

BYZANTINE MUSIC FORMULAE

Grave Mode - Protovarys (Heirmologic)

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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

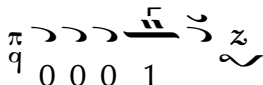
* The Byzantine music formulae herein were extracted from the heirmologic protovarys doxology in the *Zoe Anastasimatarion* (14th edition, 2002) and from the vesper verses of Psalms 140, 141, 129, and 116 in the *Anastasimatarion Neon* (1853 edition). The latter contains the troparia of grave mode composed "kata to pentaphonon" by Georgios the Kres (d. 1816), as transcribed from the old notation by Z. Zapheiroopoulos (d. 1851). Although this list of formulae is incomplete due to the limited number of sources, one may usually fill in the gaps with heirmologic first mode formulae, because protovarys and first mode have many similarities.

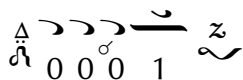
Grave Mode - Protovarys (Heirmologic)

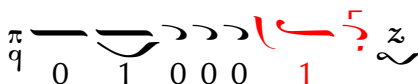
A) Cadences on Zo

Accented on last syllable:

From Pa


0001 




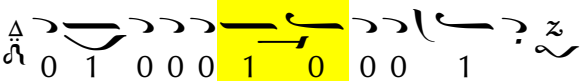
010001 



From Di

100100001 

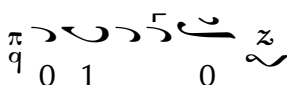
100001000001 

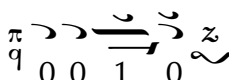
0100010001 

According to the musicologist Ioannis Arvanitis, Zapheiroopoulos intentionally used the omalon in this and other formulae to denote the sound of the oxeia, even though it is orthographically incorrect to join two different syllables with an omalon

Accented on second to last syllable:

From Pa

010 

0010 

Grave Mode - Protovarys (Heirmologic)

00010 π
 $\overset{\circ}{\text{q}}$ 0 0 0 1 0 $\overset{\circ}{\text{z}}$

π
 $\overset{\circ}{\text{q}}$ 0 0 0 1 0 $\overset{\circ}{\text{z}}$

010010 π
 $\overset{\circ}{\text{q}}$ 0 1 0 0 1 0 $\overset{\circ}{\text{z}}$

$\overset{\circ}{\text{r}}$
 0

100010 π
 $\overset{\circ}{\text{q}}$ 1 0 0 0 1 0 $\overset{\circ}{\text{z}}$

10X010 π
 $\overset{\circ}{\text{q}}$ 1 0 X 0 1 0 $\overset{\circ}{\text{z}}$

0100010 π
 $\overset{\circ}{\text{q}}$ 0 1 0 0 0 1 0 $\overset{\circ}{\text{z}}$

00010010 π
 $\overset{\circ}{\text{q}}$ 0 0 0 1 0 0 1 0 $\overset{\circ}{\text{z}}$

From Ga

10010010 $\overset{\circ}{\text{r}}$
 $\overset{\circ}{\text{n}}$ 1 0 0 1 0 0 1 0 $\overset{\circ}{\text{z}}$

From Di

100100010 $\overset{\Delta}{\text{d}}$
 $\overset{\circ}{\text{h}}$ 1 0 0 1 0 0 0 1 0 $\overset{\circ}{\text{z}}$

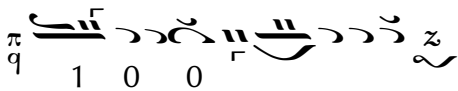
0010100010 $\overset{\Delta}{\text{d}}$
 $\overset{\circ}{\text{h}}$ 0 0 1 0 1 0 0 0 1 0 $\overset{\circ}{\text{z}}$

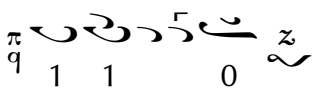
01000010010 $\overset{\Delta}{\text{d}}$
 $\overset{\circ}{\text{h}}$ 0 1 0 0 0 0 1 0 0 1 0 $\overset{\circ}{\text{z}}$

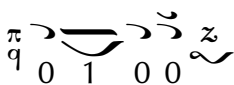
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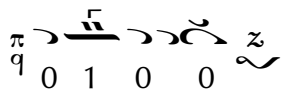
From Pa

Grave Mode - Protovarys (Heirmologic)

