

# CELESTIAL SUITE

FOR BRASS QUINTET

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**"CELESTIAL SUITE"**  
FOR BRASS QUINTET

PROGRAM NOTES PREPARED BY THE COMPOSER; SEPTEMBER, 2011.

**OVERVIEW:**

In the summer of 2011, I was contacted by Dorival Puccini, of the Axiom Brass Quintet, to compose a piece jointly commissioned by Axiom and the Fischoff National Chamber Music Association. The piece was to reflect upon and comment on the relationship between astronomy and sacred music, and would be premiered at Notre Dame University in the fall of 2011.

**SUMMARY OF INITIAL CONCEPTUAL RELATIONSHIPS:**

My first response (to myself) was "How am I going to do that??!!" However, after thinking on it for a bit, and consulting my brother-in-law, Dominic Chan, for inspiration (because he's a lot smarter than I), I came up with an initial game-plan, noting the following structural relationships:

- 1) I would highlight five astronomers/physicists, and each would be represented by a member of the brass quintet:

[Specific descriptions/relationships can be found in the individual movements' paragraphs]

- COPERNICUS - TRUMPET
- GALILEO - FRENCH HORN
- NEWTON - TUBA (BEING THE CENTER AND QUINTET'S GRAVITATIONAL FOUNDATION, PER SE)
- HUBBLE - TROMBONE
- HAWKING - TRUMPET

- 2) Additionally, each movement would relate, for the most part, to the sacred music of the individual's time period in history.

- 3) The keys of each movement - ever so coincidentally!! - could spell out the word "EARTH":

- E = E Major = Copernicus = directly relates (as dominant of):
- A = A Major = Galileo = directly relates (as dominant of):
- R = Re (solège equivalent) = D Major = Newton = directly relates (as relative major to):
- T = Ti (solfège equivalent) = B Minor = Hubble = directly relates (as parallel minor to):  
    II - B Major (German notation equivalent) = Hawking
- Furthermore, it can be noted that the final key, B Major, is also the dominant of the first key, E Major, suggesting that these keys all "revolve" around one another, and will continue to do so forever...
- Lastly, I couldn't help but realize that as a result of all this, a lot of the music happened in a rather mathematical manner. But after thinking about the five subjects with which I was dealing, this seemed rather appropriate.

## I. COPERNICUS (1473-1543)

*Earth vs. Sun*

The first thing I think it is important to mention is that there is no relationship to music of the time in this first movement of the suite. Instead, I decided to “shake it up” a bit, as that is precisely what Copernicus did. But first, I want to relate how I came up with various roles of the brass quintet members.

The 4 accompanying members of the quintet (2nd trumpet, French Horn, Trombone and Tuba) play notes entirely bound by the musical spelling of the word “Earth” (as described in the summary). They never vary from this, and are stuck in this “tradition”. They symbolize the Catholic Church’s stance - the Earth as the center of the universe - at this point in history. The solo trumpet, however, plays entirely in the key of G. In musical terms, the key of G is also referred to as Sol - which, of course, is the Latin word for “Sun”. So therein lies the conflict of Trumpet (Copernicus) going against the Brass Quintet (Church) and the clashing that occurs as a result.

In addition, for musical reasons, I felt I needed to “shake things up” a bit. Therefore, although the accompaniment at the beginning is very “firm”, the solo trumpet upsets the rhythmic foundation, so that the audience is not sure where to look/listen for solid footing. I also add a jazz element mid-way, which would have been completely jarring to the sacred world of the 15th/16th century, as another means of symbolizing Copernicus’ revolutionary vision at the time. Noteworthy is that despite the mathematically inarguable discoveries of Copernicus, the church did not change its viewpoint, and this is reflected musically at the end as well.

## II. GALILEO (1564-1642)

*1609 - Galileo makes significant improvements to the telescope*

*1633 - Galileo found "vehemently suspect of heresy" by Pope Urban VIII*

The first inspiration for this movement was the revelation that Galileo’s father was a lutenist and also a composer. This, combined with the fact that Galileo’s most famous contemporary composer, Palestrina (1526-1594), was also a lutenist. The solo horn, therefore, plays music reminiscent of the music of Palestrina throughout, while the accompanying instrument (trombone) plays in the style of a lute.

Galileo’s findings in support of Copernicus’ heliocentrism were constantly under scrutiny by the church, and most especially when Pope Urban VIII (a friend of Galileo’s) was elected to the papacy. At times supportive of Galileo’s findings - even to the point of encouraging publications - and other times against (for political reasons), the music I have written symbolizes the “dance” Galileo had to constantly endure with Pope Urban VIII in order to maintain his vocation.

