

BYZANTINE MUSIC FORMULÆ

Second Mode - Heirmologic (Hard Chromatic)

Contents*

A) Cadences on Pa.....	146
B) Cadences on Di.....	156
C) Formulae with Fthores.....	164
D) Endings for Theotokia	165

Key:

1 = accented syllable
0 = unaccented syllable
X = syllable that may be either
accented or unaccented

Variations of the same formula
are indicated in color

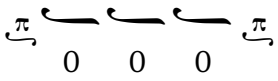
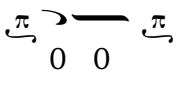
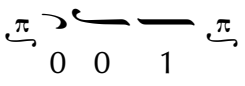
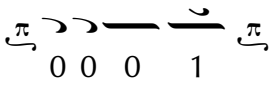
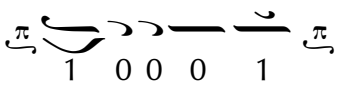
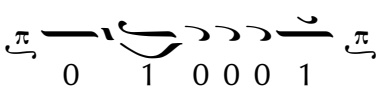
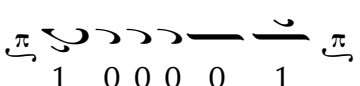
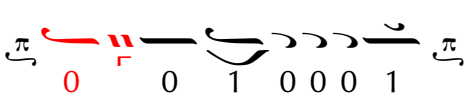
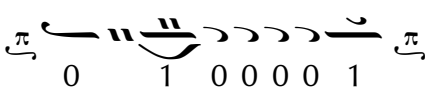
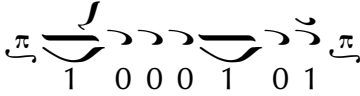
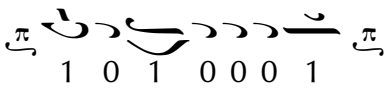
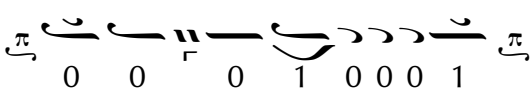
* The Byzantine music formulae herein were extracted from all the heirmologic melodies found in the Zoe *Anastasimatarion* (14th edition, 2002). Note that in the hard chromatic second mode, the troparia of the Stichera, Aposticha, Anabathmoi, Praises, and the Katanyktika troparia never have medial cadences on Ga. However, the melodies for the canons and the doxology have frequent medial cadences on Ga. Those formulae with cadences on Ga have been omitted from this collection.

Second Mode - Heirmologic (Hard Chromatic)

A) Cadences on Pa

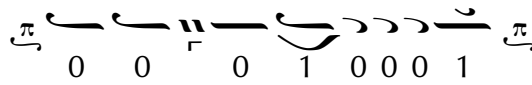
Accented on last syllable:

From Pa

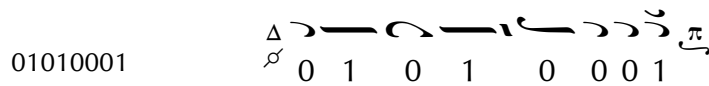
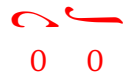
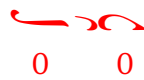
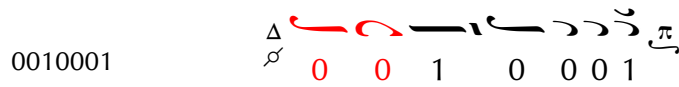
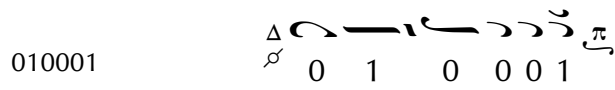
0	
00	
001	
0001	
10001	
010001	
100001	
0010001	
0100001	
1000101	
1010001	
00010001	



Second Mode - Heirmologic (Hard Chromatic)

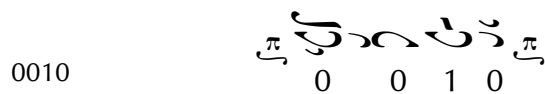
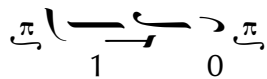


From Di

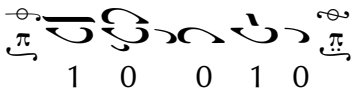


Accented on second to last syllable:

From Pa

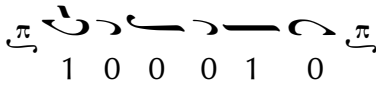


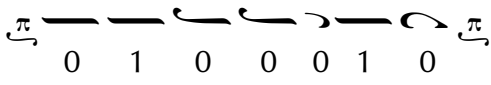
Second Mode - Heirmologic (Hard Chromatic)

10010  Musical notation for the binary sequence 10010, consisting of five notes with stems pointing up and down.

10010  Musical notation for 10010 with the first two notes (10) highlighted in red.

 Red musical notation for the binary sequence 10, consisting of two notes.

