Kelvin Thomson

Bumble

for double choir
(SAAT/ATTB)

2015

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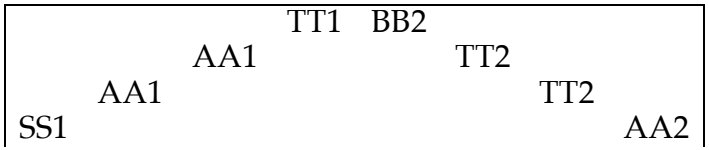
The first recording of *Bumble* was by
Danae Eleni (soprano), Emelye Moulton (Mezzo), Karl Gietzmann (alto),
Miles D'Cruz (tenor), Fraser Moyle (high baritone), Ralph Warman (bass) at
Carleton Studios, Mill Hill, North London on
8th September 2019

Duration: 3:45

Performance materials available from the composer.

Performance instructions

There should ideally be a minimum of two voices on each part. For concerts, the two choirs should stand as two separate groups positioned in a shallow V shape. Where possible, the two choirs could be placed in separate locations in order to maximise the antiphonal effect.



Pitch pipes or a quite harmonica can be used to intone pitches G, A, B, C when needed.

Pronunciation of text

Lower case:

g – as a short percussive consonant, but intoned as the 'gu' sound in the English word 'gurn'
ah – as a short percussive vowel as in the first syllable of the English word 'a-hah'
t – as a short percussive consonant, but intoned as the 'tu' sound in the English word 'turn'
k – as a short percussive consonant, but intoned as in the 'cu' sound in the English word 'curtail'

Upper case:

G – as the English word 'gee'
A – as the 'ay' sound in the English word 'may'
T – as the English drink 'tea'
C – as the English word 'sea'

Programme note

Bumble is the third in a trilogy of bee pieces following *Song's Eternity* (2011) for oboe and piano, and *The Arrival of the Beat Box* (2011) for soprano and speaking body percussionist. Both latter pieces were my musical tributes to Sylvia Plath's 'The Arrival of the Bee Box' and a contribution to raising awareness of bee decline. I went on to take a particular interest in the scientific aspect of bumble bee decline, and *Bumble* is the outcome.

DNA sequencing is the process of determining the precise order of nucleotides (adenine, guanine, cytosine and thymine) within a DNA molecule. The result is represented as a long sequence of the letters A, G, C, T. While such information is useful for biologists, it can render interesting musical results when used as part of the compositional process.

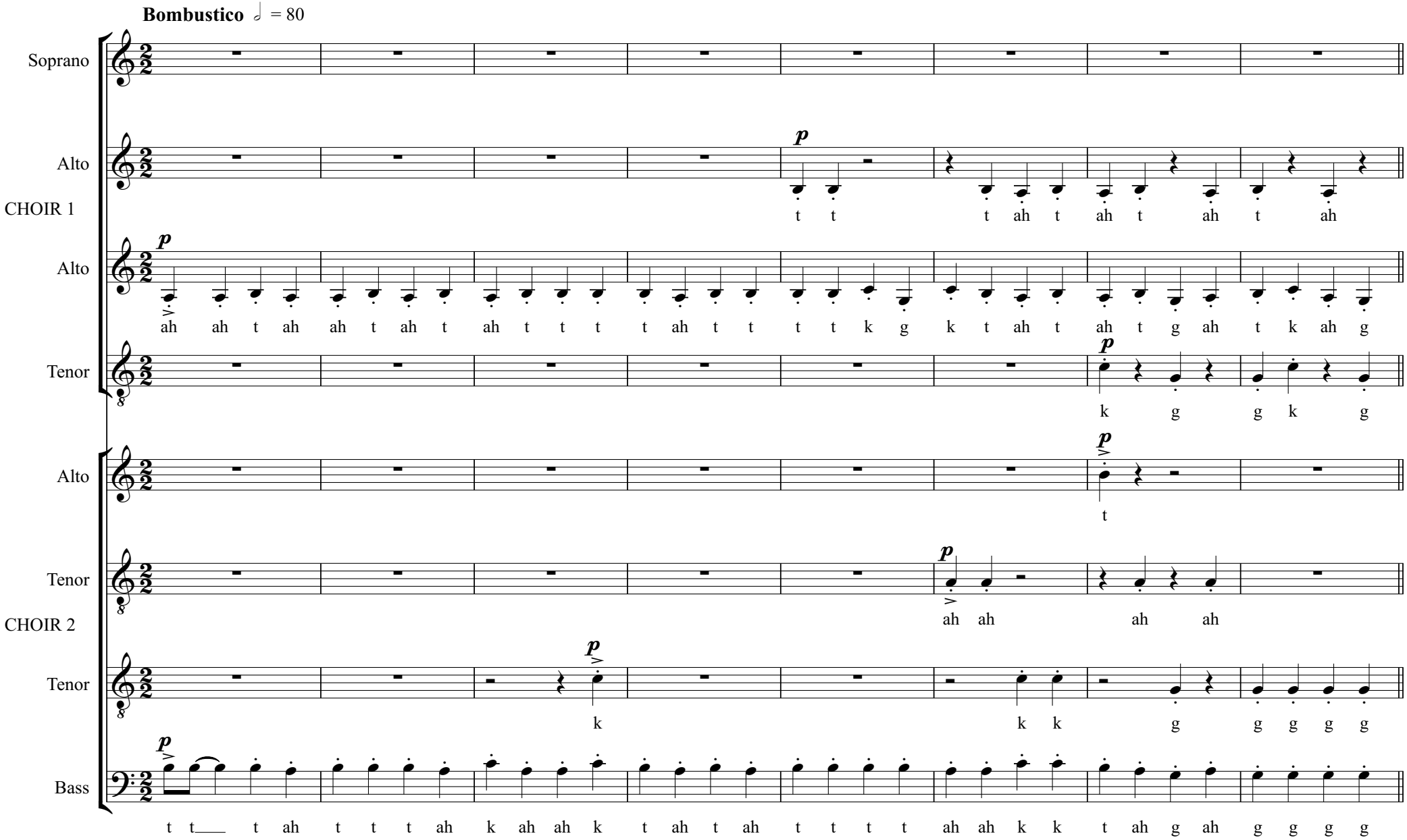
In *Bumble*, the double quartet represents the double helix model of DNA structure in which two strands intertwine in opposite directions and base pairs bond (G with C and A with T). *Bumble* is structured on the 658-letter sequence of the *Bombus Cryptarum*, a species of bumblebee recently identified in Ireland. Only pitches G, A, B (for T) and C were used, while harmonies were created in a determinate way from G-C and A-B 'base-bonding' intervals and formed indeterminately as quartet two simultaneously sings quartet one's pitches in reverse. The three-dimensional visual spiralling aspect of the double helix is musically translated by dynamics. The lyrics are formed from the letters themselves, delivered in a variety of ways.

KT

for Mark Brown

Bumble

Music and Lyrics by
Kelvin Thomson



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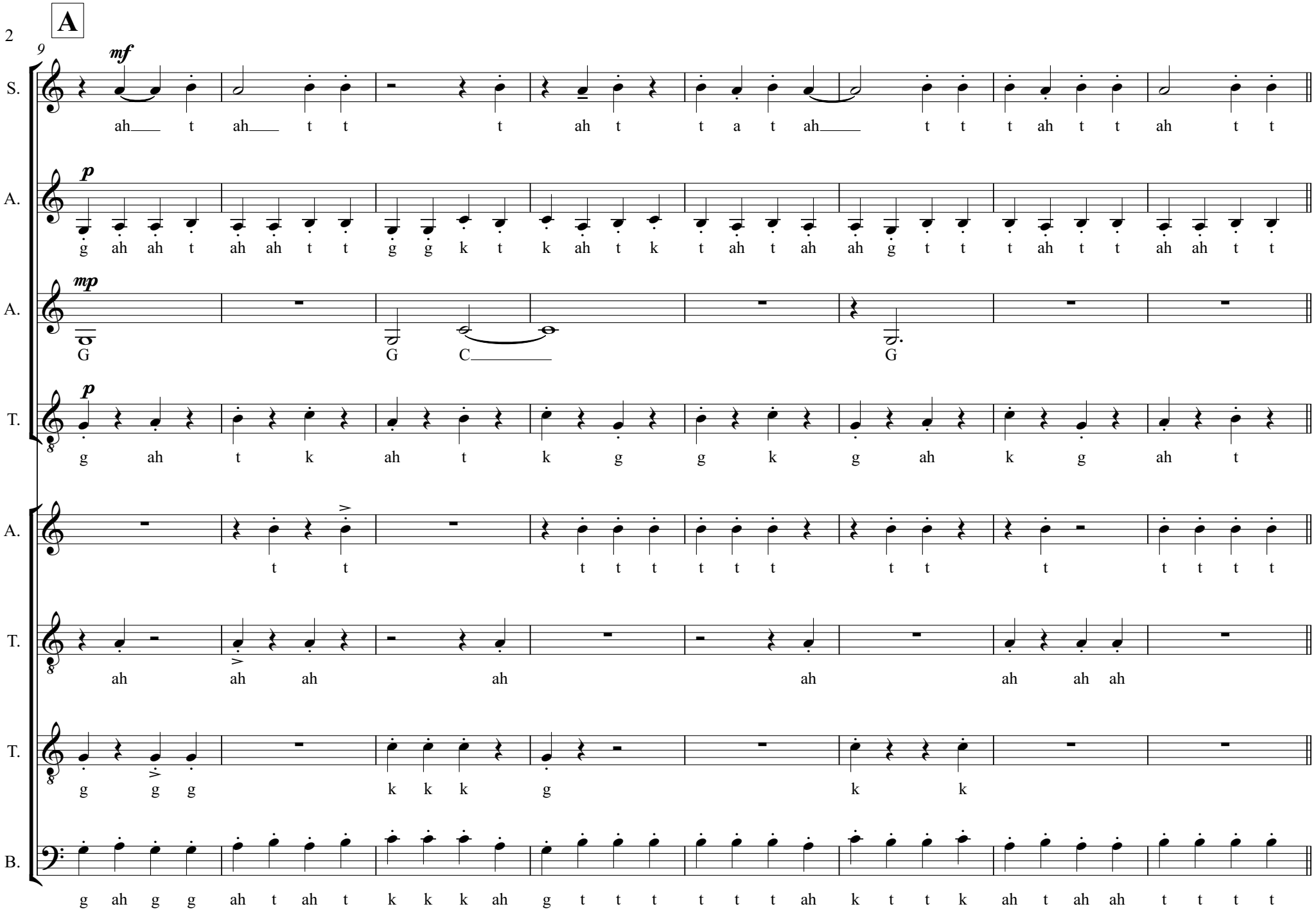

A
9
mf
S.
ah t ah t t t ah t t a t ah t t t ah t t ah t t
p
A.
g ah ah t ah ah t t g g k t k ah t k t ah t ah ah g t t t ah t t ah ah t t
mp
A.
G G C G
p
T.
g ah t k ah t k g g k g ah k g ah t
A.
t t t t t t t t t t t t t t t
T.
ah ah ah ah ah ah ah ah
T.
g g g k k k g k k
B.
g ah g g ah t ah t k k k ah g t t t t t t ah k t t k ah t ah ah t t t t

