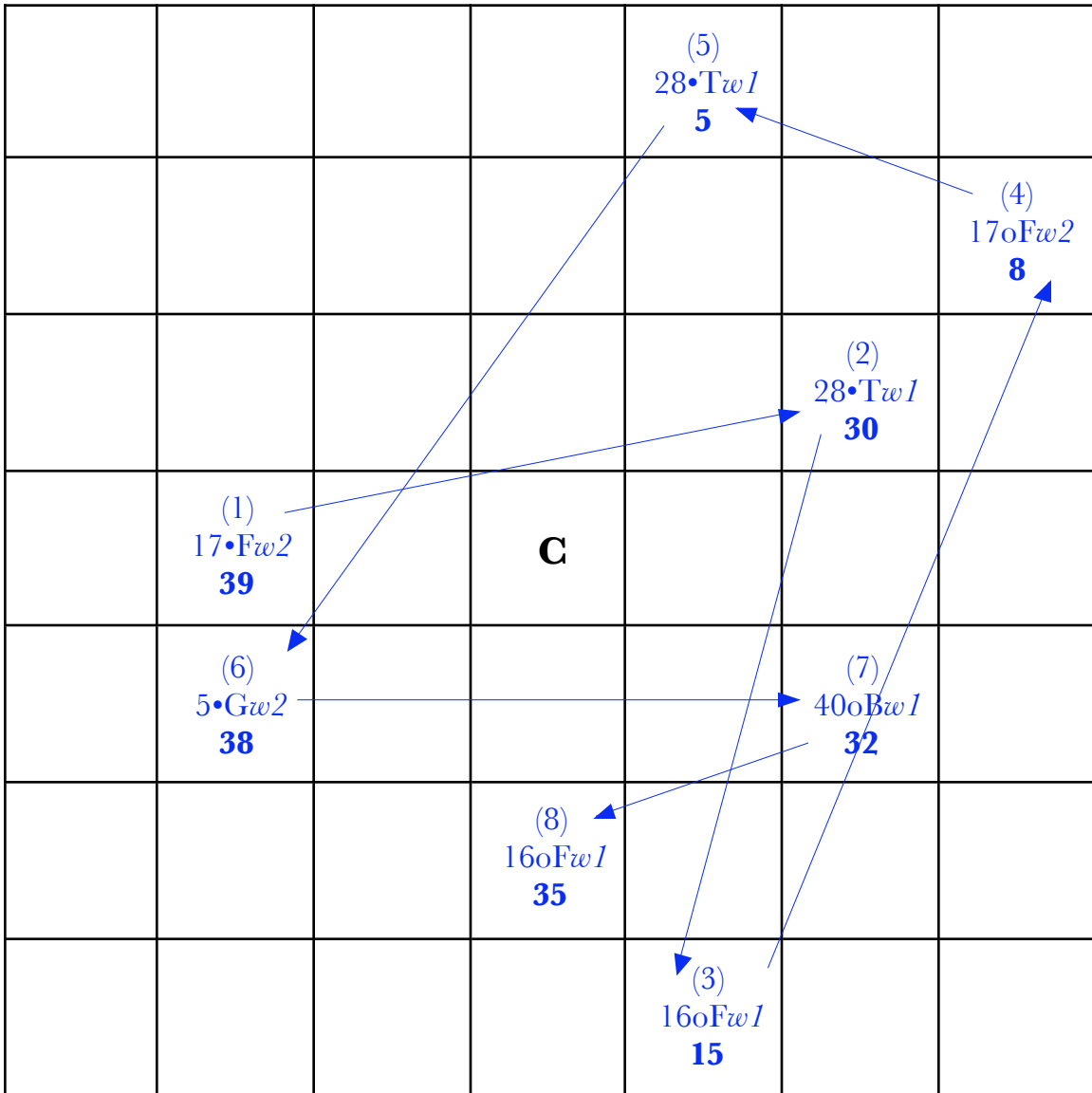
I.12
(whirlpool)



I.13
(tide-pool)

<i>1•Gm1</i> 1		<i>3oGm3</i> 3	<i>4oGw1</i> 4			<i>7•Gs2</i> 7
				<i>43oBs2</i> 43		
		<i>48•Bst2</i> 48	C			
			<i>35oTst1</i> 35			<i>12•Gst2</i> 12
<i>19•Fs2</i> 19				<i>15oFm3</i> 15		

I.14
(whirlpool)



I.15
(tide-pool)

