

BYZANTINE MUSIC FORMULAE

Grave Mode - Heirmologic

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A) Medial Cadences on Pa.....	743
B) Medial Cadences on Ga.....	746
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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 heirmologic melodies found in the *Zoe Anastasimatarion* (14th edition, 2002).

A) Medial Cadences on Pa

Accented on last syllable:

From Pa



From Ga

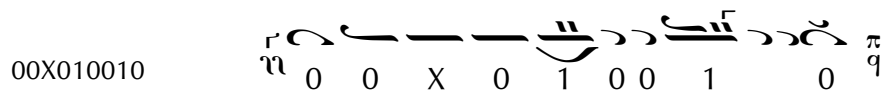
(use a 100 formula)

From Di

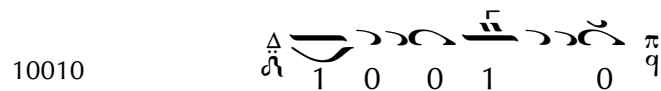
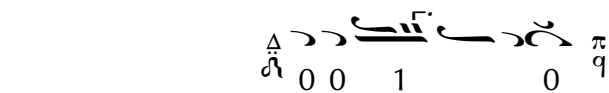
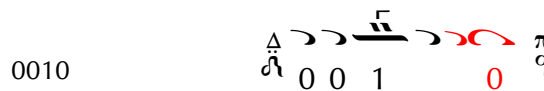
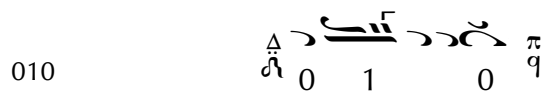
(use a 100 formula)

Accented on second to last syllable:

From Ga



From Di



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100100100 $\overset{\Delta}{\underset{\text{di}}{\curvearrowright}} \overset{\curvearrowright}{1} \overset{\curvearrowright}{0} \overset{\curvearrowright}{0} \overset{\curvearrowright}{1} \overset{\curvearrowright}{0} \overset{\curvearrowright}{0} \overset{\curvearrowright}{1} \overset{\curvearrowright}{0} \overset{\curvearrowright}{0} \overset{\pi}{\underset{\text{q}}{\curvearrowright}}$

Accented on fourth to last syllable:

From Di

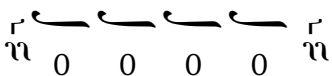
01010 $\overset{\Delta}{\underset{\text{di}}{\curvearrowright}} \overset{\curvearrowright}{0} \overset{\curvearrowright}{1} \overset{\curvearrowright}{0} \overset{\curvearrowright}{1} \overset{\curvearrowright}{0} \overset{\pi}{\underset{\text{q}}{\curvearrowright}}$

B) Medial Cadences on Ga

Accented on last syllable:

From Ga

00 

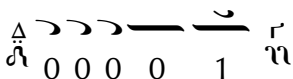
000 

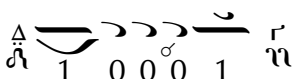
From Di

0 

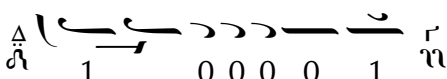
00 

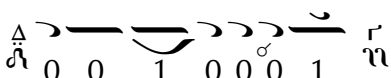
000 

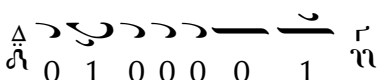
00001 

10001 

010001 

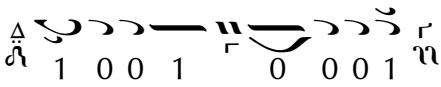
100001 

0010001 

0100001 

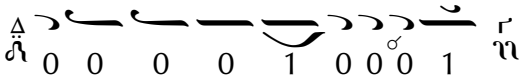
1000001 

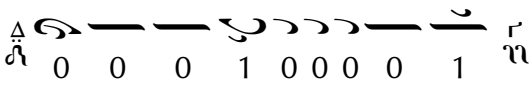
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10010001 





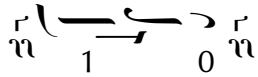
000010001 

000100001 

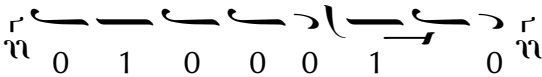
Accented on second to last syllable:

From Ga

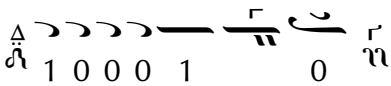
10 

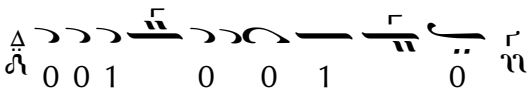


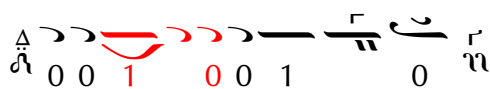
0010010 

0100010 

From Di

100010 

0010010 

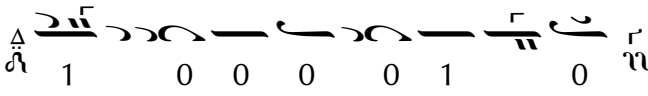


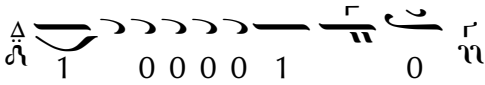


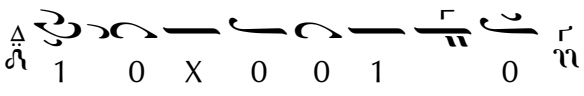
Grave Mode - Heirmologic

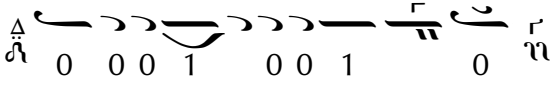
010X010 

0110010 

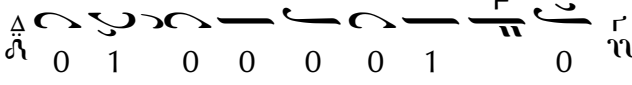
1000010 

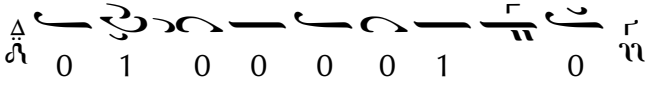


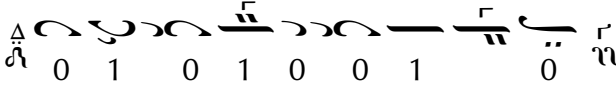
10X0010 

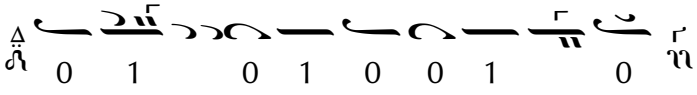
00010010 

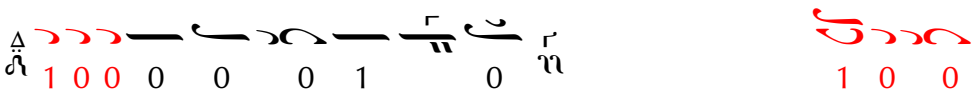
00100010 

01000010 




01010010 



10000010 

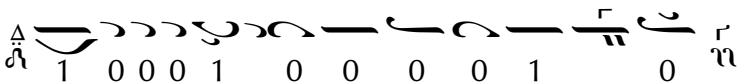
10010010 

10100010 

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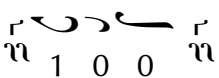
10X00010		
000010010		
001000010		
100000010		
10X000010		
100010010		
100100010		
101000010		
101010010		
10X0000010		
1000100010		
00001000010		

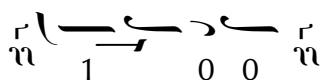
Grave Mode - Heirmologic

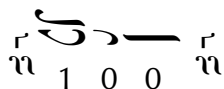
10001000010 


Accented on third to last syllable:

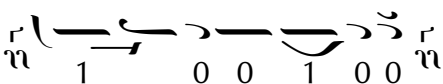
From Ga

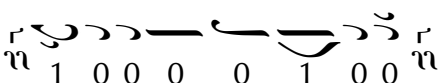
100 







0100 

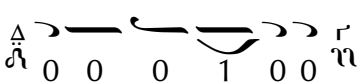
100100 

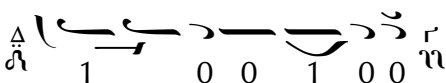
10000100 

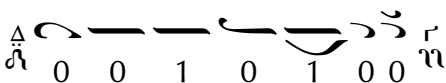
From Di

0100 

00100 

000100 

100100 

0010100 

Grave Mode - Heirmologic

0100100	 Δ δ 0 1 0 0 1 0 0 η	 1
1000100	 Δ δ 1 0 0 0 1 0 0 η	 1 0 0
	 Δ δ 1 0 0 0 1 0 0 η	
	 1 0	 0
	 1 0	
10X0100	 Δ δ 1 0 X 0 1 0 0 η	
00010100	 Δ δ 0 0 0 1 0 1 0 0 η	
01100100	 Δ δ 0 1 1 0 0 1 0 0 η	
100X0100	 Δ δ 1 0 0 X 0 1 0 0 η	
001000100	 Δ δ 0 0 1 0 0 0 1 0 0 η	
0010000100	 Δ δ 0 0 1 0 0 0 0 1 0 0 η	

Accented on fourth to last syllable:

From Ga

0101010	 Δ δ 0 1 0 1 0 1 0 η
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Grave Mode - Heirmologic

01001010

010001001

10001001010

From Di

01001

01100

001001

001100

0001001

0001001

010X010

1001001

100X010

01001010

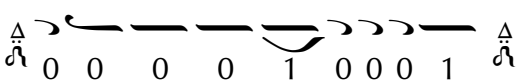
Grave Mode - Heirmologic

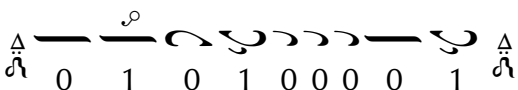
10001010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 0 0 1 0 1 0 </p>
10X01010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 X 0 1 0 1 0 </p>
10101010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 1 0 1 0 1 0 </p>
100001010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 0 0 0 1 0 1 0 </p>
	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 0 0 0 1 0 1 0 1 0 </p>
101001010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 1 0 0 1 0 1 0 </p>
10X001010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 1 0 X 0 0 1 0 1 0 </p>
0010001010	<p> $\overset{\Delta}{\underset{\delta}{\text{A}}}$ $\underset{\delta}{\text{A}}$ 0 0 1 0 0 0 1 0 1 0 </p>

Grave Mode - Heirmologic

X0001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \overbrace{\text{X}}^{\text{X}} \text{000} \overbrace{\text{1}}^{\text{1}} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	$\overline{\text{1}}$
10001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
000001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{00000} \overline{\text{1}} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
010001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{0} \text{1000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{0} \text{1000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
100001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{0000} \overline{\text{1}} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	$\overline{\text{1}}$
	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{0000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
0100001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{0} \text{10000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{0} \text{10000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
1000001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{00000} \overline{\text{1}} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	$\overline{\text{1}}$
	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{00000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
1010001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{01000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{1} \text{01000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	
01010001	$\overset{\Delta}{\underset{\text{A}}{\text{d}}} \text{0} \text{101000} \text{1} \overset{\Delta}{\underset{\text{A}}{\text{d}}}$	

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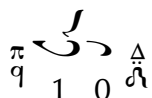
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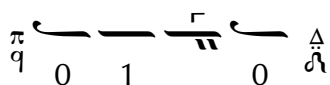
010100001 

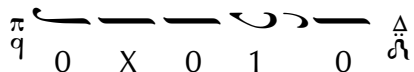
Accented on second to last syllable:

