

E.C.S. No. 685

**Richard Felciano**

# **Galactic Rounds**

**for orchestra**

E. C. Schirmer Music Company • 112 South St • Boston, MA 02111

GALACTIC ROUNDS / Richard Felciano

The following are available for purchase:

Full score and set of parts

2 each, flute I, II, III, and IV	3 each, percussion I, II, III, and IV
2 each, oboe I, II, III, and IV	2 piano
2 each, clarinet I, II, III, and IV	2 harp
2 each, bassoon I, II, III, and IV	6 violin I
2 each, horn I, II, III, and IV	6 violin II
2 each, trumpet I, II, III, and IV	5 viola
2 each, trombone I, II, III, and IV	4 violoncello
2 tuba	3 contrabass
2 timpani	

Extra full score

Extra individual instrumental parts

## Composer's Note

For some time I have been fascinated by musical applications of the time-space continuum, for although a sound is defined both by time and by space, the latter has rarely been used as a structural element. The idea for *Galactic Rounds* came from the motions of celestial bodies, which are essentially interlocking circles of different sizes moving constantly in and out of phase with one another. The musical vehicle for this circular motion is the classical round (such as *Frère Jacques* or Mozart's *Dona Nobis Pacem*), here expressed in terms of 'information banks'—single notes or groups of different lengths which are reiterated according to a variety of rules given in the score. Individual players or sections have considerable autonomy (which is to say responsibility) and section leaders often serve as assistant conductors, maintaining the circular motion of their section in a constantly shifting and often contradictory environment. The circular approach to time is also applied to space, and the trumpets and trombones, which are widely dispersed throughout the orchestra, create patterns in Doppler shifts (frequency changes caused by approaching and receding sound sources) by moving the bells of their instruments in 360-degree arcs. I was intrigued with the challenge of creating a work based in the slow unfolding, under a variety of guises, of a single harmony, a work which—like the universe—would be full of motion yet always the same.

—R. Felciano

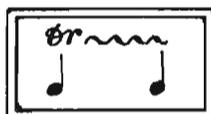
## Performance Instructions



(single outline box) Repeat until directed otherwise; if only a single duration (rather than a rhythmic figure) is given, leave irregular pauses between repetitions. Make no attempt to synchronize.



Sustain without break, staggering breathing and bowing, until directed otherwise.



(double outline box) Repeat in rhythmic unison (synchronize). Where necessary, the first chair player coordinates the group. This is especially important when contradicting simultaneous tempi exist between groups.



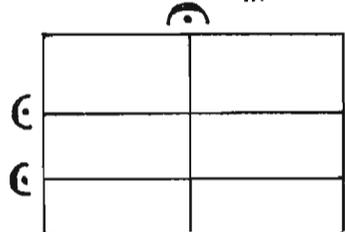
A circle indicates an exit cue. In this example, first violins stop playing.

Bsn.



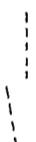
Each bassoon enters on the beat indicated, but playing the beginning of the figure, as in a classical canon.

Flutes I → II → III → IV



Flutes enter on consecutive beats after the cue, choosing any box. They then move to other boxes at will, pausing at will between boxes. Continue until change of material or exit cue is indicated. If no fermata is indicated, move between boxes in tempo, without pause.

The tempo is ♩=60 unless otherwise indicated. Metronome markings must be rigorously observed, especially when they conflict between parts.



A vertical dotted line indicates coincidence of parts.

A diagonal dotted line indicates sequence of parts.

Cues are numbered consecutively; time between cues is indicated in seconds.

senza battuta: not conducted (cued only; performers play at tempo indicated.)



Conduct in four.



Conduct in three.

In unmetred passages, the conductor may wish to aid coordination by beating the tempo without metric division.

When regular rhythms are already present, all entries are made on the beat. When moving from one repeated rhythm to another, move on cue or first convenient beat thereafter, leaving no hiatus between the two rhythms.

All staccato notes are very short.

All trills are very rapid.



Play as fast as possible.



Let vibrate.



Strings play highest pitch (not necessarily identical between players).



Muffle abruptly.

