

# **CELESTIAL SUITE**

**FOR ORCHESTRA**

**JAMES M. STEPHENSON**

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**CELESTIAL SUITE - JAMES M. STEPHENSON**

**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 opposit reaction.*

**IV. HUBBLE**

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

**DURATION: APPROX. 18 MINUTES**

**INSTRUMENTATION:**

**\*3\*3\*32 - 4331 - T+3 - HP - STRINGS**

**PICCOLO, 2 FLUTES, INCLUDING ALTO FLUTE (QUES IN ENGLISH HORN)**  
**2 OBOES, ENGLISH HORN, INCLUDES BASS OBOE (QUES IN BASSOON)**  
**2 CLARINETS IN A, BASS CLARINET**  
**2 BASSOONS**  
**4 FRENCH HORNS IN F**  
**3 TRUMPETS IN C**  
**2 TROMBONES, BASS TROMONE**  
**TUBA**  
**TIMPANI + 3 PERCUSSION**  
**HARP**  
**STRINGS**

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## **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.

The orchestral suite was created in August, 2013, for premiere by the Lake Forest Symphony on November 2, 2013.

What follows are the notes originally written for the brass quintet version:

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:

I) 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
- [Note: I abandoned this idea in the orchestral version - to allow for more color and texture]

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 (solfège equivalent) = D Major = Newton = directly relates (as relative major to):

- T = Ti (solfège equivalent) = B Minor = Hubble = directly relates (as parallel minor to):

- H = 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....

4) 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 "wake 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 [Orchestral version: mainly strings]) 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 is the center of the universe - at this point in history. The solo trumpet [Orchestra: Oboe], 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.

Although the accompaniment at the beginning is very "firm", the solo trumpet upsets the rhythmic foundation, so that the audience can't be sure where to walk/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. [Orchestral version uses violas and harp/clarinet respectively]

Galileo's findings in support of Copernicus' helio-centrism were constantly under scrutiny by the church, and this movement - 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 - at 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 in 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 beautiful 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 [Orchestra uses more low forces] to lay the foundation for this movement. Newton was also 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 therefore 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 one 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, [Orchestra U-V] 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-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 known that Brian 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! [Orchestral version has trombone cadenza]

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 dance, 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 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 the 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. [Orchestral version indeed uses a bass drum]. 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 [Orchestra: Bass Oboe, Alto Flute, Eng. 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 "nebulously" 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 heartbeat. 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

for the Lake Forest Symphony  
**CELESTIAL SUITE**  
**I. COPERNICUS**  
*Earth vs. Sun*

James M. Stephenson

**Slow March, Dirge**  $\text{♩} = 56$ 

**4** **3** **4** Solo **7** **8** **4**

Oboe I, II      pizz.  
 Violin I      **p**  
 Violin II      pizz.  
 Viola      **pp**  
 Cello      Div.  
 pizz.  
 Contrabass      **pp**

**6** **4** **7** **8** **4** **(A)** **7** **8**

Picc.      **mf**  
 Fl. I, II      **mf**  
 Ob. I, II      **mf**  
 A Cl. I, II      **mf**  
 Hn. I, II      **mf**  
 Hp.      **f**

**6** **4** **7** **8** **4** **(A)** **7** **8**

Vln. I      **mf**  
 Vln. II      **mf**  
 Vla.      **p**  
 Vc.      pizz.  
 Cb.      **p**

**II** **4** **7** **8** **4** **p** **7** **8** **4** **3** **4**

Ob. I, II      **mf**      **p**  
 Vln. I      **pp**  
 Vln. II      **pp**  
 Vla.      arco  
 Vc.      **pp**  
 Cb.      **p**

(B)

**16** **3** **5** **4**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp.

**16** **3** **5** **4**

Vln. I

Vln. II

Vla.

Vc.

Cb.

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**C** **Moderato Funk**  $\text{♩} = 160$

**21** **5** (3 + 2) **3** **5**

**Con sord.**

**p**

**Con sord.**

**p**

**Con sord.**

**p**

**p**

**21**

**p**

**2**

**C** **Moderato Funk**  $\text{♩} = 160$

**21** **5** **pizz.** **arco** **3** **8** **pizz.** **arco**

**Vln. I**

**Vln. II**

**Vla.**

**Vc.**

**Cb.**

**pizz.** **f** **arco**

**pizz.** **f** **arco**

**f**

**pizz.** **f**

**pizz.** **f**

**pizz.** **f**

**p**

**pizz.** **f**

**pizz.** **f**

**p**

**mf**

(D)

26      68      58      38      58

*mf*

a2

*mf*

*p*

*Con sord.*

*p*

*p*

*p*

*p*

26      68      58      38      58

*pizz.*      *arco*

*p*

*p*

*p*

*p*

*p*

26      68      58      38      58

*pizz.*      *arco*

*p*

*p*

*p*

*p*

*p*

*p*

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31 58 68 58 68

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim. 31

Mal.

