

Pitch Gradient with Noise #4 (in D ♮)

for 2 brass instruments, 2 percussion, 10 bowed string instruments, and sine-tones

Jordan Dykstra, 2017

PERFORMANCE NOTES

- (1) Score in C. Pitches should be thought of as pitch classes and, thus, *may be voiced in any octave*. String players may also use harmonics, sul ponticello, and/or sul tasto.
- (2) Medium dynamic throughout, with minimal attack on entrances and exists, and without vibrato.
- (3) A seating arrangement should be chosen with the lowest audible spectrum in the center and fan out from there, with the highest spectrum on either edge of the semicircle.
- (4) Instead of a pitch, any player may choose to produce a quiet, sustained noise on their instrument. Eg. bowing the wooden body or tailpiece of their instrument, sliding their finger up/down the string, blowing un-pitched air through their instrument, white/pink noise, etc.
- (5) Attention to the cent deviations is *extremely* important. While certain performance decisions—such as micro adjustments to find a stable beating pattern with an ensemble member—are fine, finding a pitch continuum regarding the overall pitch trajectory is key and it is recommended that bowed string players use a tuner with a contact microphone to aid in this process.
- (6) Guitarists will always use an Ebow and slide to find the altered pitch. When the sustained tone is finished, lift the Ebow from the string allowing the tone to fade naturally.
- (7) String parts may be performed on any bowed string instrument and horn/trombone parts may be performed on any suitable brass instrument.
- (8) Percussionists will find non-pitched instruments capable of being sustained, possibly through bowing, and that provide noise or unstable pitch (i.e. something that doesn't follow the ordering of the harmonic series). Eg. bowed woodblock, stones continuously rubbed together, a soft brush on a drum head, lightly bowed metal objects, a steady stream of rice or sand on a cymbal, etc.
- (9) Single or multiple players to a part is fine.
- (10) The players producing the sine-tone may request a MaxMSP patch via jordandykstra@gmail.com. Their loudspeaker will be placed near them and non-directionally; their dynamic just below noticeable when the full ensemble is performing.

Total duration is 31' which includes 60" of silence at the beginning.

The image shows a musical score for French Horn, consisting of nine staves. The top staff is a treble clef with a whole note on the first line (D5). The subsequent staves are also in treble clef and contain whole notes. Each staff is accompanied by a numerical label indicating a pitch deviation from the original note. The labels are as follows:

- Staff 1: $\pm 0c$
- Staff 2: $+24c$
- Staff 3: $+42c$
- Staff 4: $-40c$
- Staff 5: $-18c$
- Staff 6: $\pm 0c$
- Staff 7: $+19c$
- Staff 8: $+44c$
- Staff 9: $-37c$

Vertical labels are placed between the staves to indicate specific pitch deviations for each measure:

- Between Staff 1 and 2: $+8c$
- Between Staff 2 and 3: $+29c$
- Between Staff 3 and 4: $+48c$
- Between Staff 4 and 5: $-36c$
- Between Staff 5 and 6: $-12c$
- Between Staff 6 and 7: $+3c$
- Between Staff 7 and 8: $+27c$
- Between Staff 8 and 9: $+48c$

Horizontal labels are placed below the staves to indicate specific pitch deviations for each measure:

- Below Staff 1: $+14c$
- Below Staff 2: $+33c$
- Below Staff 3: $-49c$
- Below Staff 4: $-31c$
- Below Staff 5: $-7c$
- Below Staff 6: $+8c$
- Below Staff 7: $+33c$
- Below Staff 8: $-47c$
- Below Staff 9: $-25c$

Additional labels at the end of each staff are:

- End of Staff 1: $+18c$
- End of Staff 2: $+38c$
- End of Staff 3: $-45c$
- End of Staff 4: $-25c$
- End of Staff 5: $-2c$
- End of Staff 6: $+16c$
- End of Staff 7: $+39c$
- End of Staff 8: $-42c$
- End of Staff 9: $-20c$

French Horn

10' \sharp \circ \sharp \circ \sharp \circ \sharp \circ

-17c -12c -8c -2c

11' $\pm 0c$ +3c +9c +14c

12' +19c +25c +29c +33c

13' +39c +47c \flat \circ \flat \circ

-46c -41c

14' \flat \circ \flat \circ \flat \circ \flat \circ

-37c -31c -26c -22c

15' \flat \circ \flat \circ \flat \circ \flat \circ

-17c -13c -8c -4c

16' $\pm 0c$ +3c +9c +14c

17' +19c +25c +29c +33c

18' +39c +47c \sharp \circ \sharp \circ

-46c -41c

19' \sharp \circ \sharp \circ \sharp \circ \sharp \circ

-36c -31c -26c -22c

20' \sharp \circ \sharp \circ \sharp \circ \sharp \circ

-17c -13c -8c -4c

French Horn

21' $\pm 0c$ +3c +9c +14c

22' +19c +25c +29c +33c

23' +39c +47c

24'

25'

26' $\pm 0c$ +3c +9c +14c

27' +19c +25c +29c +33c

28' +39c +47c

29'

30'

-37c -31c -26c -22c

-17c -13c -8c -4c

-37c -31c -26c -22c

-17c -13c -8c $\pm 0c$

Pitch Gradient with Noise #4 (in D $\frac{4}{4}$)

for the 2017 Dog Star Orchestra

Jordan Dykstra (2017)