B

17

S. *p* k g ah ah t ah g ah ah t t ah ah g t k ah t k k t g g g ah t ah t g ah ah t

A. *mp* C G G G C G G

A. *mp* G A T C A T C G T C G A C G A T

T. A T A T T A t A T T A T A T A T

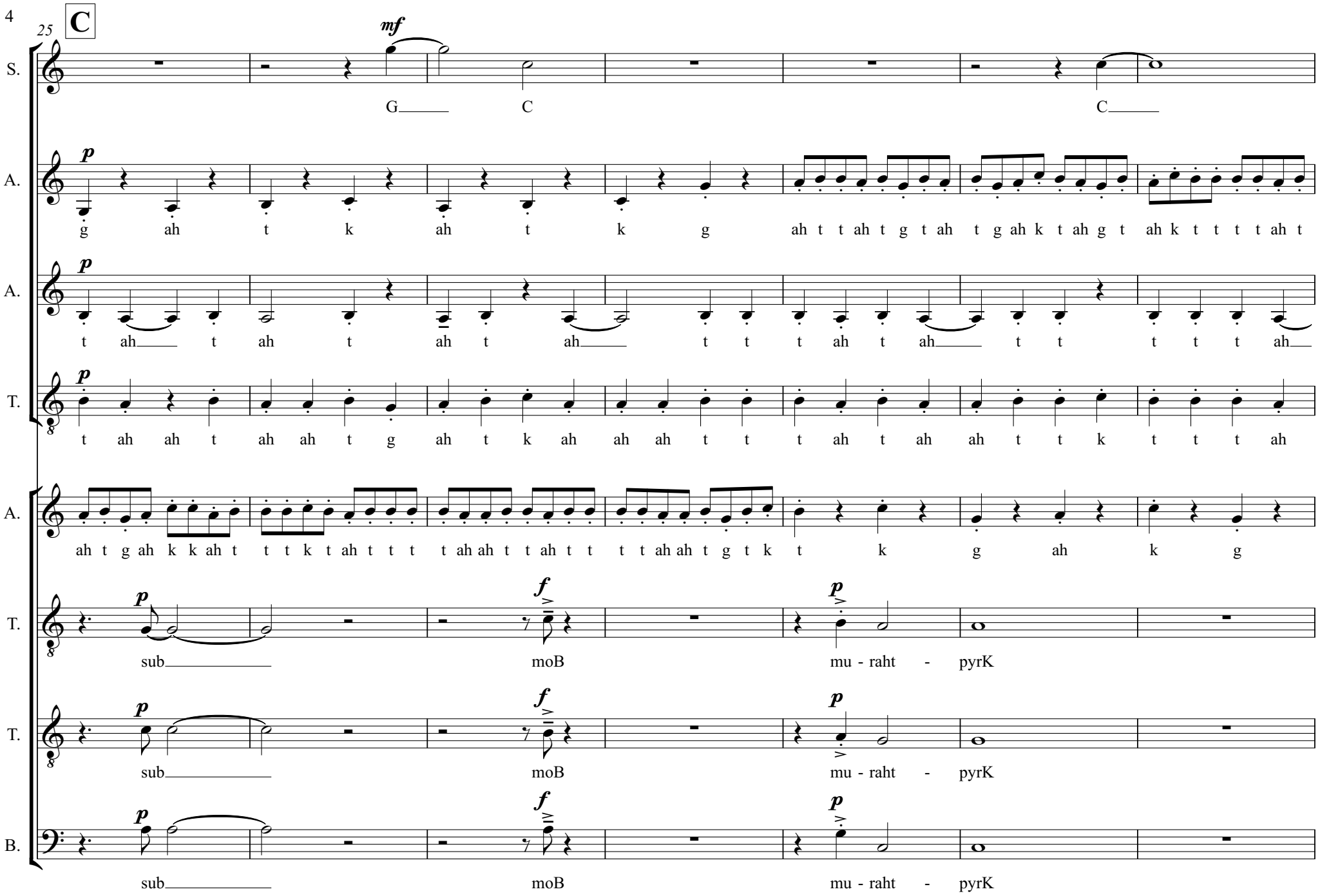
A. t t t t t t t t t t ah k g ah g g ah k g ah t t

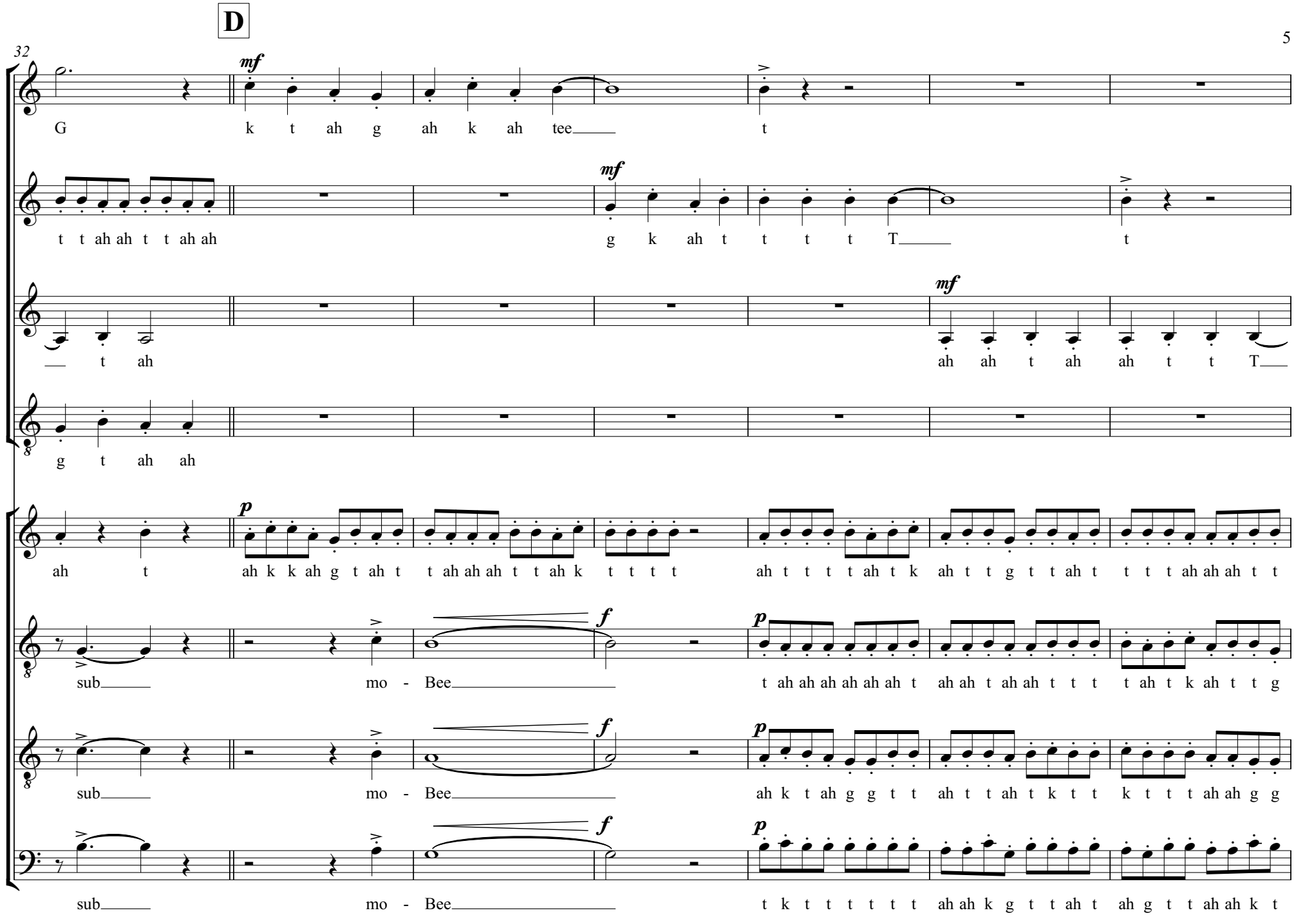
T. *mp* *f* ah ah ah ah ah ah ah ah ah ah mu - raht pyrK*