SB sound board

dead clap: Clap cymbals head-on; hold together. A 'dry' explosive sound should result.



Rotation of trumpets and trombones:

At the moment indicated in his part, each player stands so that his back is to the conductor and audience. At the symbol, which may accompany the instruction to stand or occur later, he turns (pivots) a full 360-degree circle, clockwise, aiming the bell of his instrument straight out horizontally, and playing the single pitch indicated. The speed of his movement should be that which gives the best Doppler effect (possibly ca. 2 seconds for a complete rotation). He should play only while in the act of rotating. The rotations sometimes occur in relay, the termination of one player's rotation being the cue for another player to begin. In the final passage, each player establishes a periodicity of his rotations at a variance with those of the other players (7'' vs. 8'' vs. 9'' etc.). To do this, he must demonstrate a reasonably accurate sense of duration of one second and not be influenced by the rotations of the other players.

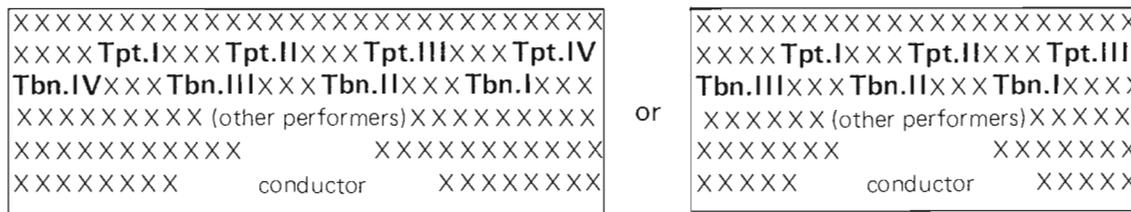
If desired, neighboring players may relay cues from the conductor to the brass players. In addition, it should be pointed out that, even with their backs to the conductor, the players are free to turn their heads to receive cues or follow the beat.



Bracketed indications at the left side of some pages are reminders to the conductor of those parts which continue from previous page(s). In the second half of the piece, where the texture is continuous and cumulative, such indications are unnecessary.

The glockenspiel sounds two octaves higher than written, the piccolos and xylophone sound one octave higher than written, and the doublebass sounds one octave lower than written. With these exceptions, the score is written as it sounds, with necessary non-octave transpositions (clarinet, trumpet & horn) occurring in the parts.

Trumpets and trombones do not play in their normal sections but are physically dispersed throughout the other players from the right to the left edge of the orchestra. Essentially, they should be in two different rows, several chairs apart, in the staggered relationship indicated in the diagram. The rest of the orchestra 'fills in' around them. A broad physically lateral dispersal is essential (one trombone and one trumpet should be very near left and right edges respectively) in order to provide variety of sound sources during the Doppler passages. If the space is sufficiently deep, the trumpets and trombones may be placed on a slightly raised platform behind the rest of the orchestra. However, it is essential in any case that a broad lateral dispersal of these players be maintained:



Whenever possible, the full complement of instruments should be used. In using the reduced complement, the music for the omitted instruments is simply not played (the sole exception is the special instruction for trombone III at 61. Since the work is not 'orchestrated' in the traditional sense, these omissions will not have a seriously dilatory effect, though the fuller sound of the complete version is clearly preferable.

The four percussion players must be located so that their parts and that of the timpani are equally audible, especially in the cross-metered passages of the second half of the work, where accents continually shift between them.

**Instrumentation**

- 3-4 flutes (all doubling on piccolo)
- 3-4 oboes
- 3-4 clarinets in B-flat
- 3-4 bassoons
- 4 horns in F
- 3-4 trumpets in B-flat
- 3-4 trombones
- 1 tuba
- timpani (three drums)
- percussion (four players):

- |   |  |
|---|--|
| I | high suspended cymbal,<br>low suspended cymbal and<br>small gong constituting a<br>choir with the gong serving<br>as bass cymbal |
|   | guiro<br>claves<br>5 temple blocks<br>crash cymbals<br>2 large cowbells  |

- |     |  |
|-----|--|
| II  | claves<br>very large gong (30")<br>large wood chimes (bamboo)<br>(accessible to Player III)<br>tubular chimes<br>snare drum<br>tenor drum<br>high suspended cymbal<br>(played at Player I station) |
| III | xylophone<br>large wood chimes (bamboo)<br>(accessible to Player II)<br>glockenspiel<br>vibraphone   |
| IV  | bass drum<br>2 bongoes<br>2 tom-toms<br>gong (played at Player II station)   |
- piano  
harp  
strings



1

10"

2

19"

3

10"

Tbn.  
(III  
sord.)

