cataract

for
large
concert
band

Jack Langdon
(2016)

DURATION

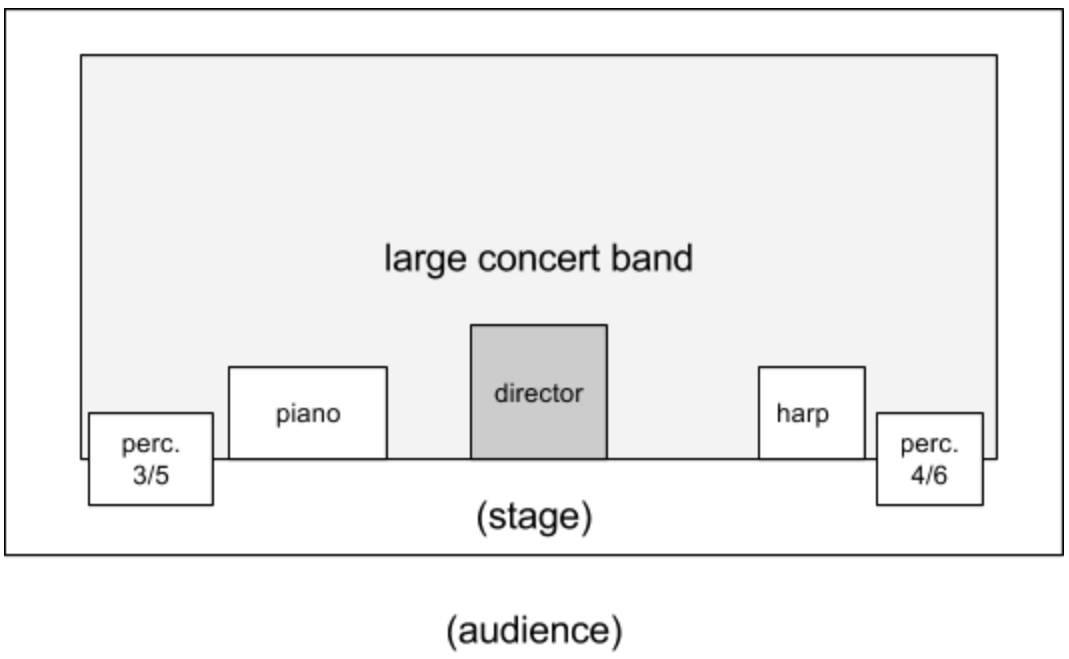
9 minutes

PROGRAM NOTES

This work was written in dedication to Timothy Mahr and The St. Olaf Band.

cataract for large concert band is an exploration of the formal devices utilized in the visual art of Bridget Riley. The title is a reference to her work *cataract 3*, which is an exemplar of her characteristic “op-art” aesthetic. Through the serial repetition of changing lines, an optical illusion arises from the gestalt perception of her composition. I play with this notion through musical time by heavily emphasizing repetition and silence as having equal structural importance. Through gradual shifts in texture through extended repetitions, this work attempts to alter the listener’s sense of temporal perception, while bringing them to a higher level of sonic acuity through the usage of unusual orchestration and extended techniques.

STAGING/SETUP



ENSEMBLE

piccolo
flute I - x3 min
flute II/III - x3 min
oboe I/II
oboe III (doubling eng. horn)
e-flat clarinet
b-flat clarinet I/II - x2 each min
b-flat clarinet III/IV - x2 each min
b-flat clarinet V/VI - x2 each min
bass clarinet - x3 min
contra-alto clarinet
contrabass clarinet
bassoon I/II
bassoon III (contrabassoon)
alto saxophone I/II - solo each
alto saxophone III - solo
tenor saxophone - solo
baritone saxophone - solo

horn I/III - x2 each min
horn II/IV - x2 each min
b-flat piccolo trumpet - solo
b-flat trumpet I/II - x2 each min
b-flat trumpet III/IV - x2 each min
b-flat trumpet V (double flugelhorn) - x2 min
trombone I - x2 min
trombone II/III - x2 each min
bass trombone - x2
euphonium - x3
tuba - x3

