

**Concordance between Source, Score, & CD of
CHARLES IVES's UNIVERSE SYMPHONY as realized
by Johnny Reinhard (note the CD=The Stereo Society SS007)**

Page number (Pg#) in the score

Patch # from which score segment was assembled

Basic Unit (BU) numbers throughout piece

Cycle#-Divisions (c-Divs) per BU

Measure #'s for full orchestra

CD track#-TrackBU#

Within track

BU start times

Track #1: INTRODUCTION

"Earth Formed Alone" fragment (for Full Orchestra)

01' 18" = 78 seconds

4 BU's at 19.5 seconds per BU

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- TrkBU	Start time of TrkBU	Pg#
2	1=28	clx		95-96	1-1	00' 00"	2
					1-2	00' 19"	
3	2=29	clxii		99-100	1-3	00' 37"	3
					1-4	00' 59"	
				end of Track #1		01' 18"	

Track #2: PULSE OF THE COSMOS (Section A Prelude),

for Percussion Section of the Orchestra only

29' 37" = 1777 sec.

112 BU's at 15.86607143 sec/BU

(Start Cycle I)

4	3	1	1-1	2-1	00' 00"	4
		2	1-2	2-2	00' 14"	
		3	1-3	2-3	00' 30"	
		4	1-4	2-4	00' 46"	
		5	1-5	2-5	01' 02"	
		6	1-6	2-6	01' 17"	
		7	1-7	2-7	01' 34"	
		8	1-8	2-8	01' 50"	
		9	1-9	2-9	02' 06"	
5		10	1-10	2-10	02' 22"	5
		11	1-11	2-11	02' 37"	
		12	1-12	2-12	02' 53"	
		13	1-13	2-13	03' 09"	
6		14	1-14	2-14	03' 26"	6
		15	1-15	2-15	03' 42"	
7		16	1-16	2-16	03' 58"	7
		17	1-17	2-17	04' 14"	
8		18	1-19	2-18	04' 28"	8
		19	1-21	2-19	04' 44"	
9		20	1-23	2-20	04' 50"	9
		21	1-29	2-21	05' 16"	
10		22	1-31	2-22	05' 31"	10
		23	1-29	2-23	05' 47"	
11		24	1-23	2-24	06' 04"	11
		25	1-21	2-25	06' 18"	
12		26	1-19	2-26	06' 35"	12
		27	1-17	2-27	06' 50"	
13		28	1-16	2-28	07' 07"	13
		29	1-15	2-29	07' 22"	
14		30	1-14	2-30	07' 38"	14
		31	1-13	2-31	07' 55"	
15		32	1-12	2-32	08' 10"	15
		33	1-11	2-33	08' 27"	
		34	1-10	2-34	08' 42"	
		35	1-9	2-35	08' 58"	

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- TrkBU	Start time of TrkBU	Pg#
16		36	1-8		2-36	09' 15"	16
		37	1-7		2-37	09' 30"	
		38	1-6		2-38	09' 47"	
		39	1-5		2-39	10' 02"	
		40	1-4		2-40	10' 18"	
		41	1-3		2-41	10' 34"	
		42	1-2		2-42	10' 49"	
					(Start Cycle II)		
17	4	43	2-1		2-43	11' 04"	17
		44	2-2		2-44	11' 19"	
		45	2-3		2-45	11' 36"	
		46	2-4		2-46	11' 51"	
		47	2-5		2-47	12' 08"	
		48	2-7		2-48	12' 23"	
		49	2-9		2-49	12' 39"	
		50	2-11		2-50	12' 56"	
18		51	2-13		2-51	13' 11"	18
		52	2-17		2-52	13' 24"	
		53	2-19		2-53	13' 43"	
		54	2-12		2-54	14' 00"	
19		55	2-29		2-55	14' 15"	19
		56	2-31		2-56	14' 31"	
		57	2-37		2-57	14' 47"	
		58	2-41		2-58	15' 03"	
20		59	2-43		2-59	15' 20"	20
		60	2-41		2-60	15' 34"	
		61	2-37		2-61	15' 50"	
		62	2-31		2-62	16' 05"	
21		63	2-29		2-63	16' 21"	21
		64	2-23		2-64	16' 37"	
		65	2-19		2-65	16' 52"	
		66	2-17		2-66	17' 10"	
		67	2-13		2-67	17' 24"	
		68	2-11		2-68	17' 41"	
22		69	2-9		2-69	17' 56"	22
		70	2-7		2-70	18' 12"	
		71	2-5		2-71	18' 28"	
		72	2-4		2-72	18' 44"	
					<i>"Heavens" Orchestra (3 measures per each BU) starts</i>		
23	5=15	73	2-3		2-73	18' 59"	23
24		74	2-2		2-74	19' 17"	24
					(Start Cycle III)		
25		75	3-1		2-75	19' 33"	25
26	6=16	76	3-2		2-76	19' 49"	26
					<i>"Heavens" Orchestra ended</i>		
27		77	3-3		2-77	20' 04"	27
		78	3-4		2-78	20' 20"	
		79	3-5		2-79	20' 35"	
		80	3-6		2-80	20' 52"	
		81	3-7		2-81	21' 08"	
		82	3-8		2-82	21' 24"	
28		83	3-9		2-83	21' 40"	28
		84	3-10		2-84	21' 56"	
		85	3-11		2-85	22' 12"	
		86	3-13		2-86	22' 27"	
29	7	87	3-17		2-87	22' 44"	29
		88	3-19		2-88	23' 00"	
30		89	3-23		2-89	23' 15"	30
		90	3-29		2-90	23' 32"	