Perc.

D. S.

Hp. 3

Vln. I 31 58 68 58 68

Vln. II pizz. arco pizz. arco pizz. arco

Vla. p

Vc. p

Cb.

**68**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

D. S.

Hp.

**36**

**58**

**68**

Con sord. a2

a2

mf

p

Con sord. a2

a2

p

mf

p

36

soft mallets  
Sus. Cymb.

p

p

mf

p

**36**

Vln. I

Vln. II

Vla.

Vc.

Cb.

f

pizz. arco

pizz. arco

pizz. arco

pizz. arco

pizz.

**58**

pizz. arco

pizz. arco

pizz. arco

pizz.

**68**

(E)

**6 8**

40

**3 4**

(Con sord.)

pp

Con sord.

Con sord.

Con sord.

Con sord.

Con sord.

f

**6 8**

40

(E)

**3 4**

pp as soft as possible

pizz.

pp as soft as possible

pp

pp

pp

pp

pp

pp

pp

arco

pizz.

pp

pp

pp

f

**47**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

47

Timpani

Mal.

Perc.

D. S.

H.

**48**

Vln. I

Vln. II

Vla.

Vc.

Cb.

**98**

**54**

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(F) **Tempo Primo**  $\text{♩} = 56$ **5****4****Funk**  $\text{♩} = 176$ **5****8****Primo****4****4**

53

Picc.

Fl. I, II

Solo *freely*

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

*p*

Hn. I, II

Open

Hn. III, IV

Open

C Tpt. I, II

C Tpt. III

Tbn. I, II

Open

B. Tbn.

Open

Tuba

*f*

53

Timp.

Mal.

Perc.

D. S.

*p*

Drum Set

Splash

closed H.H.

H.

**Tempo Primo**  $\text{♩} = 56$

**Funk**  $\text{♩} = 176$

**Primo**

53

Vln. I

*fp*

Vln. II

*fp*

Vla.

*fp*

Vc.

*fp*

Cb.

*f*

**Tempo Primo**  $\text{♩} = 56$

**Funk**  $\text{♩} = 176$

**Primo**

pizz. arco

pizz. arco

pizz. arco

pizz. arco

pizz.

*p*

pizz.

*p*

pizz.

*p*

pizz.

*p*

pizz.

*p*

## (G) 'Stesso, Dirge'

58

Ob. I, II      *mf*

E. Hn.      *mf*      *p*

Vln. I

Vln. II

Vla.

Vc.

Cb.

4 4      3      3 4      4 4

pizz.  
*pp*  
pizz.  
*pp*  
Div.  
pizz.  
*pp*

≡

63

Ob. I, II      *p*

Hn. I, II      Solo  
Con sord.

Vln. I

Vln. II

Vla.

Vc.

Cb.

4 4      4 4      3      3 4      4 4

*pp*      *ppp*

niente

niente

*pizz.*

*pp*      *ppp*

≡

**II. GALILEO**

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

**2** **Moderato con grazia** ( $\text{d} = \text{c. 56}$ )

69

Piccolo

Flute I, II

Oboe I, II

English Horn

A Clar. I, II

Bassoon I, II

Horn I, II

Horn III, IV

C Trumpet I, II

C Trumpet III

Trombone I, II

Bass Trombone

Tuba

Violin I

Violin II

Viola

Cello

Contrabass

**2** **Moderato con grazia** ( $\text{d} = \text{c. 56}$ )

arco

arco

arco

arco

arco

arco

arco

arco

(H) a tempo



75

A Cl. I, II

Hp.

Vla.

(H) a tempo

$p$  *poco leggiero*

$p$

$p$  *molto espress. ma non vibrato*

82

**4** L'istesso tempo, in 4 ( $\text{♩} = \text{c. } 112$ ) **22**

Ob. I, II

A Cl. I, II

Bsn. I, II

C Tpt. I, II

Perc.