Lastly - in honor of Galileo’s improvements to the telescope - the first and last systems of the score for this movement represent “score-painting” of a telescope.

### **III. NEWTON (1642(3) - 1727)**

*Newton's 1st law: An object at rest stays at rest and an object in uniform motion tends to stay in motion unless acted upon by external force.*

*Newton's 3rd law: Every action has an equal and opposite reaction.*

BASED ON THE BACH CHORALE SETTING OF:

WIE SCHÖN LEUCHTET DER MORGENSTERN (HOW BEAUTIFULLY SHINES THE MORNING STAR)

Isaac Newton's findings and his *Principia* lay the foundation for most of classical scientific mechanics as we know them. It is for this very reason that I knew I wanted the Tuba to lay the foundation for this movement. Newton also was a highly religious man, and for this reason I wanted to base the movement on his most famous musical contemporary, J.S. Bach, and Bach's chorale setting of the appropriately named "How Beautiful Shines the Morning Star". Newton was a follower of both Copernicus and Galileo, so the mention of the "Morning Star" was all I needed!

I was inspired by Newton's first and third laws, quoted above. This is perhaps the most complicated and mathematical of the five movements. In response to the first law, I decided to construct the music (for the most part) so that none of the accompanying 4 instruments would move from their prescribed note until acted upon by "another force". In other words, a player only changes their note, or pattern, when the note they are currently playing is touched upon by another player in the group. Once establishing their new pattern, they again become "inert" and cannot change until forced to by another. In the meantime, all of the solo tuba material is based on the Bach chorale.

From G-H, as the chorale is being stated in its original form by the tuba, I explore Newton's 3rd law. Crescendos and Decrescendos tossed back and forth between various pairs of instruments signify equal and opposite actions/reactions. The rest of the movement again investigates the 1st law as the chorale is played out.

### **IV. HUBBLE (1889-1953)**

At this point in history, many things have changed, with regard to technology, information, and science, since Newton's time. Therefore, I felt it OK to shift things a bit musically.

My first inspiration, due to a fortunate coincidence, comes from Edwin Hubble's name. It so happens that there is also a famous jazz trombonist named "Eddie" Hubble, who also played during the early-mid 20th century. I knew trombone was the instrument I needed to feature in this movement, so that was a good start. The "real" Hubble was also a good athlete; and knowing that Brett Johnson, the trombonist of the commissioning group, the Axiom Brass, is himself a good athlete, I enjoyed that connection, and felt comfortable making his part rather "athletic" as well.

As in the "Galileo" movement, this movement also begins with a "score-painted" telescope, in reference to the famous space-telescope bearing the Hubble name. These opening measures launch us into the trombone cadenza, as a kind of "Big Bang", a musical tribute to the theory to which Hubble lent great support with his findings about "red-shift".

The harmonies of the movement, which I set as a kind of ragtime (apropos to the time of Hubble's career), are based on "When the Saints go Marching In" - albeit in a minor key, for my purposes.

Using a ragtime format was done purposely for other reasons: early on, "jazz" (i.e. ragtime) was often called "the devil's music" by the religious sect in its day. Yet many would specifically use "When the Saints..." as a dirge, and later up-tempo, at religious funeral services, to both mourn and celebrate the life of the deceased. Similarly, the "Big Bang" theory is both used by the church both for and against their arguments about the beginning of the universe.

**V. HAWKING (1942 - )**

"...scientists have discovered the 'Song' of a distant Black Hole"

Admittedly, this movement is the least "religious" of the five, and this is indicative of my "perceived" impressions of Stephen Hawking's faith (or lack thereof) as well.

Right around the time of beginning composition of this movement, I discovered a publication indicating sound waves being detected during the process of matter collapsing into black holes. The resulting sound waves produced a frequency - if there could be eardrums there to detect them - that would resemble that of a low beating drum. I wanted to replicate that as best as possible, by including the slapping of a tuba mouthpiece using the palm of the hand, and using the lowest pitch possible. This slapping repeats, growing ever so slightly faster, until resembling that of a beating heart. (More on that in a bit).

In the mean time, the solo flugel-horn plays a line that constantly reaches up, only to be dragged down - as the collapsing of matter...

So too do the accompanying instruments move in and out of the texture, slowly drifting downward to very low registers - disappearing...

As the movement, and the piece, moves toward its conclusion, the accompanying instruments get louder, as a "cluster" rather "nebulous" in tonality, but searching for the answer to an unanswerable question, that very one which (I believe) scientists and theologians will never be able to answer.