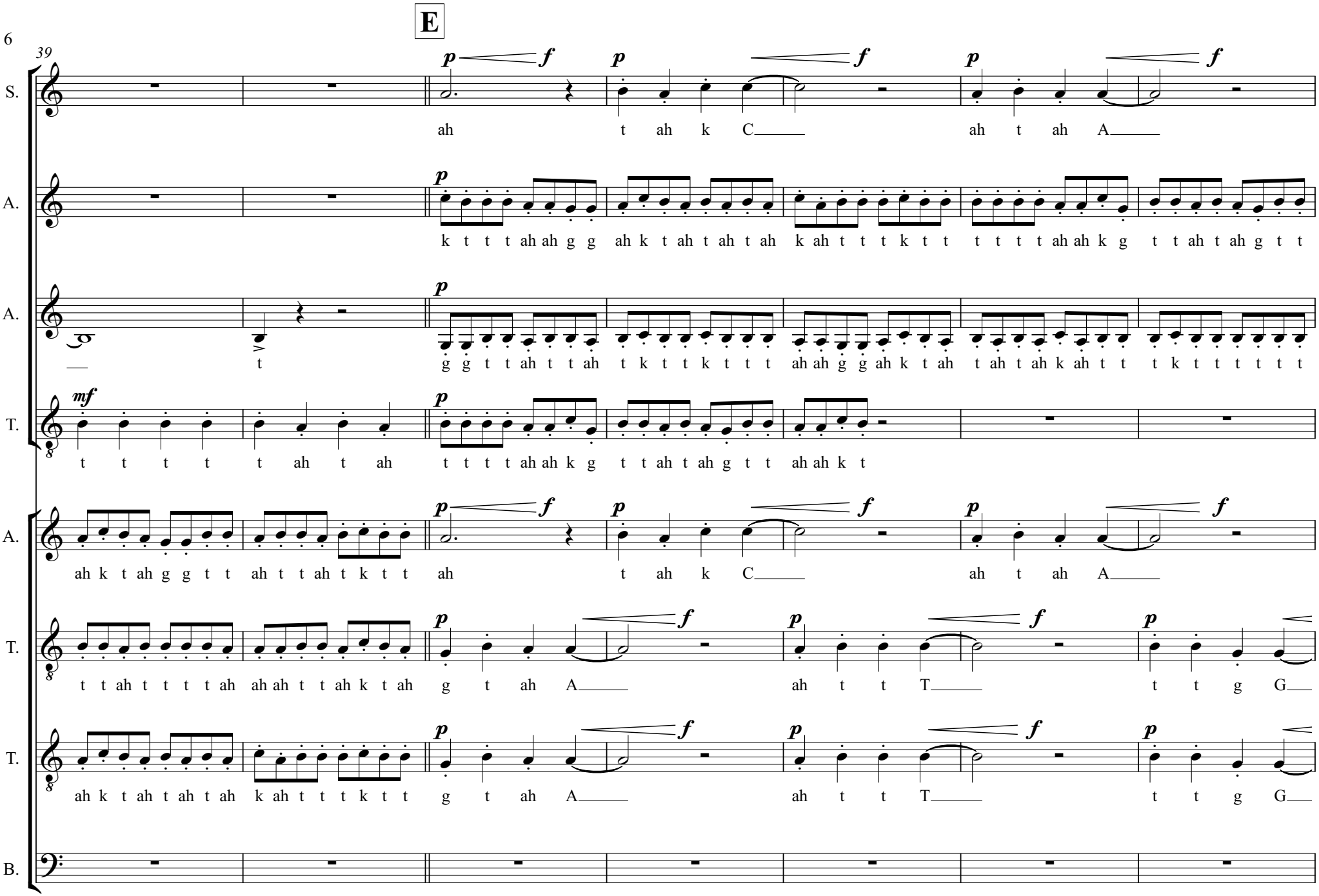
T. *mp* *f* g k g k k mu - raht pyrK*

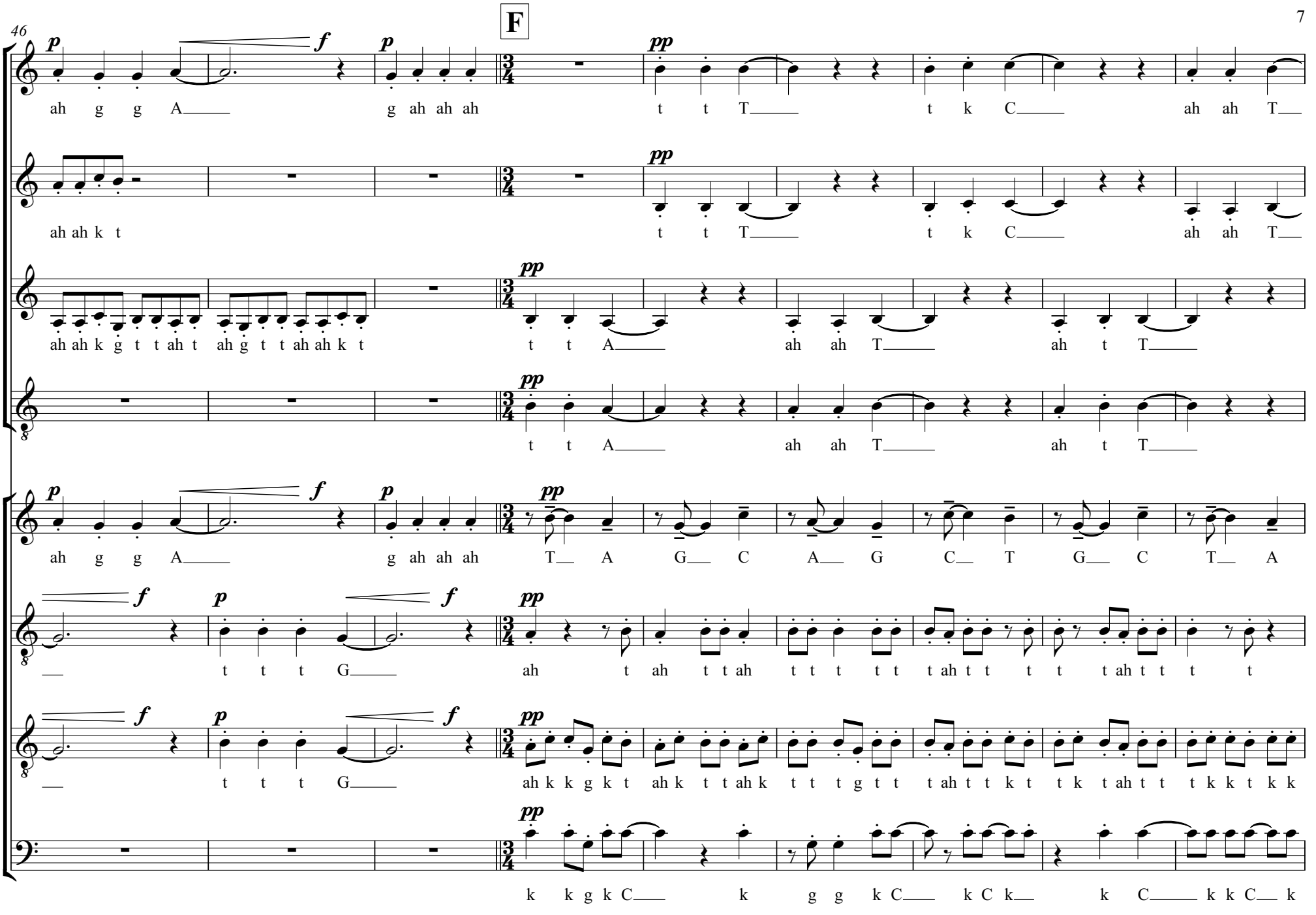
B. *mp* *f* ah ah ah g k t ah g t t t t t k ah t t ah t ah ah k ah t t ah mu - raht pyrK*

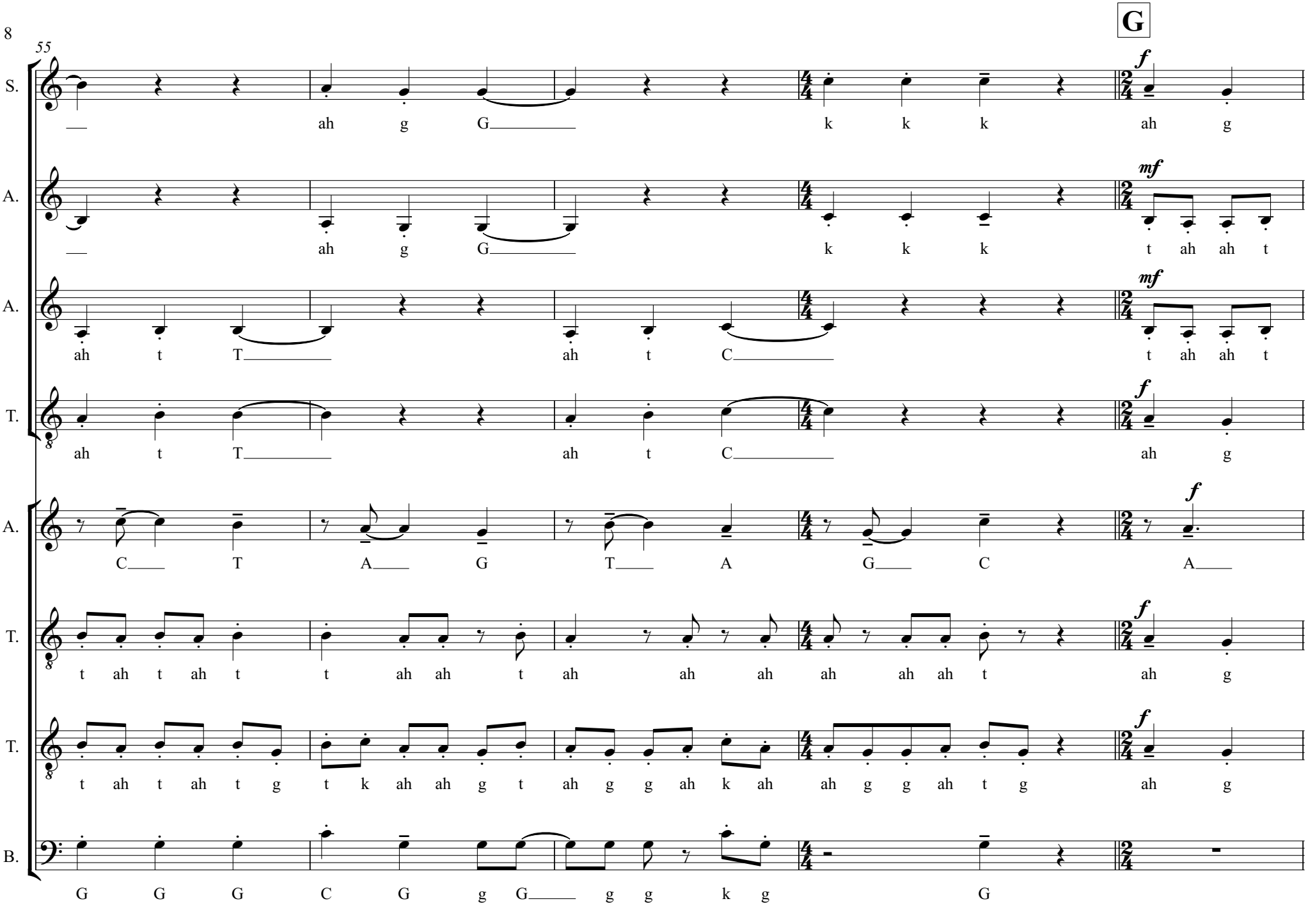
* muratpyrK submoB is *Bombus Cryptarum* backwards. The 'y' should be pronounced as in crypt.

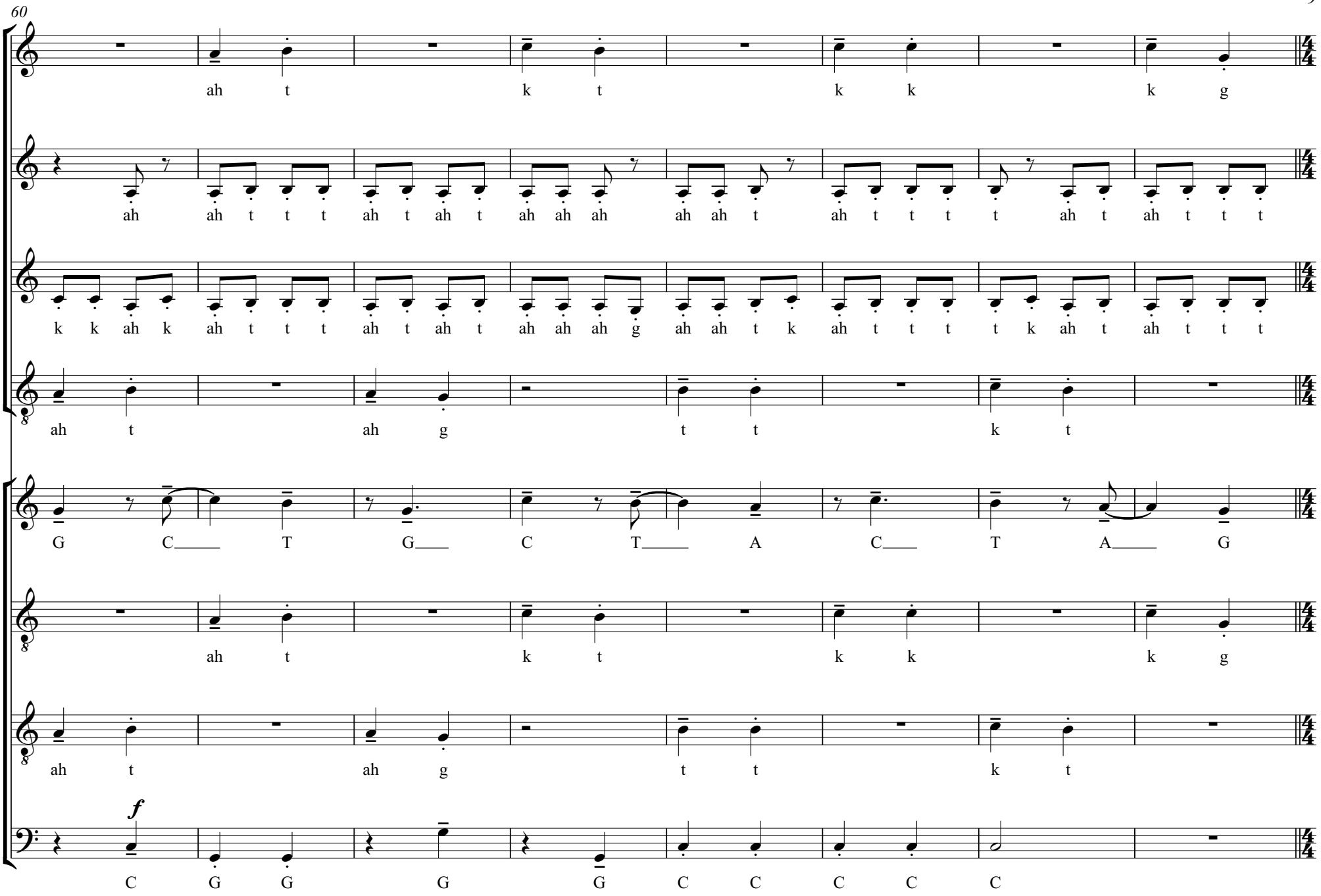

25
C
mf
S.
G C C
A.
p
g ah t k ah t k g ah t t ah t g t ah t g ah k t ah g t ah k t t t t ah t
A.
p
t ah t ah t ah t ah t t t ah t ah t t t t ah
T.
p
t ah ah t ah ah t g ah t k ah ah ah t t t ah t ah ah t t k t t t ah
A.
ah t g ah k k ah t t t k t ah t t t t ah ah t t ah t t t t ah ah t g t k t k g ah k g
T.
p
f
p
sub moB mu - raht - pyrK
T.
p
f
p
sub moB mu - raht - pyrK
B.
p
f
p
sub moB mu - raht - pyrK