100010  Musical notation for the binary sequence 100010, consisting of six notes.

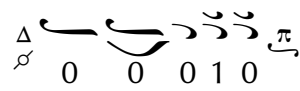
0100010  Musical notation for the binary sequence 0100010, consisting of seven notes.


10100010  Musical notation for the binary sequence 10100010, consisting of eight notes.

From Di

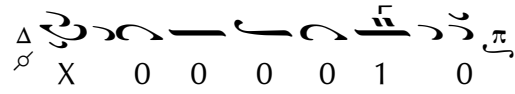
010  Musical notation for the binary sequence 010, consisting of three notes.

0010  Musical notation for the binary sequence 0010, consisting of four notes.

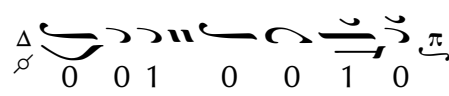
00010  Musical notation for the binary sequence 00010, consisting of five notes.

010010  Musical notation for 010010 with the fourth note (1) highlighted in red.

 Red musical notation for the binary sequence 1, consisting of one note.

X000010  Musical notation for the binary sequence X000010, consisting of eight notes, with the first note marked with an 'X'.

0010010  Musical notation for the binary sequence 0010010, consisting of seven notes.

 Musical notation for the binary sequence 0010010, consisting of seven notes.

Second Mode - Heirmologic (Hard Chromatic)

1000010

100X010

1010010

X010010

00100010

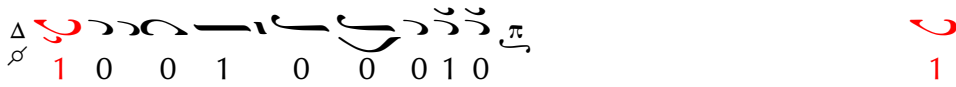
1000X010

10010010

1000X010

1100X010


Second Mode - Heirmologic (Hard Chromatic)

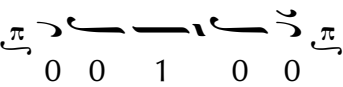
100100010 

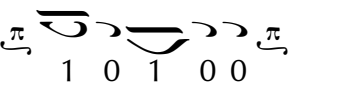
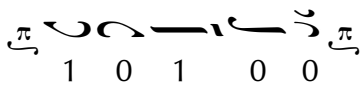
Accented on third to last syllable:

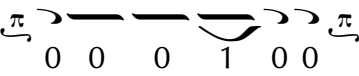
From Pa


100 

0100 

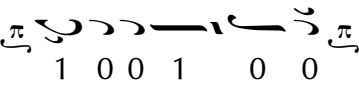
00100 


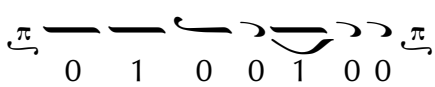
10100  

000100 

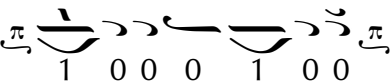
010100 



100100 

0100100  



1000100 

Second Mode - Heirmologic (Hard Chromatic)

1000101

1000101

01000100

1 0

10010100

From Di

100

00100

000100

010100

100100

1 0 0 1 0 0

1 0 0 1 0 0

0

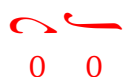
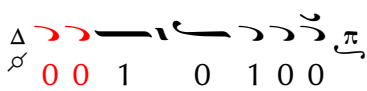
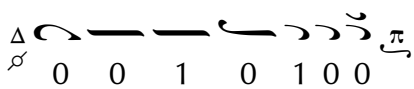
1 0 0 1 0 0

0 1

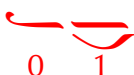
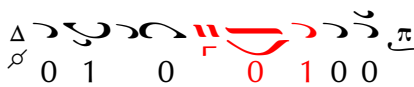
Second Mode - Heirmologic (Hard Chromatic)