						8oGs3 8
	40oBw1 40				30oTs1 30	
			C			
						13•Fm1 13

I.16
(tide-pool)

1oGm1 1	2oGm2 2	3oGm3 3		5oGw2 5	6oGs1 6	
	25oTm1 25	26oTm2 26	27oTm3 27	28oTw1 28	29oTw2 29	8oGs3 8
23oFst1 23	40oBw1 40	41oBw2 41	42oBs1 42	43oBs2 43	30•Ts1 30	9oGc1 9
22oFc2 22	39oBm3 39		C	44oBs3 44	31oTs2 31	10oGc2 10
21oFc1 21	38oBm2 38	47oBst1 47		45oBc1 45	32oTs3 32	11oGst1 11
	37oBm1 37	36oTst2 36	35oTst1 35	34oTc2 34	33oTc1 33	12oGst2 12
	18oFs1 18	17oFw2 17	16oFw1 16	15oFm3 15	14oFm2 14	13oFm1 13

I.17
(tide-pool)

		26• <i>T_m2</i> 26			29• <i>T_w2</i> 29	
		41o <i>B_w2</i> 41	42o <i>B_s1</i> 42	43• <i>B_s2</i> 43		
		48o <i>B_st2</i> 48	C			
	37o <i>B_m1</i> 37					12• <i>G_st2</i> 12
		17• <i>F_w2</i> 17				

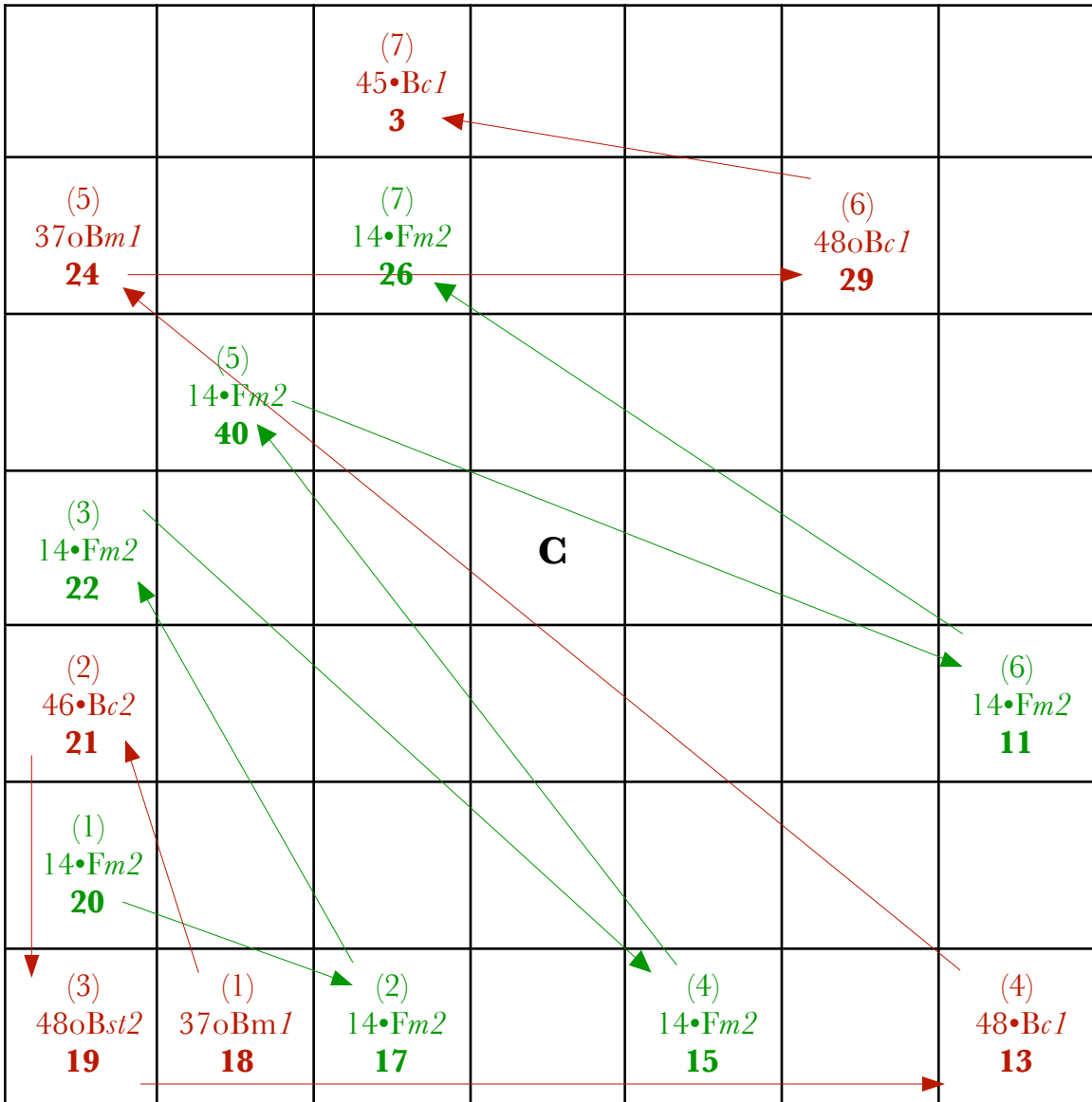
I.18
(tide-pool)