1' $\pm 0c$ +4c +10c +15c

2' +19c +24c +27c +32c

3' +36c +44c -47c -42c

4' -37c -33c -28c -22c

5' -19c -16c -12c -6c

6' +2c +5c +9c +13c

7' +18c +24c +27c +33c

8' +38c +44c -50c -47c

9' -42c -38c -33c -26c

Trombone

The image shows a musical score for Trombone, consisting of 10 staves. Each staff begins with a treble clef and a boxed measure number (10' through 20'). The notes are half notes, and the fingerings are indicated by numbers 1-4. The fingerings for each staff are as follows:

- Staff 10': 1, 2, 3, 4
- Staff 11': 2, 3, 4, 1
- Staff 12': 2, 3, 4, 1
- Staff 13': 1, 2, 3, 4
- Staff 14': 3, 2, 1, 4
- Staff 15': 3, 2, 1, 4
- Staff 16': 2, 3, 4, 1
- Staff 17': 2, 3, 4, 1
- Staff 18': 3, 2, 1, 4
- Staff 19': 1, 2, 3, 4
- Staff 20': 1, 2, 3, 4

The notes and their corresponding fingerings are:

Staff	Measure 10'	Measure 11'	Measure 12'	Measure 13'	Measure 14'	Measure 15'	Measure 16'	Measure 17'	Measure 18'	Measure 19'	Measure 20'
10'	F# (1)	F# (2)	F# (3)	F# (4)	E (1)	D (2)	C (3)	B (4)	A (1)	G (2)	F# (3)
11'	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)
12'	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)
13'	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)
14'	F# (3)	E (1)	D (2)	C (3)	B (4)	A (1)	G (2)	F# (3)	E (1)	D (2)	C (3)
15'	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)
16'	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)
17'	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)
18'	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)
19'	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)
20'	D (2)	E (1)	F# (3)	G (2)	A (1)	B (4)	C (3)	D (2)	E (1)	F# (3)	G (2)

Trombone

The image shows a musical score for Trombone, consisting of ten staves numbered 21' to 30'. Each staff contains a treble clef, a single note, and a pitch marking. The notes are half notes. The pitch markings are as follows:

Staff	Measure 1	Measure 2	Measure 3	Measure 4
21'	+2c	+5c	+10c	+15c
22'	+21c	+28c	+33c	+37c
23'	+43c	+47c	-48c	-45c
24'	-40c	-35c	-31c	-27c
25'	-22c	-17c	-12c	-7c
26'	+1c	+7c	+11c	+17c
27'	+24c	+29c	+34c	+39c
28'	+44c	+50c	-46c	-41c
29'	-36c	-30c	-25c	-19c
30'	-13c	-7c	-3c	±0c

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The image displays a musical score for Percussion 1, consisting of ten staves. At the top center, there is a conductor's cue symbol (a semi-circle with a vertical line and a dot). The staves are numbered 1' through 9' on the left side. Each staff begins with a double bar line. The notation consists of thick black horizontal lines of varying lengths and positions across the staves, representing percussive events. Staff 1' has a single line starting at the beginning and ending at approximately 85% of the staff. Staff 2' has a line starting at approximately 15% and ending at approximately 80%. Staff 3' has two lines: one from approximately 10% to 50%, and another from approximately 75% to the end. Staff 4' has two lines: one from the beginning to approximately 45%, and another from approximately 55% to the end. Staff 5' has two lines: one from the beginning to approximately 15%, and another from approximately 25% to approximately 85%. Staff 6' has a single line starting at approximately 15% and ending at approximately 85%. Staff 7' has a single line starting at the beginning and ending at approximately 80%. Staff 8' has two lines: one from the beginning to approximately 70%, and another from approximately 80% to the end. Staff 9' has two lines: one from the beginning to approximately 48%, and another from approximately 62% to the end.

Percussion 1

10'

11'

12'

13'

14'

15'

16'

17'

18'

19'

20'

Percussion 1

21'



22'



23'



24'



25'



26'



27'



28'



29'



30'



Percussion 2

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

Jordan Dykstra (2017)

The image shows a musical score for Percussion 2, consisting of nine staves. The score is written in a minimalist style using thick black lines on a white background. A conductor's cue is located at the top center of the page, above the first staff, consisting of a small circle with a vertical line and a downward-pointing arrow. Each staff begins with a double bar line on the left and ends with a vertical line on the right. The notation is as follows:

- Staff 1: A single thick black line spans the entire width of the staff.
- Staff 2: A thick black line spans the entire width of the staff.
- Staff 3: A thick black line spans the entire width of the staff.
- Staff 4: A thick black line spans the entire width of the staff.
- Staff 5: A thick black line spans the entire width of the staff.
- Staff 6: A thick black line spans the entire width of the staff.
- Staff 7: A thick black line spans the entire width of the staff.
- Staff 8: A thick black line spans the entire width of the staff.
- Staff 9: A thick black line spans the entire width of the staff.

Percussion 2

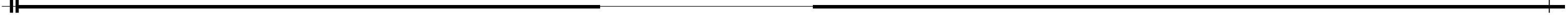
10'



11'



12'



13'



14'



15'



16'



17'



18'



19'



20'



Percussion 2

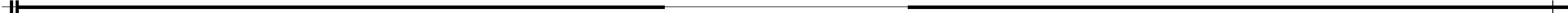
21'



22'



23'



24'



25'



26'



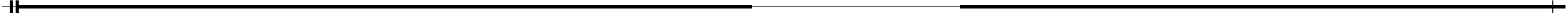
27'



28'



29'



30'



Pitch Gradient with Noise #4 (in D \natural)
for the 2017 Dog Star Orchestra

The image displays a musical score for a sine tone with a pitch gradient and noise. It consists of nine staves, each representing a different octave from 1' to 9'. The top staff shows a single note on a grand staff. The subsequent staves (2' to 9') show the pitch gradient and noise for each octave, with a thick black line representing the sine tone and a smaller note representing the noise. The noise is indicated by a circled notehead with a vertical line through it. The pitch gradient is indicated by the position of the notehead on the staff. The noise information is provided in cents (c) relative to the sine tone.