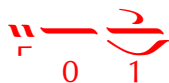
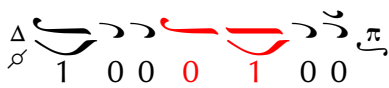
0010100



0100100



1000100

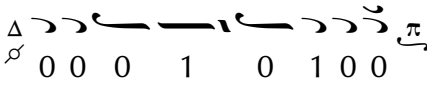


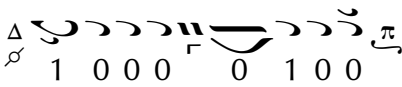
Second Mode - Heirmologic (Hard Chromatic)

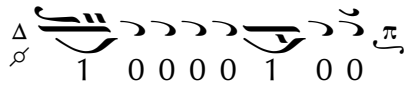
1010100  Δ
 ρ 1 0 1 0 1 0 0 π

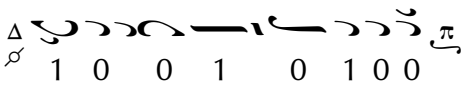
10X0100  Δ
 ρ 1 0 X 0 1 0 0 π

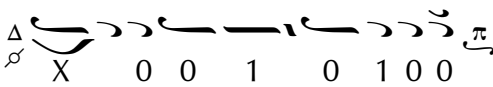
 π
 0 1

00010100  Δ
 ρ 0 0 0 1 0 1 0 0 π

10000100  Δ
 ρ 1 0 0 0 0 1 0 0 π

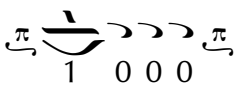
 Δ
 ρ 1 0 0 0 0 1 0 0 π

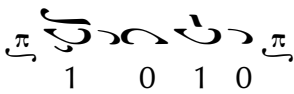
10010100  Δ
 ρ 1 0 0 1 0 1 0 0 π

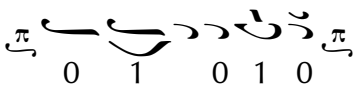
X0010100  Δ
 ρ X 0 0 1 0 1 0 0 π

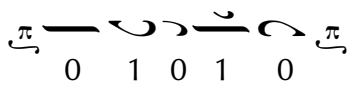
Accented on fourth to last syllable:

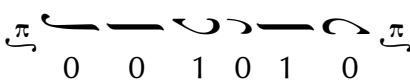
From Pa

1000  π
 1 0 0 0 π

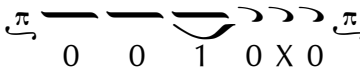
1010  π
 1 0 1 0 π

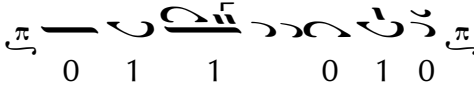
01010  π
 0 1 0 1 0 π

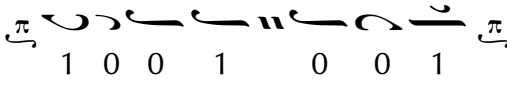
 π
 0 1 0 1 0 π

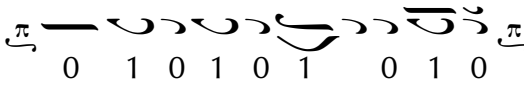
001010  π
 0 0 1 0 1 0 π

Second Mode - Heirmologic (Hard Chromatic)


0010X0 


011010 

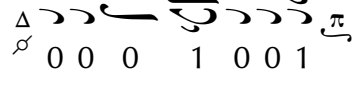
1001001 

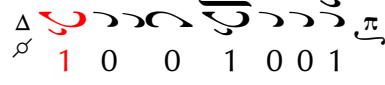
010101010 

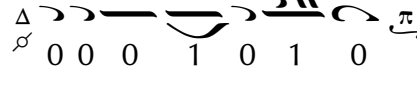
From Di

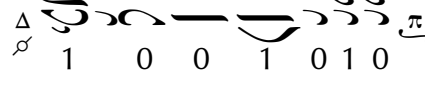
001001 

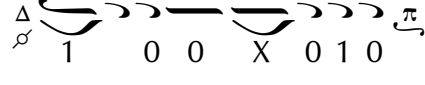
001010 

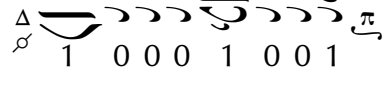
0001001 

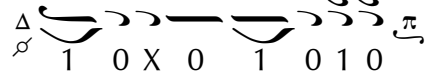
1001001 

0001010 

1001010 

100X010 

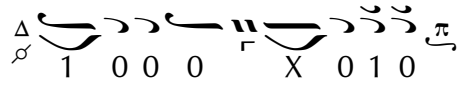
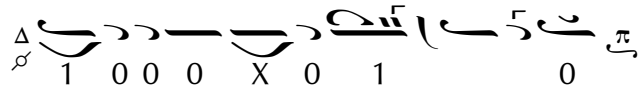
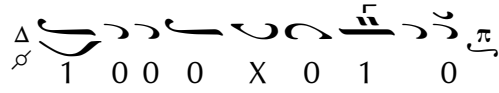
10001001 