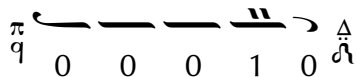
From Pa

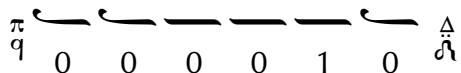
10 

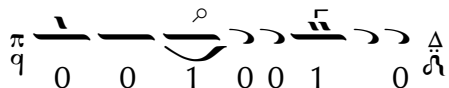


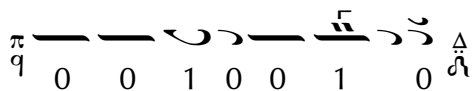
010 

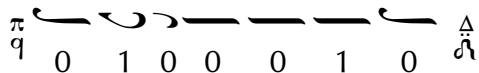
0X010 

00010 

000010 

0010010 



0100010 

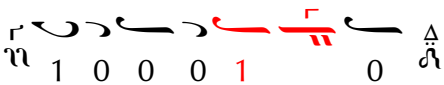

From Ga

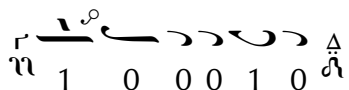
10 

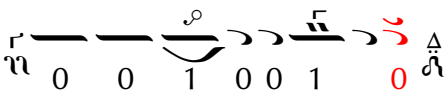

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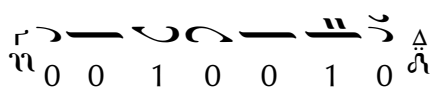
010		
0010		
00010		
10010		
00X010		

