

Andrew Nathaniel McIntosh

Immutable Distance

for eight electric guitars

(2013)

PLAIN SOUND MUSIC EDITION

notes

For this piece six of the guitars are slightly retuned. Guitars II and VI are lowered by 1/3 of a half step, or 33 cents. Guitars III and VII are lowered by 1/2 of a half step, or 50 cents. Guitars IV and VIII are lowered by 2/3 of a half step, or 67 cents. In addition, a slight bend is occasionally required to produce other pitches. The bending is notated in cents above or below the pitch, and the given bend should continue throughout the duration of the measure.

The score is notated with the sounding pitches, but the parts are notated in normal 12-tone notation (no microtonal accidentals).

Please always hold the resonance of the notes as long as possible, as if each note was played by a bell. Also, please play with the fingertips instead of with picks.

A sound quality produced by pickups closer to the neck with a small amount of overdrive is desirable.

Duration: 10 minutes

commissioned by the Los Angeles Electric 8

For more information or to acquire parts please contact the composer at

*Plainsound Music Edition
552 S. Oakland Ave., Apt. 1
Pasadena, CA 91101
www.plainsound.org
mcintosh@plainsound.org*

The Extended Helmholtz-Ellis JI Pitch Notation

microtonal accidentals designed by Marc Sabat and Wolfgang von Schweinitz, 2004

3-LIMIT (PYTHAGOREAN) INTERVALS

♭ ♯ ×

FUNCTION OF THE ACCIDENTALS

notate untempered perfect fifths ($3/2$) $\approx \pm 702.0$ cents

perfect fifth (3/2); perfect fourth (4/3); major wholitone (9/8)

7-LIMIT (SEPTIMAL) INTERVALS

↳ ↲
↳ ↳

notate an alteration by one septimal comma ($64/63$) $\approx \pm 27.3$ cents

natural seventh (7/4); septimal wholitone (8/7); septimal diminished fifth (7/5); septimal tritone (10/7); septimal minor third (7/6)

notate an alteration by two septimal commas ($64/63 \cdot 64/63$) $\approx \pm 54.5$ cents

11-LIMIT (UNDECIMAL) INTERVALS

↑ ↓

notate an alteration by one undecimal quartertone ($33/32$) $\approx \pm 53.3$ cents

undecimal augmented fourth (11/8); undecimal diminished fifth (16/11)

for the Los Angeles Electric 8
Immutable Distance

Andrew Nathaniel McIntosh

$\text{J} = 110$ [11/6/5]

Electric Guitar I
+/- 0 c

Electric Guitar II
-33 c

Electric Guitar III
-50 c

Electric Guitar IV
-67 c

Electric Guitar V
+/- 0 c

Electric Guitar VI
-33 c

Electric Guitar VII
-50 c

Electric Guitar VIII
-67 c

≡

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

copyright © 2013 A. N. McIntosh

II

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

≡

16

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

21

A

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67



26

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

B [+13/7/6]

31

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

f

VII -50

VIII -67



36

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

C +15/8/7

41

I +/- 0

II -33 *mf*

III -50

IV -67

V +/- 0

VI -33

VII -50 *mf*

VIII -67 *mf*



45

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

50

I +/- 0

II -33

III -50

IV -67

D +17/8/9

V +/- 0

VI -33

VII -50

VIII -67



54

I +/- 0

II -33

III -50

IV -67

+10

+10

+10

V +/- 0

VI -33

VII -50

VIII -67

58

E +19/10/9

I +/- 0

II -33

III -50

IV -67

V +/- 0 *mp*

VI -33

VII -50

VIII -67 *(mf)* *mp* +/- 0 *mp*



62

F +21/11/10

I +/- 0

II -33

III -50

IV -67

V +/- 0 *mp* *(f)* +17 *+15*

VI -33

VII -50

VIII -67

67

I $+/- 0$

II -33

III -50

IV -67

V $+/- 0$

p

VI -33

$+17$

$+17$

$+17$

$+17$

VII -50

VIII -67

p

G $+23/12/11$

≡

72

I $+/- 0$

$+9$

$+9$

H $+25/13/12$

II -33

pp

III -50

IV -67

V $+/- 0$

$+17$

$+17$

$+17$

pp

VI -33

VII -50

VIII -67

pp

I +27/14/13

rit.