10X01010 

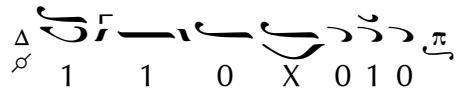


Second Mode - Heirmologic (Hard Chromatic)

1000X010



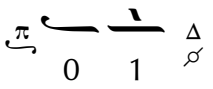
1100X010

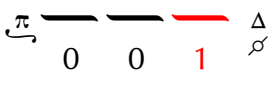



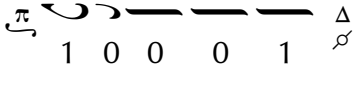
B) Cadences on Di

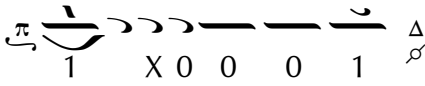
Accented on last syllable:

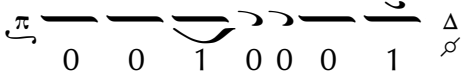
From Pa

01 

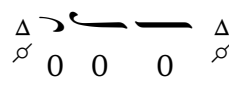
001  

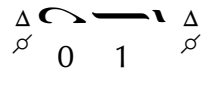
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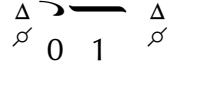
1X0001 


0010001 

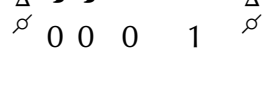
From Di

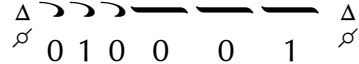
000 

01 

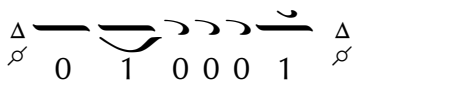


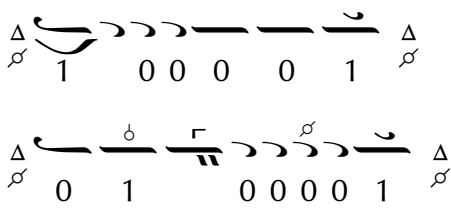
001 

0001 

010001 

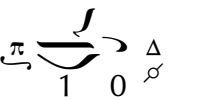
Second Mode - Heirmologic (Hard Chromatic)


100001 


0100001 

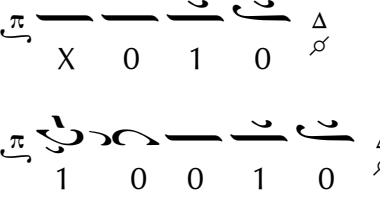
Accented on second to last syllable:

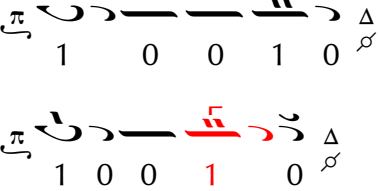
From Pa

10 

0010 

X010 

10010 



Second Mode - Heirmologic (Hard Chromatic)

	π		Δ	
		1 0 0 1 0	ρ	
10X010	π		Δ	
		1 0 X 0 1 0	ρ	
	π		Δ	
		1 0 X 0 1 0	ρ	
		1 0		
		1 0		
0010010	π		Δ	
		0 0 1 0 0 1 0	ρ	1 0
X010010	π		Δ	
		X 0 1 0 0 1 0	ρ	
1000010	π		Δ	
		1 0 0 0 0 1 0	ρ	1 0
	π		Δ	
		1 0 0 0 1 0	ρ	
	π		Δ	
		1 0 0 0 0 1 0	ρ	1 0

From Di

10	Δ		Δ	
	ρ	1 0	ρ	
	Δ		Δ	
	ρ	1 0	ρ	
	Δ		Δ	
	ρ	1 0	ρ	

Second Mode - Heirmologic (Hard Chromatic)