Octave	Pitch Gradient (c)	Noise (c)
1'	$\pm 0c$	+17c
2'	+36c	
3'	+49c	
4'	-42c	-23c
5'	-5c	
6'	+1c	
7'	+15c	+42c
8'		-40c
9'	-27c	

Sine-tone 1

The image displays a musical score for a sine tone, consisting of 10 staves. Each staff begins with a treble clef and a sharp sign (F#) on the first line. The notes are represented by horizontal black lines on the staves. Interval labels are placed between the staves to indicate the relationship between notes. The labels are as follows:

- Staff 1: 10' (boxed), -13c
- Staff 2: 11' (boxed), +11c
- Staff 3: 12' (boxed), +22c
- Staff 4: 13' (boxed), +49c
- Staff 5: 14' (boxed), -38c
- Staff 6: 15' (boxed), -24c
- Staff 7: 16' (boxed), +5c, -1c
- Staff 8: 17' (boxed), +23c, +36c
- Staff 9: 18' (boxed), -43c
- Staff 10: 19' (boxed), -27c
- Staff 11: 20' (boxed), -14c, -1c

21'

+12c

22'

+24c +43c

23'

-40c

24'

-22c

25'

-12c ±0c

26'

+15c

27'

+32c

28'

+44c -40c

29'

-25c -16c

30'

±0c

Pitch Gradient with Noise #4 (in D ♯)
for the 2017 Dog Star Orchestra

The score consists of ten staves. The first staff contains a single note on the top line of the treble clef with a fermata. The subsequent nine staves are marked with octave numbers in boxes (1' through 9') and contain horizontal lines representing pitch gradients. Each staff has a fermata at the end. The instructions are as follows:

- Staff 1: 1' +2c, +13c
- Staff 2: 2' +27c, +45c
- Staff 3: 3' -41c
- Staff 4: 4' -33c
- Staff 5: 5' -20c, -6c
- Staff 6: 6' +13c
- Staff 7: 7' +28c
- Staff 8: 8' +41c
- Staff 9: 9' -38c, -25c

Sine-tone 2

The image displays a musical score for 'Sine-tone 2' across ten staves, numbered 10' to 20'. Each staff begins with a treble clef and a single note. The notes are connected to subsequent notes on the same staff by horizontal lines, with interval labels indicating the distance between them. The notes are marked with a sharp sign (#) and a letter 'c'. The interval labels are as follows:

- Staff 10': Interval of -11c between the first and second notes.
- Staff 11': Interval of +3c between the first and second notes.
- Staff 12': Interval of +17c between the first and second notes, and +39c between the second and third notes.
- Staff 13': Interval of -50c between the first and second notes.
- Staff 14': Interval of -33c between the first and second notes.
- Staff 15': Interval of -21c between the first and second notes, and -6c between the second and third notes.
- Staff 16': Interval of +6c between the first and second notes.
- Staff 17': Interval of +23c between the first and second notes.
- Staff 18': Interval of +44c between the first and second notes.
- Staff 19': Interval of -44c between the first and second notes, and -31c between the second and third notes.
- Staff 20': Interval of -18c between the first and second notes.

The image displays ten musical staves, each representing a sine tone. Each staff is labeled with a time marker in the top left corner (e.g., 21', 22', etc.) and contains a single note. The notes are positioned on different lines and spaces of the staff, and are accompanied by a frequency offset label (e.g., +2c, -19c) and a phase shift label (e.g., #, b). The notes are connected to the staff by a horizontal line that starts at the beginning of the staff and ends at the note's position. The frequency offsets are: +2c, +19c, +33c, -50c, -38c, -14c, +6c, +19c, +33c, -33c, -11c, and ±0c. The phase shifts are: #, #, b, b, b, b, b, b, b, b, b, and #.

Staff	Time Marker	Frequency Offset	Phase Shift
1	21'	+2c	#
2	22'	+19c	#
3	23'	+33c	#
4	24'	-50c	b
5	25'	-38c	b
6	26'	-14c	b
7	26'	+6c	b
8	27'	+19c	b
9	27'	+33c	b
10	28'	-33c	b
11	29'	-11c	b
12	30'	±0c	#

Pitch Gradient with Noise #4 (in D \sharp)
for the 2017 Dog Star Orchestra

The musical score consists of nine staves, each representing a different fingering or position. The notation includes treble clefs, a key signature of one sharp (F#), and various performance instructions:

- Staff 1: A single note on the first line (D5) with a fermata.
- Staff 2: Labeled 1^{st} +4c, with a whole note on the first line.
- Staff 3: Labeled 2^{nd} +33c, with a whole note on the first line.
- Staff 4: Labeled 3^{rd} +50c, with a whole note on the first line. A second whole note on the first line is marked -44c.
- Staff 5: Labeled 4^{th} , with a whole note on the first line. A second whole note on the first line is marked -20c. A third whole note on the first line is marked -27c.
- Staff 6: Labeled 5^{th} -3c, with a whole note on the first line.
- Staff 7: Labeled 6^{th} +13c, with a whole note on the first line.
- Staff 8: Labeled 7^{th} +38c, with a whole note on the first line.
- Staff 9: Labeled 8^{th} +46c, with a whole note on the first line. A second whole note on the first line is marked -44c.
- Staff 10: Labeled 9^{th} -23c, with a whole note on the first line.