1oGm1 1	2oGm2 2	3oGm3 3	4oGw1 4	5•Gw2 5	6oGs1 6	7•Gs2 7
24oFst2 24	25•Tm1 25	26•Tm2 26	27•Tm3 27	28oTw1 28	29•Tw2 29	8•Gs3 8
23oFst1 23	40•Bw1 40	41oBw2 41	42oBs1 42	43•Bs2 43	30oTs1 30	9•Gc1 9
22•Fc2 22	39•Bm3 39	48oBst2 48	C	44oBs3 44	31•Ts2 31	10•Gc2 10
21oFc1 21	38oBm2 38	47•Bst1 47	46oBc2 46	45oBc1 45	32•Ts3 32	11oGst1 11
20oFs3 20	37oBm1 37	36•Tst2 36	35•Tst1 35	34oTc2 34	33•Tc1 33	12•Gst2 12
19•Fs2 19	18oFs1 18	17oFw2 17	16oFw1 16	15•Fm3 15	14•Fm2 14	13oFm1 13

I.19
(tide-pool)

				5•Gw2 5	6•Gsl 6	
			C			
21•Fcl 21						
						12•Gst2 12

I.20
(whirlpool)



I.) Whirlpools, tide-pools: listing of sounds used in each piece.

no.	sound	occurrences	no.	sound	occurrences
1	Gm1	2, 13, 16, 18	25	Tm1	3, 6, 16, 18
2	Gm2	2, 3, 12, 16, 18	26	Tm2	3, 7, 16, 17, 18
3	Gm3	2, 13, 16, 18	27	Tm3	3, 16, 18
4	Gw1	2, 3, 6, 13, 18	28	Tw1	3, 14, 16, 18
5	Gw2	2, 7, 14, 16, 18, 19	29	Tw2	2, 16, 17, 18
6	Gs1	16, 18, 19	30	Ts1	2, 5, 15, 16, 18
7	Gs2	8, 10, 13, 18	31	Ts2	12, 16, 18
8	Gs3	6, 11, 15, 16, 18	32	Ts3	6, 16, 18
9	Gc1	6, 7, 16, 18	33	Tc1	3, 7, 8, 16, 18
10	Gc2	9, 16, 18	34	Tc2	9, 11, 16, 18
11	Gst1	2, 5, 16, 18	35	Tst1	2, 5, 11, 13, 16, 18
12	Gst2	13, 16, 17, 18, 19	36	Tst2	6, 16, 18
13	Fm1	1, 9, 15, 16, 18	37	Bm1	16, 17, 18, 20
14	Fm2	3, 9, 16, 18, 20	38	Bm2	3, 6, 16, 18
15	Fm3	3, 4, 7, 13, 16, 18	39	Bm3	3, 7, 16, 18
16	Fw1	6, 9, 14, 16, 18	40	Bw1	6, 14, 15, 16, 18
17	Fw2	7, 14, 16, 17, 18	41	Bw2	1, 6, 16, 17, 18
18	Fs1	16, 18	42	Bs1	1, 16, 17, 18
19	Fs2	8, 13, 18	43	Bs2	3, 4, 9, 13, 16, 17, 18
20	Fs3	6, 18	44	Bs3	3, 16, 18
21	Fc1	5, 7, 9, 16, 18, 19	45	Bc1	3, 6, 7, 9, 16, 18, 20
22	Fc2	8, 9, 16, 18	46	Bc2	3, 11, 12, 18, 20
23	Fst1	8, 9, 11, 12, 16, 18	47	Bst1	2, 16, 18
24	Fst2	2, 3, 9, 18	48	Bst2	5, 8, 13, 17, 18, 20

