

Lagrange Point

for spatialized chamber ensemble

Jordan Nobles

Dedicated to Neil deGrasse Tyson
Regina/North Vancouver, June 2012

Lagrange Point

for spatialized chamber ensemble

About the Piece

Lagrange Point was commissioned by the Turning Point ensemble and premiered on June 21, 2012. It is dedicated to Neil deGrasse Tyson.

PROGRAMME NOTES

A Lagrange Point (named after the Italian-French mathematician Joseph Louis Lagrange) is a position in an orbital configuration of two large bodies where a smaller object, affected only by the combined gravitational pull of the two large masses, can be stationary relative to them (such as a satellite with respect to the Earth and Moon). It is a point in space where the object can theoretically be suspended as each large mass exerts an equal influence upon it. This piece is an attempt to suspend the music at its own "Lagrange point" between motion and silence.

Performance Notes

MELODIC CELLS

- *Lagrange Point* is made of numerous melodic cells. Musicians perform any cell, in any order, in their own time, as expressively as possible, for the durations indicated.
- there is no synchronization required or desired in this piece.
- what cells to play, and when to play them, should be decided by each musician independently as long as they are responsive to the other players. A good rule is to stop after completing a cell and listen for a moment before joining in again. Musicians in smaller ensembles can play more often but in larger ensembles should play less often to give space throughout the performance.
- the duration of the piece is variable but should be worked out ahead of time. Players should decide how long to perform and how to end; whether stopping all together or dropping out one at a time.

FORM

Ideally the piece should start with a few quiet long tones played by the sustaining instruments and, after a short time, the various melodic material should be introduced. Likewise it could end with a few of the long tones trailing off and fading out after everything else has stopped.

SPATIALIZATION

Lagrange Point is written for the performers to be spatially spread about the performance space, preferably surrounding the audience. While it is not vital for the piece to be performed this way, a spatial distribution of musicians will greatly enhance the effect of the piece.

The exact layout will vary depending on the venue and is not important as long as they are evenly distributed throughout the space. Balconies, lofts, etc. can also be utilized as well. Also, if possible, similar instruments (winds, strings, etc.), should not stand together as would be the norm in an orchestral layout but instead should be separated so each member of the group is in a different area of the venue from similar instruments.

Note: It may be beneficial to rehearse the piece, at first, in a standard layout with all of the musicians together. Then, once the piece is learned, it can be spread out and rehearsed in a spatial configuration.

Lagrange Point

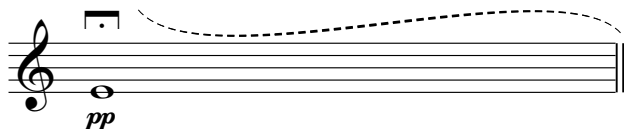
for spatialized chamber ensemble

Jordan Nobles

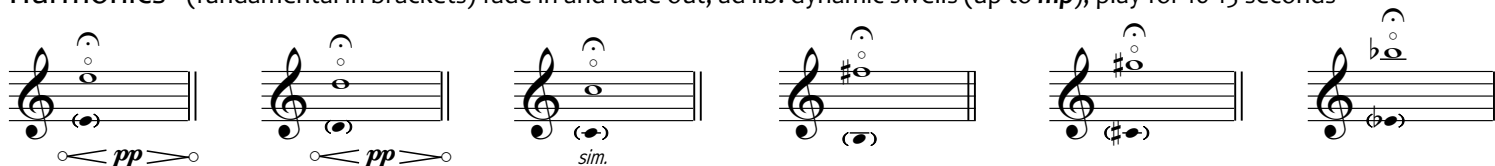
Dedicated to Neil deGrasse Tyson

Play any cells, in any order

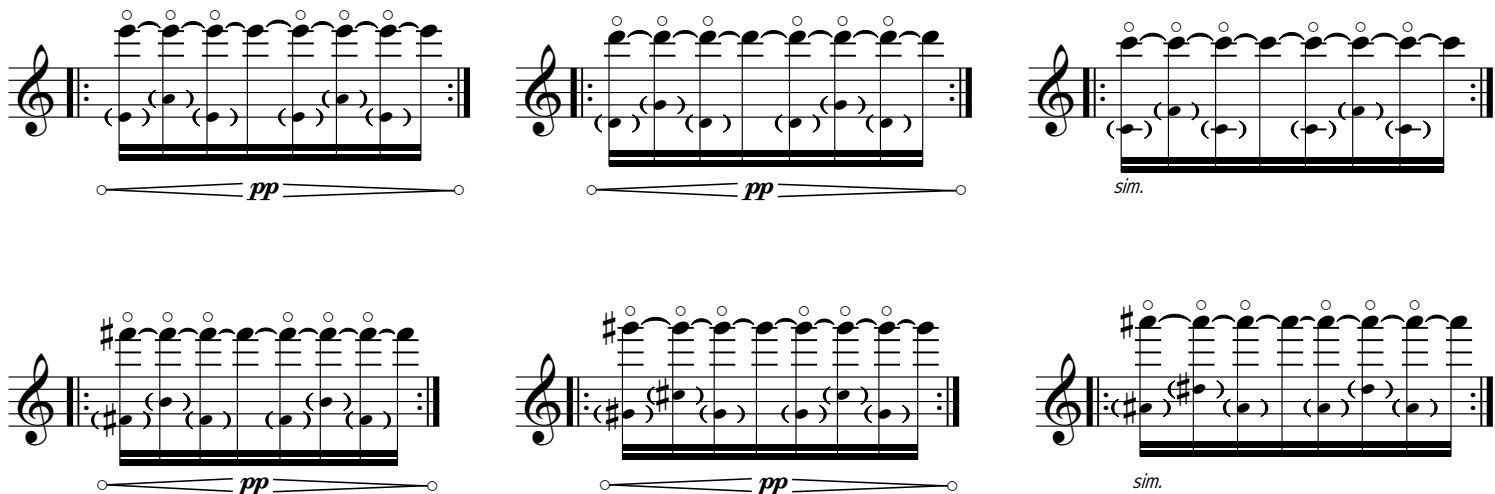
Whistle Tone - slow, ad lib., continue for 10-20 seconds



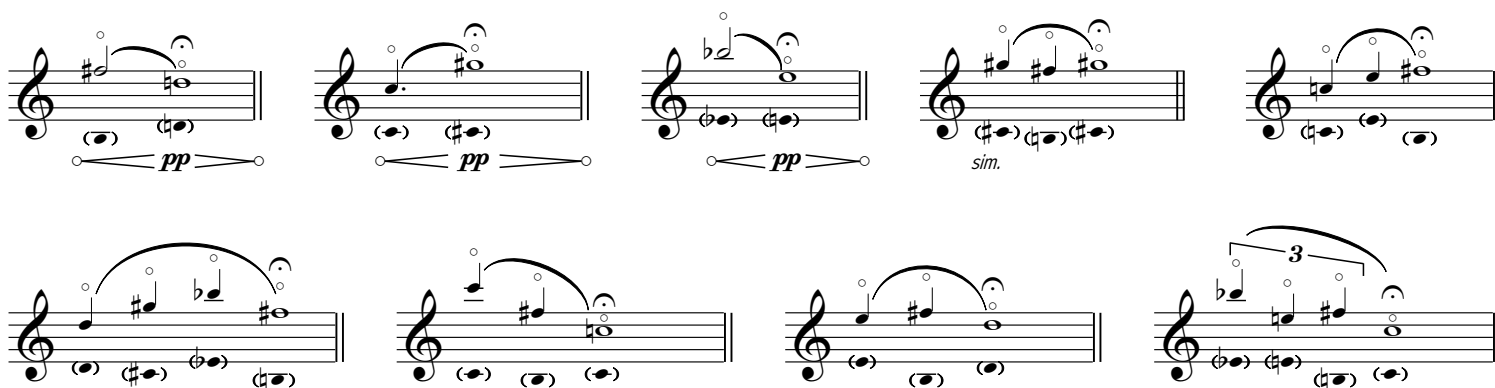
Harmonics - (fundamental in brackets) fade in and fade out, ad lib. dynamic swells (up to **mp**), play for 10-15 seconds



'Shimmering Harmonics' (timbral trill a la George Crumb) - fade in and out, ad lib. swells (up to **mp**), play for 10-15 seconds



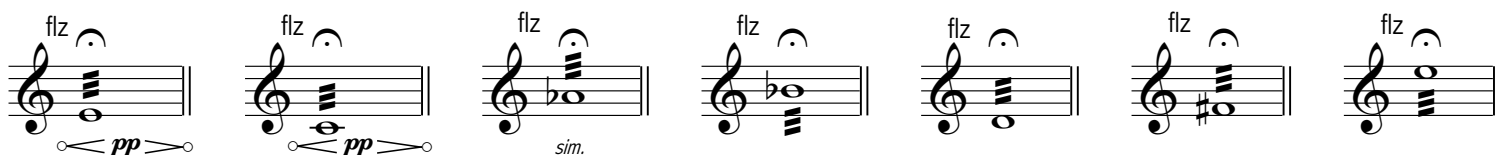
Harmonic Melodies - fade in and fade out, ad lib. dynamic swells (up to **mp**), play for 10-15 seconds



Trills - 10 to 15 seconds, fast trill, fade in and fade out (play in other octaves if desired)