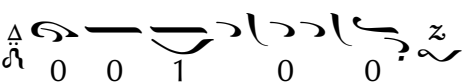
100 

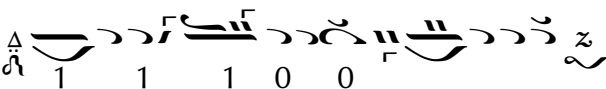
110 


0100 

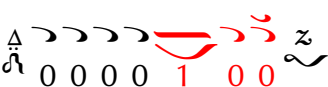


From Di

00100 

11100 

0010100 

0000100 



1000100 



01000100 

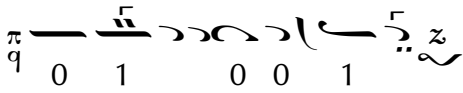
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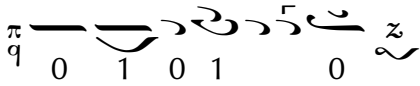
001000100 


Accented on fourth to last syllable:

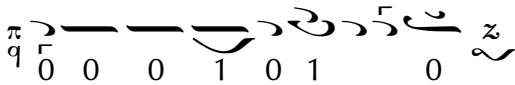
From Pa

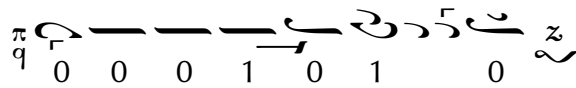
Grave Mode - Protovarys (Heirmologic)

01001 π
 $\frac{q}{0 \ 1 \ 0 \ 0 \ 1}$ 

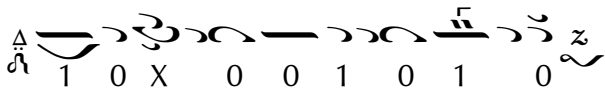
01010 π
 $\frac{q}{0 \ 1 \ 0 \ 1 \ 0}$ 

0001001 π
 $\frac{q}{0 \ 0 \ 0 \ 1 \ 0 \ 0 \ 1}$ 

0001010 π
 $\frac{q}{0 \ 0 \ 0 \ 1 \ 0 \ 1 \ 0}$ 

π
 $\frac{q}{0 \ 0 \ 0 \ 1 \ 0 \ 1 \ 0}$ 

From Di

10X001010 Δ
 $\frac{d}{1 \ 0 \ X \ 0 \ 0 \ 1 \ 0 \ 1 \ 0}$ 

B) Medial Cadences on Pa

Accented on last syllable:

From Pa

00 $\begin{array}{c} \pi \\ \text{q} \end{array} \begin{array}{c} \curvearrowright \\ \Gamma \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

000 $\begin{array}{c} \pi \\ \text{q} \end{array} \begin{array}{c} \curvearrowright \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

Accented on second to last syllable:

From Zo

00011 $\begin{array}{c} \text{z} \\ \text{z} \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \Gamma \\ \text{q} \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

From Pa

10 $\begin{array}{c} \pi \\ \text{q} \end{array} \begin{array}{c} \Gamma \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ \text{q} \end{array}$

From Ga

10010 $\begin{array}{c} \Gamma \\ \text{q} \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

From Di

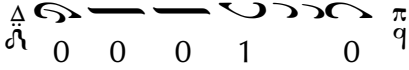
10 $\begin{array}{c} \Delta \\ \text{q} \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ \text{q} \end{array}$

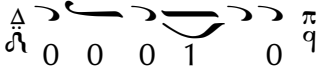
11 $\begin{array}{c} \Delta \\ \text{q} \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \Gamma \\ \text{q} \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

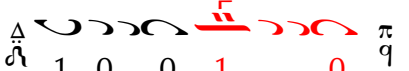

010 $\begin{array}{c} \Delta \\ \text{q} \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ \text{q} \end{array}$

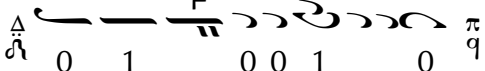
0110 $\begin{array}{c} \Delta \\ \text{q} \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 1 \end{array} \begin{array}{c} \text{—} \\ 0 \end{array} \begin{array}{c} \pi \\ \text{q} \end{array}$

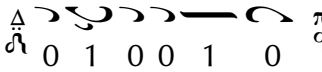
Grave Mode - Protovarys (Heirmologic)