I +/- 0 *gradual dim.*

II -33

III -50 *gradual dim.*

IV -67 *gradual dim.*

V +/- 0

VI -33 *ppp*

VII -50 *ppp*

VIII -67 *ppp*



J 22/13/9

a tempo

$\text{♩} = 95$ $\text{♩} = 110$ *rit.*

I +/- 0 *mp*

II -33 *mp* +22 +22 +22

III -50 *mp*

IV -67 *mp*

V +/- 0

VI -33

VII -50

VIII -67

10

I +/- 0 II -33 III -50 IV -67 V +/- 0 VI -33 VII -50 VIII -67

87

K 22/14/8 **a tempo** $\text{♩} = 110$ rit.

+22 +22 +22

$\text{♩} = 85$

=

I +/- 0 II -33 III -50 IV -67 V +/- 0 VI -33 VII -50 VIII -67

92

L 22/15/7 **a tempo** $\text{♩} = 110$ rit.

+17 +17 +17 +17 +17

$\text{♩} = 75$

mp

mp

97

I +/- 0

II -33

III -50

IV -67

V +/- 0

+17 +17 +17 +17

VI -33

VII -50

VIII -67







M 22/16/6

101 a tempo rit.

I +/- 0

II -33

III -50

IV -67

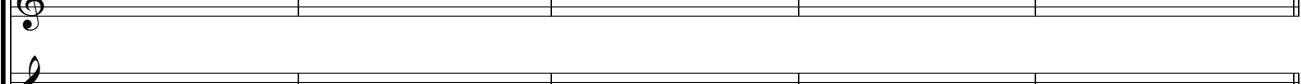
V +/- 0

VI -33

VII -50

VIII -67











12

106 $\text{♩} = 55$

I $+/- 0$

II -33

III -50

IV -67

V $+/- 0$

VI -33

VII -50

VIII -67

=

N [22/20/18/16/14/12/10/8/6]
a tempo

110 $\text{♩} = 110$

III $+/- 0$

II -33

III -50

IV -67

V $+/- 0$

VI -33

VII -50

VIII -67

117

I +/- 0

II -33

III -50

IV -67

V +/- 0

+17 +17 +17 +17

VI -33

VII -50

VIII -67

=

O

123

I +/- 0

II -33

III -50

IV -67

+17 +17 +17 +17 +17 +17 +17

V +/- 0

+/- 0

VI -33

VII -50

VIII -67

129

I +/- 0

II -33

III -50

IV -67

V +/- 0

+17

VI -33

VII -50

VIII -67



P [21/18/15/12/9/6]

134

I +/ - 0 II -33 III -50 IV - 67 V +/ - 0 VI -33 VII -50 VIII -67

140

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67



Q [20/18/16/14/12/10/8/6]

145

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67

150

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67



R [19/18/17/16/15/14/13/12/11/10/9/8/7/6]

154

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67

158

I +/- 0

II -33

III -50
+39 +39 +39 +41 +41 +41 +41

IV -67

V +/- 0

VI -33
+33 +35 +33 +33 +35 +35 +35

VII -50

VIII -67



S [18/12/6]

163

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

170

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67



T [17/16/15/14/13/12/11/10/9/8/7/6/5]

174

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

177

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

+14 +16 +14 +14 +14 +14

VII -50

VIII -67

181

U [16/14/12/10/8/6/4]