Musical score for Trombones III and IV, sordano. The score is in bass clef with a key signature of one flat. It features a dynamic marking of *pp-mf*. The notation shows a half note followed by a quarter note.

Picc.

Musical score for Piccolo I, II, III, and IV. The score is in treble clef with a key signature of one flat. It features a dynamic marking of *ff* and a *8va* (octave) marking. The notation shows a half note followed by a quarter note.

Musical score for Violins I and II, sordano. The score is in treble clef with a key signature of one flat. It features a dynamic marking of *p* and a *div.* (divisi) marking. The notation shows a half note followed by a quarter note.

Cellos

Musical score for Cellos. The score is in bass clef with a key signature of one flat. It features a dynamic marking of *mp* and a tempo marking of *♩ = 55*. The notation shows a half note followed by a quarter note. The text *mechanically* is written above the score.

4

8"

5

7"

6

6"

7

13"

Picc. I

II

III

IV

*niente*  *f brassy*

Horns 

I II III IV 

*make crescendos on note given, any duration from  (change constantly)*

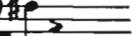
trb. 

perc. I H 

TB 

perc. II L 

Claves  $\text{♩} = 100$  

perc. III Xylo. 

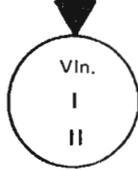
perc. IV Bass Drum 

Timp. 

Bongos 

Vln. I II 

Vln. 

Vln. I II *senza sord.* 

Cellos 

*\*Half-step cluster from top note down through both 1st and 2nd violin sections, each instrument on a different pitch (2nd violins below 1st violins) Choose pitches in advance.*

8

17"

9

25"

10

11 (on beat 3)

11"

Picc. I

Timp.

Piano

Vla.

Cellos

Cellos

All Tbn.

*pp-mf*

*f*

*f > mf*

*martellato, secco*

*ff*

8va.

*ff*

*non trem. slow gliss.*

*mp* sul sol

chain reaction: one at a time, starting with first chair, complete previous figure with slow descending gliss., then tacet. (All cellos out by 10)

*tutti spicc.*

*mp*

$\text{♩} = 60$

12

13"

13

14

6"

*molto staccato*

Picc. I  
II  
III  
IV

Horns I II

*pp* *poco*

Tbn.

Perc. I

3/4 Guiro *scrape*

Vln. I

*pp mp mf ff*

Horns I II

*rip*

Horns III IV

Tbn.

Harp

*norm.*

*mf*

Vla.

Cellos

All Tbn.

III senza sord.

Cellos

*p*

15 2" 16



Picc. I III  
II IV

cl. I III  
II IV

12" take the flute

one breath

Tuba

mf niente

perc. I high susp. cymb. choke

perc. II Very lg. gong choke

perc. IV Bass Drum niente < mp > f

Follow immediately.

Db. Grab G string 2" from bridge. Arco. Makes high, uncontrolled scream. Reverse bow at will. ff

18

9"

19

12"

20

10"

21

Timp.

*p tr.* *ff* abrupt muffle

Perc.III Wood chimes *mf* *l.v.*

2 Bongos  
Perc.IV  
2 Tom toms wooden sticks *mf*

Harp *norm.* *mf* *f* SB slap

harp  
Vla.  
Cellos

arco pizz col legno batt.  
Db. *p*

Vln. *f* knock on back of instrument with knuckles; do not synchronize  
*f* knock on back of instrument with knuckles; do not synchronize

3 seconds after last violin knock

22 23 24 25 26

2" 1" 1 1/2"

*fast to slow; do not synchronize  
slap mouthpiece with cupped hand; bell in air*

All Horns *mf*

All Trpts. *mf*

All Tbn. *mf*

Tuba *mf*

wooden sticks; evenly (count ♩); well-accented but not above

Timp. *only mf*

Perc.I Guiro

Susp. cymb. *hard mallets explosive!*

Perc.II Tubular chimes

Gong

Perc.III

Glsp.