III.) A Cloud drifting over the Plain (raindrop chart, p. 1)

	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30		31	32	33	34	35	36	37	38	39	40				
1	20	20	20	20	20	20	20	20	20	20	1	20	20	20	20	20	20	20	20	20	20	20	1	20	20	20	20	20	20	20	20	20	20	1	20	20	20	20	20	20	20	20	20	20	20	20	1
2	20	20	20	20	20	19	19	20	20	20	2	20	20	20	19	20	20	20	20	19	20	19	2	19	20	19	20	20	20	20	20	20	2	20	19	20	20	20	20	20	20	20	20	19	20	20	2
3	20	20	20	20	20	19	18	20	20	20	3	20	20	20	19	20	19	19	19	20	19	3	19	19	19	20	20	20	20	20	20	3	19	19	20	20	20	20	19	20	19	20	18	20	20	3	
4	20	20	19	19	19	19	18	20	19	20	4	20	20	19	19	20	19	18	19	20	18	4	18	19	19	20	20	20	20	20	4	19	19	20	19	20	19	20	19	20	18	20	18	20	20	4	
5	20	20	19	18	18	18	18	19	18	20	5	20	19	18	19	19	19	17	19	20	17	5	17	18	19	20	20	20	19	19	20	5	19	19	20	19	20	18	19	18	19	18	20	20	5		
6	19	19	19	18	18	18	18	19	18	20	6	20	18	18	18	19	18	17	19	19	17	6	16	18	19	19	19	19	19	20	6	18	19	20	18	20	17	19	18	20	17	19	18	20	19	6	
7	18	19	19	18	18	18	17	19	18	20	7	20	18	18	18	18	18	17	19	19	16	7	16	18	18	19	19	19	18	19	20	7	18	19	19	18	20	17	19	18	20	19	18	20	19	7	
8	18	19	19	18	18	18	17	18	17	20	8	19	18	18	18	18	17	16	18	19	16	8	16	18	17	18	19	19	18	19	20	8	17	18	19	17	20	16	18	17	20	18	20	18	8		
9	18	19	19	18	18	17	17	18	17	20	9	19	18	18	17	18	17	16	18	18	16	9	15	17	17	18	19	19	18	18	19	20	9	17	18	19	17	19	16	18	16	20	18	20	18	9	
10	17	19	19	18	18	16	17	18	16	20	10	18	18	17	17	17	17	16	18	17	15	10	15	17	17	18	18	19	18	18	19	20	10	17	18	19	17	19	15	17	16	20	18	20	18	10	
11	17	18	19	18	17	16	17	17	16	20	11	18	17	17	17	17	17	16	18	16	15	11	15	17	17	18	18	19	17	18	19	20	11	17	18	19	16	19	14	17	16	20	18	20	11		
12	17	18	19	18	16	16	17	17	16	20	12	17	17	17	17	17	17	16	18	16	15	12	15	17	16	18	18	19	17	17	19	20	12	17	18	19	16	19	14	17	15	19	18	20	12		
13	17	18	19	17	16	16	17	16	15	20	13	17	17	17	16	16	17	16	17	16	15	13	14	16	16	17	18	19	17	17	19	20	13	17	17	19	16	19	14	17	15	19	18	20	13		
14	16	18	18	16	15	15	17	16	15	19	14	17	16	16	16	16	17	16	17	16	15	14	14	16	16	15	17	18	19	17	17	19	20	14	17	16	19	15	19	14	17	15	19	18	20	14	
15	16	17	18	16	15	15	16	16	15	18	15	16	15	16	16	15	17	16	17	16	15	15	14	16	16	15	16	18	19	17	17	19	20	15	17	15	19	15	19	14	17	14	19	18	20	15	
16	16	17	17	15	15	15	16	16	15	18	16	15	14	15	15	15	15	16	16	16	15	16	14	16	15	15	18	19	16	16	18	19	20	16	17	15	19	15	18	13	17	13	19	18	20	16	
17	15	17	16	14	15	14	16	16	15	18	17	15	14	15	14	15	17	16	15	16	15	17	14	15	14	15	17	19	15	15	18	18	17	17	15	19	15	17	13	17	12	19	18	20	17		
18	14	17	16	14	15	13	16	16	14	18	18	14	14	14	14	15	17	16	14	16	15	18	13	14	14	15	17	19	15	15	18	17	18	17	15	19	15	17	13	17	12	19	17	20	18	18	