I +/- 0

II -33

+19 +19 +19 +19 +19 +19

III -50

IV -67

V +/- 0

VI -33

+14 +12 +12

VII -50

VIII -67

<img alt="Musical score for measures 181 through the end of the section. The score consists of eight staves, each with a unique identifier (I-VIII) and a time offset (-67 to +0). Measure 181 starts with a treble clef and a key signature of one sharp. Measures 182-184 show eighth-note patterns. Measures 185-187 show sixteenth-note patterns. Measures 188-190 show eighth-note patterns. Measures 191-193 show sixteenth-note patterns. Measures 194-196 show eighth-note patterns. Measures 197-199 show sixteenth-note patterns. Measures 200-202 show eighth-note patterns. Measures 203-205 show sixteenth-note patterns. Measures 206-208 show eighth-note patterns. Measures 209-211 show sixteenth-note patterns. Measures 212-214 show eighth-note patterns. Measures 215-217 show sixteenth-note patterns. Measures 218-220 show eighth-note patterns. Measures 221-223 show sixteenth-note patterns. Measures 224-226 show eighth-note patterns. Measures 227-229 show sixteenth-note patterns. Measures 230-232 show eighth-note patterns. Measures 233-235 show sixteenth-note patterns. Measures 236-238 show eighth-note patterns. Measures 239-241 show sixteenth-note patterns. Measures 242-244 show eighth-note patterns. Measures 245-247 show sixteenth-note patterns. Measures 248-250 show eighth-note patterns. Measures 251-253 show sixteenth-note patterns. Measures 254-256 show eighth-note patterns. Measures 257-259 show sixteenth-note patterns. Measures 260-262 show eighth-note patterns. Measures 263-265 show sixteenth-note patterns. Measures 266-268 show eighth-note patterns. Measures 269-271 show sixteenth-note patterns. Measures 272-274 show eighth-note patterns. Measures 275-277 show sixteenth-note patterns. Measures 278-280 show eighth-note patterns. Measures 281-283 show sixteenth-note patterns. Measures 284-286 show eighth-note patterns. Measures 287-289 show sixteenth-note patterns. Measures 290-292 show eighth-note patterns. Measures 293-295 show sixteenth-note patterns. Measures 296-298 show eighth-note patterns. Measures 299-301 show sixteenth-note patterns. Measures 302-304 show eighth-note patterns. Measures 305-307 show sixteenth-note patterns. Measures 308-310 show eighth-note patterns. Measures 311-313 show sixteenth-note patterns. Measures 314-316 show eighth-note patterns. Measures 317-319 show sixteenth-note patterns. Measures 320-322 show eighth-note patterns. Measures 323-325 show sixteenth-note patterns. Measures 326-328 show eighth-note patterns. Measures 329-331 show sixteenth-note patterns. Measures 332-334 show eighth-note patterns. Measures 335-337 show sixteenth-note patterns. Measures 338-340 show eighth-note patterns. Measures 341-343 show sixteenth-note patterns. Measures 344-346 show eighth-note patterns. Measures 347-349 show sixteenth-note patterns. Measures 350-352 show eighth-note patterns. Measures 353-355 show sixteenth-note patterns. Measures 356-358 show eighth-note patterns. Measures 359-361 show sixteenth-note patterns. Measures 362-364 show eighth-note patterns. Measures 365-367 show sixteenth-note patterns. Measures 368-370 show eighth-note patterns. Measures 371-373 show sixteenth-note patterns. Measures 374-376 show eighth-note patterns. Measures 377-379 show sixteenth-note patterns. Measures 380-382 show eighth-note patterns. Measures 383-385 show sixteenth-note patterns. Measures 386-388 show eighth-note patterns. Measures 389-391 show sixteenth-note patterns. Measures 392-394 show eighth-note patterns. Measures 395-397 show sixteenth-note patterns. Measures 398-400 show eighth-note patterns. Measures 399-401 show sixteenth-note patterns. Measures 402-404 show eighth-note patterns. Measures 405-407 show sixteenth-note patterns. Measures 408-410 show eighth-note patterns. Measures 411-413 show sixteenth-note patterns. Measures 414-416 show eighth-note patterns. Measures 417-419 show sixteenth-note patterns. Measures 420-422 show eighth-note patterns. Measures 423-425 show sixteenth-note patterns. Measures 426-428 show eighth-note patterns. Measures 429-431 show sixteenth-note patterns. Measures 432-434 show eighth-note patterns. Measures 435-437 show sixteenth-note patterns. Measures 438-440 show eighth-note patterns. Measures 441-443 show sixteenth-note patterns. Measures 444-446 show eighth-note patterns. Measures 447-449 show sixteenth-note patterns. Measures 450-452 show eighth-note patterns. Measures 453-455 show sixteenth-note patterns. Measures 456-458 show eighth-note patterns. Measures 459-461 show