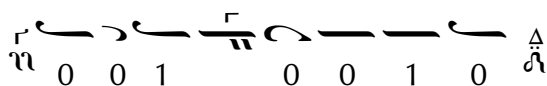
Grave Mode - Heirmologic

100010  

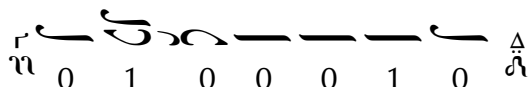


0010010  

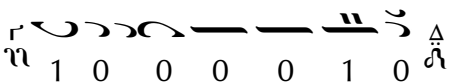


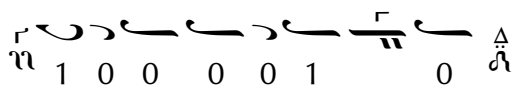


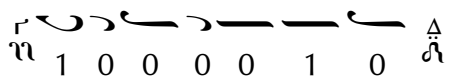
0100010  




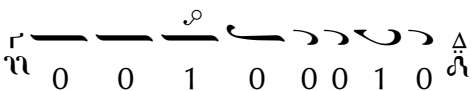
 

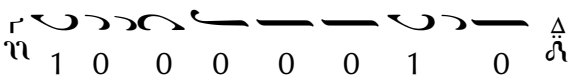
1000010 

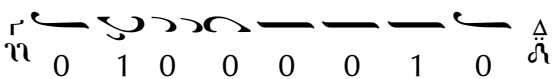




1010010 

00100010 

10000010 

01000010 

Grave Mode - Heirmologic

10010010

From Di

10		
010		
0010		
00010		
00010		

Grave Mode - Heirmologic

10010

⚠ 0 0 0 1 0 ⚠

⚠ 1 0 0 1 0 ⚠

1 0

⚠ 1 0 0 1 0 ⚠

⚠ 1 0 0 1 0 ⚠

⚠ 1 0 0 1 0 ⚠

⚠ 1 0 0 1 0 ⚠

000010

⚠ 0 0 0 0 1 0 ⚠

1 0

⚠ 0 0 0 0 1 0 ⚠

010010

⚠ 0 1 0 0 1 0 ⚠

1 0

⚠ 0 1 0 0 1 0 ⚠

1

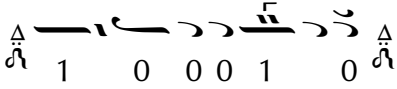
⚠ 0 1 0 0 1 0 ⚠

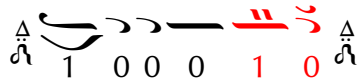
⚠ 0 1 0 0 1 0 ⚠

⚠ 0 1 0 0 1 0 ⚠

⚠ 0 1 0 0 1 0 ⚠

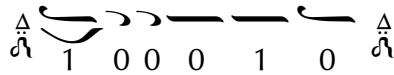
Grave Mode - Heirmologic

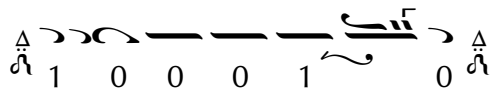
100010 

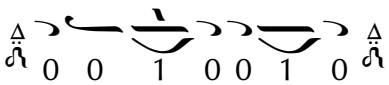


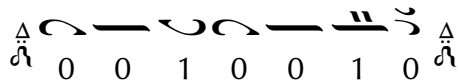


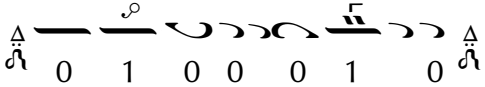


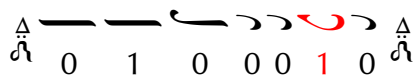




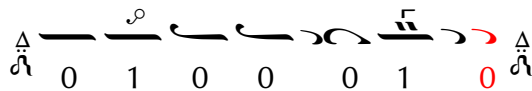
0010010 



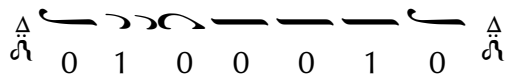
0100010 

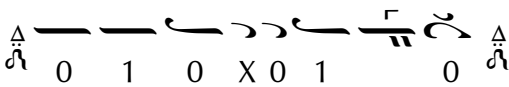


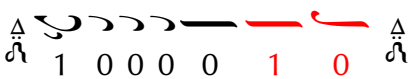




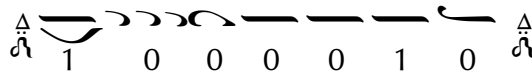




010X010 

1000010 



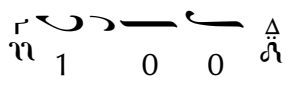
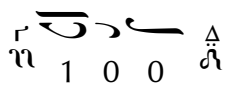
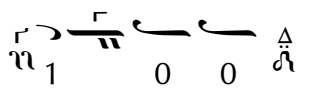
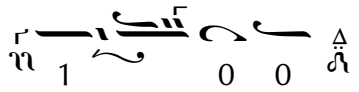
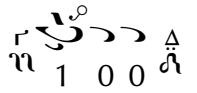


Grave Mode - Heirmologic

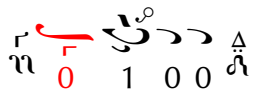
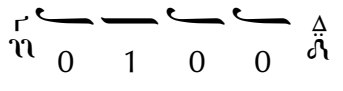
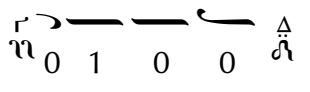
100



$\overset{\Delta}{\mathfrak{A}}$
0

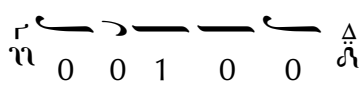
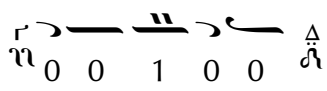
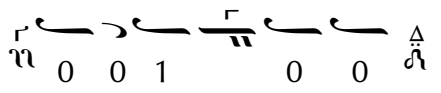