*balance: cymbals and gong should somewhat cover chimes*

*immediately after last knock*

Vln. I *(f)*

Vln. II *(f)*

Vla. Cellos



**30**  $\text{♩} = 60$  slower

III Fls. flutter  
 II Fls.  
 I III Ob.  
 II IV All Clar. flutter

All Bsn. resume previous figure

Timp. resume previous figure

Perc. I TB  
 Perc. II Snare Drum loosen snares  
 Perc. III hard  
 Xylo.  
 Perc. IV resume previous figure

Piano  
 Harp resume previous figure

Vin. I gl.  
 Vin. II gl.  
 Vla. gl.  
 Cellos gl.

Db. resume previous figure

**31** 3" **32** 10" **33** 7" **34** 12" **35** 9"

Bsn. *mf*

Horns {mute I III flutter abrupt release  
 All horns remove mutes.  
 II IV flutter

Trpts. I RELAY After I  
 II abrupt release

Tbn. I flutter  
 Tuba II III flutter

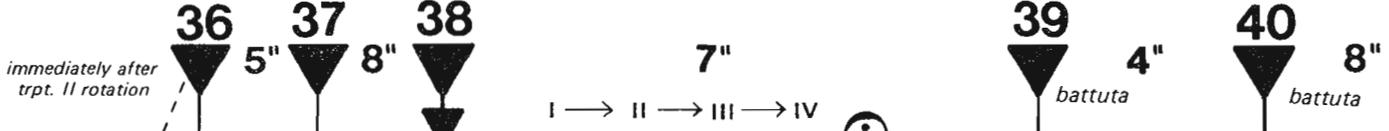
(wood) Snare dr. 3  
 Tenor dr. 4

(tpt.) \*stand with back to audience, turn full circle, clockwise. Adjust speed to produce best Doppler effect. Note length = duration of circular movement. (possibly ca. 2 seconds each)(bell in the air) Sit after next cue.

**6x\***

div. 3 6 3 3  
 5 3 3  
 5 3 3  
 6 3 3

\*repeat 6 times, then go on.



Flutes *mf*

*flutter*

Bsn.

Horns *mf*

Timp.

Perc.II Snare Dr. Tenor Dr.

*hard mallets*

Perc.III Vibes *motor off*

*f* 3 3 3 *senza ped.*

Perc.IV Bongos Toms

Harp

*soundboard slap*

Harp

Vln. I

Vln. II

Vla.

Cellos

Db.

*pizz.* *random pitches on the lowest string*

*f* *rall. molto* *do not synchronize*

Perc.I Claves

$\frac{2}{4}$  *ff* *prominent*

Perc. IV

*f* *very broadly*

**41** **4 1/4"** **42** **8-10"** **43** **8-10"**  
*senza battuta* I → II → III → IV

Oboe I  
*f* {bend tone freely (accel.) *ff*

Oboe II  
*f*

Oboe III  
*f* {bend tone freely (accel.) *ff*

Oboe IV  
*f*

I → II → III → IV

Oboe *mf*

Clar. *mf*

44

45

8"

46

10"

Fl.

Musical notation for Flute (Fl.) in 4/4 time, measures 44-45. The score includes fingerings (I, II, III, IV), slurs, and dynamics (f). Measure 44 has a 6-measure slur, and measure 45 has a 7:8 time signature change and an 8-measure slur.

Clar.

Musical notation for Clarinet (Clar.) in 4/4 time, measures 46-47. The score includes fingerings (I, II, III, IV), slurs, and dynamics (f).

bsn.

Musical notation for Bassoon (bsn.) in 4/4 time, measures 44-45. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

hn.