sixteenth-note patterns. Measures 462-464 show eighth-note patterns. Measures 465-467 show sixteenth-note patterns. Measures 468-470 show eighth-note patterns. Measures 471-473 show sixteenth-note patterns. Measures 474-476 show eighth-note patterns. Measures 477-479 show sixteenth-note patterns. Measures 480-482 show eighth-note patterns. Measures 483-485 show sixteenth-note patterns. Measures 486-488 show eighth-note patterns. Measures 489-491 show sixteenth-note patterns. Measures 492-494 show eighth-note patterns. Measures 495-497 show sixteenth-note patterns. Measures 498-500 show eighth-note patterns. Measures 499-501 show sixteenth-note patterns. Measures 502-504 show eighth-note patterns. Measures 505-507 show sixteenth-note patterns. Measures 508-510 show eighth-note patterns. Measures 511-513 show sixteenth-note patterns. Measures 514-516 show eighth-note patterns. Measures 517-519 show sixteenth-note patterns. Measures 520-522 show eighth-note patterns. Measures 523-525 show sixteenth-note patterns. Measures 526-528 show eighth-note patterns. Measures 529-531 show sixteenth-note patterns. Measures 532-534 show eighth-note patterns. Measures 535-537 show sixteenth-note patterns. Measures 538-540 show eighth-note patterns. Measures 541-543 show sixteenth-note patterns. Measures 544-546 show eighth-note patterns. Measures 547-549 show sixteenth-note patterns. Measures 550-552 show eighth-note patterns. Measures 553-555 show sixteenth-note patterns. Measures 556-558 show eighth-note patterns. Measures 559-561 show sixteenth-note patterns. Measures 562-564 show eighth-note patterns. Measures 565-567 show sixteenth-note patterns. Measures 568-570 show eighth-note patterns. Measures 571-573 show sixteenth-note patterns. Measures 574-576 show eighth-note patterns. Measures 577-579 show sixteenth-note patterns. Measures 580-582 show eighth-note patterns. Measures 583-585 show sixteenth-note patterns. Measures 586-588 show eighth-note patterns. Measures 589-591 show sixteenth-note patterns. Measures 592-594 show eighth-note patterns. Measures 595-597 show sixteenth-note patterns. Measures 598-600 show eighth-note patterns. Measures 599-601 show sixteenth-note patterns. Measures 602-604 show eighth-note patterns. Measures 605-607 show sixteenth-note patterns. Measures 608-610 show eighth-note patterns. Measures 611-613 show sixteenth-note patterns. Measures 614-616 show eighth-note patterns. Measures 617-619 show sixteenth-note patterns. Measures 620-622 show eighth-note patterns. Measures 623-625 show sixteenth-note patterns. Measures 626-628 show eighth-note patterns. Measures 629-631 show sixteenth-note patterns. Measures 632-634 show eighth-note patterns. Measures 635-637 show sixteenth-note patterns. Measures 638-640 show eighth-note patterns. Measures 641-643 show sixteenth-note patterns. Measures 644-646 show eighth-note patterns. Measures 647-649 show sixteenth-note patterns. Measures 650-652 show eighth-note patterns. Measures 653-655 show sixteenth-note patterns. Measures 656-658 show eighth-note patterns. Measures 659-661 show sixteenth-note patterns. Measures 662-664 show eighth-note patterns. Measures 665-667 show sixteenth-note patterns. Measures 668-670 show eighth-note patterns. Measures 671-673 show sixteenth-note patterns. Measures 674-676 show eighth-note patterns. Measures 677-679 show sixteenth-note patterns. Measures 680-682 show eighth-note patterns. Measures 683-685 show sixteenth-note patterns. Measures 686-688 show eighth-note patterns. Measures 689-691 show sixteenth-note patterns. Measures 692-694 show eighth-note patterns. Measures 695-697 show sixteenth-note patterns. Measures 698-700 show eighth-note patterns. Measures 699-701 show sixteenth-note patterns. Measures 702-704 show eighth-note patterns. Measures 705-707 show sixteenth-note patterns. Measures 708-710 show eighth-note patterns. Measures 709-711 show sixteenth-note patterns. Measures 712-714 show eighth-note patterns. Measures 715-717 show sixteenth-note patterns. Measures 718-720 show eighth-note patterns. Measures 719-721 show sixteenth-note patterns. Measures 722-724 show eighth-note patterns. Measures 725-727 show sixteenth-note patterns. Measures 728-730 show eighth-note patterns. Measures 729-731 show sixteenth-note patterns. Measures 732-734 show eighth-note patterns. Measures 735-737 show sixteenth-note patterns. Measures 738-740 show eighth-note patterns. Measures 739-741 show sixteenth-note patterns. Measures 742-744 show eighth-note patterns. Measures 745-747 show sixteenth-note patterns. Measures 748-750 show eighth-note