0100



$\overset{\Delta}{\mathfrak{A}}$
0

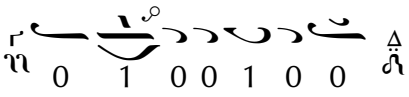
00100

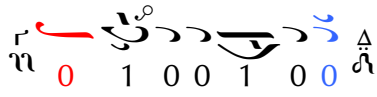


Grave Mode - Heirmologic

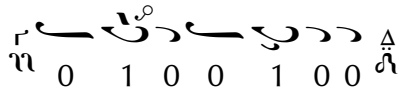
10100		
X0100		
010100		
100100		

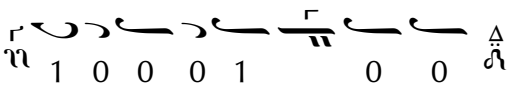
Grave Mode - Heirmologic

0100100  Δ
 0 1 00 1 0 0

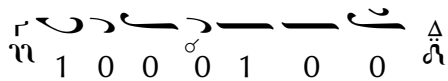
 Δ
 0 1 00 1 0 0

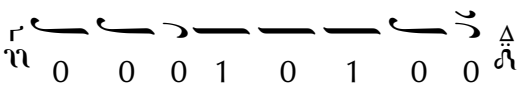

 0 0

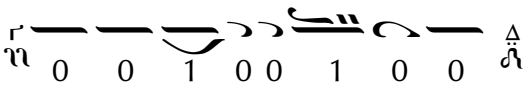
 Δ
 0 1 0 0 1 0 0

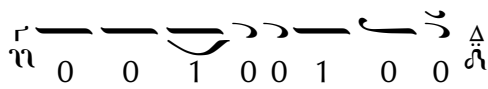
1000100  Δ
 1 0 0 0 1 0 0

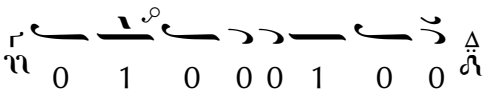
 Δ
 1 0 00 1 0 0

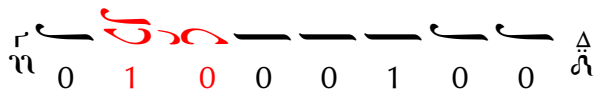
 Δ
 1 0 0 0 1 0 0

00010100  Δ
 0 0 0 1 0 1 0 0

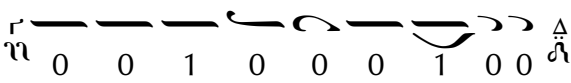
00100100  Δ
 0 0 1 00 1 0 0

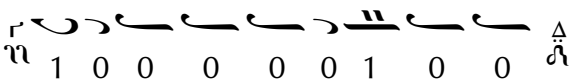
 Δ
 0 0 1 00 1 0 0

01000100  Δ
 0 1 0 00 1 0 0

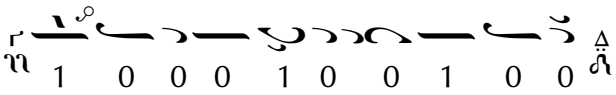
 Δ
 0 1 0 0 0 1 0 0

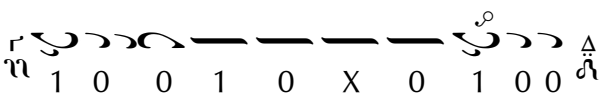

 1 0

001000100  Δ
 0 0 1 0 0 0 1 00

100000100  Δ
 1 0 0 0 0 0 1 0 0

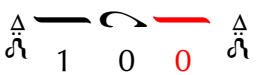
Grave Mode - Heirmologic

1000100100 

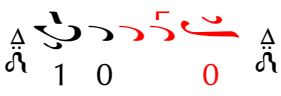
10010X0100 

From Di

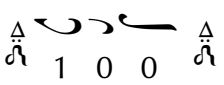
100  

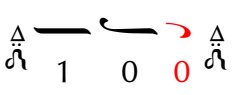




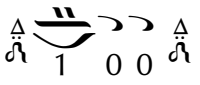


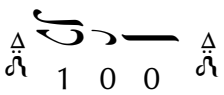


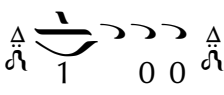


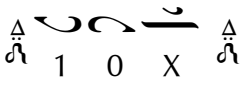


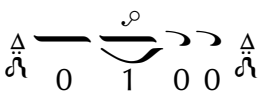








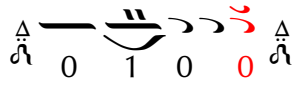
10X 

0100 





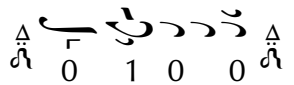
Grave Mode - Heirmologic



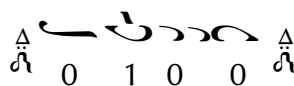
 0 1 0 0



 0



 0 1 0 0



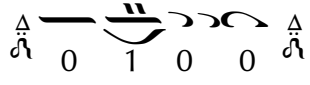
 0 1 0 0



 0 1 0 0

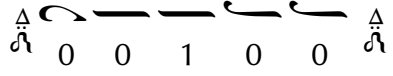


 1



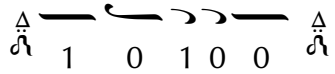
 0 1 0 0

00100

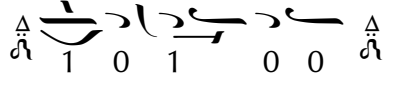


 0 0 1 0 0

10100

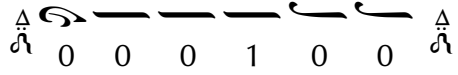


 1 0 1 0 0



 1 0 1 0 0

000100

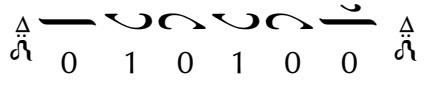


 0 0 0 1 0 0

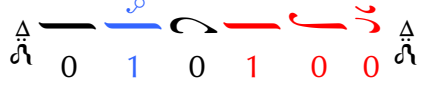
010100



 0 1 0 1 0 0



 0 1 0 1 0 0



 0 1 0 1 0 0



 1



 1 0 0



 1 0 0

Grave Mode - Heirmologic

100100			
0010100			
0100100			
01X0101			
0110100			
1000100			
1000101			
00100100			
01000100			

Grave Mode - Heirmologic

$\overset{\Delta}{\underset{\text{d}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 1 0 0 1 0 0