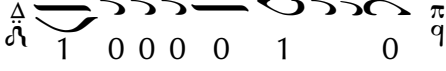
00010 

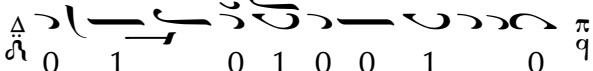


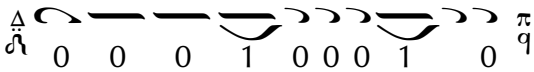
10010  

010010 




1000010 

0100010 

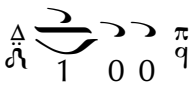
000100010 

Accented on third to last syllable:

From Pa

0100 

From Di

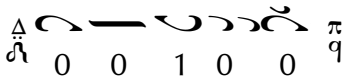
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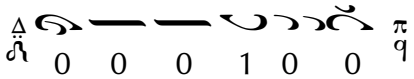
0100 



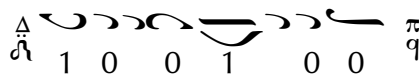
Grave Mode - Protovarys (Heirmologic)

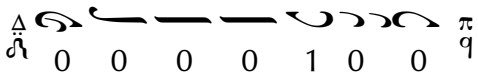
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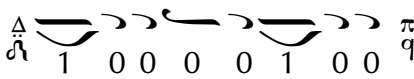
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000100 

100100 




0000100 

10000100 

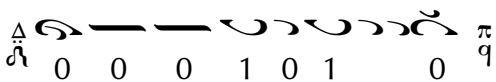
Accented on fourth to last syllable:

From Zo

1010 

From Di

1010 

0001010 

D) Medial Cadences on Di

Accented on last syllable:

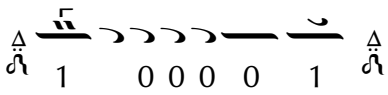
From Zo


0	
1	
0001	
100001	
1000001	
100010001	


From Di


00	
000	
001	
010001	

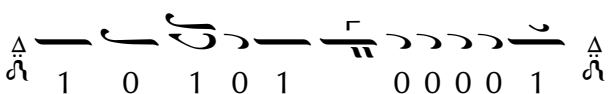
Grave Mode - Protovarys (Heirmologic)

100001 

010X0001 




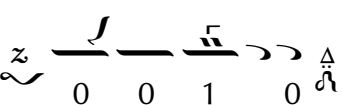
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1010100001 

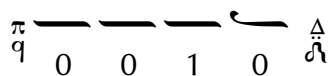
Accented on second to last syllable:

From Zo

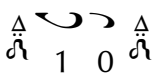
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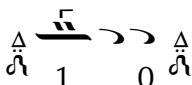
0010 

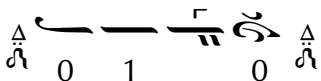
From Pa

0010 

From Di

10 



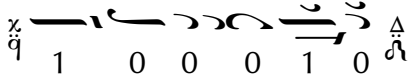
010 

Grave Mode - Protovarys (Heirmologic)

011	
0010	
00010	
10010	
010010	
110010	
0100010	
00010010	
010X0010	
01100010	
101000010	
0001000010	



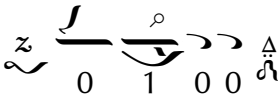
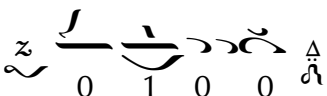
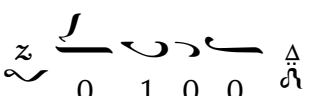
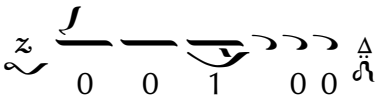
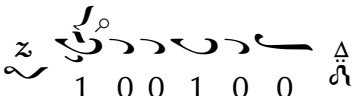
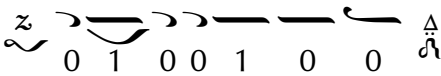
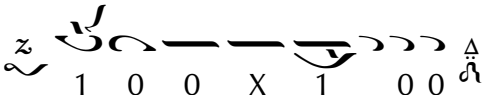
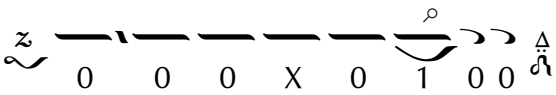