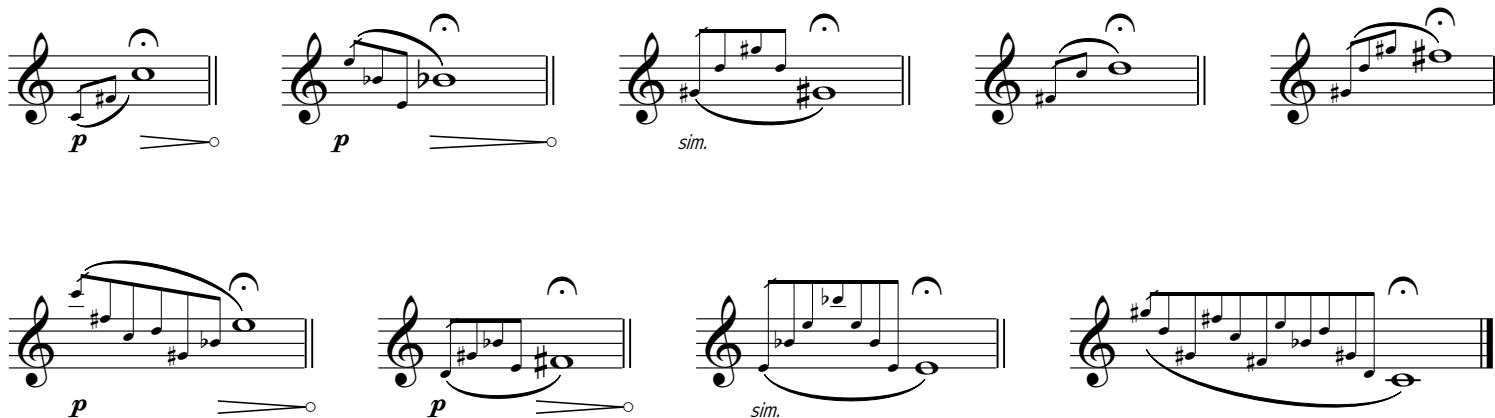
Flutter Tongue - very quietly and subtle, hold for 5-10 seconds, fading in and out



Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



Grace Notes - quiet and subtle, fade out



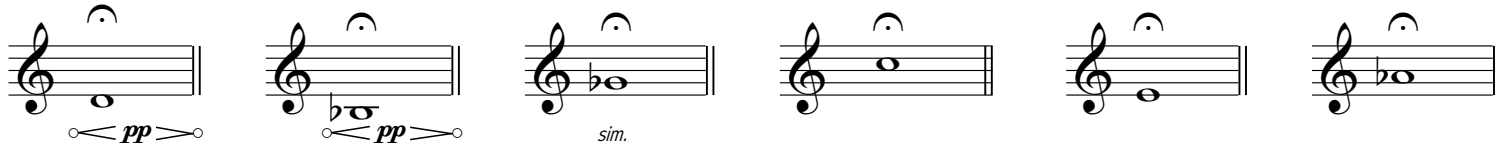
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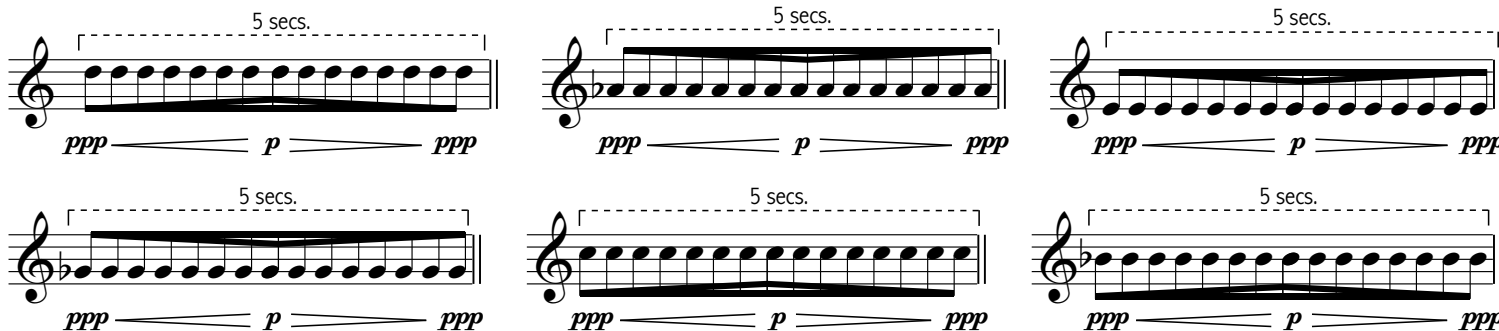
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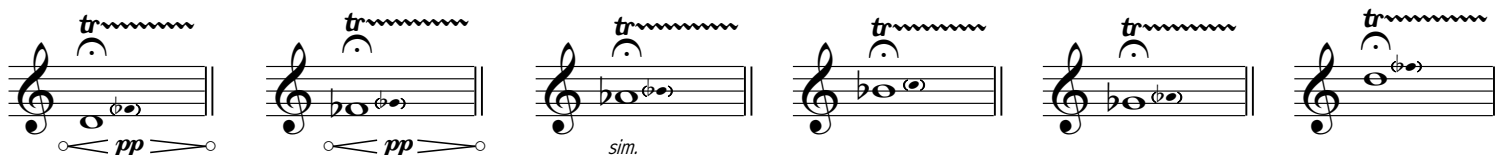
Play any cells, in any order

Long Tones - fade in and fade out, ad lib. dynamic swells (up to *mp*), play for 10-15 seconds, play in other octaves if desired

Pulse - very quietly pulse for 5-10 seconds, fading in and out, accel and decel with the dynamic, play in other octaves if desired



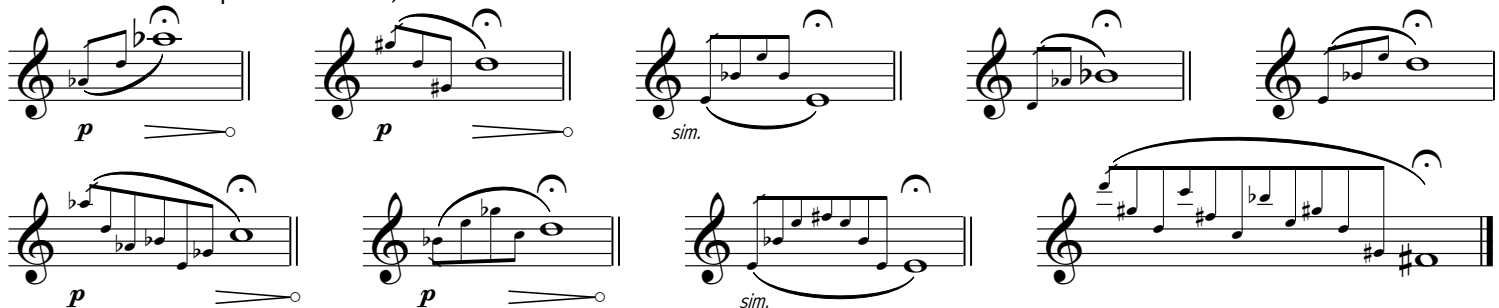
Trills - 10 to 15 seconds, fade in and fade out, vary the speed of the trill with the dynamic, play in other octaves if desired



Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



Grace Notes - quiet and subtle, fade out



Clarinet in B \flat
(or Bass Clarinet)

Lagrange Point

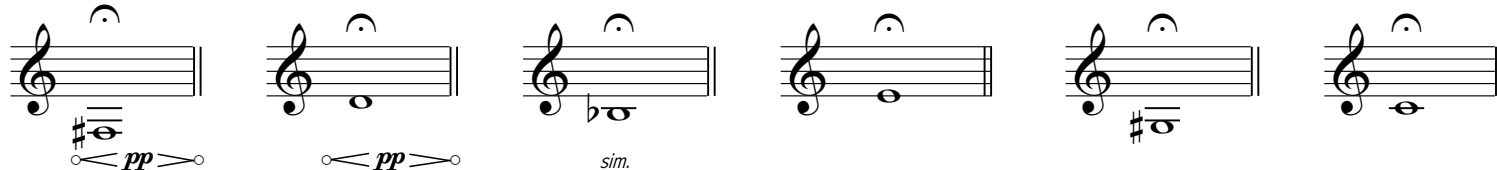
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Play any cells, in any order

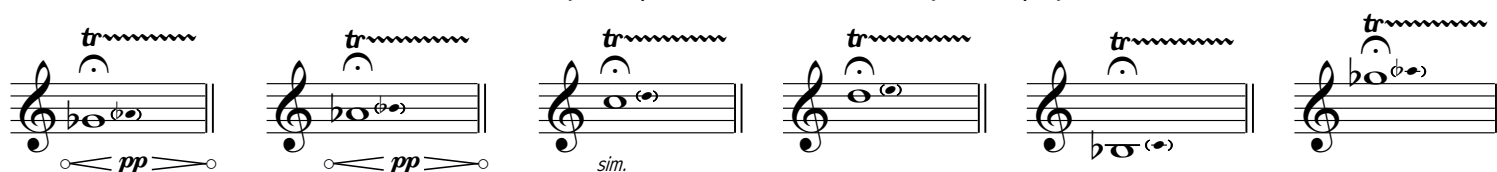
Long Tones - fade in and fade out, ad lib. dynamic swells (up to **mp**), play for 10-15 seconds, play in other octaves if desired



Flutter Tongue - very quietly and subtle, hold for 10-15 seconds, fading in and out