contrabass

harp
piano (doubling celesta) - quarter for coin scrape

timpani (range = D2-B3)

percussion I
1. inst: large tam-tam, large triangle, log drums (hi, med, lo), large maracas, brake drum, bass drum (flat)
2. mallets: triangle beater, tam-tam beater, bow, wire brush, rubber mallets, brass glock. mallets, rice

percussion II
1. inst: wood block, bass drum (flat), small triangle, thundersheet, small maracas, large tam-tam, steel bowl
2. mallets: bow, wire brush, bass drum beater, triangle beater, aquarium pebbles

percussion III (stage right nest)
1. inst: vibraphone, low almglocken
2. mallets: hard yarn mallets, bow, rubber mallets, rice

percussion IV (stage left nest)
1. inst: vibraphone, thai gong (f#)
2. mallets: med. yarn mallets, bow, rubber mallets, rice

percussion V (stage right nest)
1. inst: crotales (high), glockenspiel, thai gong (d)
2. mallets: brass crotale mallets, plastic glock mallets, rice

percussion VI (stage left nest)
1. inst: crotales (low), glockenspiel, thai gong ©
2. mallets: brass mallets, plastic glock mallets, rice

PERFORMANCE NOTES

woodwinds

-oboe mm 40 onward : use “crow multiphonic” where notated (fingerings in part/score)
-flutes mm 102 (sec. 11) : create white noise by blowing directly into embouchure hole
-saxes mm 106 (sec. 14) : subtone = very low dynamic, pure tone

brass

-tubas mm 32 : play highest pitch possible, mostly noise, little pitch. retake breaths when needed.
-trumpets mm 27 : play long notes w/ all valves depressed halfway, with occasional glissandos up harmonic series
-trumpets/trombones mm 47 onward : blow air directly onto mouthpiece, mouth 1-2 cm away
-all mm 26 onward : half valve or trigger and blow air through instrument
-horns and trumpets mm 74 : microtonal fingerings can be found here (http://www.microtonaltrumpet.com/resources.html) and (https://amperkinsmusic.com/2011/10/22/microtonality-and-the-horn/)
-trombones mm 113 (sec. 22) : dashed lines denote glissando
-trombone 1 mm 114 (sec. 23) : b# quarter tone is approximated by slide position between 3/4th pos.

bass/harp/keyboards

-piano mm 1 onward : arpeggios are played freely and light
-contrabass mm 14 : sul pont = bow near the bridge
-contrabass mm 36 : x notehead means approximate pitch
-contrabass mm 69 : **E2** means “e string, second partial harmonic”
-contrabass mm 72 : square notehead means bow the bridge of the bass
-piano mm 72 : scrape quarter lengthwise along the notated string
-contrabass mm 84 : double downbow sign means bow overpressure (distorted effect)
-piano mm 110 (sec. 19) : scrape quarter lengthwise along the notated string

percussion

-perc II mm 1 : use bow on woodblock, using enough pressure to make audible noise/semi-pitched sound
-perc I mm 24 : dangle triangle beater across face of tam-tam, strike to create vibrations w/ t.b. on tam face
-perc I/II mm 48 : drag wire brushes against tam/thundersheet to create white noise sounds
-perc I/II mm 72 : rotate the maracas so that they create a soft white noise effect
-perc I mm 78 : drag mallet in brake drum head in a circular motion
-perc II mm 78 : bow the tam-tam while muting the tam with other hand
-perc I/III/IV/V/VI mm 92: drop rice onto instruments at variable densities. continue replenishing rice as it is dropped
-perc II mm 92: swirl aquarium rocks in metal bowl at variable speeds, loudnesses

score

-mm 92 : each section is divided vertically into semi-synchronous events. conductor queues each advancing timeframe, allowing 3-7 seconds to pass for each event
-always : silences should always be conducted to maintain control of musical temporality

Dedicated to Timothy Mahr and The St. Olaf Band

cataract

for large wind ensemble

Transposed Score

Jack Langdon (b. 1994)