(Track 2 and Cycle III continued on next page)

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start time		
					TrkBU	of TrkBU	Pg#
31		91	3-31		2-91	23' 47"	31
32		92	3-37		2-92	24' 03"	32
33		93	3-41		2-93	24' 17"	33
34		94	3-43		2-94	24' 34"	34
35		95	3-41		2-95	24' 49"	35
36		96	3-37		2-96	25' 05"	36
37		97	3-31		2-97	25' 22"	37
38		98	3-29		2-98	25' 37"	38
39		99	3-23		2-99	25' 53"	39
		100	3-19		2-100	26' 08"	
		101	3-17		2-101	26' 25"	
		102	3-13		2-102	26' 43"	
40		103	3-11		2-103	26' 56"	40
		104	3-10		2-104	27' 13"	
		105	3-9		2-105	27' 28"	
		106	3-8		2-106	27' 45"	
41		107	3-7		2-107	28' 00"	41
		108	3-6		2-108	28' 16"	
		109	3-5		2-109	28' 28"	
		110	3-4		2-110	28' 48"	
		111	3-3		2-111	29' 04"	
		112	3-2		2-112	29' 21"	
			end of Track #2			29' 37"	

Track #3: Wide Valleys and Clouds (Section A)

12' 03" = 723 seconds

51 BU's at 14.17647059 sec/BU

(Start Cycle IV) Full orchestra from here to the end

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start time			
					TrkBU	of TrkBU	Pg#	
42	8	113	4-1	1-2	3-1	00' 00"	42	
		114	4-2	3-4	3-2	00' 13"		
43		115	4-3	5-6	3-3	00' 26"	43	
	9	116	4-5	7-8	3-4	00' 40"		
44		117	4-7	9-10	3-5	00' 54"	44	
		118	4-10	11-12	3-6	01' 08"		
45	10	119	4-11	13-14	3-7	01' 20"	45	
		120	4-12	15-16	3-8	01' 34"		
46	11	121	4-13	17-18	3-9	01' 46"	46	
47	12	122	4-14	19-20	3-10	02' 00"	47	
48	13	123	4-17	21-22	3-11	02' 12"	48	
49	14	124	4-19	23-24	3-12	02' 25"	49	
50		125	4-23	25-26	3-13	02' 38"	50	
			<i>"Heavens" Orchestra (3 measure per each BU) starts</i>					
51	15	126	4-29	27-28	3-14	02' 52"	51	
52		127	4-31	29-30	3-15	03' 06"	52	
53		128	4-29	31-32	3-16	03' 19"	53	
54	16	129	4-23	33-34	3-17	03' 32"	54	
55		130	4-19	35-36	3-18	03' 44"	55	
56		131	4-17	37-38	3-19	03' 58"	56	
57	17	132	4-14	39-40	3-20	04' 08"	57	
58		133	4-13	41-42	3-21	04' 20"	58	
59		134	4-12	43-44	3-22	04' 32"	59	
60	18	135	4-11	45-46	3-23	04' 45"	60	
61		136	4-10	47-48	3-24	04' 57"	61	
62		137	4-7	49-50	3-25	05' 10"	62	
63	19	138	4-5	51-52	3-26	05' 23"	63	
64		139	4-3	53-54	3-27	05' 36"	64	
65		140	4-2	55-56	3-28	05' 50"	65	

(Start Cycle V)