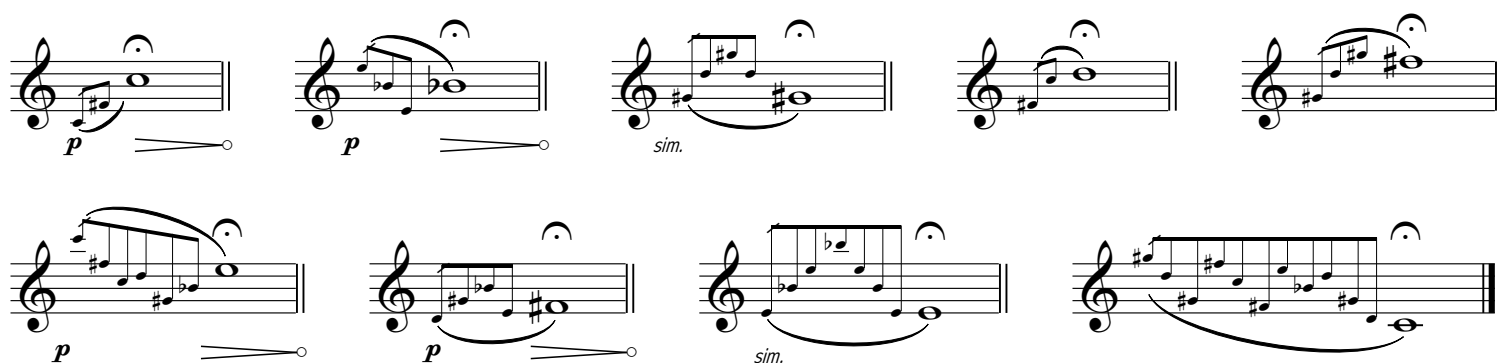
Trills - 10 to 15 seconds, fade in and fade out, vary the speed of the trill with the dynamic, play in other octaves if desired



Melodic Cells - $\text{half note} = 60$ or slower, play in other octaves if desired as long as they can be quiet and very legato



Grace Notes - quiet and subtle, fade out



Lagrange Point

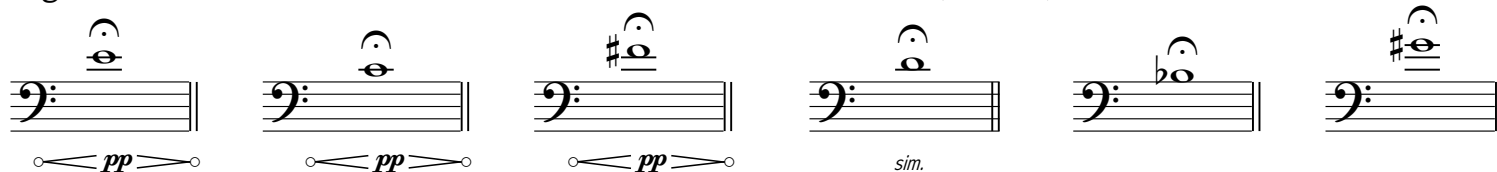
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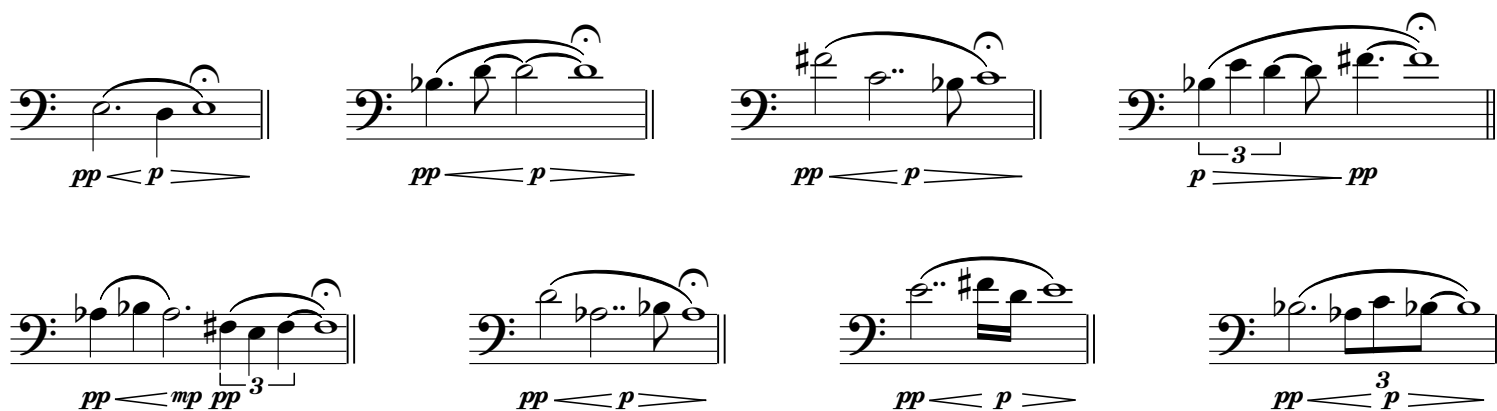
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Play any cells, in any order

High tones - hold for 10-20 seconds each, fade in and out, ad lib. dynamic swells (up to **mp**)



Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



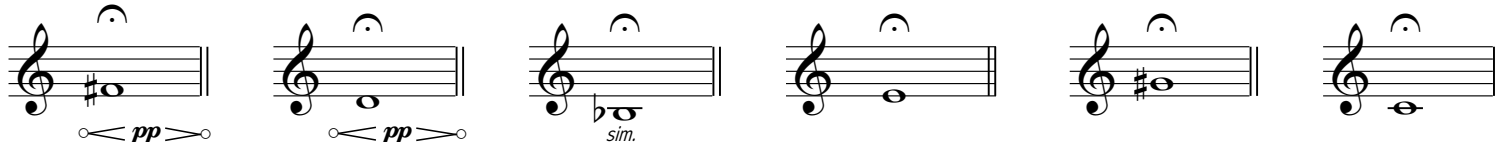
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Play any cells, in any order

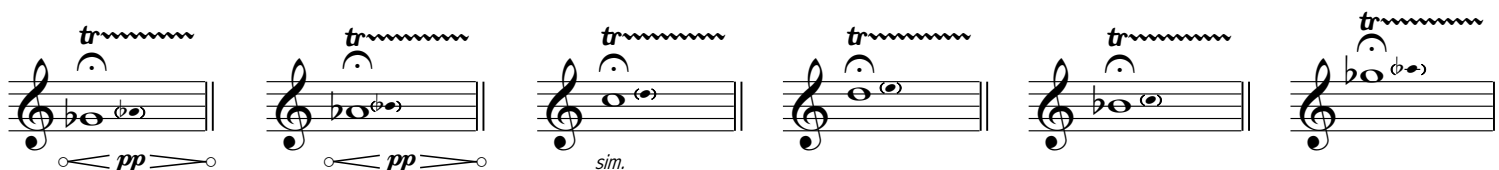
Long Tones - fade in and fade out, ad lib. dynamic swells (up to **mp**), play for 10-15 seconds, play in other octaves if desired



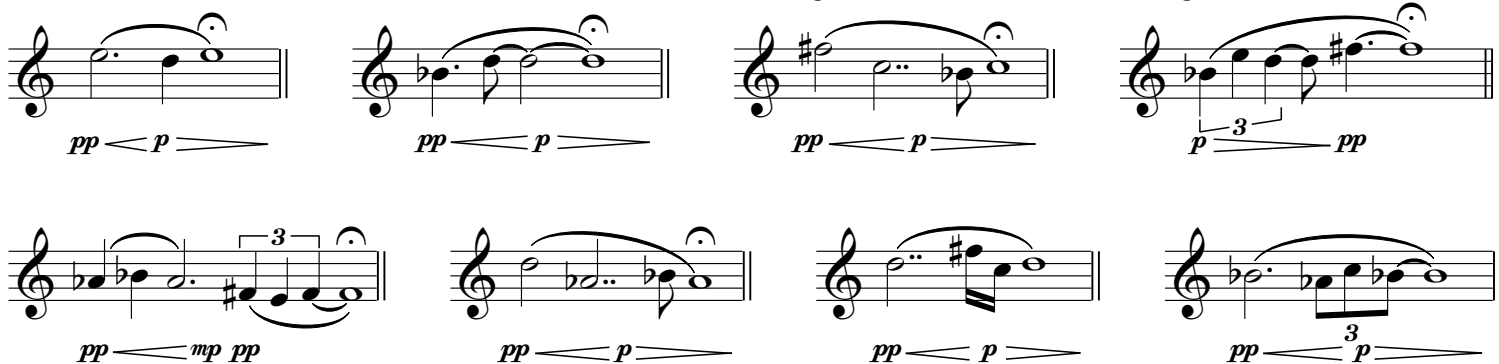
Flutter Tongue - very quietly and subtle, hold for 10-15 seconds, fading in and out



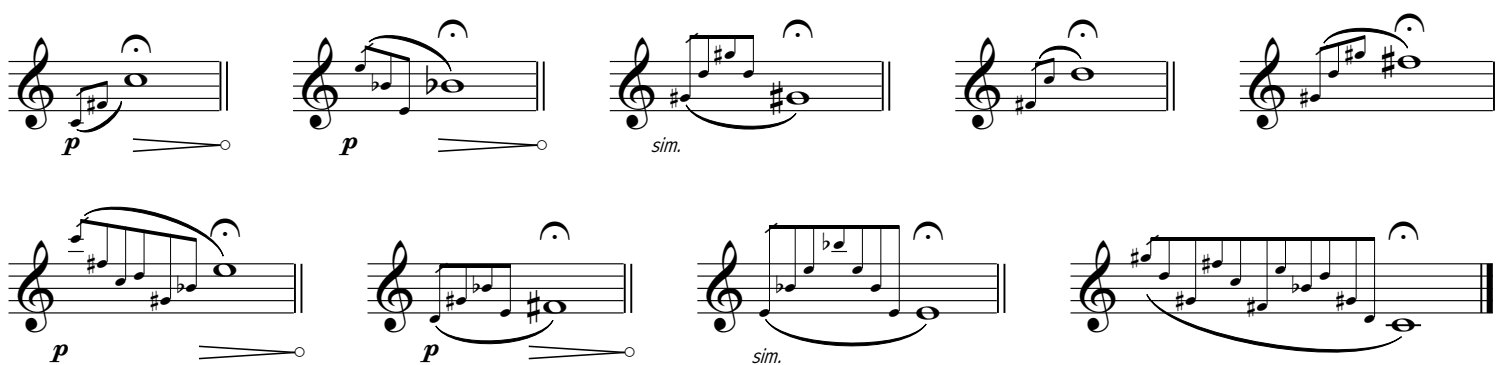
Trills - 10 to 15 seconds, fade in and fade out, vary the speed of the trill with the dynamic, play in other octaves if desired



Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



Grace Notes - quiet and subtle, fade out




Harp

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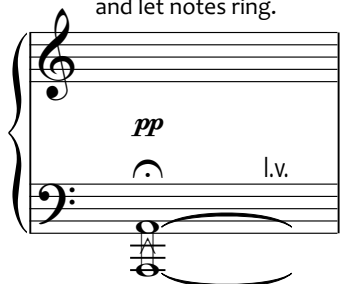
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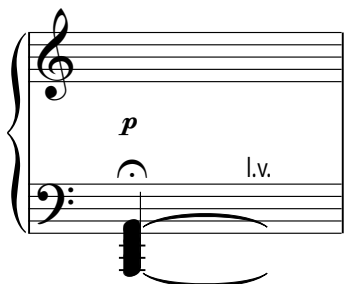
Play any cells in any order; let all notes ring throughout; initial pedal positions: D \sharp C \sharp B \flat | E \sharp F \flat G \flat A \flat 

Effects - very softly, and infrequently

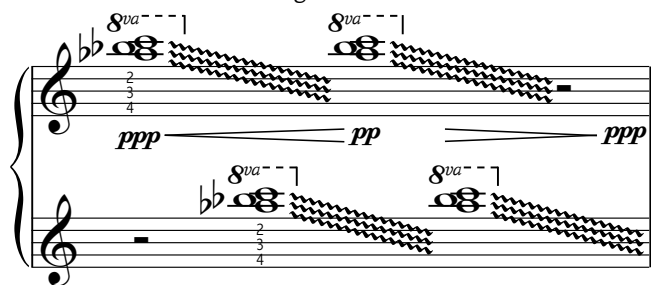
Whistle Sound: Slide left hand lengthwise on the wire strings very slowly, release at the top and let notes ring.



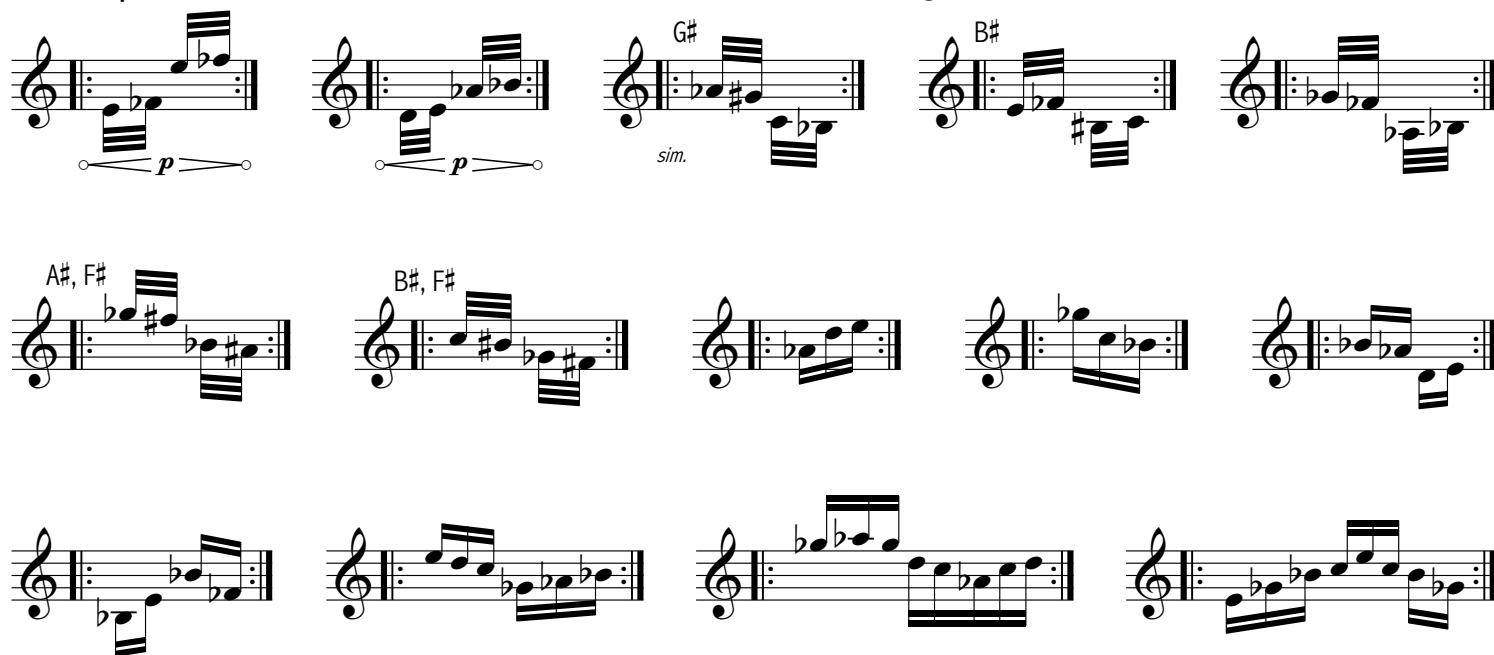
Gong Sound: Hit, with an open palm, a large cluster of low wire strings, like a quiet gong. Let ring.



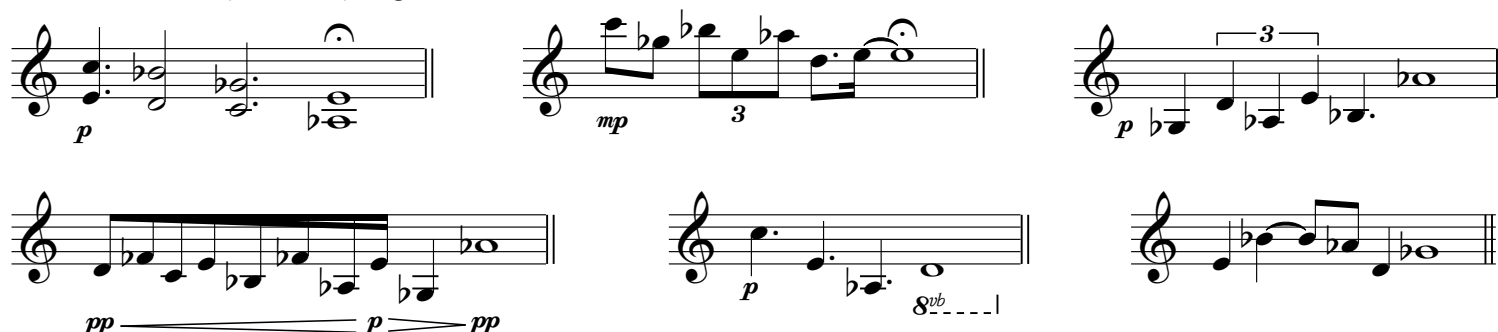
Falling-hail Effect: very slow, very quiet descending glisses with the back of the fingernails. Fade in and out.



Fast Repeated Cells - repeat for 10 -15 sec., fade in and out, very quiet and legato, accel. and decel with volume, play in any octave

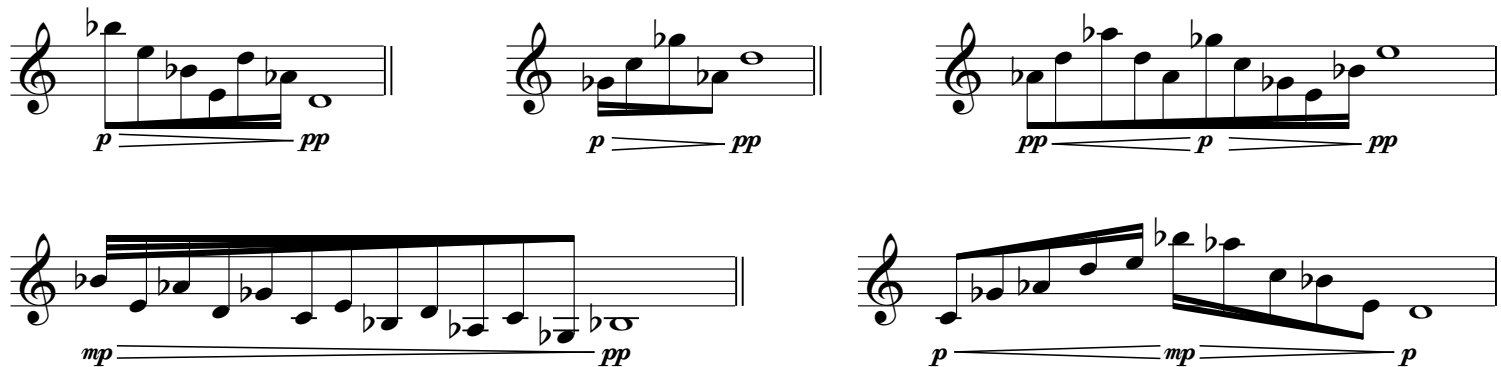


Melodic Cells - ($\text{half note} = 60-90$) - legato, do not repeat, molto espressivo, play in any octave