Hp.

Con sord.  
pp

Triangle  
Tamb.  $p$

82

**4** L'istesso tempo, in 4 ( $\text{♩} = \text{c. } 112$ ) **22**

Vln. I

Vln. II

Vla.

Vc.

pizz.  
 $p$

**I** **22**

88

**4** **22**

Ob. I, II

A Cl. I, II

Bsn. I, II

C Tpt. I, II

Perc.

Hp.

pp

Triangle  
Tamb.  $p$

**I** **22**

88

**4** **22**

Vln. I

Vln. II

Vla.

Vc.

pizz.  
 $p$

**J**

94

Ob. I, II

A Cl. I, II

Bsn. I, II

C Tpt. I, II

Hp.

Vla.

**K**

100

Picc.

Ob. I, II

A Cl. I, II

Bsn. I, II

Hn. I, II

C Tpt. I, II

Perc.

Hp.

Vln.

Vln. II

Vla.

Vc.

22

106

**4** **3** **4**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

22

106

**4** **3** **4 arco**

Vln. I

Vln. II

Vla.

Vc.

Cb.

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**Galileo**

**1**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

Hp.

**2**

**4**

**3**

**2**

a2

p

f

p

Con sord.

Con sord.

Con sord.

ff

**2**

**4**

pizz.

arco

arco

arco

arco

arco

arco

ff

**3**

**4**

**2**

pizz.

ff

**2**

**L 2 4**

**118**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

*mf* as before

Bsn. I, II

Hn. I, II

mp

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

Open *mp* poco leggiero

B. Tbn.

Tuba

Tim.

Mal.

Tamb. 2

Perc.

*p*

Perc.

*mp*

*mf*

*f*

*fp*

*mp*

*mf*

*fp*

*f*

Hp

*f*

*mf*

*f*

This musical score page contains ten staves of instrumentation. The top section includes Picc., Fl. I, II, Ob. I, II, E. Hn., A Cl. I, II, Bsn. I, II, Hn. I, II, Hn. III, IV, C Tpt. I, II, C Tpt. III, Tbn. I, II, B. Tbn., Tuba, Tim., Mal., Tamb. 2, Perc., and Perc. The bottom section includes Vln. I, Vln. II, Vla., Vc., and Cb. Various dynamics like *mf*, *f*, *fp*, and *p* are indicated throughout the score. Measure numbers L 2 and 4 are at the top left, and measure 118 is at the top center. The tempo is marked as 118 BPM.

**L 2 4**

**118**

Vln. I

pizz.

*p*

Vln. II

*p*

*mf*

Vla.

pizz.

*mf*

Vc.

*f*

arco

*mf*

*mf*

*mp*

*f*

arco

*f*

arco

*f*

This musical score page contains five staves of instrumentation. The top section includes Vln. I, Vln. II, Vla., Vc., and Cb. The bottom section includes Vln. I, Vln. II, Vla., Vc., and Cb. Various dynamics like *p*, *mf*, *fp*, and *f* are indicated. Measure numbers L 2 and 4 are at the top left, and measure 118 is at the top center. The tempo is marked as 118 BPM.

(M)

124

2

4

4

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

Hp.

(M)

124

2

4

4

Vln. I

Vln. II

Vla.

Vc.

Cb.

**131**

**54**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A. Cl. I, II

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timpani

Mal.

Perc.

Perc.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

Galileo

**5**

135 **4**

Picc. **N**

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp. (F Major)

**2**

**in 4**  
*molto rit...*

**N**

**2**

**in 4**  
*molto rit...*

[L.V. Chimes to be dampered well after the orchestral cut-off]

### 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.

23

**4 Allegro agitato (M.M.  $\text{♩} = \text{c. } 132$ )**

142

Oboe I, II  
English Horn  
A Clar. I, II  
Bassoon I, II  
Horn I, II  
Horn III, IV  
Mallets  
Violin I  
Violin II  
Viola

**5**

**4**

**(O) 4**

146

Ob. I, II  
E. Hn.  
A Cl. I, II  
Bsn. I, II  
Hn. I, II  
Hn. III, IV  
C Tpt. I, II  
C Tpt. III  
Tbn. I, II  
B. Tbn.  
Mal.

**6**

**4**

**4**

**(O)**

146

I  
II  
Vla.  
Vc.

*Newton*

150

Ob. I, II  
E. Hn.  
A Cl. I, II  
C Tpt. I, II  
C Tpt. III  
Mal.