Musical notation for Horn (hn.) in 4/4 time, measures 44-45. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

timp.

Musical notation for Timpani (timp.) in 4/4 time, measures 44-45. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

perc. I Claves  
perc. II Snare Tenor  
perc. III Vibes  
perc. IV Bongo Tom tom  
Harp

Musical notation for Percussion (perc. I-IV) and Harp in 4/4 time, measures 44-45. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

Vln. I  
Vln. II  
Vla.  
Cellos

Musical notation for Violins (Vln. I, II), Viola (Vla.), and Cellos in 4/4 time, measures 44-45. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

Bsn.

Musical notation for Bassoon (Bsn.) in 4/4 time, measures 46-47. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

Perc. II Snare Tenor

Musical notation for Percussion II (Snare Tenor) in 4/4 time, measures 46-47. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

Piano  
*inside piano with plastic stick strike random strings in 2 lowest octaves; slow irregular rhythm, not more than one note every 2 seconds. Hold pedal down throughout. Play ff*

Perc. III Vibes

Musical notation for Percussion III (Vibes) in 4/4 time, measures 46-47. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f). Includes the instruction "trill chromatic ascent" and "Renew pedal with each repetition." with an asterisk.

Vla.

Musical notation for Viola (Vla.) in 4/4 time, measures 46-47. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

Cellos

Musical notation for Cellos in 4/4 time, measures 46-47. The score includes fingerings (I, 3, II, III, IV, 5) and dynamics (f).

47 5" 48 10" 49 2" 50 6"

Oboe I-IV

Horns I, III

Trpts. I, II

Trpts. III, IV

All Flutes take piccolo

Timp.

Bongos, Perc. IV, Toms

Vln. I, II

51

6"

52

6"

53

*broadly  
battuta*

4"

54

*non battuta*  
2"

Picc.

Oboe

Clar.

Bsn.

Horns

Trpts.

Tbn. I  
II  
III  
IV

Tuba

Timp.  
(timp. sticks)

Perc.I Claves

Perc.II Snare Dr.  
Tenor Dr.

Perc.III Vibes

Perc.IV Bass Drum

Piano

Harp

Vin. I

Vin. II

Vla.

Cellos

Db.

*mixed cluster flat of hand*

*senza ped.*

*sound board slap*

15va

*mf*  
(less)

*mf*

Bongos

Tom toms

Bass Dr.

15va

All piccolos take flutes.

*mf*

Horns I  
III  
II  
IV

N.B. horns and percussion same tempo;  
therefore little rhythmic coincidence  
between them.

55 4" All Flutes random ascending graces; leave irregular pauses between notes mf average one note every three seconds

56 4" Tbn. I II stand\*

57 2" Tbn. I II stand\*

58 10" All Clar. random ascending graces; leave irregular pauses between notes mf average one note every three seconds

59 8" Tbn. I II f (after I) 2-beat turn

60 8" All Oboes random ascending graces; leave irregular pauses between notes mf average one note every three seconds

Tuba niente ff niente

Perc. I Cymbals dead clap

Piano furioso random clusters in four highest octaves continue until cue 56

Vln. I II furioso both parts sempre and marcato, secco, spiccato

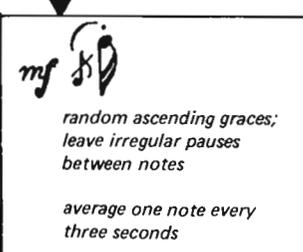
\*Instructions as for Tpts at 35, but remain standing, motionless, back to conductor when not playing. Adjust speed of turn to best Doppler effect; play only while turning.

\*\*Take entry cue from 'D' of previous Tbn, rather than from tempo. If performed without Tbn IV Tbn III cue goes back to Tbn II rather than on to Tbn IV.