Harp

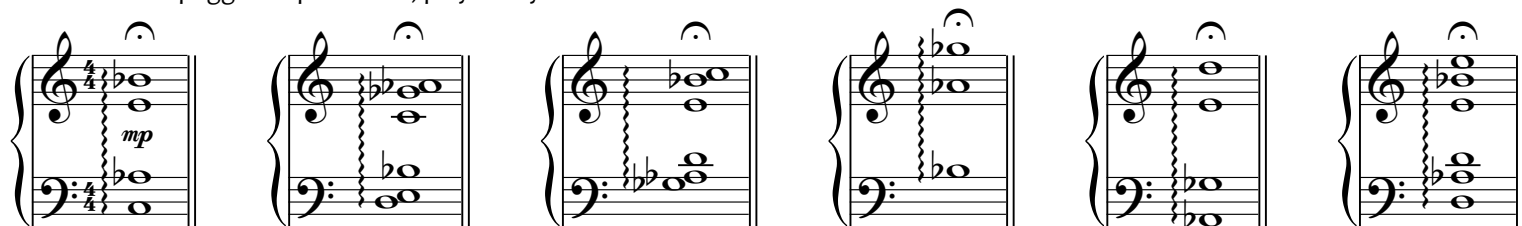
Melodic Cells cont. - (♩ = 60-90) - legato, do not repeat, molto espressivo, play in any octave



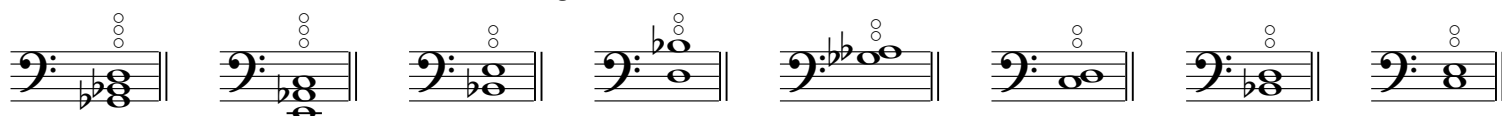
Ostinati - (♩ = 80-120) - very rubato, accel and decel freely, repeat as long as desired, change octaves with either hand freely



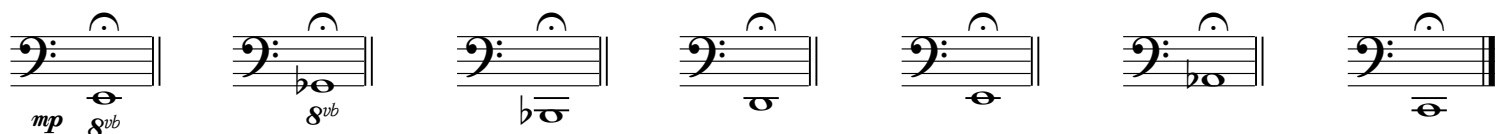
Chords - arpeggiate up or down, play in any octave



Harmonic Chords - play in any octave as long as they resonate well



Low Notes - play anytime (even while playing another cell), let ring, do not repeat immediately after



Piano

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Play any cells in any order, sustain pedal down throughout

High Tones - slowly, quietly and sparsely, very rubato, avoid a regular rhythm or pulse

8^{va}

pp

Ped.

15^{ma}

pp

Ped.

Fast Repeated Cells - repeat for 10 -15 sec., fade in and out, very quiet and legato, accel. and decel with volume

p

p

sim.

p

p

p

p

p

p

p

Pulses - (♩=60 or slower) play in any mid to octaves, keep sustain pedal down between cells

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

decel

pp

p

pp

Ped.

Low Notes - play anytime (even while playing another cell), let ring, do not repeat immediately after

mp

8^{vb}

Ped.

8^{vb}

8^{vb}

8^{vb}

8^{vb}

8^{vb}

Melodic Cells - (♩ = 60-90) - legato, do not repeat, molto espressivo, play in any octave

The image displays ten musical staves, each illustrating a different dynamic or articulation concept. The staves are arranged in four rows:

- Staff 1:** Features a piano (*p*) dynamic marking. The music consists of a series of chords, with the final chord being a whole note chord.
- Staff 2:** Features a mezzo-piano (*mp*) dynamic marking. It includes a triplet of eighth notes.
- Staff 3:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 4:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 5:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 6:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 7:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 8:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 9:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.
- Staff 10:** Features a piano (*p*) dynamic marking. It includes a triplet of eighth notes.

Ostinati - (♩ = 80-120) - very rubato, accel and decel freely, repeat as long as desired, change octaves with either hand freely

The image displays a musical score for 'The Swan' by Camille Saint-Saëns, specifically the piano introduction and the beginning of the waltz section. The score is written for piano (pp) and includes a pedal point (Ped.) instruction.

First System (Piano Introduction):

- Staff 1 (Treble Clef):** The melody begins with a half note G4, followed by quarter notes A4, B4, and C5. The phrase concludes with a half note G4.
- Staff 2 (Bass Clef):** The accompaniment consists of a steady eighth-note pattern starting on C3, moving up stepwise to G3.
- Dynamic:** The piece begins with a piano (*pp*) dynamic marking.
- Pedal:** A 'Ped.' instruction with a line and arrow indicates the sustain pedal is to be held throughout this section.

Second System (Waltz Section):

- Staff 1 (Treble Clef):** The melody continues with a half note B4, followed by quarter notes A4, G4, and F#4. The phrase concludes with a half note B4.
- Staff 2 (Bass Clef):** The accompaniment continues with the same eighth-note pattern, now starting on D3 and moving up stepwise to A3.
- Dynamic:** The piece continues with a piano (*pp*) dynamic marking.
- Pedal:** A 'Ped.' instruction with a line and arrow indicates the sustain pedal is to be held throughout this section.

Chords - arpeggiate up or down, play in any octave

Figure 1 shows the first six measures of the piano introduction in Schubert's 'The Trout'. The notation is in treble and bass clefs, with a key signature of one flat (B-flat). The first measure is marked 'mp' (mezzo-piano). The notation includes various musical symbols such as notes, rests, and dynamic markings.

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Humming - hold for a full breath, always quiet, play in whatever octave fits your range best
(Optional - open to any vowel and close again to mmm)

Humming exercises (pp):

- Exercise 1: Half note C4, mmm
- Exercise 2: Half note D4, mmm
- Exercise 3: Half note E4, mmm
- Exercise 4: Half note F4, mmm
- Exercise 5: Half note G4, mmm
- Exercise 6: Half note A4, mmm

Longer humming exercises (pp) with slurs and breath marks:

- Exercise 7: Slur from D4 to A4, mmm
- Exercise 8: Slur from E4 to A4, mmm
- Exercise 9: Slur from F4 to A4, mmm
- Exercise 10: Slur from G4 to A4, mmm
- Exercise 11: Slur from A4 to G4, mmm
- Exercise 12: Slur from A4 to F4, mmm

Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato

Melodic Cells (pp):

- Exercise 1: Slur from D4 to A4, mmm
- Exercise 2: Slur from E4 to A4, mmm
- Exercise 3: Slur from F4 to A4, mmm

Melodic Cells (pp and p):

- Exercise 4: Slur from D4 to A4, [u] [o]
- Exercise 5: Slur from E4 to A4, [i]
- Exercise 6: Slur from F4 to A4, [u]

Melodic Cells (pp and p):

- Exercise 7: Slur from G4 to A4, [o]
- Exercise 8: Slur from A4 to G4, [a] 3
- Exercise 9: Slur from A4 to G4, [o] [i] 3

Melodic Cells (pp and p):

- Exercise 10: Slur from A4 to G4, [e]
- Exercise 11: Slur from A4 to G4, [o]
- Exercise 12: Slur from A4 to G4, [u] 3

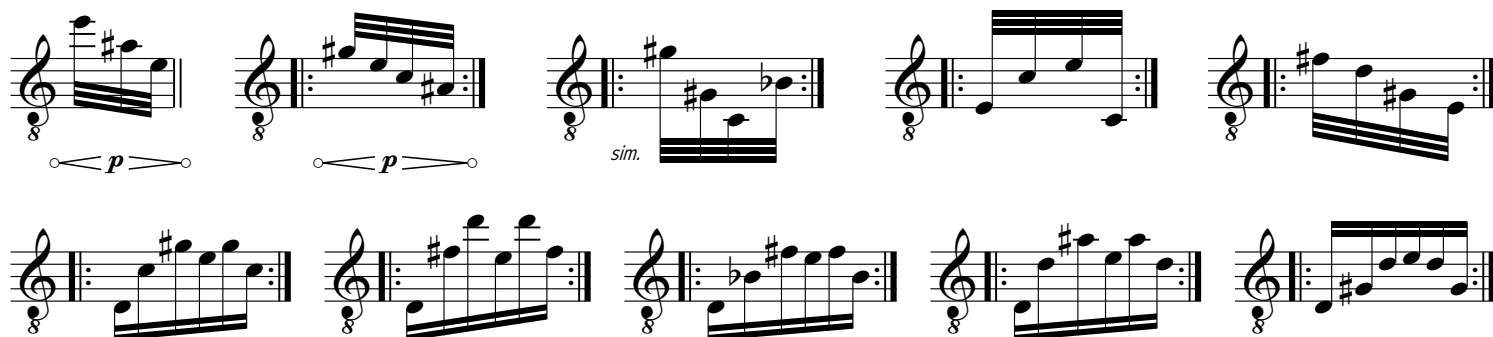
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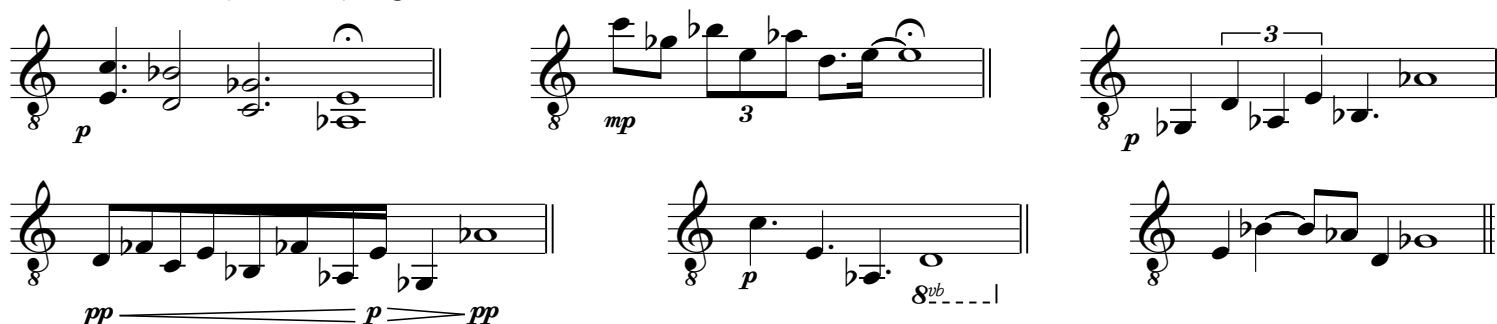
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Play any cells in any order; let all notes ring as much as possible