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start time			
					TrkBU	of TrkBU	Pg#	
66	20	141	5-1	57-58	3-29	06' 05"	66	
67		142	5-2	59-60	3-30	06' 19"	67	
68		143	5-3	61-62	3-31	06' 34"	68	
69	21	144	5-4	63-64	3-32	06' 48"	69	
70		145	5-5	65-66	3-33	07' 03"	70	
71		146	5-6	67-68	3-34	07' 17"	71	
			<i>"Heavens" orchestra ended</i>					
72	22	147	5-7	69-70	3-35	07' 34"	72	
73		148	5-9	71-72	3-36	07' 48"	73	
74	23	149	5-11	73-74	3-37	08' 05"	74	
75		150	5-13	75-76	3-38	08' 17"	75	
76	24	151	5-17	77-78	3-39	08' 39"	76	
77		152	5-19	79-80	3-40	08' 52"	77	
78	25	153	5-23	81-82	3-41	09' 08"	78	
79		154	5-29	83-84	3-42	09' 25"	79	
			<i>"Heavens" Orchestra (3 measures per each BU) starts</i>					
80	26	155	5-31	85-86	3-43	09' 40"	80	
			(Start Cycle VI)					
81		156	6-1	87-88	3-44	09' 57"	81	
82		157	6-2	89-90	3-45	10' 13"	82	
83	27	158	6-3	91-92	3-46	10' 29"	83	
84		159	6-5	93-94	3-47	10' 44"	84	
			<i>"Heavens" orchestra ended; "Earth Formed Alone" starts</i>					
85	28	160	6-7	95-96	3-48	11' 00"	85	
86		161	6-11	97-98	3-49	11' 16"	86	
87	29	162	6-13	99-100	3-50	11' 31"	87	
88		163	6-17	101-102	3-51	11' 47"	88	
			end "Earth Formed Alone" & end of Track #3 12' 03"					

Track #4: Birth of the Oceans (Section B Prelude)

03' 32" = 212 seconds

13 BU's at 16.30769231 / BU

(Cycle VI continuation)

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start time			
					TrkBU	of TrkBU	Pg#	
89	30	164	6-19	103-104	4-1	00' 00"	89	
90		165	6-23	105-106	4-2	00' 16"	90	
91	31	166	6-29	107-108	4-3	00' 33"	91	
		167	6-31	109-110	4-4	00' 52"		
92		168	6-29	111-112	4-5	01' 09"	92	
		169	6-23	113-114	4-6	01' 26"		
93	32	170	6-19	115-116	4-7	01' 43"	93	
		171	6-17	117-118	4-8	02' 01"		
94	33	172	6-13	119-120	4-9	02' 15"	94	
		173	6-11	121-122	4-10	02' 31"		
95	34	174	6-7	123-124	4-11	02' 44"	95	
			(Start Cycle VII)					
		175	7-1	125-126	4-12	03' 00"		
96		176	7-2	127-128	4-13	03' 16"	96	
			end of Track #4 03' 32"					

Track #5: see next page

Track #5: Earth and the Firmament (Section B),

04'34" = 274 sec.

18 BU's at 15.22222222 / BU

(Cycle VII continuation)

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start		Pg#
					TrkBU	Trk-time	
96	35	177	7-3	129-130	5-1	00' 00"	96
97	36	178	7-5	131-132	5-2	00' 16"	97
		179	7-7	133-134	5-3	00' 30"	
98		180	7-11	135-136	5-4	00' 45"	98
99	37	181	7-13	137-138	5-5	00' 59"	99
		182	7-17	139-140	5-6	01' 15"	
100		183	7-19	141-142	5-7	01' 27"	100
	38	184	7-23	143-144	5-8	01' 40"	
(Start Cycle VIII)							
101		185	8-1	145-146	5-9	01' 54"	101
		186	8-2	147-148	5-10	02' 08"	
102		187	8-3	149-150	5-11	02' 22"	102
		188	8-5	151-152	5-12	02' 38"	
103	39	189	8-7	153-154	5-13	02' 56"	103
		190	8-11	155-156	5-14	03' 12"	
104		191	8-13	157-158	5-15	03' 30"	104
		192	8-17	159-160	5-16	03' 46"	
105		193	8-19	161-162	5-17	04' 01"	105
		194	8-23	163-164	5-18	04' 17"	
end of Track #5						04' 34"	

Track #6: And Lo...Now Is Night (Section C Prelude),

02' 33" = 153 seconds

9 BU's at 17 seconds per BU

(Cycle VIII continuation)

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start		Pg#
					TrkBU	Trk-time	
106	40	195	8-29	165-166	6-1	00' 00"	106
107		196	8-31	167-168	6-2	00' 16"	107
108	41	197	8-29	169-170	6-3	00' 33"	108
109		198	8-23	171-172	6-4	00' 50"	109
110		199	8-19	173-174	6-5	01' 07"	110
111		200	8-17	175-176	6-6	01' 24"	111
112		201	8-13	177-178	6-7	01' 42"	112
113	42	202	8-11	179-180	6-8	01' 59"	113
114	43	203	8-7	181-182	6-9	02' 16"	114
end of Track #6						02' 33"	

(Start Cycle IX)