For me, the answer lies in that very aforementioned heart beat. It is not how or why we are here, but the very fact that we ARE here, LIVING, and that is what "matters" and should be enjoyed for what it is, and to the fullest.

JIM STEPHENSON, SEPTEMBER 24, 2011

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## I. COPERNICUS

*Earth vs. Sun*

## II. GALILEO

*1609 - Galileo makes significant improvements to the telescope  
1633 - Galileo found "vehemently suspect of heresy" by Pope Urban VIII*

## III. NEWTON

*Newton's 1st law: An object at rest stays at rest and an object in uniform motion tends to stay in motion unless acted upon by external force.  
Newton's 3rd law: Every action has an equal and opposite reaction.*

## IV. HUBBLE

## V. HAWKING

*"...scientists have discovered the 'Song' of a distant Black Hole"*

## Score

*Co-Commissioned by: Axiom Brass, lead ensemble, and Fischoff National Chamber Music Association.*

*Additional consortium members: Chicago Chamber Musicians Brass Quintet, Chicago Symphony Orchestra Brass Quintet, The Principal Brass of the New York Philharmonic, and University of Mary Washington Faculty Brass Quintet, Dr. Kevin P. Bartram, Director.*

**CELESTIAL SUITE**

FOR BRASS QUINTET

**I. COPERNICUS***Earth vs. Sun***Slow March, Dirge** ♩ = 56

C Trumpet 1

C Trumpet 2 Cup Mute *p* Con sord.

Horn in F *p*

Trombone Cup Mute *p* Con sord.

Tuba *p*

Open

Slow March, Dirge ♩ = 56

C Trumpet 1

C Trumpet 2 Cup Mute *p* Con sord.

Horn in F *p*

Trombone Cup Mute *p* Con sord.

Tuba *p*

Open

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(A)

6

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(A)

*Copernicus*

4

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(B)

mf      p

p

mp      p

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(C) Moderato Funk  $\text{♩} = 176$

f      p

pp      f

mp      pp      f

mp      pp      f

mp      pp      f

p      mf      f

pp      f

p

f

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(C) Moderato Funk  $\text{♩} = 176$

p

p

p

p

(D)

26

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

31

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

36

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

mf

p

p

mp

mf

mp

mp

mp

mf

mf

p

p

p

f mp

## Copernicus

6

(E)

40

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

47

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(F) Tempo Primo  $\text{♩} = 156$ Funk  $\text{♩} = 176$ 

Primo

53

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

## (G) 'Stesso, Dirge

58

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

p

p

p

63

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

p

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**II. GALILEO**

1609 - Galileo makes significant improvements to the telescope  
1633 - Galileo found "vehemently suspect of heresy" by Pope Urban VIII

**Moderato con grazia (♩ = c. 56)**

C Trumpet 1

C Trumpet 2

Horn in F

Trombone

Tuba

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(H)

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

(I)

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

20

pp

pp

mp

This section consists of five staves. The first two staves are for brass instruments: Tpt. 1 and Tpt. 2. The third staff is for the Horn (Hn.). The fourth staff is for the Bassoon (Tbn.). The fifth staff is for the Double Bass (Tuba). Measure 20 starts with rests for all instruments. Measures 21-22 show sustained notes with grace notes above them. Measures 23-24 show eighth-note patterns. Measure 25 concludes with eighth-note patterns and dynamics pp, pp, and mp.

(J)

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

26

This section consists of five staves. The first two staves are for brass instruments: Tpt. 1 and Tpt. 2. The third staff is for the Horn (Hn.). The fourth staff is for the Bassoon (Tbn.). The fifth staff is for the Double Bass (Tuba). Measure 26 starts with sustained notes with grace notes above them. Measures 27-29 continue this pattern. Measure 30 concludes with sustained notes with grace notes above them.

(K)

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

32

p

mf

mf

mf

f

mf

f

This section consists of five staves. The first two staves are for brass instruments: Tpt. 1 and Tpt. 2. The third staff is for the Horn (Hn.). The fourth staff is for the Bassoon (Tbn.). The fifth staff is for the Double Bass (Tuba). Measure 32 starts with a dynamic p. Measures 33-34 show eighth-note patterns with dynamics mf. Measures 35-36 show eighth-note patterns with dynamics mf. Measure 37 concludes with eighth-note patterns and dynamics f.