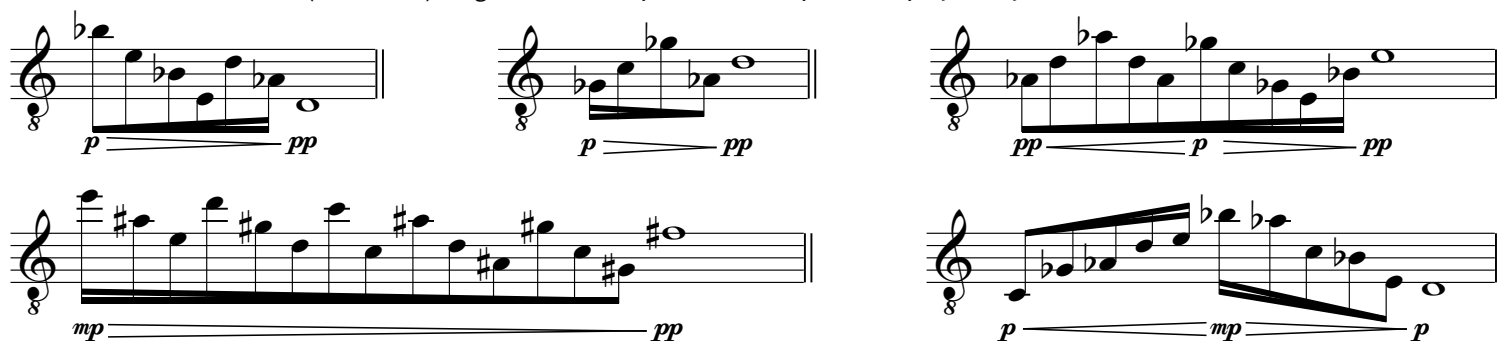
Fast Repeated Cells - repeat for 10 -15 sec., fade in and out, very quiet and legato, accel. and decel with volume



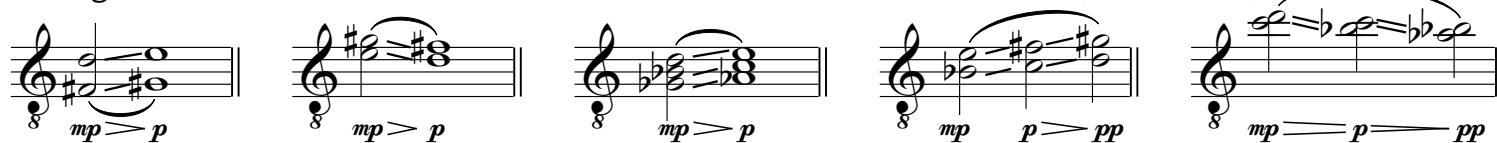
Melodic Cells - ($\text{♩} = 60-90$) - legato, do not repeat, molto espressivo, play in any octave



Melodic Cells cont. - ($\text{♩} = 60-90$) - legato, do not repeat, molto espressivo, play in any octave



Sliding Chords - play the first chord, hold a second, and then slide up or down a whole step (do not restrike)



Natural or Artificial Harmonics - let ring



Marimba

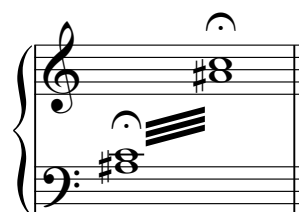
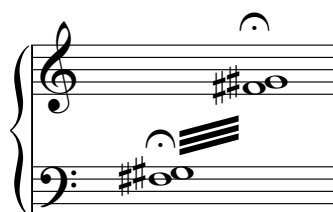
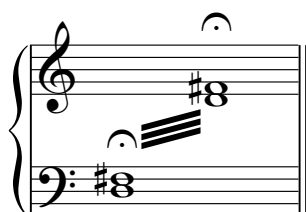
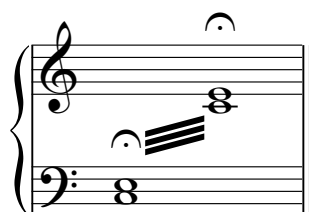
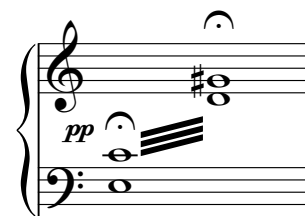
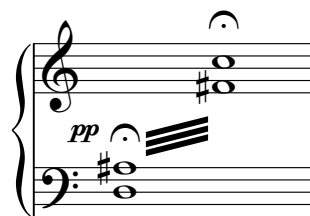
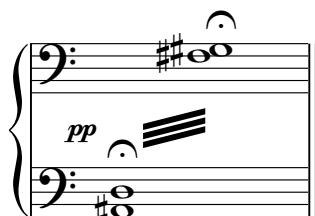
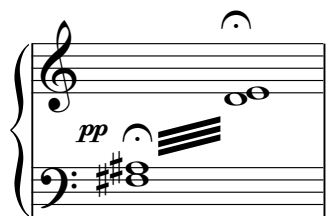
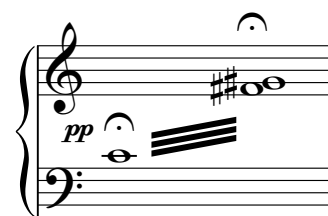
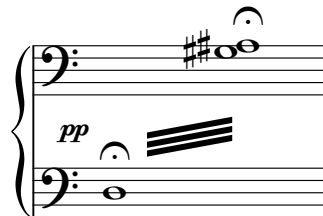
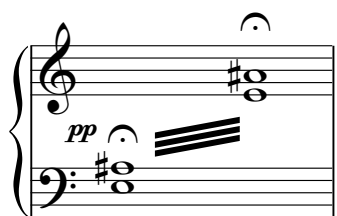
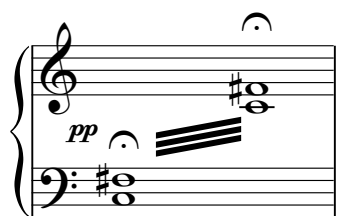
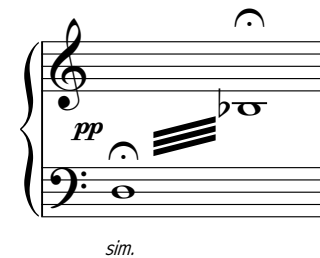
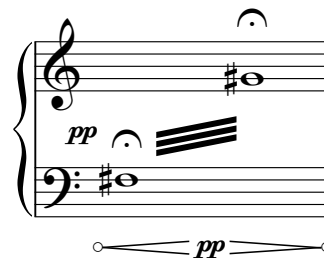
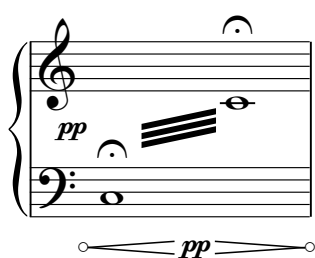
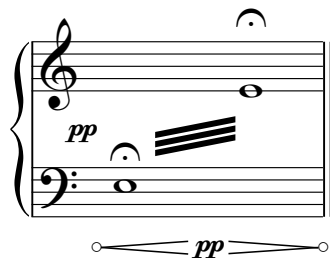
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Play any cells in any order

Fast quiet Tremolos - play for 10 - 20 seconds, fading in and fading out. Use VERY soft mallets



Vibraphone

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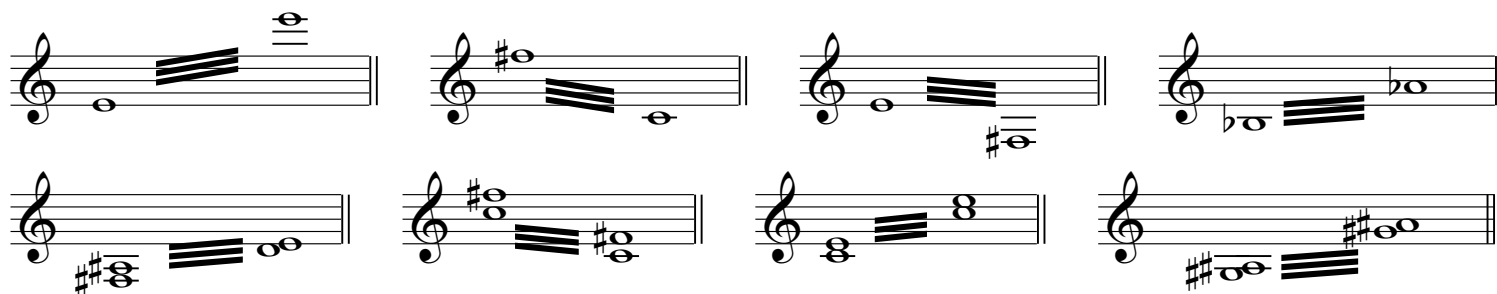
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Play any cells, in any order