**61**
**62**
**63**
**64**
**65**

12"
6"
3"
3"
6"

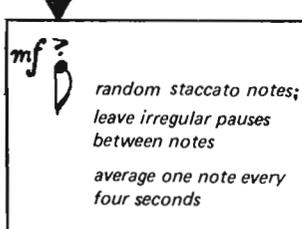
**All Bsn.**

*mf* 

random ascending graces;  
leave irregular pauses  
between notes

average one note every  
three seconds

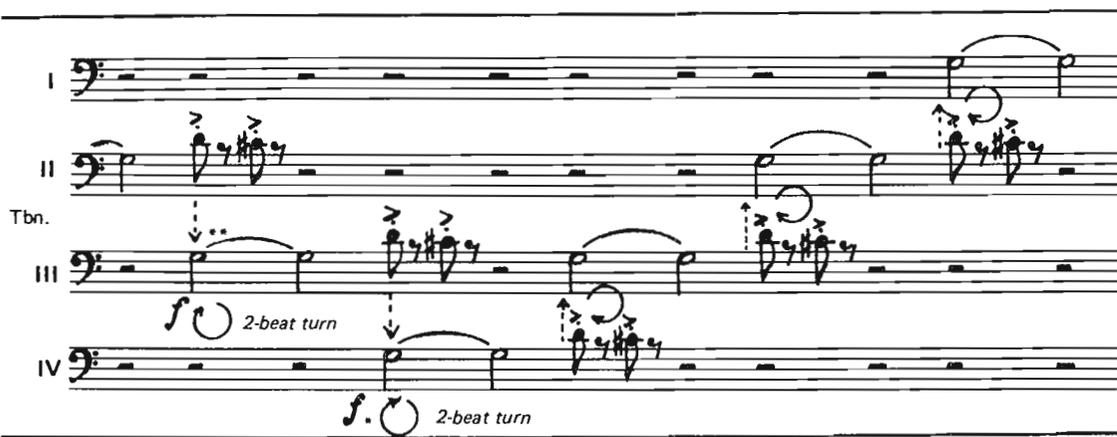
**All Horns**

*mf* 

random staccato notes;  
leave irregular pauses  
between notes

average one note every  
four seconds

**Tbn. I-IV**

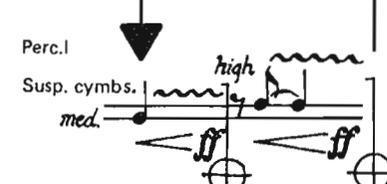


**Perc.I**

**Susp. cymb.**

*high*

*med.*



**Perc.III**

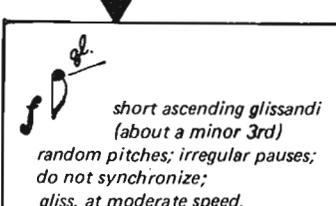
**Vibes**

hard mallets



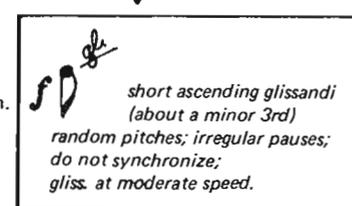
senza ped.

**Vla.**



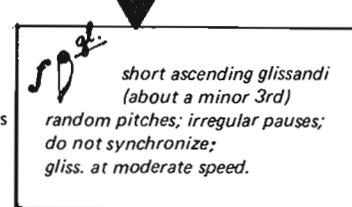
short ascending glissandi  
(about a minor 3rd)  
random pitches; irregular pauses;  
do not synchronize;  
gliss. at moderate speed.

**Vln. I**

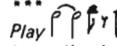


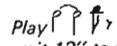
short ascending glissandi  
(about a minor 3rd)  
random pitches; irregular pauses;  
do not synchronize;  
gliss. at moderate speed.

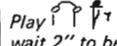
**Cellos**

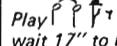


short ascending glissandi  
(about a minor 3rd)  
random pitches; irregular pauses;  
do not synchronize;  
gliss. at moderate speed.

\*\*\* Play  2x in relay, then immediately begin 68 (xylo. entry).

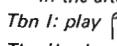
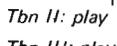
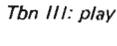
Play  3x in relay, then wait 12" to begin 67 (timp. entry).

Play  3x in relay, then wait 2" to begin 66 (pno. entry).

Play  2x in relay, then wait 17" to begin 69.