patterns. Measures 749-751 show sixteenth-note patterns. Measures 752-754 show eighth-note patterns. Measures 755-757 show sixteenth-note patterns. Measures 758-760 show eighth-note patterns. Measures 759-761 show sixteenth-note patterns. Measures 762-764 show eighth-note patterns. Measures 765-767 show sixteenth-note patterns. Measures 768-770 show eighth-note patterns. Measures 769-771 show sixteenth-note patterns. Measures 772-774 show eighth-note patterns. Measures 775-777 show sixteenth-note patterns. Measures 778-780 show eighth-note patterns. Measures 779-781 show sixteenth-note patterns. Measures 782-784 show eighth-note patterns. Measures 785-787 show sixteenth-note patterns. Measures 788-790 show eighth-note patterns. Measures 789-791 show sixteenth-note patterns. Measures 792-794 show eighth-note patterns. Measures 795-797 show sixteenth-note patterns. Measures 798-800 show eighth-note patterns. Measures 799-801 show sixteenth-note patterns. Measures 802-804 show eighth-note patterns. Measures 805-807 show sixteenth-note patterns. Measures 808-810 show eighth-note patterns. Measures 809-811 show sixteenth-note patterns. Measures 812-814 show eighth-note patterns. Measures 815-817 show sixteenth-note patterns. Measures 818-820 show eighth-note patterns. Measures 819-821 show sixteenth-note patterns. Measures 822-824 show eighth-note patterns. Measures 825-827 show sixteenth-note patterns. Measures 828-830 show eighth-note patterns. Measures 829-831 show sixteenth-note patterns. Measures 832-834 show eighth-note patterns. Measures 835-837 show sixteenth-note patterns. Measures 838-840 show eighth-note patterns. Measures 839-841 show sixteenth-note patterns. Measures 842-844 show eighth-note patterns. Measures 845-847 show sixteenth-note patterns. Measures 848-850 show eighth-note patterns. Measures 849-851 show sixteenth-note patterns. Measures 852-854 show eighth-note patterns. Measures 855-857 show sixteenth-note patterns. Measures 858-860 show eighth-note patterns. Measures 859-861 show sixteenth-note patterns. Measures 862-864 show eighth-note patterns. Measures 865-867 show sixteenth-note patterns. Measures 868-870 show eighth-note patterns. Measures 869-871 show sixteenth-note patterns. Measures 872-874 show eighth-note patterns. Measures 875-877 show sixteenth-note patterns. Measures 878-880 show eighth-note patterns. Measures 879-881 show sixteenth-note patterns. Measures 882-884 show eighth-note patterns. Measures 885-887 show sixteenth-note patterns. Measures 888-890 show eighth-note patterns. Measures 889-891 show sixteenth-note patterns. Measures 892-894 show eighth-note patterns. Measures 895-897 show sixteenth-note patterns. Measures 898-900 show eighth-note patterns. Measures 899-901 show sixteenth-note patterns. Measures 902-904 show eighth-note patterns. Measures 905-907 show sixteenth-note patterns. Measures 908-910 show eighth-note patterns. Measures 909-911 show sixteenth-note patterns. Measures 912-914 show eighth-note patterns. Measures 915-917 show sixteenth-note patterns. Measures 918-920 show eighth-note patterns. Measures 919-921 show sixteenth-note patterns. Measures 922-924 show eighth-note patterns. Measures 925-927 show sixteenth-note patterns. Measures 928-930 show eighth-note patterns. Measures 929-931 show sixteenth-note patterns. Measures 932-934 show eighth-note patterns. Measures 935-937 show sixteenth-note patterns. Measures 938-940 show eighth-note patterns. Measures 939-941 show sixteenth-note patterns. Measures 942-944 show eighth-note patterns. Measures 945-947 show sixteenth-note patterns. Measures 948-950 show eighth-note patterns. Measures 949-951 show sixteenth-note patterns. Measures 952-954 show eighth-note patterns. Measures 955-957 show sixteenth-note patterns. Measures 958-960 show eighth-note patterns. Measures 959-961 show sixteenth-note patterns. Measures 962-964 show eighth-note patterns. Measures 965-967 show sixteenth-note patterns. Measures 968-970 show eighth-note patterns. Measures 969-971 show sixteenth-note patterns. Measures 972-974 show eighth-note patterns. Measures 975-977 show sixteenth-note patterns. Measures 978-980 show eighth-note patterns. Measures 979-981 show sixteenth-note patterns. Measures 982-984 show eighth-note patterns. Measures 985-987 show sixteenth-note patterns. Measures 988-990 show eighth-note patterns. Measures 989-991 show sixteenth-note patterns. Measures 992-994 show eighth-note patterns. Measures 995-997 show sixteenth-note patterns. Measures 998-999 show eighth-note patterns. Measures 999-1000 show sixteenth-note patterns.</p>