4/8 ♪ = 60 | 5/8 | 4/8 | 6/8

Piccolo

Flute I — solo — pppp | ppp | pp | pp

Flute II/III — solo — pppp | ppp | pp | pp

Oboe I/II

Oboe III (eng. horn)

E♭ Clarinet

B♭ Clarinet I/II — solo — pppp | ppp | pp | pp

B♭ Clarinet III/IV — solo — pppp | pp

B♭ Clarinet V/VI — solo — pppp | pp

Bass Clarinets — solo — pppp | ppp | pp | pp

Contra-alto Clarinet — p

Contrabass Clarinet — mp | mp

Bassoon I/II

Bassoon III (cbsn)

♪ = 60

Alto Saxophone I/II — I, solo — ppp (subtone) | ppp

Alto Saxophone III

Tenor Saxophone

Baritone Saxophone — solo — pp (subtone) | ppp

♪ = 60

Horn I/III

Horn II/IV

Piccolo Trumpet in B♭

B♭ Trumpet I/II

B♭ Trumpet III/IV

B♭ Trumpet V (flugelhorn)

Trombone I — solo — ppp | ppp | pp

Trombone II/III

Bass Trombone (X2)

Euphonium (x3) — (w/ mute) | solo — pp

Tuba (x3) — *blow air through instrument — p | pp | pp | (w/ mute) | solo — pp

♪ = 60

Contrabass — *bow top of music stand — p | pp | mp

Harp — p (♮ ♭ ++++) LV sempre | mp

Piano/Celeste — Piano — mp — ped. always, unless marked

Timpani — (wooden mallet) — p

Percussion I — Large tam-tam — pp (triangle beater, strike)

Percussion II — Wood Block — (bow) mf | (continue bowing)

Percussion III (stage right) — Vibraphone (stage right)

Percussion IV (stage left) — Vibraphone (stage left)

Percussion V (stage right) — High Crotales — HighCrotales (stage right)

Percussion VI (stage left) — Low Crotales — Low Crotales (stage left)

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10

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

Cb.
Hrp.
Pno/Cel.
Piano
Timp.
Perc. 1
Large tam-tam
Perc. II
Wood Block
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
(brass mallets)
Perc. V (right)
High Crotales
(brass mallets)
Perc. VI (left)
Low Crotales

4/8 | 2/8 | 4/8 | 9/8 | 4/8 | 5/8 | 4/8 | 2/8

19

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

19

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

19

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

19

Cb.
Hrp.
Pno/Cel.
Piano
Timp.
Perc. 1
Large tam-tam
Perc. II
Wood Block
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
High Crotales
Perc. VI (left)
Low Crotales

4/8 5/8 4/8 2/8 4/8 3/8 4/8 2/8 5/8

28

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

*tongue ram
solo
*tutti section breathe
tutti
solo

36

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

solo

36

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

solo
one per note
solo, w/straight mute

36

Cb.
Hrp.
Pno/Cel.
Piano
Timp.
Perc. 1
Large tam-tam
Perc. II
Bass Drum (flat)
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
High Crotales
Perc. VI (left)
Low Crotales

pizz.
arco
"triangle beater sizzle"
swirl
(to bow)
(to b.d. beater)
LV

37

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

Cb.
Hrp.
Pno/Cel.
Piano
Timp.
Perc. 1
Large tam-tam
Perc. II
Bass Drum (flat)
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
High Crotales
Perc. VI (left)
Low Crotales

44

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

46

senza vibrato — wide vibrato — senza vibrato

solo, non vib.

solo, freely

*grace notes

soli

solo

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

*blow air towards mouthpiece, 1-2cm away

a2

Cb.
Hrp.
Pno/Cel.
Timp.
Perc. 1
large triangle
Perc. II
small triangle
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
glockenspiel
Perc. VI (left)
glockenspiel

Piano

to celeste

ped. always w/ celeste

To Large Tam (wire brush)

To Thundersheet (wire brush)

*drag wire brush along tam-tam

*drag wire brush along thundersheet

(no pedal)

(plastic glock mallets)

54

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

60

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

60

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

60

Cb.
Hrp.
Pno/Cel.
Timp.
Perc. I
Large Tam-tam
Perc. II
Thundersheet
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
glockenspiel
Perc. VI (left)
glockenspiel

64

65

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

Cb.
Hrp.
Pno/Cel.
piano
Timp.
Perc. 1
three log drums
Perc. II
small triangle
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
Perc. VI (left)

73

74

Picc.