19	14	16	16	13	14	12	16	16	14	18	19	13	14	14	14	15	16	16	13	15	15	19	13	14	14	15	16	18	14	15	18	17	19	17	14	19	15	17	13	17	12	18	17	20	19	19	
20	14	16	16	13	13	12	16	16	13	18	20	13	14	14	14	15	15	15	13	15	15	20	13	14	14	15	16	18	13	15	18	16	20	17	14	19	15	16	13	16	11	18	17	20	20	20	
21	14	16	15	12	13	12	15	16	13	18	21	12	14	13	14	14	15	15	13	14	15	21	12	14	14	14	15	17	12	14	17	16	21	17	14	19	15	16	12	16	11	17	17	20	21		
22	14	16	15	12	13	12	15	16	12	18	22	12	14	13	14	14	15	14	13	13	14	22	12	13	14	13	15	17	12	14	16	16	22	17	14	18	14	16	11	16	10	17	17	22			
23	14	16	14	12	13	12	14	15	11	18	23	12	14	13	14	14	15	14	13	13	14	23	12	13	14	13	15	17	12	13	16	16	23	17	13	18	14	15	11	16	10	17	16	23			
24	14	16	13	12	13	11	14	15	11	17	24	11	15	13	14	14	15	14	13	12	14	24	12	13	14	12	14	17	11	12	15	16	24	17	13	18	14	15	11	16	10	17	16	24			
25	14	15	13	12	13	11	13	15	11	17	25	10	15	13	14	14	15	14	13	12	14	25	12	12	14	12	14	17	11	12	14	16	25	17	13	18	14	15	10	15	10	16	15	25			
26	14	15	14	12	13	10	12	14	11	17	26	10	15	13	14	14	15	14	13	12	14	26	12	12	14	12	14	17	11	11	14	15	26	17	13	18	14	15	10	14	10	15	14	26			
27	14	15	15	11	13	9	12	14	11	16	27	10	15	13	14	14	15	13	12	14	27	12	12	14	12	14	17	11	11	14	15	27	17	13	18	13	14	9	14	10	15	14	27				
28	13	15	15	10	13	9	12	14	11	15	28	10	15	13	14	14	15	12	13	12	14	28	11	12	14	11	14	17	11	11	14	15	28	17	12	18	13	13	9	13	10	15	14	28			
29	13	15	15	9	13	9	12	14	10	15	29	9	15	13	14	14	14	12	13	12	14	29	11	12	13	10	14	17	11	10	14	15	29	17	12	18	13	13	8	13	10	15	14	29			
30	13	15	15	8	12	8	11	14	9	15	30	8	15	13	14	14	14	12	13	12	14	30	11	12	12	9	14	17	11	10	14	15	30	17	11	18	13	13	8	12	10	15	14	30			
31	13	15	15	8	13	8	11	13	9	14	31	8	15	13	14	14	14	11	13	11	14	31	11	12	11	9	14	17	11	10	14	14	31	17	11	17	13	13	7	12	10	15	15	31			
32	12	15	16	7	13	8	11	13	8	14	32	8	16	13	14	14	14	11	13	11	14	32	11	12	10	9	14	17	10	9	14	32	17	11	18	12	12	7	12	10	15	16	32				
33	11	15	16	7	14	7	11	13	8	14	33	8	17	12	13	14	14	11	13	10	14	33	11	12	9	9	13	17	10	9	15	33	17	11	18	12	12	7	12	10	15	16	33				
34	11	15	16	7	14	6	10	12	8	14	34	7	17	12	12	14	14	11	13	10	13	34	11	12	9	9	12	17	10	9	15	34	17	11	18	12	12	7	12	9	16	16	34				
35	11	15	16	7	14	5	10	12	8	14	35	7	17	11	12	14	13	11	13	9	13	35	11	12	8	9	12	16	10	9	15	35	16	10	18	12	12	7	12	9	17	16	35				
36	11	16	16	7	14	5	10	12	8	14	36	7	17	11	11	13	13	11	13	9	13	36	10	12	7	9	11	16	9	9	15	36	16	10	18	12	11	7	11	9	18	16	36				
37	11	16	17	7	14	5	9	11	7	15	37	7	17	10	11	12	12	10	13	9	13	37	10	12	7	9	11	16	9	9	15	37	16	10	18	12	11	7									