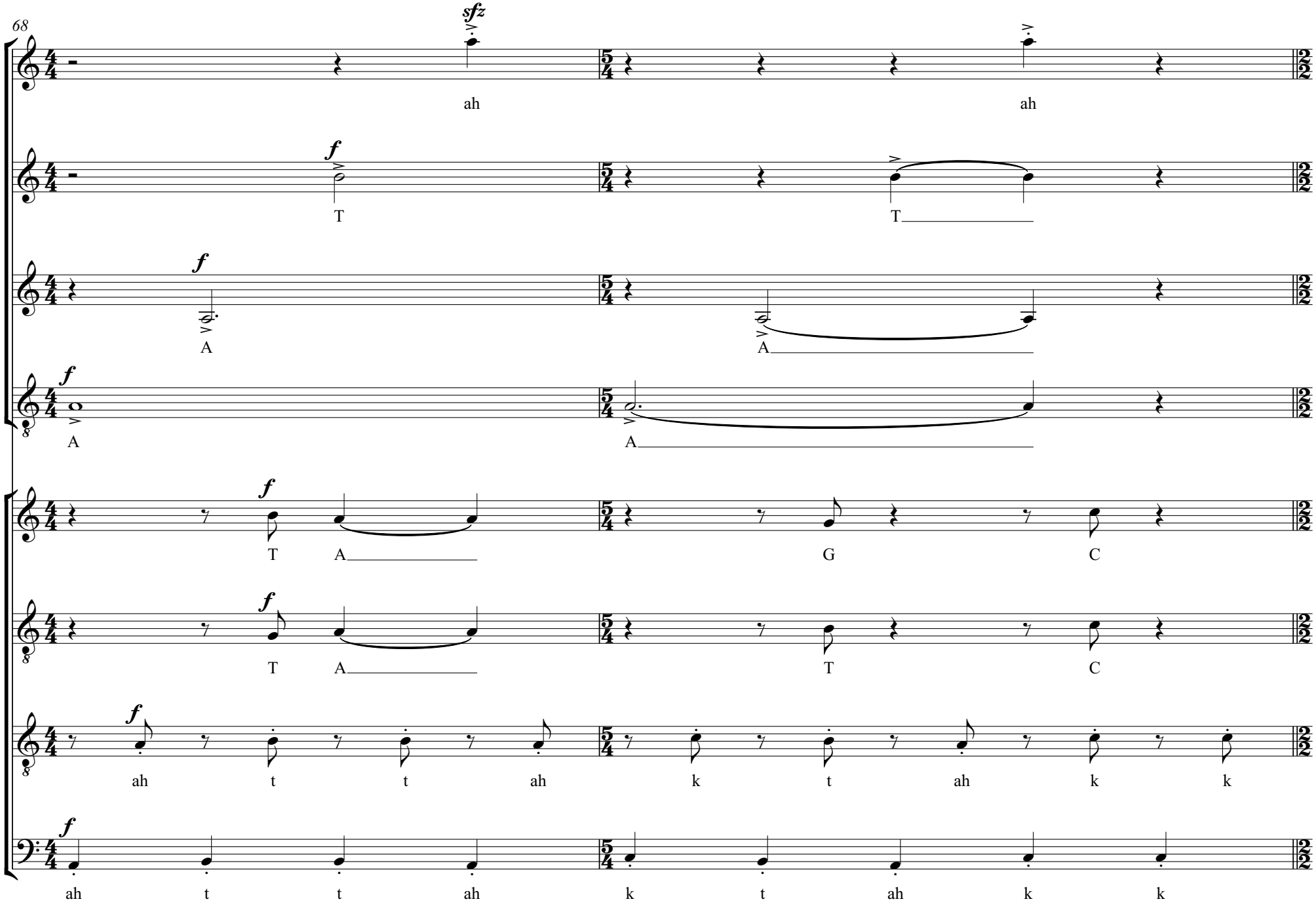

D
32
S.
G k t ah g ah k ah tee t
mf
A.
t t ah ah t t ah ah g k ah t t t t T t
mf
A.
t ah ah ah t ah ah t t T
mf
T.
g t ah ah
A.
ah t ah k k ah g t ah t t ah ah ah t t ah k t t t t ah t t t t ah t k ah t t g t t ah t t t t ah ah ah t t
p
T.
sub mo - Bee t ah ah ah ah ah ah t ah ah t ah ah t t t t ah t k ah t t g
f
p
T.
sub mo - Bee ah k t ah g g t t ah t t ah t k t t k t t t ah ah g g
f
p
B.
sub mo - Bee t k t t t t t t ah ah k g t t ah t ah g t t ah ah k t
f
p

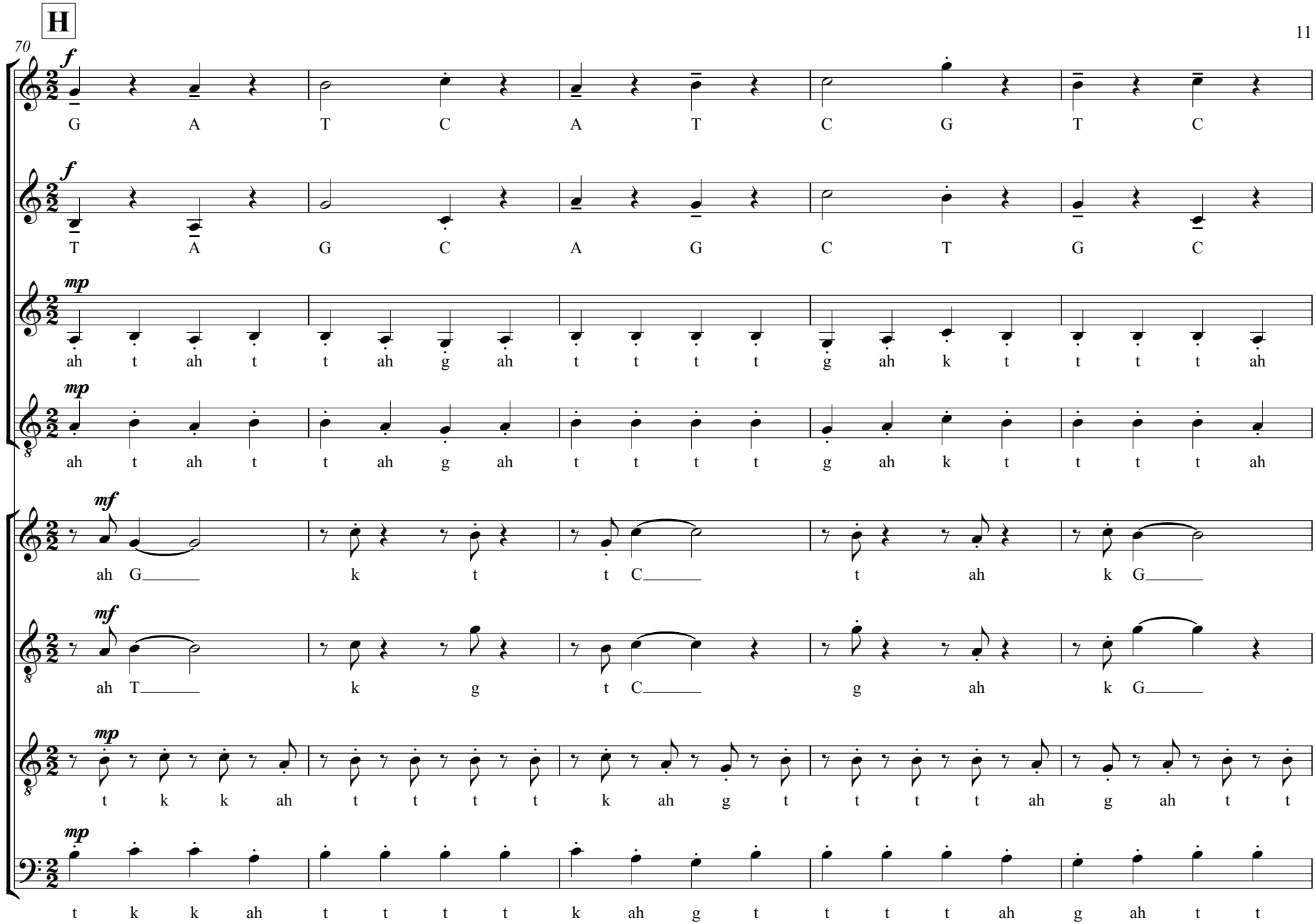

E
39
S.
A.
A.
T.
A.
T.
T.
B.
ah t ah k C ah t ah A
k t t t ah ah g g ah k t ah t ah t ah k ah t t t k t t t t t t ah ah k g t t ah t ah g t t
t g g t t ah t t ah t k t t t k t t t ah ah g g ah k t ah t ah t ah k ah t t t k t t t t t t
t t t t t ah t ah t t t t ah ah k g t t ah t ah g t t ah ah k t
ah k t ah g g t t ah t t ah t k t t ah t ah k C ah t ah A
t t ah t t t t ah ah ah t t ah k t ah g t ah A ah t t T t t g G
ah k t ah t ah t ah k ah t t t k t t g t ah A ah t t T t t g G