0 0 1 0 0

1 0 0

010X0100

$\overset{\Delta}{\underset{\text{d}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 1 0 X 0 1 0 0

1 0 0

10000100

$\overset{\Delta}{\underset{\text{d}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 1 0 0 0 0 1 0 0

001000100

$\overset{\Delta}{\underset{\text{d}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 0 1 0 0 0 1 0 0

010100100

$\overset{\Delta}{\underset{\text{d}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 1 0 1 0 0 1 0 0

Accented on fourth to last syllable:

From Pa

0X010

$\overset{\pi}{\underset{\text{q}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 X 0 1 0

001001

$\overset{\pi}{\underset{\text{q}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 0 1 0 0 1

001010

$\overset{\pi}{\underset{\text{q}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 0 0 1 0 1 0

From Ga

1000

$\overset{\pi}{\underset{\text{q}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

 1 0 0 0

1001

$\overset{\pi}{\underset{\text{q}}{\text{A}}} \text{ — — — — — } \overset{\Delta}{\underset{\text{d}}{\text{A}}}$

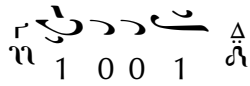
 1 0 0 1

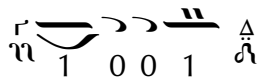
Grave Mode - Heirmologic



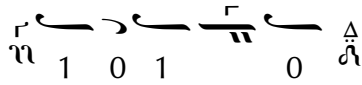
 1 1

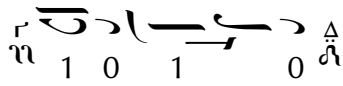

 1 0 0 1


 1 0 0 1

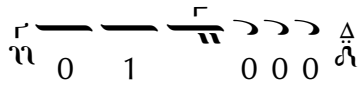

 1 0 0 1

1010

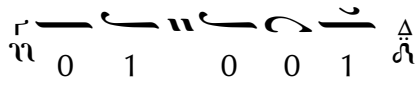

 1 0 1 0

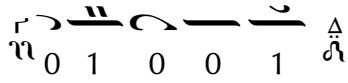

 1 0 1 0

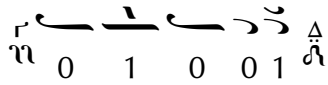
01000


 0 1 0 0 0

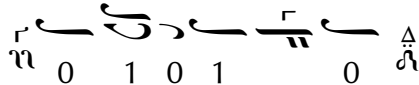
01001

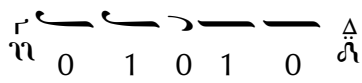

 0 1 0 0 1

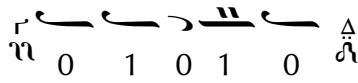

 0 1 0 0 1


 0 1 0 0 1

01010


 0 1 0 1 0


 0 1 0 1 0


 0 1 0 1 0

01100


 0 1 1 0 0

Grave Mode - Heirmologic

001000		
001001		
001010		
101000		
0001000		
0001010		
1001000		
1001010		
100X010		
01001001		
10001001		

Grave Mode - Heirmologic

10001010

10101001

0100001001

From Di

1001

100X

1010

01000

01001

01010

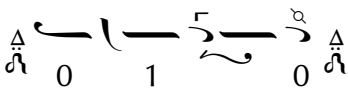
D) Formulae with Fthoras

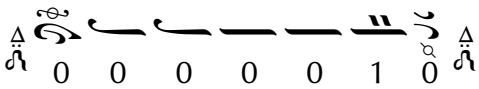
Accented on last syllable:

10001 

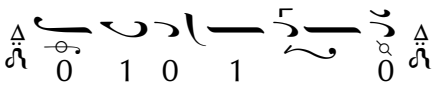
10001 

Accented on second to last syllable:

010 

0000010 

Accented on fourth to last syllable:

01010 

E) Ending Formulae

Note: Formulae from section B (pages 746-753) may also be used as ending formulae if the phrase is accented on the second to last or fourth to last syllable.