III.) A Cloud drifting over the Plain (raindrop chart, p. 2)

96	9		8		11	18	96	17		17	5	20	19	13	96	9	20	12		18		14	96	19		8		20	9	96													
97	9		8		11	18	97	17		17	5	20	19	14	97	9	20	12		18		14	97	19		8		20	9	97													
98	9		8		11	19	98	17		17	5	20	19	15	98	10		12		18		14	98	19		8		20	9	98													
99	10		8		12	19	99	17		17	6	20	20	15	99	10		13		18		15	99	19		8		20	9	99													
100	10		9		13	19	100	17		17	7	20	20	15	100	11		14		18		15	100	19		8		20	9	100													
101	10		9		13	20	101	18		17	7	20		15	101	11		14		18		15	101	19		8		20	9	101													
102	10		9		13	20	102	18		17	7	20		15	102	11		14		18		15	102	19		8		20	9	102													
103	10		9		13	20	103	18		17	7			15	103	11		14		18		16	103	19		8		20	9	103													
104	11		10		14	20	104	19		17	7			15	104	11		14		18		16	104	19		8		20	10	104													
105	11		10		14	20	105	19		17	7			15	105	11		14		18		16	105	20		9		20	11	105													
106	11		10		14	20	106	19		17	7			16	106	11		14		19		16	106	20		9		20	12	106													
107	11		10		15		107	19		18	7			16	107	12		14		19		17	107	20		10		20	12	107													
108	11		11		15		108	19		19	8			16	108	12		14		19		17	108	20		10		20	12	108													
109	12		11		15		109	19		19	8			16	109	12		14		19		18	109	20		11		20	13	109													
110	13		11		15		110	19		19	8			17	110	13		14		19		18	110	20		12		20	13	110													
111	14		11		15		111	19		19	8			17	111	13		14		20		18	111	20		12		20	13	111													
112	14		11		15		112	19		19	9			18	112	13		15		20		19	112	20		12			14	112													
113	14		12		15		113	19		20	9			18	113	14		15		20		20	113			12			14	113													
114	15		12		16		114	20		20	9			19	114	14		15		20		20	114			12			15	114													
115	15		12		16		115	20		20	9			20	115	14		15		20		20	115			12			15	115													
116	15		13		16		116	20		20	9			20	116	14		15		20		20	116			12			15	116													
117	16		13		17		117	20		20	9			20	117	14		15		20		20	117			12			16	117													
118	16		13		17		118	20		20	9			20	118	14		15		20			118			12			17	118													
119	16		13		17		119	20		20	9				119	14		16		20			119			12			18	119													
120	16		14		17		120			20	9				120	14		17		20			120			12			19	120													
121	17		14		17		121				10				121	14		18		20			121			12			20	121													
122	17		15		17		122				11				122	14		19		20			122			12				122													
123	18		15		18		123				11				123	14		20		20			123			12				123													
124	18		15		18		124				11				124	14		20		20			124			13				124													
125	19		15		18		125				11				125	14		20		20			125			13				125													
126	19		16		18		126				12				126	14		20		20			126			14				126													
127	19		16		18		127				12				127	14		20		20			127			15				127													
128	20		16		19		128				13				128	14		20		20			128			15				128													
129	20		16		19		129				13				129	15		20		20			129			16				129													
130	20		17		19		130				13				130	16				20			130			16				130													
131	20		18		19		131				13				131	17				20			131			16				131													
132	20		18		19		132				13				132	17				20			132			16				132													
133	20		18		19		133				13				133	17				20			133			16				133													
134	20		18		19		134				14				134	17				20			134			17				134													
135	20		18		19		135				14				135	17				20			135			17				135													
136			18		19		136				14				136	17				20			136			17				136													
137			18		19		137				14				137	17				20			137			18				137													
138			18		19		138				15				138	18				20			138			18				138													
139			18		19		139				15				139	19				20			139			19				139													
140			18		20		140				15				140	20				20			140			20				140													
141			18		20		141				15				141	20				20			141			20				141													
142			18		20		142				16				142	20				20			142			20				142													
143			18		20		143				17				143								143							143													
144			19		20		144				18				144								144							144													
145			19		20		145				18				145								145							145													
146			20		20		146				18				146								146							146													
147			20		20		147				19				147								147							147													
148			20		20		148				20				148								148							148													
149			20		20		149				20				149								149							149													
150			20		20		150				20				150								150							150													
total	1612	1131	870	1526	956	967	1792	1462	1117	1280		1238	854	1624	1291	1585	1589	1439	1476	1313	1217		1543	1505	1426	890	1199	1815	1185	1485	932	1416		1874	1147	1166	1606	1126	777	1700	1115	1087	994