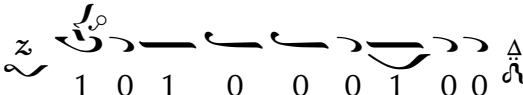
Grave Mode - Protovarys (Heirmologic)

From Ke

100010 

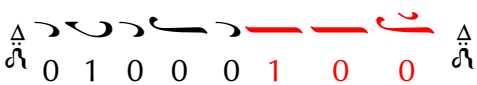
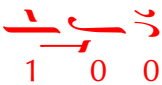
Accented on third to last syllable:

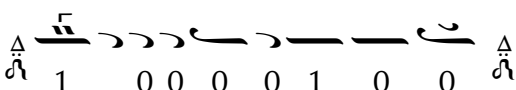
From Zo

100		
0100		
		
		
00100		
100100		
0100100		
100X100		
000X0100		
100100100		
101000100		

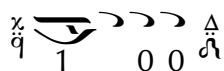
From Di

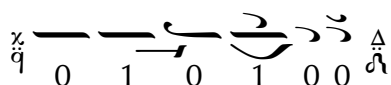
Grave Mode - Protovarys (Heirmologic)

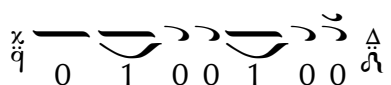
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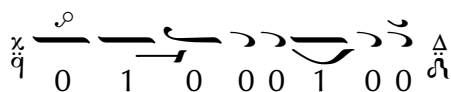
10000100 

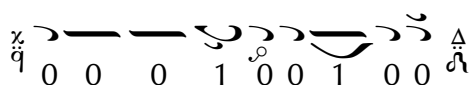
From Ke

100 

010100 


0100100 

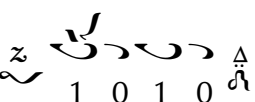
01000100 

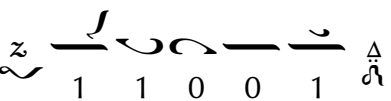
000100100 


Accented on fourth to last syllable:

From Zo

1001 

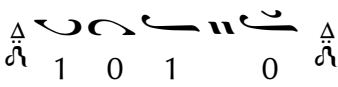
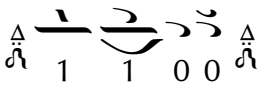

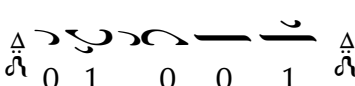
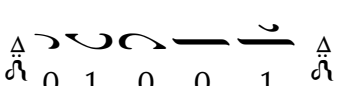
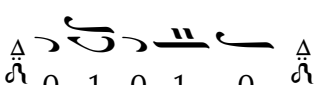
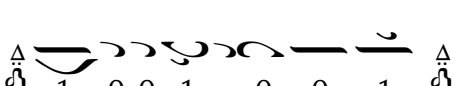
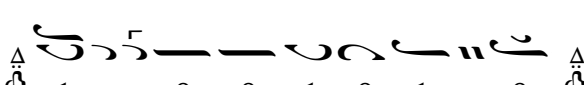
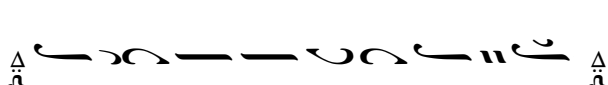
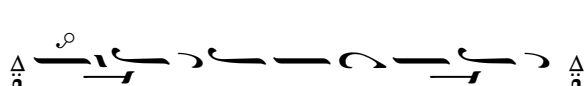
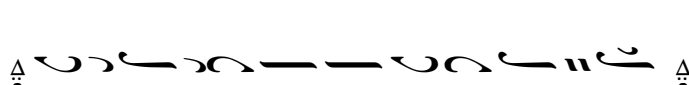

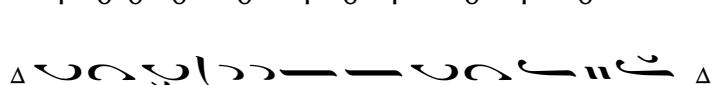
1010 

01001 

1001001 

From Di

Grave Mode - Protovarys (Heirmologic)

1010	
1100	
01001	
	
	
01010	
1001001	
1001010	
00001010	
10001010	
1000001010	
10000101010	
1010001010	

From Ke

Grave Mode - Protovarys (Heirmologic)