\*\*When only three trombones are used this entry serves both as itself and as the following Tbn III entry, thus relaying the rotation immediately back to Tbn II.

\*Instructions as for Trpts at **35** but remain standing, motionless, back to conductor, when not playing.

\*\*\*In the alternate version using three trombones, the following pertains:  
Tbn I: play  4x in relay, then immediately begin 68 (xylo. entry).  
Tbn II: play "  6x in relay, then immediately begin 67 (timp. entry).  
Tbn III: play "  2x in relay, then wait 8" to begin 66 (pno. entry).

66

8"

67

7"

68

6"

Cues 66, 67, 68, 69:  
one at a time, trombones  
are cued to leave relay  
and begin new material.

Tbn. III

every 7 seconds  
silence between

**15x**

Tbn. II

every 8 seconds;  
silence between

**2x to next cue**

Timp.\*\*

Goodman green (5) mallet.

molto *sfz* > sub. *mf* only: murmur

Perc.II

Perc.IV\*\*

Bongos  
Tom toms

murmur *mf* only 3 sub. *sfz* molto

Tbn. I

every 9 seconds  
silence between

**3x to next cue**

Perc.I TB

*ff*

Perc.II  
Wood chimes

Perc.III Xylo.

*ff* scorrevole

Pno.

*mf* martellato *hard!* ringing: pull hands instantly away from keys

*Ped.* (hold down from here to end)

continue by playing the pitches of the last 9 beats in any order, using similar rhythms. Move freely among the pitches given.

\*note-length=duration of body rotation, probably 1-2 seconds. Choose best speed for acoustics and Doppler effect. 15x=one note every 7" will result in total of 15 by exit cue 82.

\*\*Timp. and Perc. IV parts are interlocking; they should be heard as a unit and not protrude from the ensemble, except for their *sfz* notes which mark their differing periodicities. *sfz* notes are markedly louder than the rest of the figure.

69 5" 70 10" 71 10" 72 10" 73 5"

one breath da.

one breath da.

one breath da.

con sord. (brassy)

Trpts. II III stand\*\*

Trpts.\*\*

every 5 seconds; silence between

10x to end

every 4 seconds; silence between

13x to end

Tbn. II

maintain 8" periodicity; change to this pitch; silence between rotations.

10x to end

Tbn. IV

every 10 seconds; silence between

8x to end

Musser red (rubber) mallets rotate inside bells

Perc. I med. Cow Bells lg. niente motto fff!

Perc. II lg. gong niente molto fff! l.v.

Perc. III

Vibes (motor off)