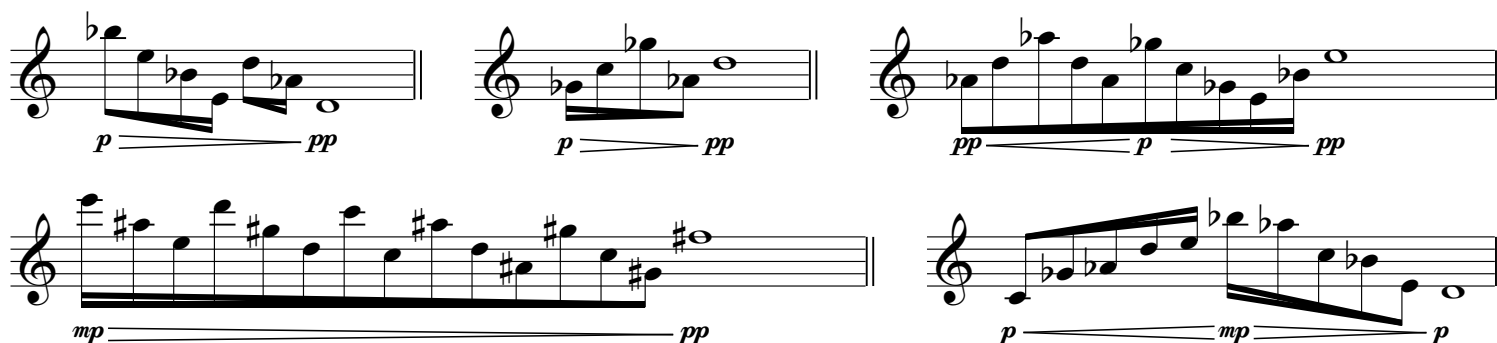
Bowed Notes - bow with bass or cello bow, any of the following notes (or combinations), play in any octave, let ring



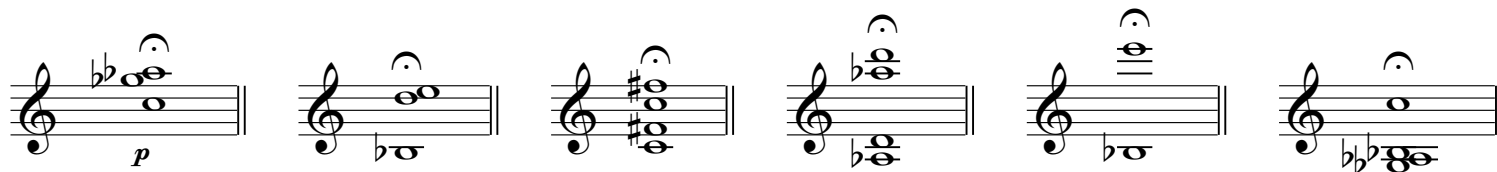
Tremolos - hold for 10-20 seconds each, fade in and out, change octaves if desired



Melodic Cells cont. - (♩ = 60-90) - legato, do not repeat, molto espressivo, play in any octave



Chords - play as a solid chord OR arpeggiate (up or down), play in any octave



Ostinati - (♩ = 80-120) - very rubato, accel and decel freely, repeat as long as desired, change octaves with either hand freely



Glockenspiel
and/or Crotales

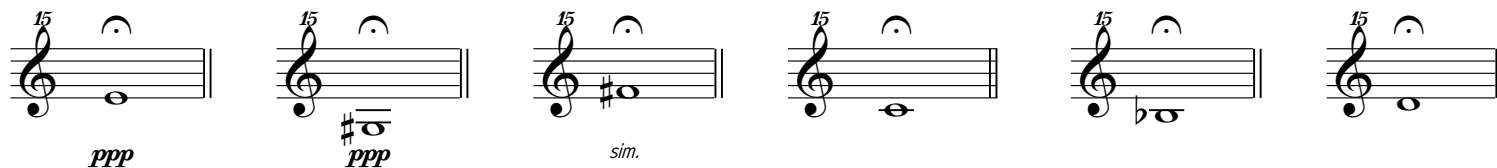
Lagrange Point

for spatialized chamber ensemble
Dedicated to Neil deGrasse Tyson

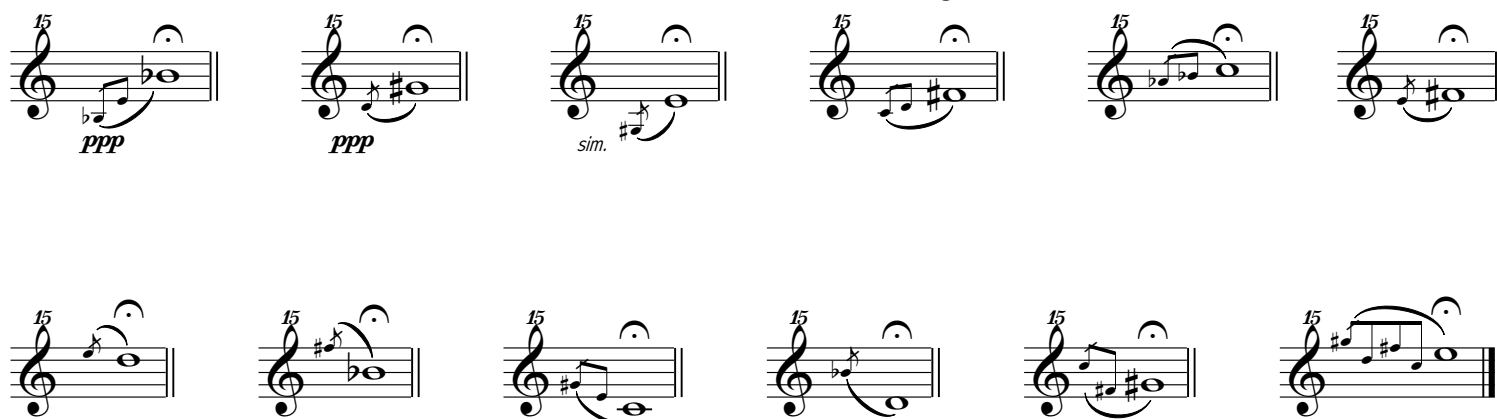
Jordan Nobles

Play any cells, in any order

Single Notes - play very quietly with plastic mallets, quite sparsely and with no regular pulse

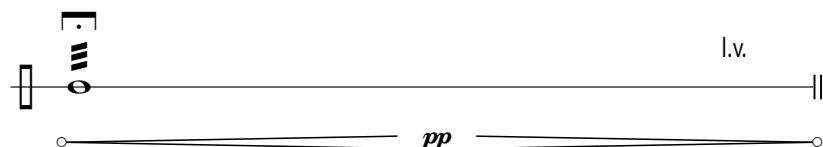


Grace Notes - play very quietly with plastic mallets, very sparsely and with no regular pulse



Unpitched Percussion

Tam-Tam (or large gongs) - roll quietly with very soft mallets, at least a minute or longer, varying the dynamic and timbre



Cymbals (various sizes) - bow very quietly with a bass or cello bow, varying the dynamic and timbre, let ring



Lagrange Point

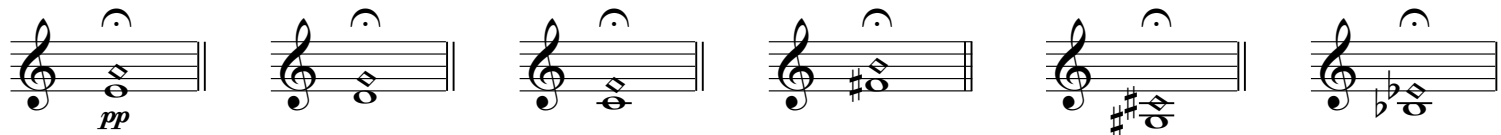
for spatialized chamber ensemble

Jordan Nobles

Dedicated to Neil deGrasse Tyson

Play any cells, in any order

Artificial Harmonics - hold for 10-20 seconds each



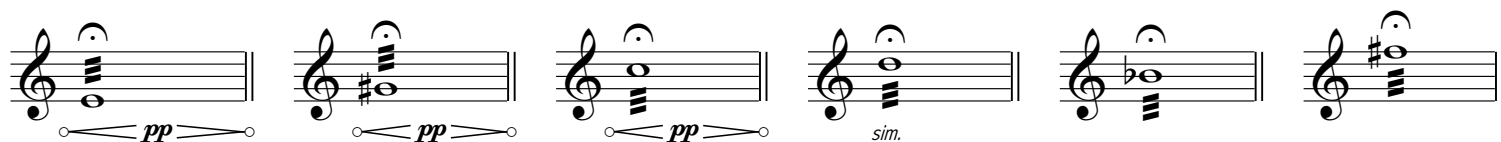
Natural Harmonics - hold for 10-20 seconds each



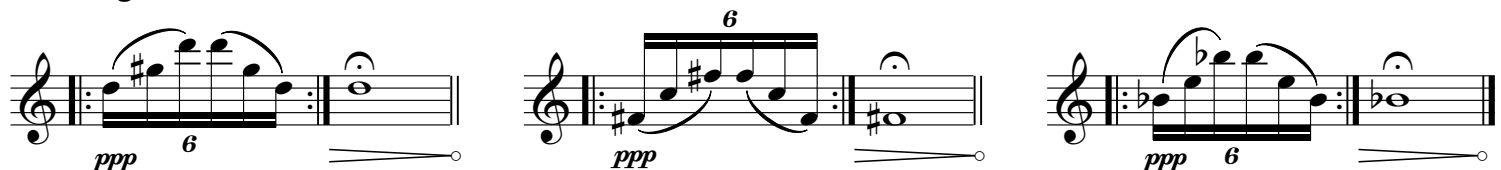
Trills - 10 to 15 seconds, fast trill, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Tremolo - 10 to 15 seconds, fast tremolo, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Rocking Bows - approx. ♩=60, repeat 5 - 10 seconds before the held note, sul ponticello, very quietly, like a whisper