Musical score for measures 38-40. The score includes parts for Tpt. 1, Tpt. 2, Hn., Tbn., and Tuba. Measure 38 starts with a rest for Tpt. 1 followed by eighth-note patterns. Measure 39 begins with a forte dynamic for Tpt. 1. Measure 40 starts with a piano dynamic for all instruments. A large 'CONFIDENTIAL' stamp is overlaid on the score.

44

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

*mf*

*f*

*p*

*f*

50 **L**

Tpt. 1 3

Tpt. 2 2

Hr.

Tbn. 3

Tuba

mp

mf

f

mp

mf

f

mp

f

mp

f

mp

mf

f

*Galileo*

11

11

56 (M)

Tpt. 1: - *p* *mf*

Tpt. 2: Open *p* *mf*

Hn.: *p*

Tbn.: *p* *mf*

Tuba: Open *p* *mf*

63

Tpt. 1: *f*

Tpt. 2: *f*

Hn.: *f*

Tbn.: *f*

Tuba: *f*

(N)

Tpt. 1: *ff* *f* *rit.*

Tpt. 2: *ff* *mp* *f*

Hn.: *p* *mp* *f*

Tbn.: *ff* *mp* *f*

Tuba: *ff* *f*

### III. NEWTON

Score

12

*Newton's 1st law: An object at rest stays at rest and an object in uniform motion tends to stay in motion unless acted upon by external force.*

*Newton's 3rd law: Every action has an equal and opposite reaction.*

**BASED ON THE BACH CHORALE SETTING OF: WIE SCHÖN LEUCHTET DER MORGENSTERN (HOW BEAUTIFULLY SHINES THE MORNING STAR)**

#### Allegro agitato (M.M. $\text{♩} = \text{c. } 138$ )

Con sord.

Musical score for measures 12-15. The instrumentation includes C Trumpet 1, C Trumpet 2, Horn in F, Trombone, and Tuba. The key signature is A major (two sharps). Measure 12 starts with C Trumpet 1 playing eighth-note pairs. Measures 13-14 show rhythmic patterns involving sixteenth-note groups and eighth-note pairs. Measure 15 concludes with eighth-note pairs. Dynamics include *fp*, *p*, and *f*.

(O)

Musical score for measures 16-19. The instrumentation includes Tpt. 1, Tpt. 2, Hn., Tbn., and Tuba. The key signature changes to G major (one sharp) for measures 16-17. Measures 18-19 return to A major. The score features sixteenth-note patterns and dynamic markings like *f* and *p*. The Tuba part includes an "Open" instruction.

Musical score for measures 20-23. The instrumentation remains the same. The key signature returns to A major. The score continues with sixteenth-note patterns and dynamic markings like *f* and *p*.

**P**

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

**Q**

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

**R**

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

## Newton

14

26

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

fp      f      fp      3mf

30

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

mp      pp      pp      mp      pp

34

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

mp      pp      p      mp      pp      p

39

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

46 (T)

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

50

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

## Newton

16

55

Tpt. 1 *fp* *f*

Tpt. 2 *fp* *f*

Hn. *fp* *f*

Tbn. *fp* *f*

Tuba *f*

**(U)**

60

Tpt. 1 *f* *p* *f* *p*

Tpt. 2 *f* *p* *f* *p*

Hn. *p* *f* *p* *f*

Tbn. *p* *f* *p* *f*

Tuba *p*, *f*

68

Tpt. 1 *f* *p* *f* *p* *f* *p* *fp*

Tpt. 2 *f* *p* *f* *p* *f* *p* *fp*

Hn. *p* *f* *p* *f* *p* *fp* *p*

Tbn. *p* *f* *p* *f* *p* *mf legato*

Tuba *p*, *p* *legato*

**(V)**

75

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

79

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

83

rit.

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

**(W) Slowly**

**(X) Tempo Primo (M.M.  $\text{♩} = \text{c. } 138$ )**

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

90

**(Y)**

*lunga*

Tpt. 1  
Tpt. 2  
Hn.  
Tbn.  
Tuba

97

102

**IV. HUBBLE**

**Molto Largo**

**Cadenza - trombone**

C Trumpet 1

C Trumpet 2

Horn in F

Trombone

Tuba

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

*f* *fff*

*mp* *f* *fff*

*p* *f* *fff*

*mp* *f* *ff*

*f* *fff*

*Z* Slow Rag, gradually accelerating

Ad. lib.  
[Opt: improvise own cadenza in F#7]

*p*

*f*

*mp*

*mf*

*f*

*f*

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The musical score consists of three systems of music. The first system, starting at measure 7, features five brass instruments: C Trumpet 1, C Trumpet 2, Horn in F, Trombone, and Tuba. The second system, starting at measure 13, features five woodwind instruments: Tpt. 1, Tpt. 2, Hn., Tbn., and Tuba. The third system, starting at measure 13, continues with the same five woodwind instruments. The score includes various dynamics such as *f*, *fff*, *mp*, *p*, and *mf*. Performance instructions include "Slow Rag, gradually accelerating" and "Ad. lib. [Opt: improvise own cadenza in F#7]". The instrumentation is consistent across all systems, with the exception of the first system which includes C Trumpets and Horn in F.