10' \sharp \circ
-7c

11' $\pm 0c$ +13c \sharp \circ

12' +23c +32c \sharp \circ

13' +45c \natural \circ
-40c

14' \natural \circ
-25c

15' \natural \circ
-7c

16' +10c \natural \circ

17' +31c \natural \circ

18' +46c \natural \circ
-40c

19' \sharp \circ
-24c

20' \sharp \circ
-7c

Detailed description: This musical score is for an electric guitar (E. Guitar 1) on page 2. It consists of ten staves, each representing a string. The strings are numbered 10' through 20' from top to bottom. Each staff begins with a treble clef and a sharp sign (#) on the first line, indicating a key signature of one sharp (F#). The notes are represented by circles with stems, and some have accidentals (sharps, naturals, or flats). The notes are positioned at various frets, indicated by the numbers and cents (c) in the labels. For example, the 10th string has a note at fret -7c. The 11th string has notes at frets $\pm 0c$ and +13c. The 12th string has notes at frets +23c and +32c. The 13th string has notes at frets +45c and -40c. The 14th string has a note at fret -25c. The 15th string has a note at fret -7c. The 16th string has a note at fret +10c. The 17th string has a note at fret +31c. The 18th string has notes at frets +46c and -40c. The 19th string has a note at fret -24c. The 20th string has a note at fret -7c.

21' ±0c +12c

22' +31c

23' +46c -40c

24' -21c

-30c

25' -7c

26' ±0c +13c

27' +27c

28' +46c -40c

29' -25c

30' -3c

-12c

Pitch Gradient with Noise #4 (in D $\frac{7}{8}$)

for the 2017 Dog Star Orchestra

The score consists of nine staves, each representing a different finger or hand position. The notation includes treble clefs, a key signature of one sharp (F#), and various musical symbols such as notes, rests, and dynamic markings. The staves are labeled with finger numbers in boxes: 1', 2', 3', 4', 5', 6', 7', 8', and 9'. Performance instructions include pitch adjustments in cents (e.g., +2c, +8c, +20c, +46c, -43c, -17c, -2c, +8c, +22c, +48c, -38c, -22c) and a specific note with a fermata on the top staff.

Staff 1: Treble clef, one sharp key signature, a whole note with a fermata on the first line (F#5).

Staff 2: Treble clef, one sharp key signature, a whole note on the first line (F#4) with a box containing '1'' and '+2c' above it.

Staff 3: Treble clef, one sharp key signature, a whole note on the second line (F#4) with a box containing '2'' and '+8c' above it.

Staff 4: Treble clef, one sharp key signature, a whole note on the second space (F#5) with a box containing '3'' and '+20c' above it.

Staff 5: Treble clef, one sharp key signature, a whole note on the third space (F#6) with a box containing '4'' and '+46c' above it.

Staff 6: Treble clef, one sharp key signature, a whole note on the third line (F#5) with a box containing '5'' and '-43c' below it.

Staff 7: Treble clef, one sharp key signature, a whole note on the second space (F#4) with a box containing '6'' and '-17c' below it.

Staff 8: Treble clef, one sharp key signature, a whole note on the second line (F#4) with a box containing '7'' and '-2c' below it.

Staff 9: Treble clef, one sharp key signature, a whole note on the first space (F#3) with a box containing '8'' and '+8c' above it.

Staff 10: Treble clef, one sharp key signature, a whole note on the first line (F#2) with a box containing '9'' and '+22c' above it.

Staff 11: Treble clef, one sharp key signature, a whole note on the first space (F#2) with a box containing '7'' and '+48c' above it.

Staff 12: Treble clef, one sharp key signature, a whole note on the first space (F#2) with a box containing '8'' and '-38c' below it.

Staff 13: Treble clef, one sharp key signature, a whole note on the first space (F#2) with a box containing '9'' and '-22c' below it.