010		
0010		
00010		
10010		
000010		
010010		
0100010		
01000010		

Accented on third to last syllable:

From Pa

100	

Second Mode - Heirmologic (Hard Chromatic)

\int_{π} Δ
1 0 0 ρ

\int_{π} Δ
1 0 0 ρ

ρ

\int_{π} Δ
1 0 0 ρ

\int_{π} Δ
1 0 0 ρ

00100

\int_{π} Δ
0 0 1 0 0 ρ

\int_{π} Δ
0 0 1 0 0 ρ

\int_{π} Δ
0 0 1 0 0 ρ

\int_{π} Δ
0 0 1 0 0 ρ

\int_{π} Δ
0 0 1 0 0 ρ

10100

\int_{π} Δ
1 0 1 0 0 ρ

100100

\int_{π} Δ
1 0 0 1 0 0 ρ

\int_{π} Δ
1 0 0 1 0 0 ρ

\int_{π} Δ
1 0 0 1 0 0 ρ

00X0100

\int_{π} Δ
0 0 X 0 1 0 0 ρ

Second Mode - Heirmologic (Hard Chromatic)

1000100

From Di

100

0100

0101

00100

10100

2
1

Second Mode - Heirmologic (Hard Chromatic)

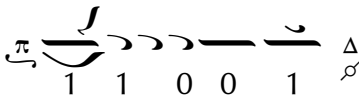
000100		
0X0100		
100100		
0100100		
100X0100		

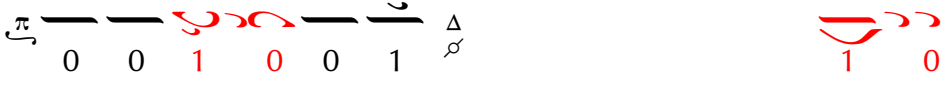
Accented on fourth to last syllable:

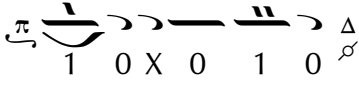
From Pa


1001	
X010	


Second Mode - Heirmologic (Hard Chromatic)

11001 

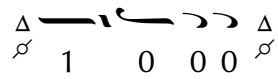
001001 

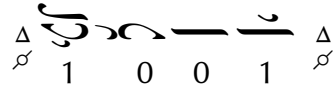
10X010 

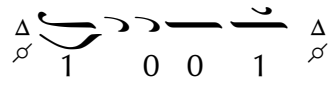


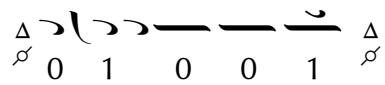



From Di

1000 

1001 



01001 

01010 

Second Mode - Heirmologic (Hard Chromatic)

C) Formulae with Fthores

01001 $\begin{array}{cccccc} \pi & \overset{\varphi}{\curvearrowright} & \curvearrowright & \Gamma & \text{---} & \text{---} & \overset{\varphi}{\curvearrowleft} & \pi \\ & 0 & 1 & 0 & 0 & & 1 & \end{array}$

010001 $\begin{array}{cccccc} \pi & \curvearrowright & \curvearrowright & \text{---} & \text{---} & \overset{\varphi}{\curvearrowleft} & \pi \\ & 1 & 0 & 0 & 0 & 1 & \end{array}$

D) Endings for Theotokia*

Accented on last syllable:

(Use a formula ending in 100)

Accented on second to last syllable:

100010  Δ
 μ 1 0 0 0 0 1 0

1X0010  Δ
 μ 1 X 0 0 0 1 0

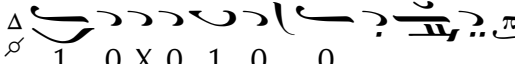
Accented on third to last syllable:

0X0100  Δ
 μ 0 X 0 1 0 0

100100  Δ
 μ 1 0 0 1 0 0

 Δ
 μ 1 0 0 1 0 0

10X0100  Δ
 μ 1 0 X 0 1 0 0

 Δ
 μ 1 0 X 0 1 0 0

* The formulae in blue in this section are from the Athonite oral tradition, as represented in the book *Παρακλητικῆς, Μουσικὸν Ἐγκόλπιον, Πλάγιοι Ἦχοι, Ἱεροθέου Ἱερομονάχου, ἐκδόσεις Ἱ.Μ. Φιλοθέου, Ἅγιον Ὄρος, 2004.*