150

I  
II  
Vla.

**4** **5** **4**

**P**

154

Fl. I, II  
Ob. I, II  
A Cl. I, II  
B. Cl.  
Bsn. I, II

154

Hn. I, II  
Hn. III, IV  
Mal.

154

I  
II  
Vla.  
Vc.

**4** **6** **4** **4**

6  
4

(Q)

159

E. Hn.

A Cl. I, II

Bsn. I, II

Hn. III, IV

Tuba

Tim. 159

*p*

*f*

*pp*

(Q)

159

I

II

Vla.

Cb.

*p*

*pp*

*p*

*pp*

6  
4

6  
4

4

(R)

163

E. Hn.

A Cl. I, II

Bsn. I, II

Tbn. I, II

*p*

*p*

*pp*

*p*

*f*

*p*

*f*

6  
4

4

(R)

163

I

Vla.

Vc.

Cb.

*p*

*pp*

*pp*

*p*

*pp*

*p*

*Newton*

167

A Cl. I, II      Tbn. I, II      B. Tbn.

fp      f      fp      f

mf

167

I      II      Vla.      Vc.

Fl. I, II

Fl. I, II

A Cl. I, II

Hn. I, II      Con sord. p      mp      pp

Hn. III, IV      Con sord. p      mp      pp

Tbn. I, II

B. Tbn.

Tuba      mp      p

171

I      II      Vla.      Vc.      Cb.

mp      p

175 (S)

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp.

II

Vla.

Vc.

Cb.

*Newton*

*COMPOSEUM.COM*

This musical score page is part of a multi-page document. It contains ten staves of musical notation for various instruments, each with specific dynamics and performance instructions. The instruments listed include Piccolo, Flute I & II, Oboe I & II, English Horn, Alto Clarinet I & II, Bassoon I & II, Horn I & II, Horn III & IV, C Trumpet I & II, C Trumpet III, Trombone I & II, Bass Trombone, Tuba, Timpani, Marimba, Percussion, Percussion, Bassoon, Violin II, Viola, Cello, and Double Bass. The score is marked with measure numbers 175, dynamic markings like *mf*, *p*, *mp*, *pp*, and *Open*, and performance instructions such as *3* (tripling) and *2*. The title *Newton* is at the top right, and a large watermark *COMPOSEUM.COM* is diagonally across the page.

*molto ritardando*

Tempo **3**  
**4**

180

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim. p

Mal. p

Perc.

Perc. S.D. p

Sus. Cymb. p

Hp. 180

Vla. 180

Vc.

Cb.

(T)

187 **3** **4**

Picc.

Fl. I, II

f

Ob. I, II

f

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

fp

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

fp

Tuba

fp

187

Timp.

Mal.

p

Perc.

Perc.

187 *Gliissando*

Hn.

f

(Orch. Bells)

**3** **4**

I

II

Vla.

f

p fp

Vc.

fp

Cb.

fp

Newton

Conductor's signature watermark: CONDOSUM.COM

**192**

Picc. —

Fl. I, II —

Ob. I, II a2 f

E. Hn. f

A Cl. I, II a2 f

B. Cl. 3 3 f ff

Bsn. I, II p 3 mfp 3 f ff

Hn. I, II a2 > f a2 >

Hn. III, IV fp a2 >

C Tpt. I, II a2 > fp f

C Tpt. III fp > f sim. gliss.

Tbn. I, II fp > f

B. Tbn. f

Tuba f

Tim. —

Mal. —

Perc. —

Perc. wire brushes f soft mallets

**192**

I fp > f fp > f

II fp > f fp > f

Vla. fp > f fp > f

Vc. fp > f fp > ff

Cb. p 3 mfp 3 f ff

(U)

197

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Div. I

Div. II

Vla.

Vc.

Cb.

**COMPOSEUM.COM**

202

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

v. I

Div. II

Vla.

Vc.

Cb.

208

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timpani

Mal.

Perc.

Perc.

Div. I

Div. II

Vla.

Vc.

Cb.

Newton

33

(V)

214

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Div. I

Div. II

Vla.

Vc.

Cb.

*Newton*

**220**

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

**220**

I

II

Vla.

Vc.

Cb.

*rit.*

4  
4

225

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

225

Vla.

Vc.

Cb.

*Newton*

**(W) Slowly** **(X) Tempo Primo (M.M.  $\text{♩} = \text{c. } 132$ )**

232 **4** **4**

Picc.