10' $\sharp\circ$ -6c

11' +9c $\sharp\circ$

12' +33c $\sharp\circ$

13' +50c $\sharp\circ$ -44c

14' $\flat\circ$ -23c

15' $\flat\circ$ -4c

16' +4c $\flat\circ$

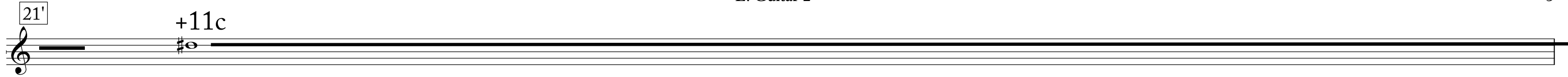
17' +22c $\flat\circ$ +32c

18' +46c $\flat\circ$ -41c

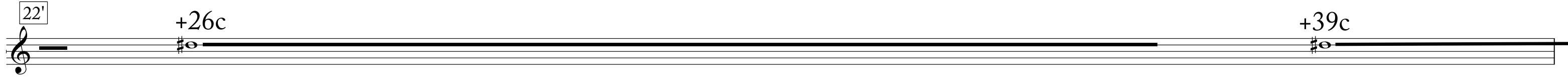
19' $\sharp\circ$ -26c

20' $\sharp\circ$ -4c

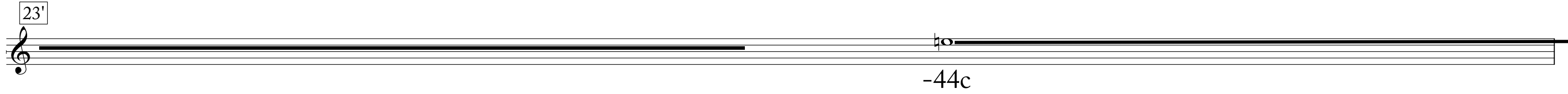
21' +11c



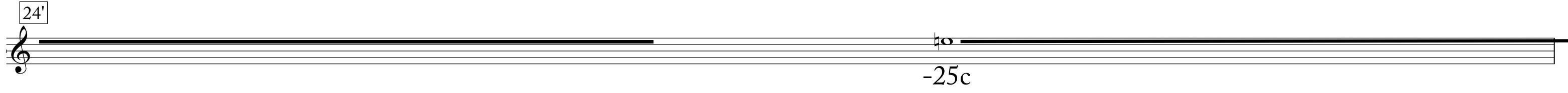
22' +26c +39c



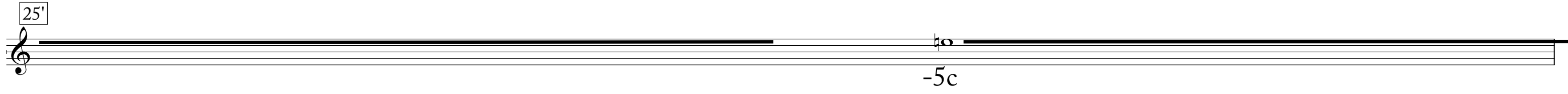
23'



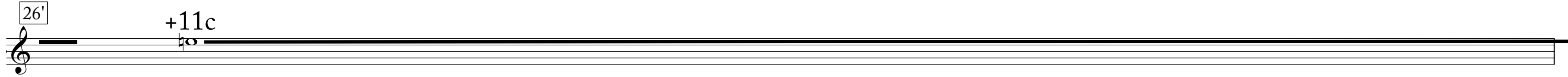
24'



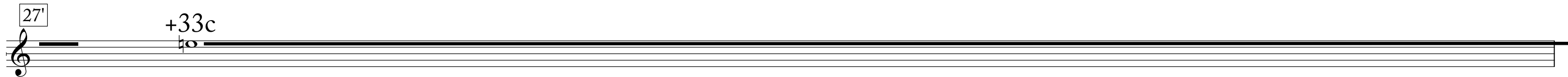
25'



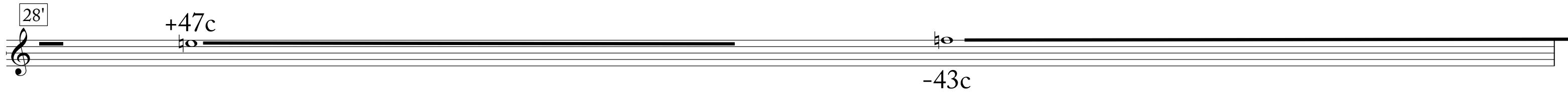
26' +11c



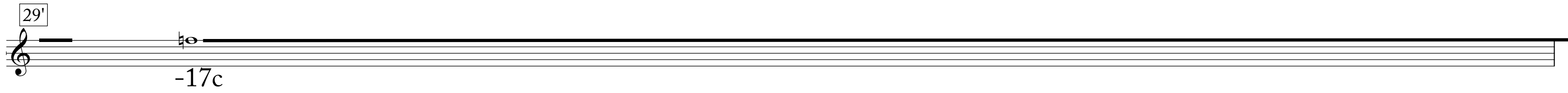
27' +33c




28' +47c -43c



29'



30'



Violin 1

Pitch Gradient with Noise #4 (in D $\frac{7}{8}$)
for the 2017 Dog Star Orchestra

Jordan Dykstra (2017)

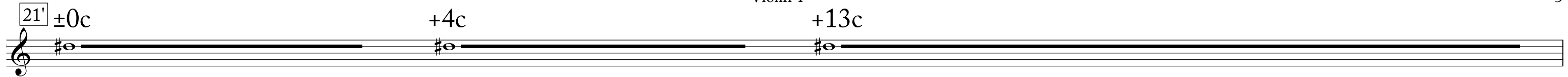
The image displays a musical score for Violin 1, consisting of nine staves. The top staff shows a single note with a fermata. The subsequent eight staves are organized into pairs, each representing a different finger position (1' to 9'). Each pair includes a staff with a treble clef and a key signature of one flat (B-flat), and a staff with a treble clef and a key signature of two flats (B-flat and E-flat). The notes in these staves are represented by thick horizontal lines. Between the two staves of each pair, numerical values in cents are provided for each of the four measures. The values for each pair are: 1' (+3c, +6c, +17c, +19c), 2' (+26c, +28c, +37c), 3' (+42c, +49c, -48c, -44c), 4' (-41c, -31c, -26c), 5' (-17c, -11c, -6c, -2c), 6' ($\pm 0c$, +9c, +16c), 7' (+19c, +26c, +32c, +38c), 8' (+47c, -48c, -43c), and 9' (-38c, -32c, -24c, -19c).

Staff	Measure 1	Measure 2	Measure 3	Measure 4
Staff 1				
Staff 2 (1')	+3c	+6c	+17c	+19c
Staff 3 (2')	+26c	+28c	+37c	
Staff 4 (3')	+42c	+49c	-48c	-44c
Staff 5 (4')	-41c	-31c		-26c
Staff 6 (5')	-17c	-11c	-6c	-2c
Staff 7 (6')	$\pm 0c$		+9c	+16c
Staff 8 (7')	+19c	+26c	+32c	+38c
Staff 9 (8')	+47c		-48c	-43c
Staff 10 (9')	-38c	-32c	-24c	-19c

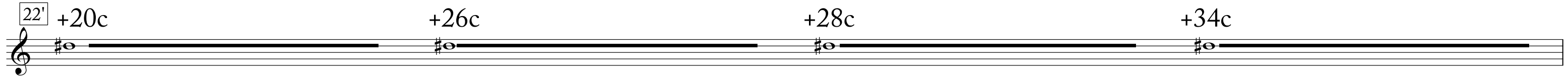
The image displays a musical score for Violin 1, page 2. It consists of ten staves, each representing a different fingering or position. Each staff begins with a boxed number (10' through 20') and a treble clef. The notes are represented by horizontal lines with a small circle at the end, indicating the finger placement. Various accidentals (sharps, naturals, and flats) are used throughout. Below each staff, there are numerical values in cents (e.g., -16c, +22c) that likely represent the pitch deviation or interval from a reference point. The staves are arranged in pairs, with the first staff of each pair having a boxed number and the second staff having numerical values.