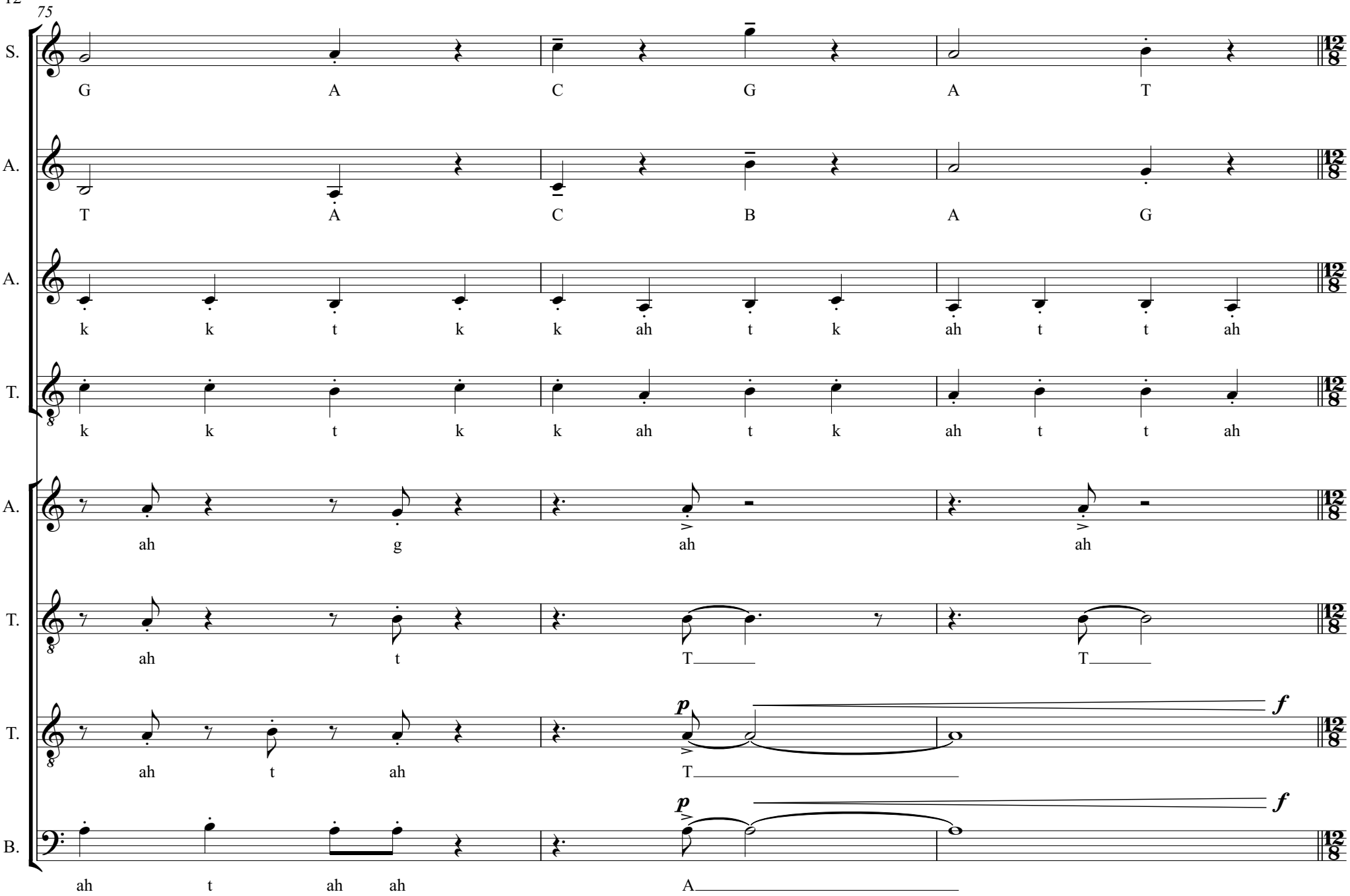

46
F
S.
A.
A.
T.
A.
T.
T.
B.
ah g g A g ah ah ah t t T t k C ah ah T
ah ah k t t t T t k C ah ah T
ah ah k g t t ah t ah g t t ah ah k t t t A ah ah T ah t T
t t A ah ah T ah t T
ah g g A g ah ah ah T A G C A G C T G C T A
t t t G ah t ah t t ah t t t t t ah t t t t t ah t t t t
t t t G ah k k g k t ah k t t ah k t t t g t t t ah t t k t t k t ah t t t k k t k k
k k g k C k g g k C k C k k C k C k k C k

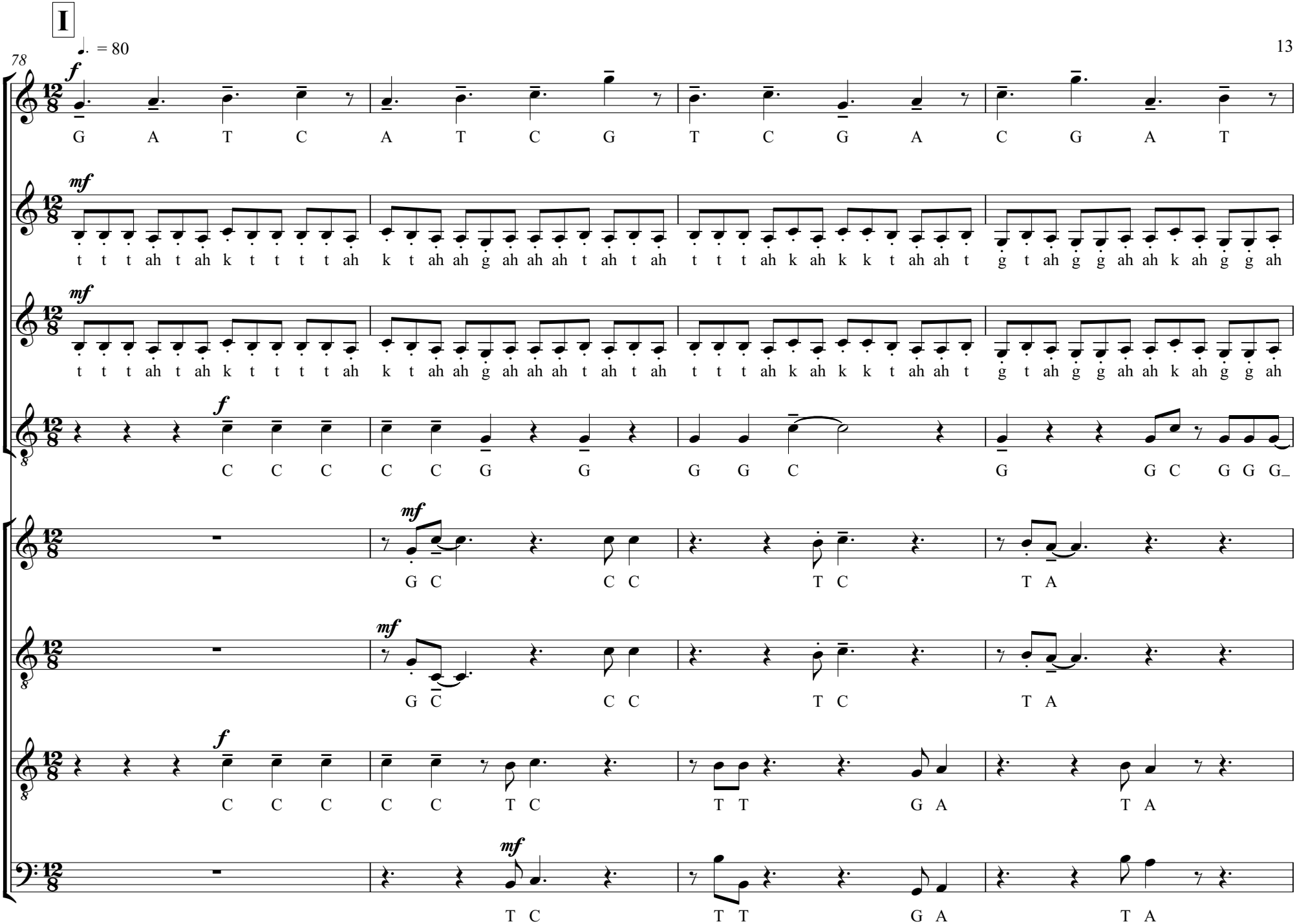

G
55
S.
A.
A.
T.
A.
T.
T.
B.
f
mf
mf
f
f
f
f
ah g G k k k ah g
ah g G k k k t ah ah t
ah t T ah t C t ah ah t
ah t T ah t C ah g
C T A G T A G C A
t ah t ah t t ah ah t ah ah ah ah ah t ah g
t ah t ah t g t k ah ah g t ah g g ah k ah ah g g ah t g ah g
G G G C G g G g g k g G

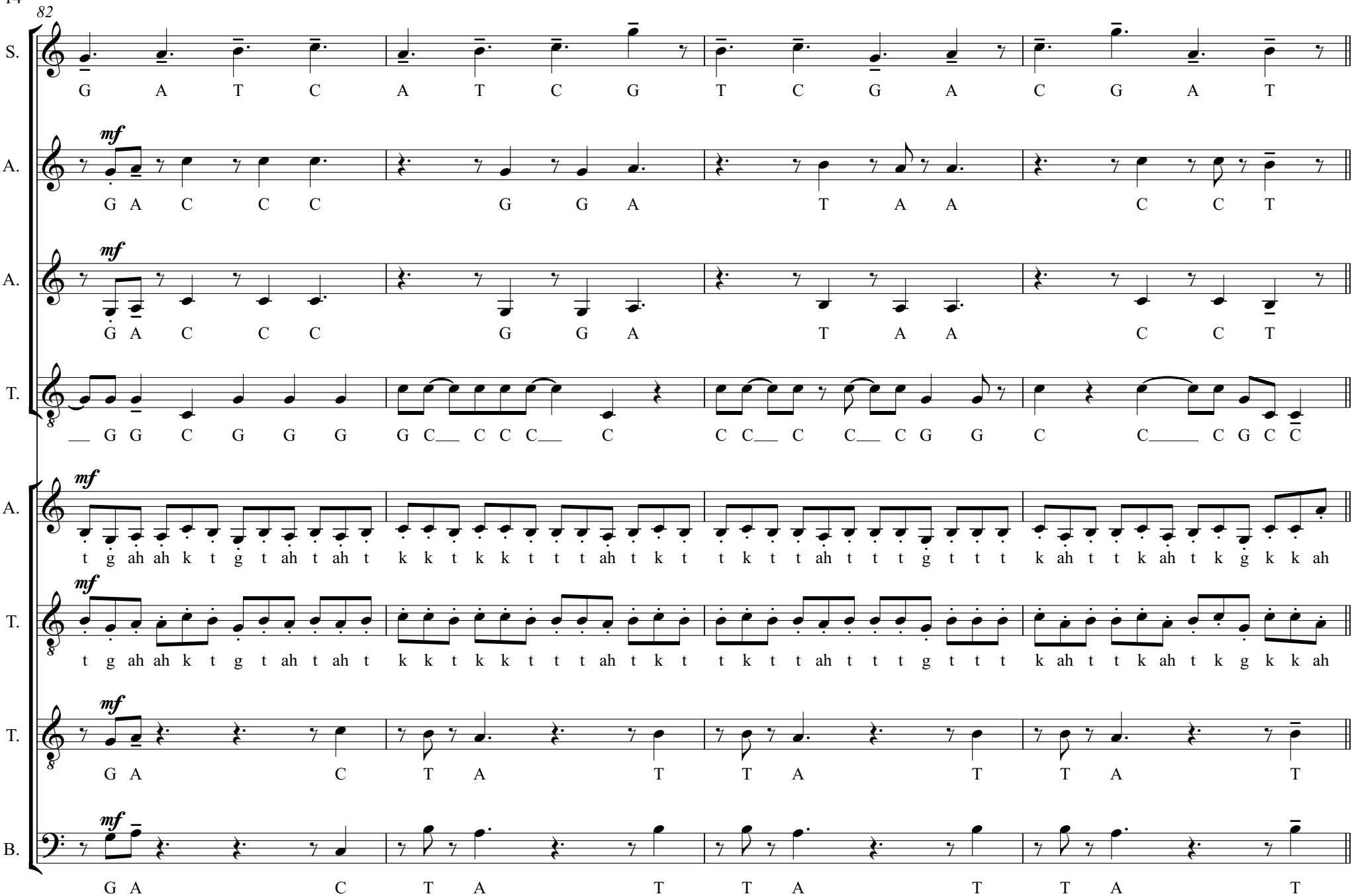

60
S.
ah t k t k k k g
A.
ah ah t t t ah t ah t ah ah ah ah ah t ah t t t t ah t ah t t t
A.
k k ah k ah t t t ah t ah t ah ah ah g ah ah t k ah t t t t k ah t ah t t t
T.
ah t ah g t t k t
A.
G C T G C T A C T A G
T.
ah t k t k k k g
T.
ah t ah g t t k t
B.
f
C G G G G C C C C C