Fl. I, II *p* *pp*

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II *p* *pp* *p* *fp* *p* *fp*

Hn. I, II *p* *pp* *p* *fp* *p* *fp*

Hn. III, IV Con sord. *p* Con sord. *p* Con sord. *p*

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

232 *p* *pp* *p* *fp* *p* *fp*

Tim. *p*

Mal. *p* *p* *p* *p* *p* *p*

Perc.

Perc.

232 *mf* *p* *p* *p* *p* *p* *p*

Hp. **Slowly** **(X) Tempo Primo (M.M.  $\text{♩} = \text{c. } 132$ )**

232 **4** **4**

I

II

Vla.

Vc. *p* *pp*

Cb.

239

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp.

I

II

Vla.

Vc.

Cb.

*Newton*

**Y**

244

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

Hp.

**Y**

244

I

II

Vla.

Vc.

Cb.

*lunga*

*lunga*

## IV. HUBLE

**Molto Largo****4****4**

**Cadenza - trombone**

248 Piccolo

Flute I, II

Oboe I, II

English Horn

A Clar. I, II

Bass Clarinet

Bassoon I, II

Horn I, II

Horn III, IV

C Trumpet I, II

C Trumpet III

Trombone I, II

Bass Trombone

Tuba

Timpani

Mallets

Percussion

Percussion

Harp

**Molto Largo**

**4**

**4**

**Cadenza - trombone**

248 Violin I

Violin II

Viola

Cello

Contrabass

Ad. lib.  
Opt. improv. own cadenza in F#7

(C#, F#, G#, A#)

10

**Z** *Slow Rag, gradually accelerating*

254

Tbn. I, II

Vln. I

Cb.

*p*

Solo

*p*

Solo pizz.

*p*

260

B. Tbn.

Vln. I

Cb.

Solo

**AA** *Moderato Ragtime (♩ = c. 108)*

265

Fl. I, II

A Cl. I, II

B. Cl.

Bsn. I, II

Tbn. I, II

B. Tbn.

Tuba

Perc.

Hp.

*mf*

*p*

*Con sord. - Solo tone mute*

*Solo*

*wa*

*wa*

*wa*

*wa*

*mf*

*p*

*mf*

*mp*

*Tamb.*

*p*

*mf*

**AA** *Moderato Ragtime (♩ = c. 108)*

265

Vln.

Vln. II

Vla.

Vc.

*tutti*

*pizz.*

*p*

*pizz.*

*p*

*mf*

*p*

269

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

*p*

269

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

*Flz.*

B. Tbn.

Tuba

*p*

269

Timp.

Mal.

Perc.

Perc.

269

Hp.

*p*

26

Vln. I

*p*

Vln. II

*p*

Vla.

*arco*

*pizz.*

Vc.

*p*

Cb.

**BB**

273 Picc. *mf*

Fl. I, II *f*

Ob. I, II *p*

E. Hn.

A Cl. I, II *a2* *f*

B. Cl. *mf*

Bsn. I, II *p* *a2* *f* *p*

Hn. I, II Con sord. *p*

Hn. III, IV Con sord. *p*

C Tpt. I, II Con sord. St. mute *f*

C Tpt. III Cup Mute *molto vib.* *mf*

Tbn. I, II *f* *p*

B. Tbn. *f* *p*

Tuba *f* *p*

273 Timp.

Mal.

Perc. *pp*

Perc. *B.D.* *pp*

273 Hp. *ff*

**BB**

273 Vln. I arco *f* *mf*

Vln. II *p* *f* *p*

Vla. arco *f* arco *pizz.*

Vc. *p* arco *f* *p* *pizz.*

Cb. *tutti pizz.* *p* *f* *p*

277

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

277

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

277

Timp.

Mal.

Perc.

Perc.

277

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

*Hubble* score page 44, measures 277-278. The page features ten staves of musical notation for various instruments, including Piccolo, Flute I & II, Oboe I & II, English Horn, Alto Clarinet I & II, Bassoon I & II, Horn I & II, Horn III & IV, C Trumpet I & II, C Trumpet III, Trombone I & II, Bass Trombone, Tuba, Timpani, Marimba, Percussion, Percussion (Wood Block), and Bassoon. The music includes dynamic markings like *p*, *f*, *mf*, *pp*, and *ppp*. A large, semi-transparent watermark reading "COMPOSE JUNIOR.COM" is diagonally overlaid across the page.