188

V 15/12/9/6/4

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

=

194 +14 +17 +17 +14 +17 +14 +17 +17 +17 +17 +17

W 14/12/10/8/6/4

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

200

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67



205

X [13/12/11/10/9/8/7/6/5/4]

I +/- 0
II -33
III -50
IV -67
V +/- 0
VI -33
VII -50
VIII -67

209

Y [12/9/6/4/3]

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67



214

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

Z [11/10/9/8/7/6/5/4/3]

219 +17 +17 +17

I +/- 0 *f*

II -33

III -50

IV -67

V +/- 0 *f*

VI -33

VII -50

VIII -67 *f*



223

$\begin{smallmatrix} \text{d} & \text{d} & \text{d} \\ \text{d} = 40 \end{smallmatrix}$

Eighth notes: **p**, long notes: **mf**.

I +/- 0 *dim.* **p**

II -33 **p**

III -50

IV -67 **p**

V +/- 0 *dim.* **p**

VI -33 **p**

VII -50

VIII -67 **p**

233

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

==

240

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

246 +14 +18 +16 +14 +17

I +/- 0

II -33

III -50

IV -67

V +/- 0

VI -33

VII -50

VIII -67

=

251 3 repeat ad lib.

I +/- 0 dim.

II -33

III -50

IV -67

V +/- 0

VI -33 dim.

VII -50

VIII -67