Lagrange Point

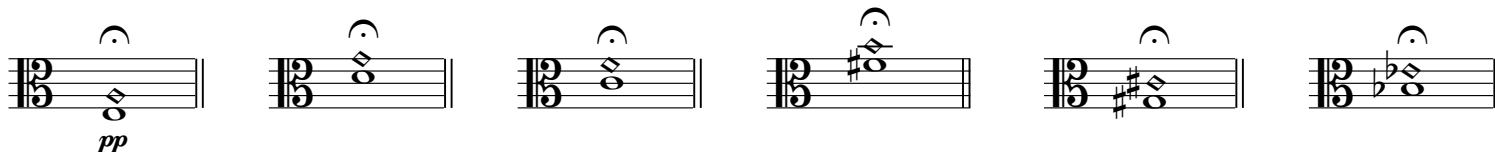
for spatialized chamber ensemble

Jordan Nobles

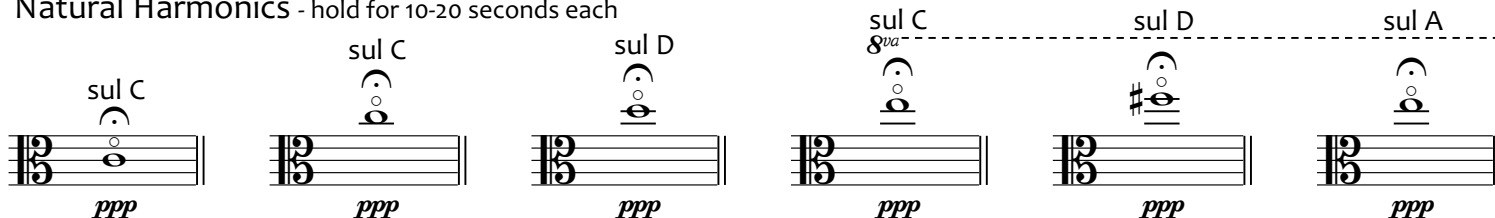
Dedicated to Neil deGrasse Tyson

Play any cells, in any order

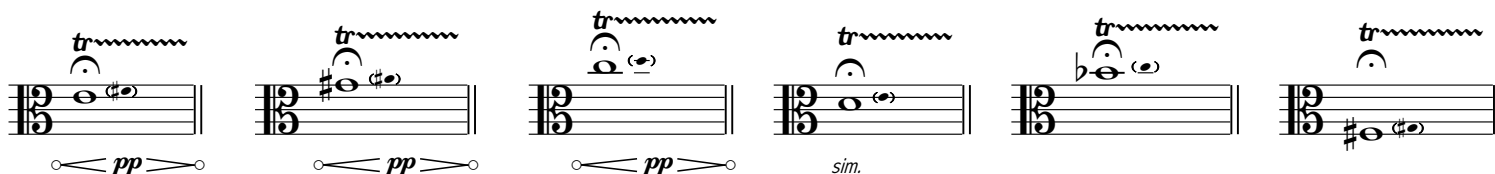
Artificial Harmonics - hold for 10-20 seconds each



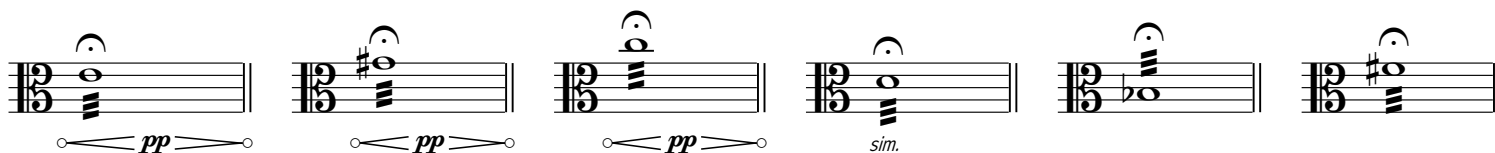
Natural Harmonics - hold for 10-20 seconds each



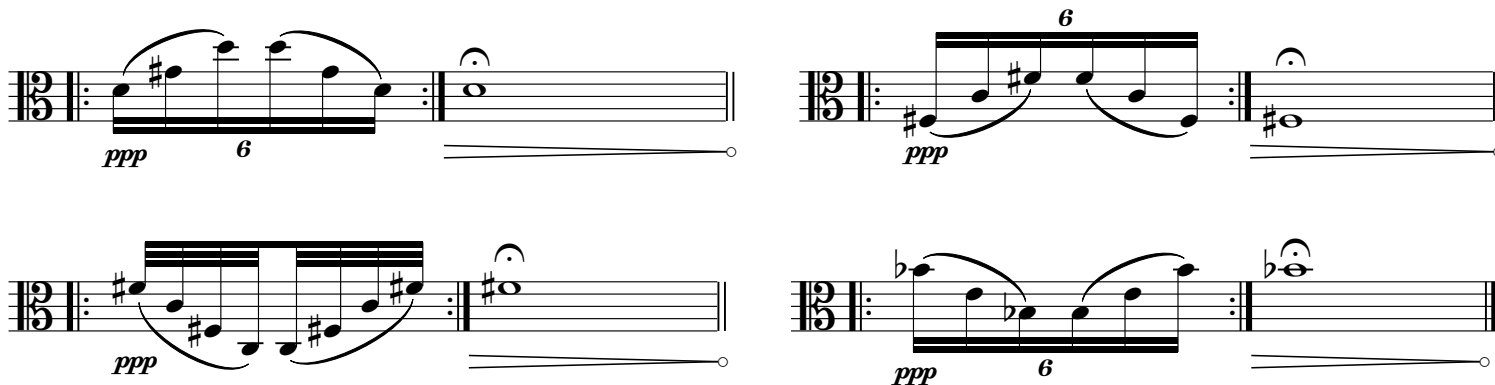
Trills - 10 to 15 seconds, fast trill, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Tremolo - 10 to 15 seconds, fast tremolo, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Rocking Bows - approx. ♩=60, repeat 5 - 10 seconds before the held note, sul ponticello, very quietly, like a whisper



Lagrange Point

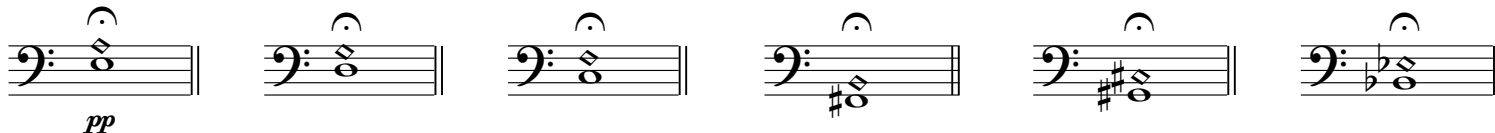
for spatialized chamber ensemble

Jordan Nobles

Dedicated to Neil deGrasse Tyson

Play any cells, in any order

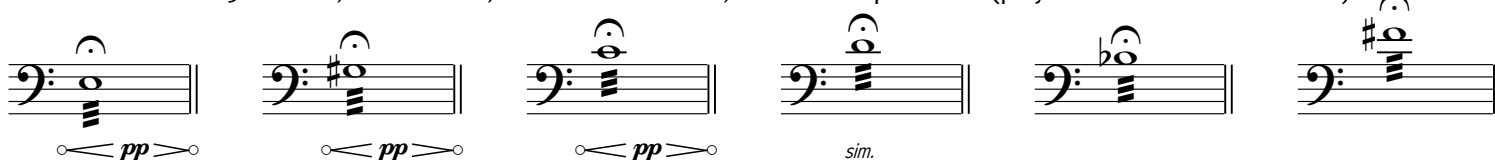
Artificial Harmonics - hold for 10 or more seconds each



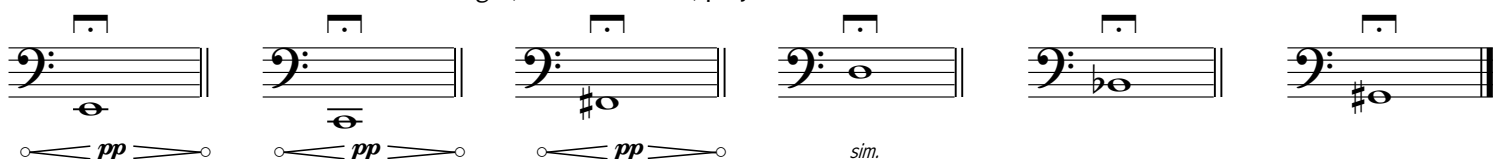
Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



Tremolo - 10 to 15 seconds, fast tremolo, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Low Notes - hold for 10 seconds or longer, fade in and out, play in other octaves if desired



Lagrange Point

for spatialized chamber ensemble

Jordan Nobles

Dedicated to Neil deGrasse Tyson

Play any cells, in any order

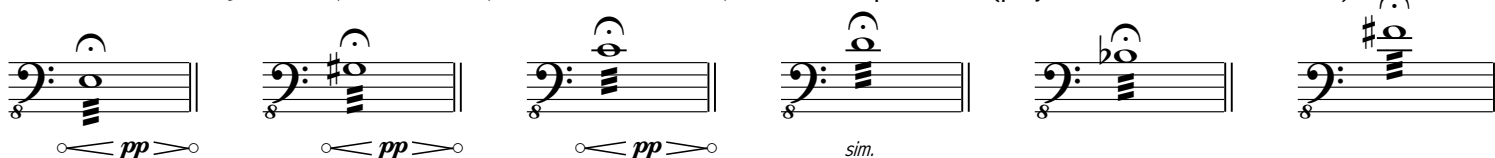
Artificial Harmonics - hold for 10 or more seconds each



Melodic Cells - ♩=60 or slower, play in other octaves if desired as long as they can be quiet and very legato



Tremolo - 10 to 15 seconds, fast tremolo, fade in and fade out, extreme sul ponticello (play in other octaves if desired)



Low Notes - hold for 10 seconds or longer, fade in and out, play in other octaves if desired