Staff	Boxed Label	Value 1	Value 2	Value 3	Value 4
1	10'	-16c	-8c		-4c
2	11'	±0c	+4c	+8c	+13c
3	12'	+22c		+30c	+34c
4	13'	+39c	+48c		
5	14'	-38c	-27c	-47c	-42c
6	15'	-16c	-12c	-6c	-1c
7	16'	+2c	+5c	+10c	+15c
8	17'	+22c		+29c	+34c
9	18'	+41c	+48c		
10	19'	-36c	-30c	-22c	-42c
11	20'	-16c	-12c	-7c	-3c

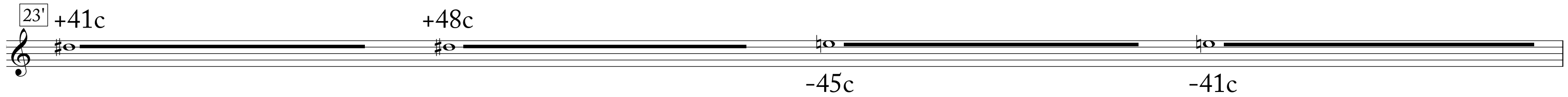
21' ±0c +4c +13c



22' +20c +26c +28c +34c



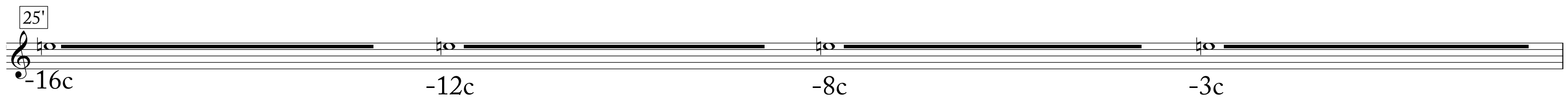
23' +41c +48c -45c -41c



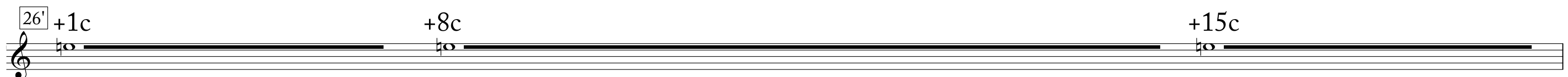
24' -31c -25c -21c



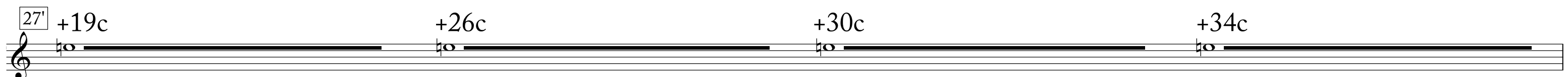
25' -16c -12c -8c -3c



26' +1c +8c +15c




27' +19c +26c +30c +34c



28' +45c -48c -42c



29' -36c -30c -25c -21c



30' -12c -7c -2c



Violin 2

Pitch Gradient with Noise #4 (in D $\frac{7}{8}$)
for the 2017 Dog Star Orchestra

Jordan Dykstra (2017)

The image displays a musical score for Violin 2, consisting of nine staves. The top staff features a single note with a fermata. The subsequent staves are marked with first positions (1' through 9') and contain various pitch gradient markings. The markings are as follows:

Staff	Position	Markings
1	1'	$\pm 0c$, +4c, +9c, +13c
2	2'	+22c, +27c, +35c
3	3'	+41c, +47c, -49c, -42c
4	4'	-32c, -26c, -20c
5	5'	-16c, -11c, -6c, -1c
6	6'	+8c, +11c, +14c
7	7'	+18c, +24c, +33c
8	8'	+42c, +49c, -47c, -42c
9	9'	-36c, -28c, -20c

10' $\sharp\circ$ -16c -12c -7c -1c

11' $\sharp\circ$ +7c +10c +14c

12' $\sharp\circ$ +19c +25c +31c +38c

13' $\sharp\circ$ +47c $\flat\circ$ -44c -39c

14' $\flat\circ$ -36c -31c -21c

15' $\flat\circ$ -17c -13c -9c -2c

16' $\flat\circ$ +4c +13c +19c

17' $\flat\circ$ +24c +29c +33c +39c

18' $\flat\circ$ +48c $\sharp\circ$ -46c -40c

19' $\sharp\circ$ -36c -30c -25c -16c

20' $\sharp\circ$ -10c -7c -1c

21' +3c +7c +18c

22' +25c +30c +35c +40c

23' +46c +50c -40c

24' -35c -31c -24c -19c

25' -10c -5c -2c

26' +4c +9c +13c +19c

27' +25c +33c +39c

28' +44c +49c -42c

29' -35c -29c -22c -16c

30' -13c -4c ±0c

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The score consists of nine staves, each representing a different finger position (1' to 9'). Each staff contains a treble clef, a key signature of one flat (Bb), and a series of notes with stems. The notes are positioned on the staff lines, and their vertical positions are indicated by pitch gradient values in cents (c). The values are: Staff 1: 0c; Staff 2: +6c, +15c, +20c; Staff 3: +27c, +31c, +35c, +39c; Staff 4: +48c, -48c, -44c; Staff 5: -38c, -34c, -29c, -23c; Staff 6: -16c, -5c, -1c; Staff 7: +2c, +5c, +10c, +17c; Staff 8: +21c, +33c, +41c; Staff 9: +45c, +49c, -48c, -44c; Staff 10: -39c, -33c, -21c.