Fl. I

Fl. II/III

Ob. I/II

Ob. III

E♭ Cl.

B♭ Cl. I/II

B♭ Cl. III/IV

B♭ Cl. V/VI

B. Cl.

C-a. Cl.

Cb. Cl.

Bsn. I/II

Cbsn.

A. Sax. I/II

A. Sax. III

T. Sax.

Bar. Sax.

Hn. I/III

Hn. II/IV

P. Tpt. B♭

B♭ Tpt. I/II

B♭ Tpt. III/IV

B♭ Tpt. V

Tbn. I

Tbn. II/III

B. Tbn.

Euph.

Tba.

Cb.

Hrp.

Pno/Cel.
piano

Timp.

Perc. 1
large maraca

Perc. II
small maraca

Perc. III (right)
Vibraphone

Perc. IV (left)
Vibraphone

Perc. V (right)
high crotales

Perc. VI (left)
low crotales

tutti

ppp

p

f

mf

mp

ff

solo

I, solo

II, solo

I, solo w/ straight mute

a2

tutti

ped. again

no ped.

To Brake Drum (pick up brass glock mallet)

To large tam-tam (pick up bow)

*drag mallet around brake drum, circular motion

*bow while muting edge w/ left hand

ped

82

84

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

84

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

84

Hn. I/III
Hn. I/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

84

Cb.
Hrp.
Pno/Cel.
piano
Timp.
Perc. 1
Brake Drum
Perc. II
large tam-tam
Perc. III (right)
Vibraphone
Perc. IV (left)
Vibraphone
Perc. V (right)
high crotales
Perc. VI (left)
low crotales

solo
soli
*overpressure (distored noise), sul ponticello
ped.

0

92 *each measure queued by conductor, allowing internal events to go on for 3-7 seconds each, depending on the discretion of the conductor

91

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

92

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

92

Hn. I/III
Hn. II/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

92

Cb.
Hrp.
Pno/Cel.
piano
Timp.
Perc. 1
bass drum + rice
Perc. II
steel bowl + aquarium pebbles
Perc. III (right)
almglocken (low) + rice
Perc. IV (left)
thai gong (f#) + rice
Perc. V (right)
thai gong (d) + rice
Perc. VI (left)
thai gong (c) + rice

1 2 3 4 5 6 7 8

solo *take breaths freely when needed

ppp mp

ppp pp ppp
ppp pp ppp
*blow air onto mouthpiece (1-2 cm away)
pp *blow air onto mouthpiece (1-2 cm away)
pp *blow air onto mouthpiece (1-2 cm away)
pp *blow air onto mouthpiece (1-2 cm away)
pp

p

fff ff pp

fff

p

to bass drum + rice
to steel bowl + aquarium pebbles
to almglocken (low) + rice
to thai gong (f#) + rice
to thai gong (d) + rice
to thai gong (c) + rice

*drop rice at notated densities
sparse, irregular dense, full sparse, irregular
*drop rice at notated densities
sparse, irregular dense, full *drop rice at notated densities
dense, full sparse, irregular
*drop rice at notated densities
dense, full sparse, irregular
*drop rice at notated densities
dense, full sparse, irregular

100

Picc.

Fl. I

Fl. II/III

Ob. I/II

Ob. III

E♭ Cl.

B♭ Cl. I/II

B♭ Cl. III/IV

B♭ Cl. V/VI

B. Cl.

C-a. Cl.

Cb. Cl.

Bsn. I/II

Cbsn.

A. Sax. I/II

A. Sax. III

T. Sax.

Bar. Sax.

Hn. I/II

Hn. I/IV

P. Tpt. B♭

B♭ Tpt. I/II

B♭ Tpt. III/IV

B♭ Tpt. V

Tbn. I

Tbn. II/III

B. Tbn.

Euph.