*Hubble*

20 (AA) **Moderato Ragtime** ( $\text{♩} = \text{c. } 108$ )

Solo-Tone Mute

waa's ad. lib

18

Tpt. 1

*p*

Tpt. 2

*p*

Hn.

*p*

Tbn.

*mp*

Tuba

*p*

*Fz.*

22

Tpt. 1

*Fz.*

Tpt. 2

*bend*

Hn.

*bend*

Tbn.

Tuba

**(BB)**

26

Tpt. 1

*p*

Tpt. 2

*mp*

Hn.

*pp*

Tbn.

Tuba

*ff*

*pp*

*ff*

*pp*

*ff*

*p*

*pp*

*ff*

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30

Tpt. 1 *p* f *p*

Tpt. 2 *pp* f *p*

Hn. *pp* f *p*

Tbn. *f* f *p*

Tuba *f* *p*

CC Open

34

Tpt. 1 *f* *fp* *jp* *p*

Tpt. 2 *f* *fp* *fp* *p*

Hn. *f* *p*

Tbn. *f* *fp* *fp* *p*

Tuba *f* *fp* *fp* *p*

38

Tpt. 1 *f* *mp* *p*

Tpt. 2 *f* *p*

Hn. *mf* *p*

Tbn. *f* *mf* *mp* *p*

Tuba *f* *mf* *mp* *p*



*Hubble*

22

42

**(DD)**

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

*p*

*p*

*mf*

*p*

*p*

*mf*

*p*

*mf*

*p*

*mf*

*p*

46

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

*mp* > *pp*

*mp* > *pp*

*p*

*p*

*f*

*f*

*p*

*f*

*fz*

*p*

*f*

*fz*

*f*

*f*

*f*

*f*

*mf*

*mf*

*f*

50

**(EE)**

Tpt. 1

Tpt. 2

Hn.

Tbn.

Tuba

[Opt.]

*mp*

*f*

*mp*

*f*

*mp*

*f*

*f*

*f*

*f*

*f*

*f*

*mf*

*f*

*alt: sing note*

54

Tpt. 1 *mp* *fp* *fp* *fp*

Tpt. 2 *mp* *fp* *fp*

Hn. *mf* *f* *mf*

Tbn. *f*

Tuba

57 **(FF)**

Tpt. 1 *mf* *p* *p* *f*

Tpt. 2 *mf* *p* *p* *f*

Hn. *mf* *p* *f*

Tbn. *p* *f*

Tuba *p* *f*

61

Tpt. 1 *f p*

Tpt. 2 *f p*

Hn. *f p*

Tbn. *f p* *fp* *f*

Tuba *f p*



**V. HAWKING***"...scientists have discovered the 'Song' of a distant Black Hole"***Adagio lacrimoso** ♩ = 56

Harmon - stem out

(GG)

C Trumpet 1

B♭ Flugel

Horn in F (Stopped) sim.

Trombone

Tuba Harmon - stem out Slap mthpc. w/ palm

Tpt. 1 9 p mp

Flgl. 6/8

Hn. 6/8

Tbn. 6/8

Tuba 6/8

**HH Andante Benedictus** ♩ = 84

Tpt. 1 6/8

Flgl. 6/8 pp

Hn. 6/8

Tbn. 6/8 pp

Tuba 6/8 p

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(II)

Tpt. 1      Open

Flgl.      *mf*

Hn.      Open

Tbn.      Open

Tuba      *mf*

(JJ)

Tpt. 1      < *pp* <

Flgl.      *p*

Hn.      <*pp* < *pp* <

Tbn.      <*pp* < *pp* <

Tuba      *f*      *mf*

Tpt. 1      < *pp* < *p* < *mp* < *mf* < *f* < *ff*

Flgl.      *pp*

Hn.      > > >

Tbn.      <*pp* < *p* < *mp* < *mf* < *f* < *ff*

Tuba      <*pp* < *p* < *mp* < *mf* < *f* < *ff*

*pp*

**COMPOSED BY C. COLE**