68
S.
sfz
ah
ah
A.
f
T
T
A.
f
A
A
T.
f
A
A
A.
f
T
A
G
C
T.
f
T
A
T
C
T.
f
ah
t
t
ah
k
t
ah
k
k
B.
f
ah
t
t
ah
k
t
ah
k
k


H
70
S.
A.
A.
T.
A.
T.
T.
B.
f
mp
mf
G A T C A T C G T C
T A G C A G C T G C
ah t ah t t ah g ah t t t t g ah k t t t t ah
ah t ah t t ah g ah t t t t g ah k t t t t ah
ah G k t t C t ah k G
ah T k g t C g ah k G
t k k ah t t t t k ah g t t t t ah g ah t t
t k k ah t t t t k ah g t t t t ah g ah t t


75
S.
G A C G A T
A.
T A C B A G
A.
k k t k k ah t k ah t t ah
T.
k k t k k ah t k ah t t ah
A.
ah g ah ah
T.
ah t T T
T.
p f
ah t ah T
B.
p f
ah t ah ah A


I
78
♩. = 80
S.
A.
A.
T.
A.
T.
T.
B.
f
mf
G A T C A T C G T C G A C G A T
t t t ah t ah k t t t t ah k t ah ah g ah ah ah t ah t ah t t t ah k ah k k t ah ah t g t ah g g ah ah k ah g g ah
C C C C C G G G G C G G C G G G_
G C C C T C T A
G C C C T C T A
C C C C C T C T T G A T A
T C T T G A T A


82
S.
G A T C A T C G T C G A C G A T
mf
A.
G A C C C G G A T A A C C T
mf
A.
G A C C C G G A T A A C C T
mf
T.
__ G G C G G G G C__ C C C__ C C C__ C C__ C G G C C____ C G C C
mf
A.
t g ah ah k t g t ah t ah t k k t k k t t t ah t k t t k t t ah t t t g t t t k ah t t k ah t k g k k ah
mf
T.
t g ah ah k t g t ah t ah t k k t k k t t t ah t k t t k t t ah t t t g t t t k ah t t k ah t k g k k ah
mf
T.
G A C T A T T A T T A T
mf
B.
G A C T A T T A T T A T

86 **J**

S. *p* *f*

t k ah ah t t g ah t ah t t g k ah ah t t t t t t k t t t ah k ah t ah t ah t k ah g g ah ah t t t k t t k t

A. *p* *f*

t k ah ah t t g ah t ah t t g k ah ah t t t t t t k t t t ah k ah t ah t ah t k ah g g ah ah t t t k t t k t ah t t ah t t g g ah t k ah

A. *p*

t k ah ah t t g ah t ah t t g k ah ah t t t t t t k t

T.