Staff	1	2	3	4
1'	0c			
2'	+6c		+15c	+20c
3'	+27c	+31c	+35c	+39c
4'	+48c		-48c	-44c
5'	-38c	-34c	-29c	-23c
6'	-16c	-5c	-1c	
7'	+2c	+5c	+10c	+17c
8'	+21c	+33c		+41c
9'	+45c	+49c	-48c	-44c
10'	-39c	-33c	-21c	

Viola 1

10' -19c

11' +1c -14c +4c -10c +15c -4c

12' +20c +25c +30c +34c

13' +45c -48c -42c

14' -39c -33c -23c

15' -19c -15c -10c -6c

16' +6c +11c +16c

17' +21c +27c +35c

18' +42c +49c -47c -42c

19' -39c -29c -23c

20' -18c -14c -9c -5c

21' $\pm 0c$ +5c +9c +15c

22' +20c +25c +33c

23' +41c +48c -47c -42c

24' -35c -27c -23c

25' -18c -14c -5c

26' $\pm 0c$ +4c +9c +15c

27' +24c +31c +34c

28' +40c +46c -44c

29' -38c -32c -27c -23c

30' -18c -10c -3c

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The score consists of nine staves, each representing a different finger position (1' to 9'). Each staff begins with a treble clef and a common time signature (C). The first staff contains a single note on the top line of the staff with a fermata above it. The subsequent staves (2' through 9') each contain four notes, with pitch gradient instructions in centimeters (c) placed above or below each note. The instructions are: 1' (+6c, +11c, +20c), 2' (+27c, +33c, +39c, +46c), 3' (+50c, -46c, -42c), 4' (-37c, -33c, -30c, -25c), 5' (-16c, -10c, -4c), 6' (+3c, +10c, +19c), 7' (+24c, +29c, +36c, +41c), 8' (+48c, -47c, -41c), and 9' (-36c, -25c, -18c).

Finger Position	Note 1	Note 2	Note 3	Note 4
1'	+6c	+11c	+20c	
2'	+27c	+33c	+39c	+46c
3'	+50c	-46c	-42c	
4'	-37c	-33c	-30c	-25c
5'	-16c	-10c	-4c	
6'	+3c	+10c	+19c	
7'	+24c	+29c	+36c	+41c
8'	+48c	-47c	-41c	
9'	-36c	-25c	-18c	

10' # # # #

-12c -8c -4c -1c

11' +7c +15c +17c

12' +22c +30c +40c

13' +44c +49c -46c -40c

14' -33c -22c -20c

15' -17c -12c -8c -1c

16' +9c +14c +22c

17' +28c +33c +39c +42c

18' +50c -46c -40c

19' # # # #

-37c -30c -26c -20c

20' # # #

-17c -5c -2c

Viola 2

21' +3c +7c +12c +20c

22' +25c +30c +33c

23' +39c +44c -45c

24' -40c -34c -30c -25c

25' -14c -8c -2c

26' +6c +10c +16c +25c

27' +33c +39c +44c

28' +48c +50c -47c -44c

29' -34c -27c -20c

30' -17c -11c ±0c

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The image displays a musical score for Cello 1, consisting of nine staves. The first staff is a standard musical staff with a treble clef and a single note (D4) on the second line. The subsequent eight staves are simplified, each starting with a boxed number (1' through 9') and containing three notes on a single line. Each note is accompanied by a performance instruction in cents (c). The notes are positioned on the first, second, and third lines of the staff, corresponding to the notes D4, E4, and F4. The performance instructions are: 1' ±0c, 2' +28c, 3' +40c, 4' -39c, 5' -19c, 6' ±0c, 7' +20c, 8' +45c, and 9' -34c. Additionally, there are performance instructions for intervals between notes: +7c, +17c, +35c, +46c, -43c, -32c, -24c, -15c, -6c, +17c, +29c, +41c, +49c, -43c, -24c, and -18c.

Staff	Instruction
1	±0c
2	+28c
3	+40c
4	-39c
5	-19c
6	±0c
7	+20c
8	+45c
9	-34c

Interval instructions:

Interval	Instruction
1-2	+7c
2-3	+17c
3-4	+35c
4-5	+46c
5-6	-43c
6-7	-32c
7-8	-24c
8-9	-15c
9-10	-6c
10-11	+17c
11-12	+29c
12-13	+41c
13-14	+49c
14-15	-43c
15-16	-24c
16-17	-18c

10' -11c

11' +8c -4c -1c +15c

12' +20c +31c +37c

13' +41c +48c -43c

14' -36c -21c

15' -14c -8c -2c

16' +3c +5c +15c

17' +29c +36c

18' +42c +49c -44c

19' -32c -24c

20' -19c -15c -6c

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The score consists of nine staves, each representing a different fingering or position for the cello. The first staff shows a single note on the top line of the staff. The subsequent staves (1' through 9') show notes on the staff with various performance instructions in centimeters (c). The instructions are as follows:

- 1' $\pm 0c$, +7c, +11c
- 2' +28c, +33c, +44c
- 3' -47c, -40c
- 4' -27c, -14c
- 5' -11c, -7c, -2c
- 6' +8c, +14c
- 7' +18c, +27c, +31c
- 8' +40c, +47c, -41c
- 9' -33c, -28c, -22c