Accented on last syllable:

From Ga

1010X01

From Di

001

100001

0000001

0010001

0100001

1000001

1010X01

10010001

Accented on second to last syllable:

From Di

Grave Mode - Heirmologic

000010	
010010	
0000010	
1000010	
0010X010	
100100010	
1000100010	

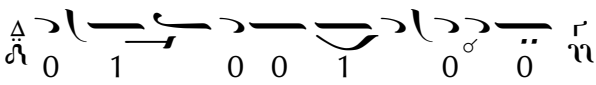
Accented on third to last syllable:

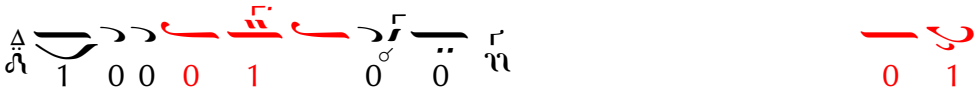
From Di

100	
100100	
0000100	
0010100	

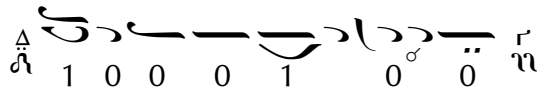
1

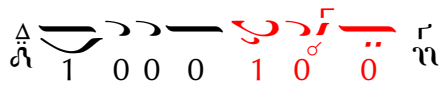
Grave Mode - Heirmologic

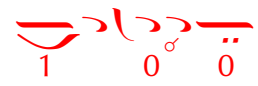
0100100 


1000100 



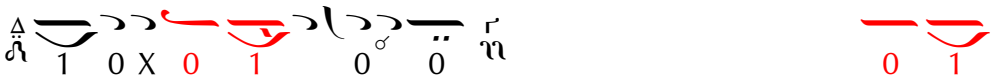




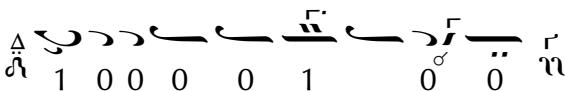


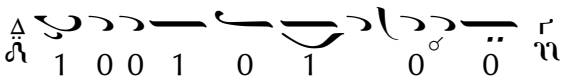


1010100 

10X0100 

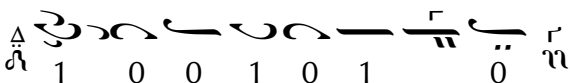


10000100 

10010100 

Accented on fourth to last syllable:

From Di

1001010 

Grave Mode - Heirmologic

0010X010



F) Endings for Theotokia*

Accented on last syllable:

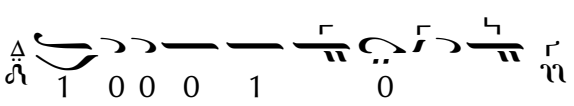
(A 100 or 1001 formula may also be appropriate.)


10001 

Accented on second to last syllable:

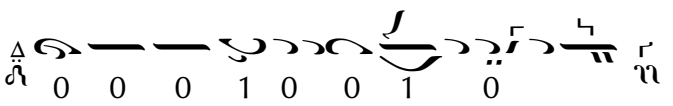
From Di

10010 

100010 

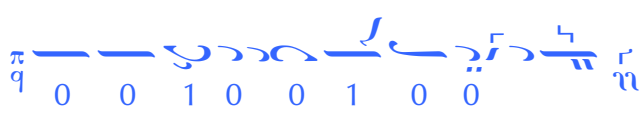
1000010 

0010010 

00010010 

Accented on third to last syllable:

From Pa

00100100 

* 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, Ἁγίον Ὅρος, 2004. The first formula on this page (in pink) is from the Rumanian *Anastasimatarul* by Dimitrie Suceveanu, Sfintei Monastiri Neamt̃u, 1943.

Grave Mode - Heirmologic

From Ga

0100010X

From Di

0100

00100

010100

100100

1000100

0100010X

Accented on fourth to last syllable:

From Di

01001

101001