A. *p*

T T T ah ah ah g A g g ah A ah t ah

T. *p*

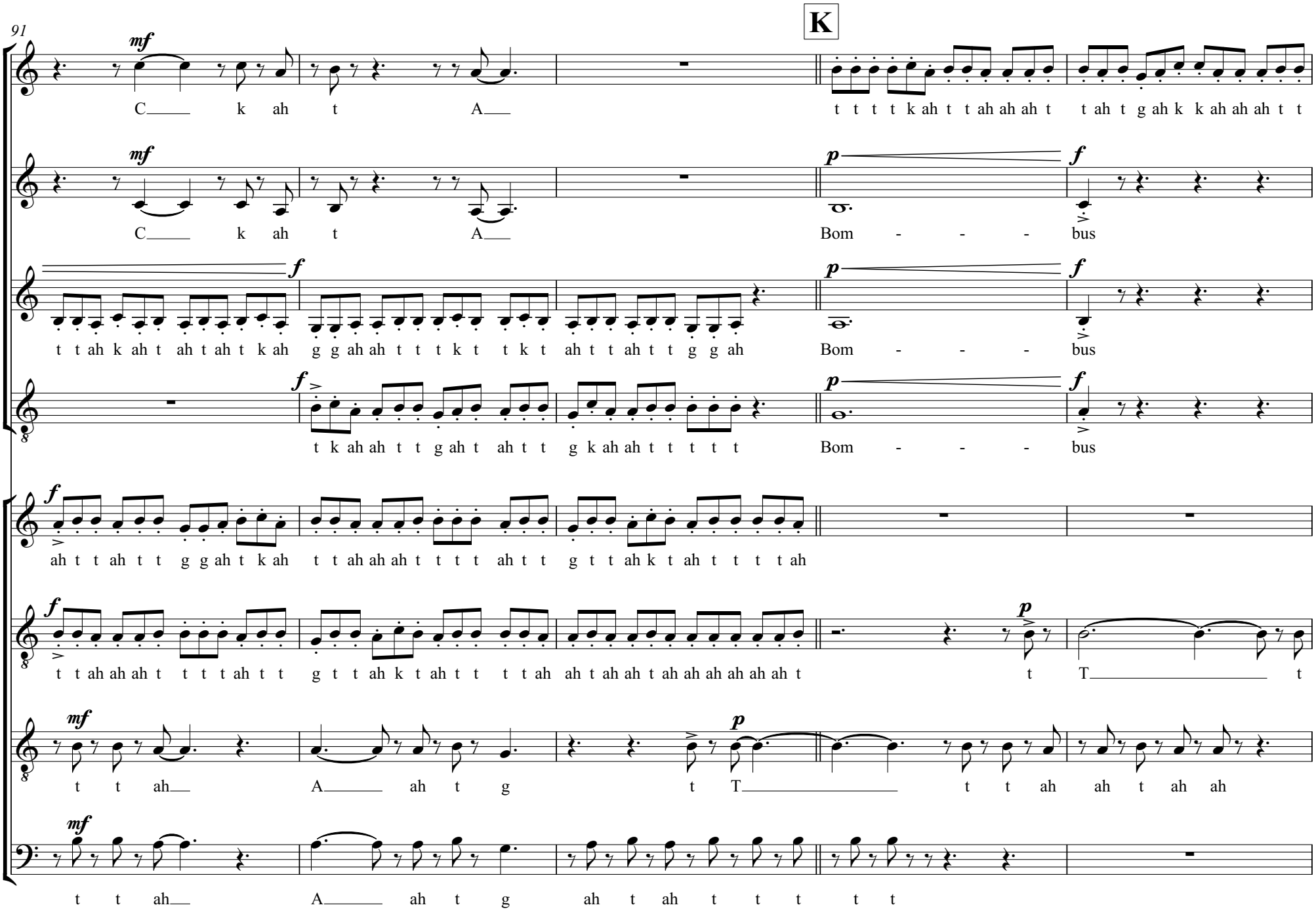
T T T ah ah ah g A g g ah A ah t ah

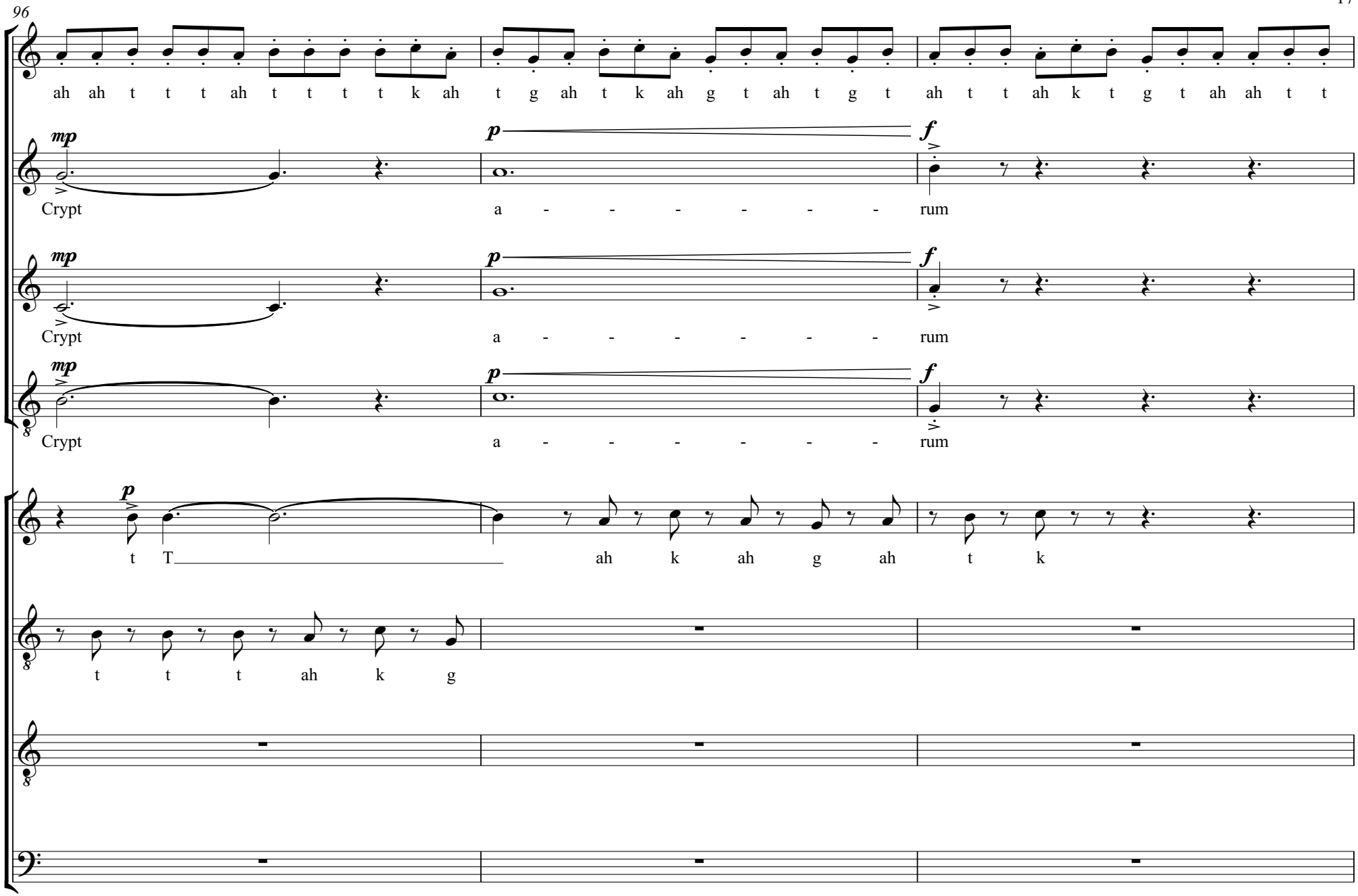
T. *p*

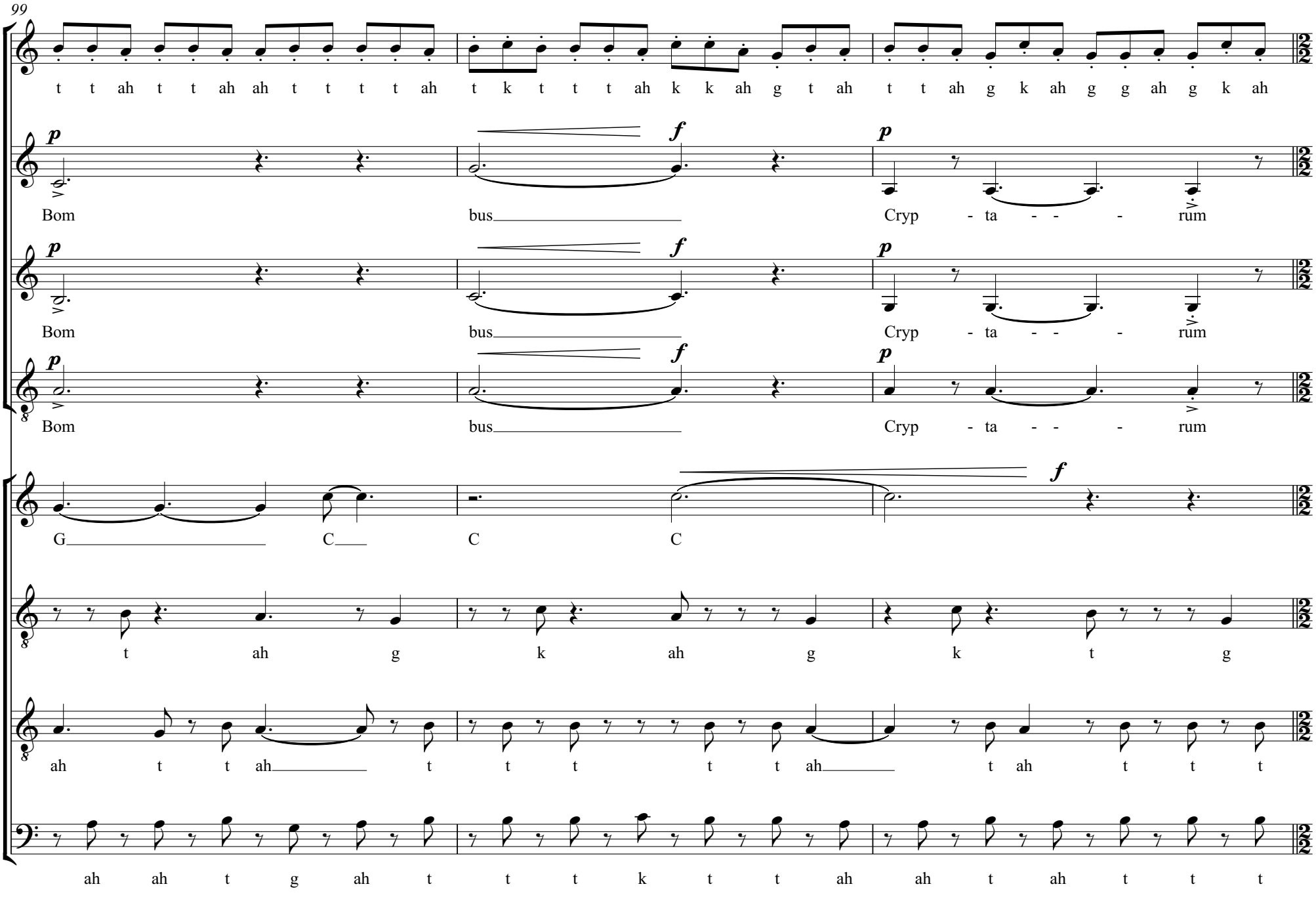
ah ah ah t t G t t t G g t t T

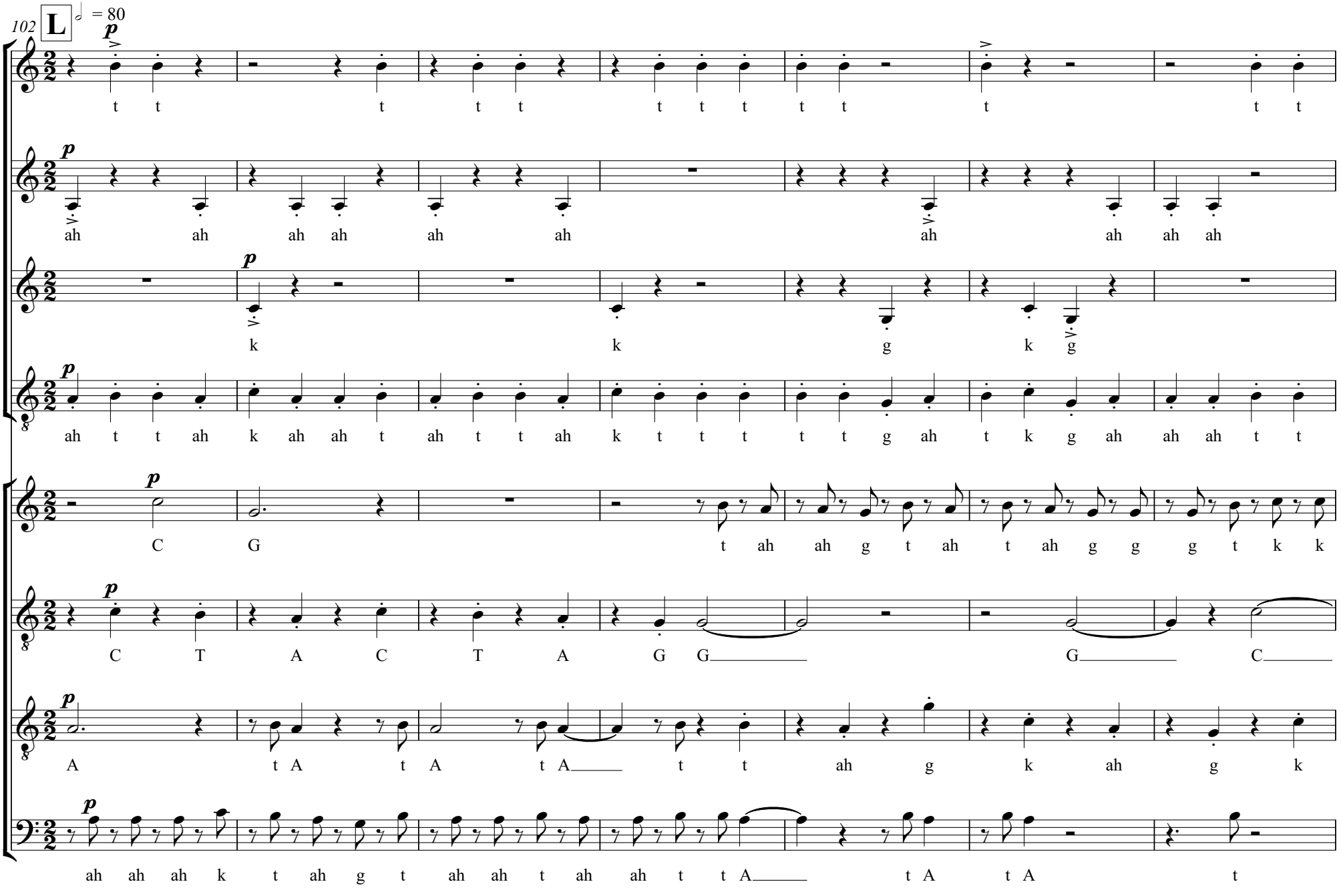
B. *p*

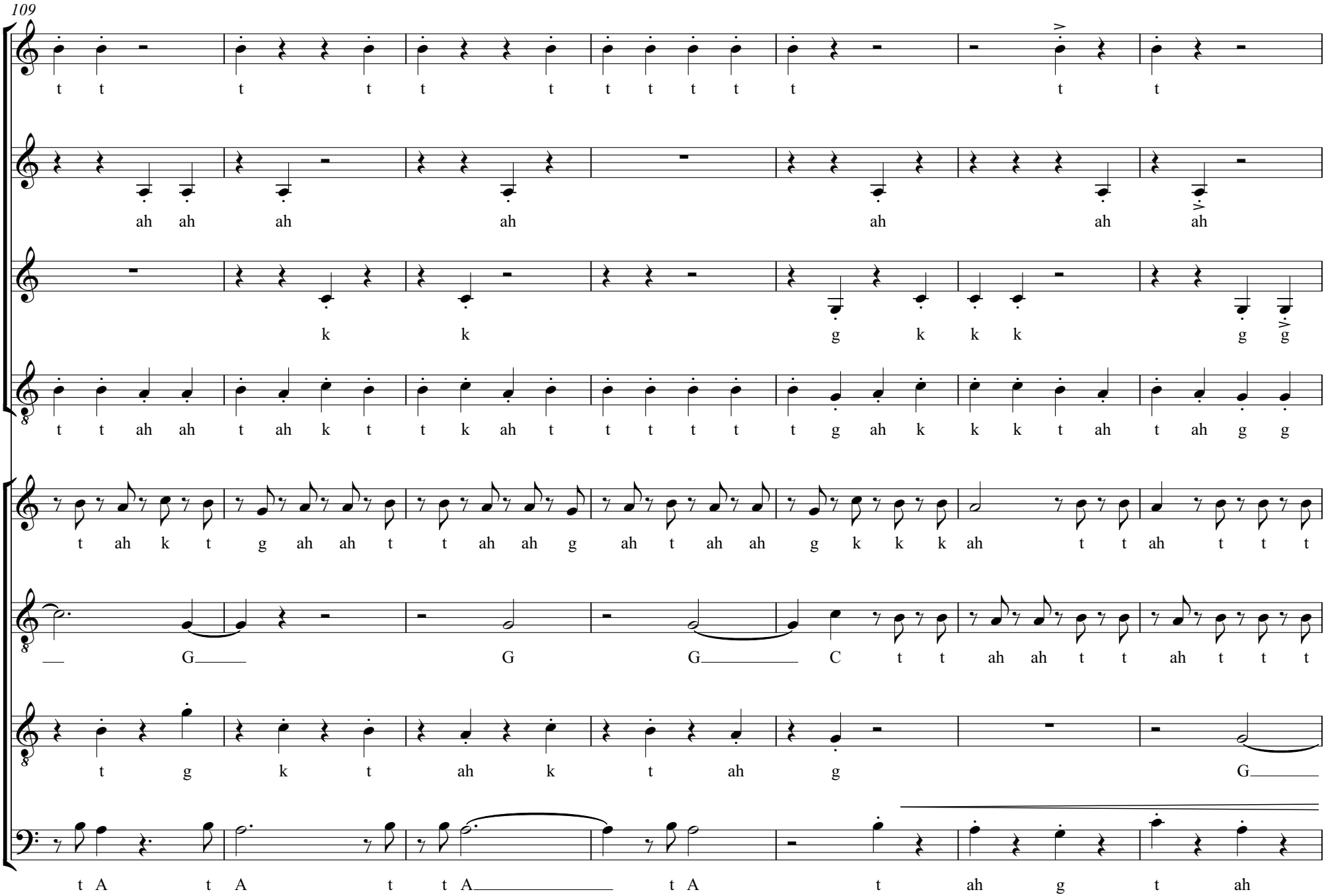
ah ah ah t t G t t t G g t t T

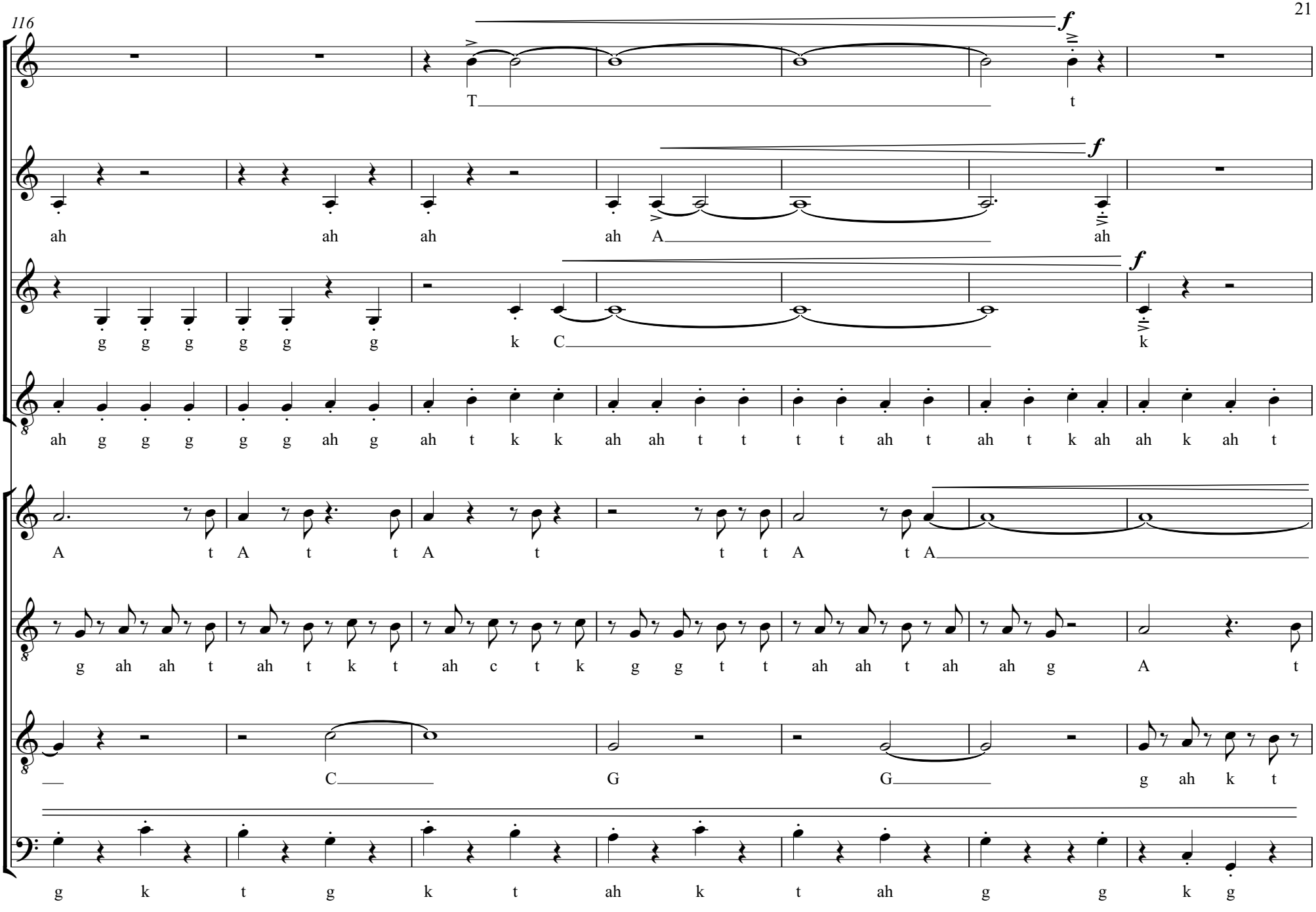

91
K
S.
A.
A.
T.
A.
T.
T.
B.
mf
f
p
C k ah t A
t t t t k ah t t ah ah ah t t ah t g ah k k ah ah ah t t
Bom - - - bus
t t ah k ah t ah t ah t k ah g g ah ah t t t k t t k t ah t t ah t t g g ah
t k ah ah t t g ah t ah t t g k ah ah t t t t t
ah t t ah t t g g ah t k ah t t ah ah ah t t t t ah t t g t t ah k t ah t t t t ah
t t ah ah ah t t t t ah t t g t t ah k t ah t t t t ah ah t ah ah t ah ah ah ah ah ah t
t T t
t t ah A ah t g t T t t ah ah t ah ah
t t ah A ah t g ah t ah t t t t t

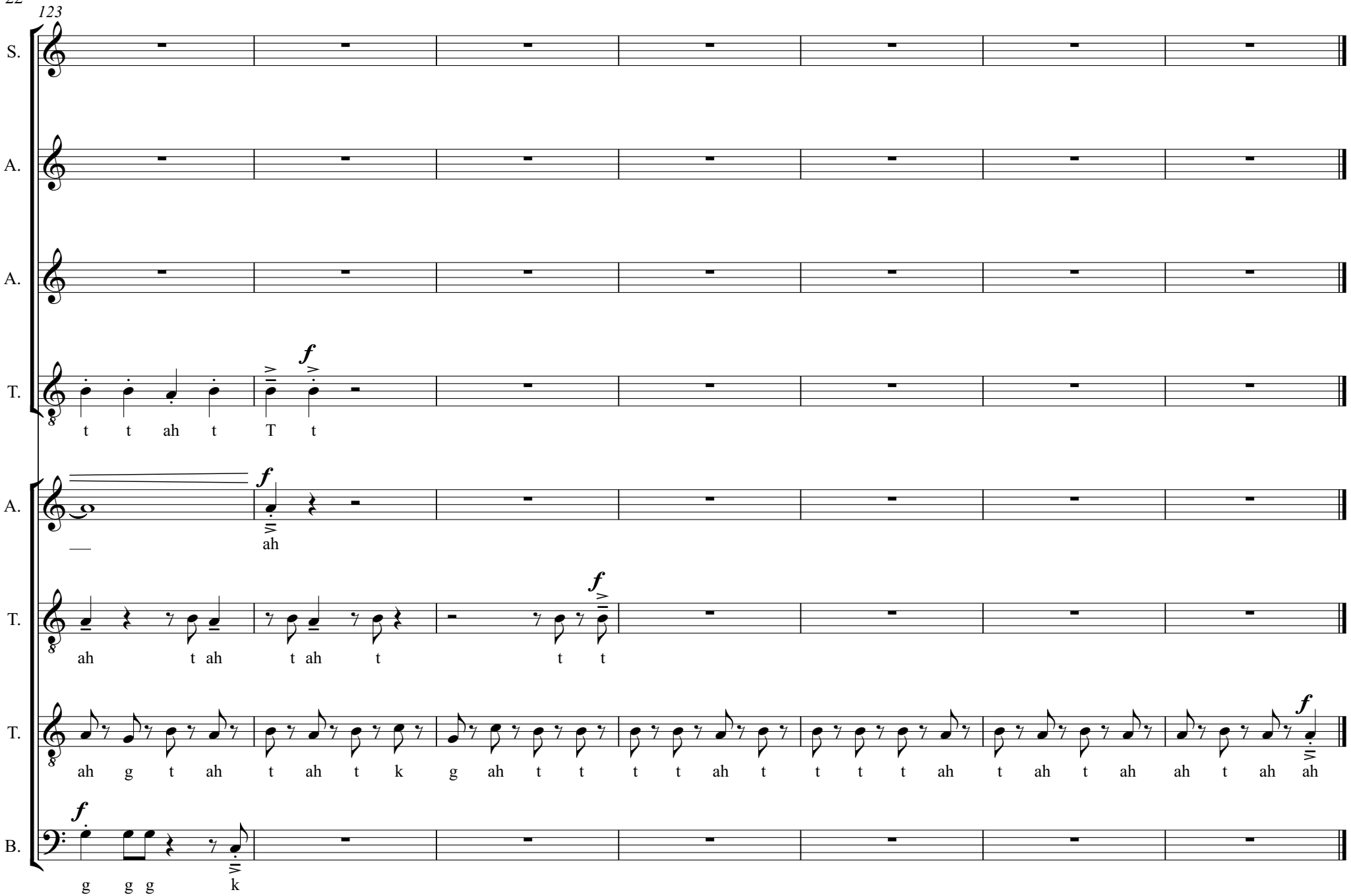

96
S.
ah ah t t t ah t t t t k ah t g ah t k ah g t ah t g t ah t t ah k t g t ah ah t t
A.
mp
p
f
Crypt a - - - - - - - rum
A.
mp
p
f
Crypt a - - - - - - - rum
T.
mp
p
f