Pedale sempre al fine

any order, irregular rhythm, one note every 2-3 seconds

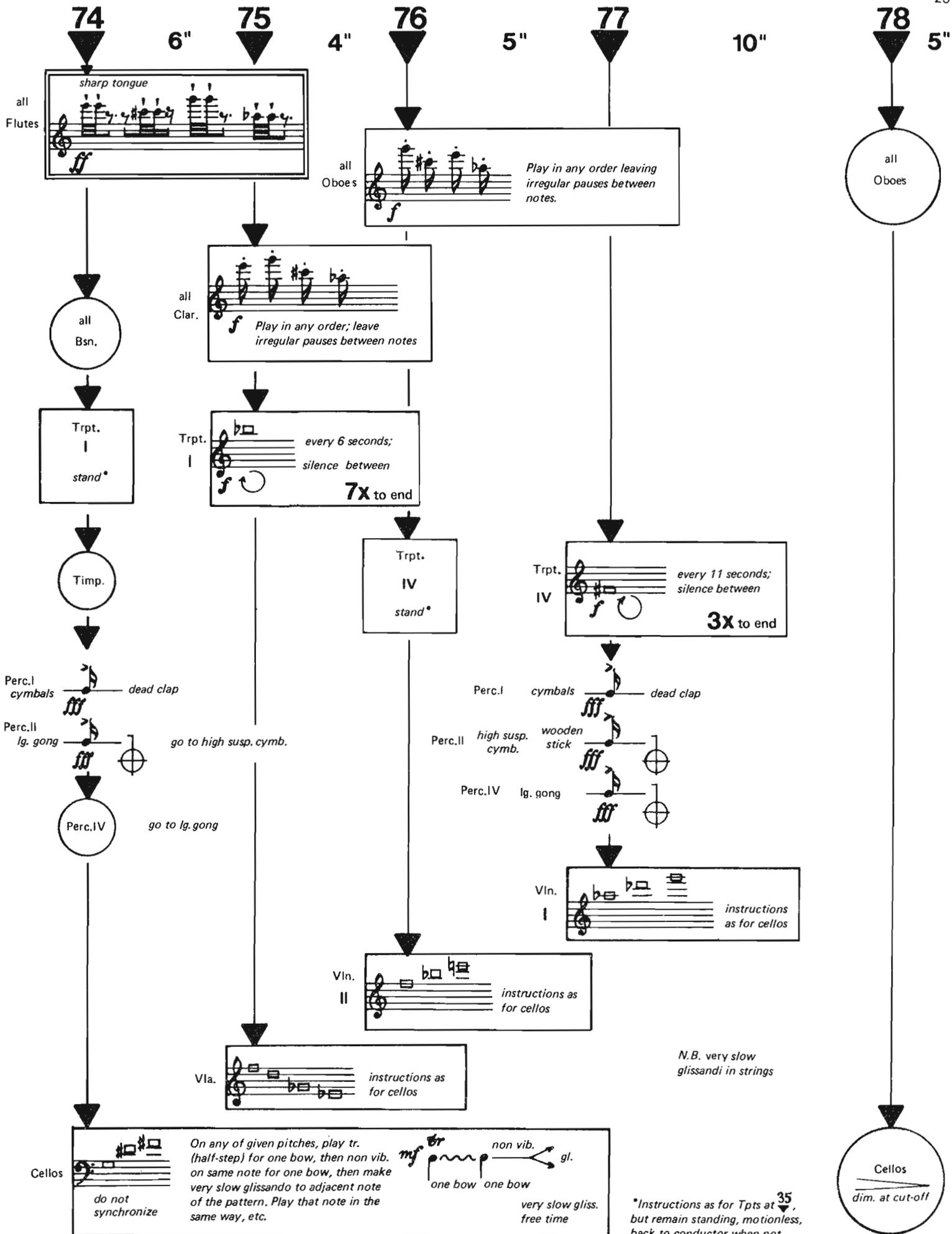
Harp

L. V. sempre

Move freely among notes given, constantly changing the order. Play one note every 1-2 seconds. Play irregularly.

\* To maintain periodicity, count from beginning of previous note, not from cue for new note.

\*\*Instructions as for Tpts at 35, but remain standing, motionless, back to conductor when not playing. Adjust speed of turn to best Doppler effect; play only while turning.



79 5" 80 10" 81 5" 82 2" 83

all Clars.

all Flutes

all Trpts. & Trbs.  
 (Any rotation in progress when the cue is given should be completed.) Stand motionless backs to audience, until the end.

Perc.I cymb. dead clap

Perc.II high susp. cymb.

Perc.IV lg. gong

Perc.III Vibes

Piano

Harp

Vln. I

Vln. II

Vla.

*dim. at cut-off*

*dim. at cut-off*

*dim. at cut-off*

*sempre ped.*

*sempre fff*

*ped. cont'd*

*sempre e l.v. (near soundboard)*

*hold pedal down*

*hold pedal down*

*l.v.*

duration ca. 10' 30"

The diagram shows a conductor's cue chart for measures 79-83. Cues are marked with inverted triangles and distances: 5" for measures 79, 80, and 82; 10" for measure 81; and 2" for measure 83. The chart indicates when various instruments enter or perform specific actions. Percussion parts include cymbal, high suspended cymbal, large gong, and vibraphone. Piano and Harp parts feature complex rhythmic patterns with triplets and sustained pedal effects. String parts (Violins I and II, Viola) are marked with dynamics and 'dim. at cut-off' instructions. A note for the Trpts. & Trbs. section states that any rotation in progress should be completed when the cue is given, and they should stand motionless with their backs to the audience until the end.