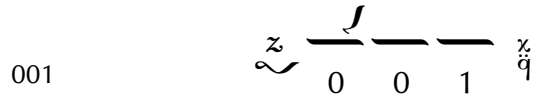
1010 $\begin{array}{cccc} \times & \text{---} & \text{---} & \text{---} \\ \text{q} & 1 & 0 & 1 \\ & & & \Delta \\ & & & \text{q} \end{array}$

1001010 $\begin{array}{cccccc} \times & \text{---} & \text{---} & \text{---} & \text{---} & \text{---} \\ \text{q} & 1 & 0 & 0 & 1 & 0 \\ & & & & & \Delta \\ & & & & & \text{q} \end{array}$

E) Medial Cadences on Ke

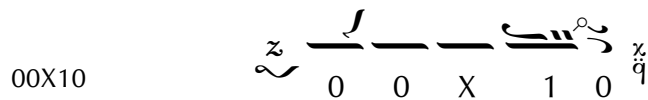
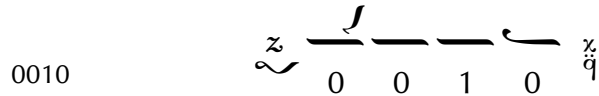
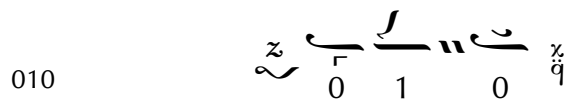
Accented on last syllable:

From Zo

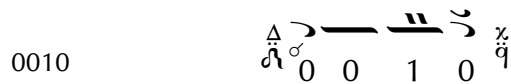


Accented on second to last syllable:

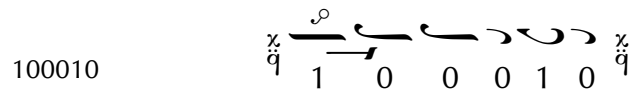
From Zo



From Di

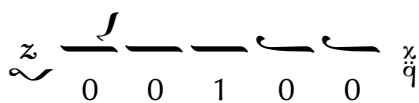
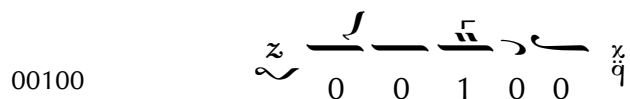


From Ke

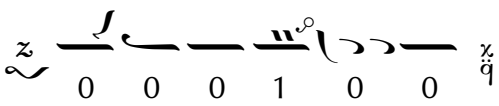


Accented on third to last syllable:

From Zo

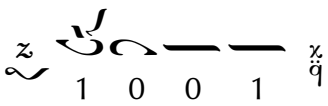


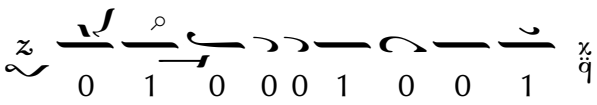
Grave Mode - Protovarys (Heirmologic)

000100 

Accented on fourth to last syllable:

From Zo

1001 

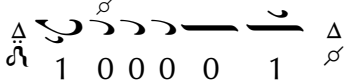
010001001 

F) Formulae with Fthoras

Accented on last syllable:


From Di

10001 

100001 

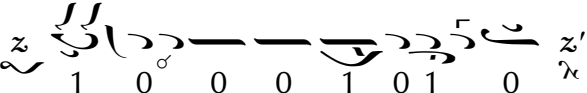
Accented on second to last syllable:

From Zo

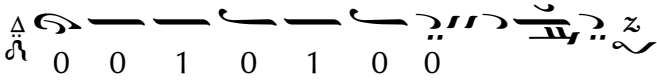
010 

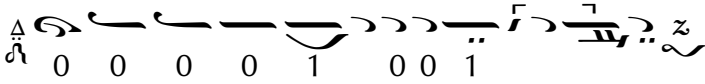
Accented on fourth to last syllable:

From Zo

10001010 

G) Endings for Theotokia

0010100 $\overset{\Delta}{\underset{\delta}{\text{A}}}$  $\overset{\Delta}{\underset{\delta}{\text{A}}}$
0 0 1 0 1 0 0

00001001 $\overset{\Delta}{\underset{\delta}{\text{A}}}$  $\overset{\Delta}{\underset{\delta}{\text{A}}}$
0 0 0 0 1 0 0 1