10' -18c -11c -5c

11' +9c +14c

12' +19c +28c +37c

13' +44c +50c -42c

14' -33c -29c -22c

15' -14c -8c -1c

16' +7c +12c +20c

17' +23c +33c +39c

18' +44c +49c -44c

19' -35c -31c -22c

20' -9c -1c

21' +11c

22' +24c +30c +36c

23' +44c +48c -42c

24' -32c -22c

25' -14c -7c

26' +4c +14c +22c

27' +26c +37c +44c

28' +50c -44c

29' -37c -30c

30' -14c -5c

Pitch Gradient with Noise #4 (in D $\frac{4}{4}$)
for the 2017 Dog Star Orchestra

The musical score consists of nine staves, each representing a different fingering or position. The notes are marked with performance instructions:

- Staff 1: A whole note on the first line (A4).
- Staff 2: A whole note on the first space (B3), marked with a first fingering box $1'$ and $\pm 0c$.
- Staff 3: A whole note on the second space (C4), marked with a second fingering box $2'$ and $+35c$.
- Staff 4: A whole note on the second line (B3), marked with a third fingering box $3'$ and $+49c$. A second whole note on the second space (C4) is marked with $-46c$.
- Staff 5: A whole note on the second space (C4), marked with a fourth fingering box $4'$ and $-23c$.
- Staff 6: A whole note on the third space (D4), marked with a fifth fingering box $5'$ and $-4c$. A second whole note on the third line (C4) is marked with $+12c$.
- Staff 7: A whole note on the third line (C4), marked with a sixth fingering box $6'$ and $\pm 0c$. A second whole note on the fourth space (D4) is marked with $+45c$.
- Staff 8: A whole note on the fourth space (D4), marked with a seventh fingering box $7'$. A second whole note on the fourth line (C4) is marked with $-43c$.
- Staff 9: A whole note on the fourth line (C4), marked with an eighth fingering box $8'$ and $-22c$.

Musical score for Double Bass 1, page 2. The score consists of ten staves, each with a treble clef and a key signature of one sharp (F#). The notes and fingerings are as follows:

- Staff 1: Note 10' (F#4), fingering -7c.
- Staff 2: Note 11' (F#5), fingering +5c.
- Staff 3: Note 12' (F#6), fingering +31c.
- Staff 4: Note 13' (F#7), fingering +48c. Note 14' (F#8), fingering -33c.
- Staff 5: Note 15' (F#8), fingering -9c.
- Staff 6: Note 16' (F#9), fingering ±0c. Note 17' (F#9), fingering +25c.
- Staff 7: Note 18' (F#9), fingering +50c.
- Staff 8: Note 19' (F#9), fingering -27c.
- Staff 9: Note 20' (F#9), fingering -5c.

21' +11c

Musical staff 21' showing a treble clef, a sharp sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff.

22' +30c

Musical staff 22' showing a treble clef, a sharp sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff.

23' +48c

Musical staff 23' showing a treble clef, a sharp sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff.

24' -31c -9c

Musical staff 24' showing a treble clef, a flat sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff. A second flat sign and a whole note on the first line are shown further to the right, with a thick black line extending to the right edge of the staff.

25'

Musical staff 25' showing a treble clef and a thick black line extending from the left edge to the right edge of the staff.

26' ±0c +25c

Musical staff 26' showing a treble clef, a flat sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff. A second flat sign and a whole note on the first line are shown further to the right, with a thick black line extending to the right edge of the staff.

27'

Musical staff 27' showing a treble clef and a thick black line extending from the left edge to the right edge of the staff.

28' +49c

Musical staff 28' showing a treble clef, a flat sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff.

29' -24c -17c

Musical staff 29' showing a treble clef, a flat sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff. A second flat sign and a whole note on the first line are shown further to the right, with a thick black line extending to the right edge of the staff.

30' -3c

Musical staff 30' showing a treble clef, a flat sign on the first line, and a whole note on the first line. A thick black line extends from the note to the right edge of the staff.

Pitch Gradient with Noise #4 (in D 4/4)
for the 2017 Dog Star Orchestra

The score consists of nine staves, each representing a different finger position (1' to 9'). Each staff begins with a treble clef and a key signature of one flat (B-flat). The notation includes various note values and rests, with specific performance instructions in centimeters (c) indicating finger placement or movement. A circled 'i' is positioned above the first staff. The instructions are as follows:

- Staff 1: i
- Staff 2: $1'$ +2c, +14c
- Staff 3: $2'$, +43c
- Staff 4: $3'$, -44c
- Staff 5: $4'$, -22c
- Staff 6: $5'$, -5c
- Staff 7: $6'$, +11c, +24c
- Staff 8: $7'$, +42c
- Staff 9: $8'$, -40c
- Staff 10: $9'$, -18c

10' $\sharp\circ$ -4c

11' +8c $\sharp\circ$

12' +32c $\sharp\circ$

13' +50c $\sharp\circ$ -44c $\flat\circ$

14' $\flat\circ$ -29c

15' $\flat\circ$ -6c

16' +8c $\flat\circ$ +19c $\flat\circ$

17' +38c $\flat\circ$

18' +50c $\flat\circ$

19' $\sharp\circ$ -31c

20' $\sharp\circ$ -12c

21' +12c
#o

22' +32c
#o

23' -40c
bo

24' -23c
bo

25' -3c
bo

26' +9c
bo

27' +20c
bo

28' +47c -36c
bo

29' -18c
bo

30' ±0c
bo