Crypt a - - - - - - - rum
A.
p
t T ah k ah g ah t k
T.
t t t ah k g
T.
B.


99
S.
t t ah t t ah ah t t t t ah t k t t t ah k k ah g t ah t t ah g k ah g g ah g k ah
A.
p
f
p
Bom bus Cryp - ta - - - rum
A.
p
f
p
Bom bus Cryp - ta - - - rum
T.
p
f
p
Bom bus Cryp - ta - - - rum
A.
f
G C C C
T.
t ah g k ah g k t g
T.
ah t t ah t t t t t ah t ah t t t
B.
ah ah t g ah t t t k t t ah ah t ah t t t


102
L
= 80
S.
A.
A.
T.
A.
T.
T.
B.
p
t t t


109
S.
t t t t t t t t t t t t
A.
ah ah ah ah ah ah ah
A.
k k g k k k g g
T.
t t ah ah t ah k t t k ah t t t t t g ah k k k t ah t ah g g
A.
t ah k t g ah ah t t ah ah g ah t ah ah g k k k ah t t ah t t t
T.
G G G C t t ah ah t t ah t t t
T.
t g k t ah k t ah g G
B.
t A t A t t A t A t ah g t ah


116
S.
T
t
A.
ah ah ah ah A ah
A.
g g g g g g k C k
T.
ah g g g g g ah g ah t k k ah ah t t t t ah t ah t k ah ah k ah t
A.
A t A t t A t t t A t A
T.
g ah ah t ah t k t ah c t k g g t t ah ah t ah ah g A t
T.
C G G g ah k t
B.
g k t g k t ah k t ah g g k g


123
S.
A.
A.
T.
t t ah t T t
A.
ah
T.
ah t ah t ah t t t
T.
ah g t ah t ah t k g ah t t t t ah t t t t ah t ah t ah ah t ah ah
B.
g g g k