Track #7: Earth Is of the Heavens (Section C),

10' 49" = 649 second

45 BU's at 14.42222222 / BU

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start		Pg#
					TrkBU	Trk-time	
115	44	204	9-1	183-184	7-1	00' 00"	115
116		205	9-2	185-186	7-2	00' 13"	116
117		206	9-3	187-188	7-3	00' 31"	117
118	45	207	9-5	189-190	7-4	00' 49"	118
119		208	9-7	191-192	7-5	01' 07"	119
120	46	209	9-10	193-194	7-6	01' 21"	120
121		210	9-11	195-196	7-7	01' 38"	121
122	47	211	9-12	197-198	7-8	01' 55"	122
123	48	212	9-13	199-200	7-9	02' 11"	123

Pg#	Patch	ΣBU	c-Divs	Measr#	CDtrk- Start		Pg#
					TrkBU	Trk-time	
124	49	213	9-14	201-202	7-10	02' 27"	124
125	50	214	9-17	203-204	7-11	02' 40"	125
126		215	9-19	205-206	7-12	02' 55"	126
127		216	9-23	207-208	7-13	03' 10"	127
128	51	217	9-29	209-210	7-14	03' 25"	128
129		218	9-31	211-212	7-15	03' 37"	129
130		219	9-29	213-214	7-16	03' 51"	130
131		220	9-23	215-216	7-17	04' 05"	131
132	52	221	9-19	217-218	7-18	04' 19"	132
133	53	222	9-17	219-220	7-19	04' 31"	133
134	54	223	9-14	221-222	7-20	04' 47"	134
135		224	9-13	223-224	7-21	05' 01"	135
136		225	9-12	225-226	7-22	05' 16"	136
137	55	226	9-11	227-228	7-23	05' 28"	137
138		227	9-10	229-230	7-24	05' 43"	138
139	56	228	9-7	231-232	7-25	05' 55"	139
140		229	9-5	233-234	7-26	06' 10"	140
141		230	9-3	235-	7-27	06' 22"	141
	57			-236			
142		231	9-2	237-238	7-28	06' 37"	142
(Start Cycle X)							
143		232	10-17	239-240	7-29	06' 51"	143
144		233	10-16	241-242	7-30	07' 02"	144
"Earth Formed Alone" starts							
145	58	234	10-15	243-244	7-31	07' 15"	145
146		235	10-14	245-246	7-32	07' 30"	146
147		236	10-13	247-248	7-33	07' 42"	147
148	59	237	10-12	249-250	7-34	07' 57"	148
"Earth Formed Alone" ended							
149		238	10-11	251-252	7-35	08' 10"	149
150		239	10-10	253-254	7-36	08' 24"	150
151	60	240	10-9	255-256	7-37	08' 39"	151
152		241	10-8	257-	7-38	08' 52"	152
	61			-258			
153		242	10-7	259-260	7-39	09' 04"	153
154		243	10-6	262-262	7-40	09' 18"	154
155	62	244	10-5	263-264	7-41	09' 32"	155
156		245	10-4	265-266	7-42	09' 48"	156
157		246	10-3	267-268	7-43	10' 04"	157
158		247	10-2	269-270	7-44	10' 20"	158
159		248	10-1	271	7-45	10' 39"	159
END of Ives's UNIVERSE SYMPHONY							10' 49"

= 248 BU's in total + 4 from the Introduction
= 271 orchestral measures

Total CD playing time = 60 minutes & 26 seconds

This Concordance was prepared by
Ted (Edgar E.) Coons
Board President of

The American Festival of Microtonal Music (AFMM) of
which **Johnny Reinhard** is the Artistic Director

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(Note: on the next page follows the Code list of percussion designations for the time-factorings of the Basic Units into their divisions)

Code List–Percussion designations for time factoring of the Basic Unit (BU) in divisions (Divs):

- 1- Low Bell - Low Gong Bell
- 2-Bass Drum/Cymbal
- 3-Low Gong - Tam Tam
- 4-Bass Drum - 2 sticks
- 5-Low Timpani (A natural, F#)
- 6-Triangle (12 triplets)
- 7-High Gang - 3 all together
- 8-Log Drum
- 9-Piccolo Timpani
- 10-Indian Drum
- 11-Snare Drum
- 12-Two kinds of Metal Pipe
- 13-High Brittle Wood
- 14-Medium Small Xylophone
- 15-Clay Pipes - large
- 16-Different Woods Bl/Bd - Wooden Box about 4' square hit by a metal basin or small pail or can / 5 kinds
- 17-Low Xylophone
- 19-Large Tambourine - several, 4 kinds bound and free
- 21-Small Triangle
- 23-Wood Block(s)
- 29-High Bell
- 31-Suspended Cymbals - 3 sizes of suspended cymbals, 2 crash
- 37-Glasses
- 41-Drum Rims - piece of metal hit with hammer - 3 kinds
- 43-Small Steel Bars