Tba.

Cb.

Hrp.

Pno/Cel.

Timp.

Perc. 1
bass drum + rice

Perc. II
steel bowl + aquarium pebbles

Perc. III (right)
almglocken (low) + rice

Perc. IV (left)
thai gong (f#) + rice

Perc. V (right)
thai gong (d) + rice

Perc. VI (left)
thai gong (c) + rice

9 10 11 12 13 14 15 16 17

tutti *blow air into embrochure hole

ppp

tutti *blow air into embrochure hole

ppp

pp

ppp

sfpp

mf

sfpp

ppp

mf

ppp

ppp

ppp

p

ppp

p

ppp

p

ppp

subtone

ppp

p

subtone

ppp

pp

subtone

ppp

p

ppp

subtone

ppp

p

f

f

f

f

pp

pp

pp

pp

ff

mf

*circulate in bowl

dense, full

quietly

medium, faster

sparse, irregular

dense, full

dense, full

dense, full

dense, full

109

Picc.

Fl. I

Fl. II/III

Ob. I/II

Ob. III

E♭ Cl.

B♭ Cl. I/II

B♭ Cl. III/IV

B♭ Cl. V/VI

B. Cl.

C-a. Cl.

Cb. Cl.

Bsn. I/II

Cbsn.

18 19 20 21 22 23 24 25 26

p *ppp* *pp*

p

A. Sax. I/II

A. Sax. III

T. Sax.

Bar. Sax.

ff

Hn. I/III

Hn. I/IV

P. Tpt. B♭

B♭ Tpt. I/II

B♭ Tpt. III/IV

B♭ Tpt. V

Tbn. I

Tbn. II/III

B. Tbn.

Euph.

Tba.

p *pp* *mf*

straight mute

pp *f*

div.

p *mf* *ppp*

Cb.

18 19 20 21 22 23 24 25 26

LV sempre

Hrp.

mf

Pno/Cel.
piano

scrape coin along string

Timp.

Perc. 1
bass drum + rice

Perc. II
steel bowl + aquarium pebbles

slow, quiet *loud, fast* *quiet, slow*

Perc. III (right)
almglocken (low) + rice

sparse, irregular *dense, full* *sparse, irregular*

Perc. IV (left)
thai gong (f#) + rice

sparse, irregular *dense, full* *sparse, irregular*

Perc. V (right)
thai gong (d) + rice

sparse, irregular *dense, full* *sparse, irregular*

Perc. VI (left)
thai gong (c) + rice

sparse, irregular *dense, full* *sparse, irregular*

4
4

120 ♩ = 72

118

27 28

Picc.
Fl. I
Fl. II/III
Ob. I/II
Ob. III
eng. horn
E♭ Cl.
B♭ Cl. I/II
B♭ Cl. III/IV
B♭ Cl. V/VI
B. Cl.
C-a. Cl.
Cb. Cl.
Bsn. I/II
Cbsn.

A. Sax. I/II
A. Sax. III
T. Sax.
Bar. Sax.

Hn. I/II
Hn. III/IV
P. Tpt. B♭
B♭ Tpt. I/II
B♭ Tpt. III/IV
B♭ Tpt. V
Tbn. I
Tbn. II/III
B. Tbn.
Euph.
Tba.

Cb.
Hrp.
Pno/Cel.
piano
Timp.
Perc. 1
bass drum + rice
Perc. II
steel bowl + aquarium pebbles
Perc. III (right)
almglocken (low) + rice
Perc. IV (left)
thai gong (f#) + rice
Perc. V (right)
thai gong (d) + rice
Perc. VI (left)
thai gong (c) + rice

solo
pp
ff
*tongue ram
f
piccolo
p
to eng. horn
ppp
mp
(harmon mute, stem out)
solo flz.
to solo flugelhorn
(solo, mute in)
pp
(rubber mallet)
to high log drum
to bass drum (wooden mallet)
to brake drum (hammer)
fff
ffff
fffff
ffffff
mf
ped. until marked
(ped. off)