**CC**

281 Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

*Hubble*

**COMPOSE.JUIN.COM**

281 a2

mf

f

mf

mf

mp

mf

Open mp

mf

f

281

f

**CC**

281

mf

mf

f

f

281

mf

285

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

285

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

285

Timp.

Mal.

Perc.

Perc.

285

Hp.

285

Vln. I

Vln. II

Vla.

Vc.

Cb.

This musical score page contains ten staves of music for a full orchestra. The instrumentation includes Piccolo, Flute I & II, Oboe I & II, English Horn, Alto Clarinet I & II, Bass Clarinet, Bassoon I & II, Horn I & II, Bassoon III & IV, C Trumpet I & II, C Trumpet III, Trombone I & II, Bass Trombone, Tuba, Timpani, Maracas, Percussion, Percussion, Horn, Violin I, Violin II, Viola, Cello, and Double Bass. Measure numbers 285 are indicated at the top of each staff. Dynamics such as *p* (piano), *mf* (mezzo-forte), and *f* (fortissimo) are present. The key signature is mostly A major (no sharps or flats). The page is numbered 46 at the top left and has a title 'Hubble' at the top right. A large, semi-transparent watermark reading 'COMPOSE JIM.' is diagonally overlaid across the page.

**DD**

289 Solo

Picc. *mf*

Fl. I, II *p*

Ob. I, II *p*

E. Hn.

A Cl. I, II

B. Cl.

Solo

Bsn. I, II *mf* *f* *p* *f*

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

289

Tim. *p*

Mal. *p*

[Xylo.]

Perc. *p*

on Rim

Perc. *p*

289

Hp.

**DD**

289

Vln. I *f* *p*

Vln. II *f* *p*

Vla. *f* *p*

Vc. *f* *p*

Cb. *f* *p*

293

Picc. *mf*

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II *mp* *p*

B. Cl.

Bsn. I, II *p*

Hn. I, II

Hn. III, IV *p*

C Tpt. I, II *mp* *p*

C Tpt. III

Tbn. I, II *p*

B. Tbn.

Tuba

Tim. *pp* *Glock.*

Mal. *p*

Perc. *p*

Perc. *f* *>* *>* *>* *>* *< fz*

Hp.

Vln. I *mf* *leggiero* *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Cb. *p*

**EE**

297

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Xylo.

Mal.

Perc.

S.D.

Perc.

B.D.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

297

297

[do that tuba thing you guys do]

gliss.

297

297

EE

301

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Timp.

Mal.

Perc.

Perc.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

**FF**

Picc. *p* *p* *pp*

Fl. I, II *p* *p* *pp*

Ob. I, II *p* *p* *pp*

E. Hn.

A Cl. I, II *p* *p* *pp*

B. Cl. *f* *p* *p*

Bsn. I, II *p* *f* *p*

Hn. I, II *p* *mp* *p*

Hn. III, IV

C Tpt. I, II *p*

C Tpt. III *p*

Tbn. I, II *mp* *p*

B. Tbn. *p*

Tuba *p* *f* *p*

Tim. *p*

Mal. *p* *pp*

Perc. *p* *pp*

Perc. *p* *pp*

Hp. *p*

Vln. I *p*

Vln. II *p* *pizz.*

Vla. *p* *mp*

Vc. *p*

Cb. *p*

**FF**

Vln. I *f*

Vln. II *f*

Vla. *f* *arco*

Vc. *f* *p*

Cb. *f* *p*

308

Picc.

Fl. I, II

Ob. I, II

E. Hn.

A Cl. I, II

B. Cl.

Bsn. I, II

Hn. I, II

Hn. III, IV

C Tpt. I, II

C Tpt. III

Tbn. I, II

B. Tbn.

Tuba

Tim.

Mal.

Perc.

Perc.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

*Hubble*

This page contains musical notation for a full orchestra. The score is divided into four systems, each starting with a dynamic instruction and a measure number (308). The instruments listed on the left include Piccolo, Flute I & II, Oboe I & II, English Horn, Alto Clarinet I & II, Bassoon I & II, Horn I & II, Horn III, IV, C Trumpet I & II, C Trumpet III, Bass Trombone I & II, Bass Trombone, Tuba, Timpani, Marimba, Percussion, Percussion, Bassoon, Violin I, Violin II, Viola, Cello, and Double Bass. The music features various rhythmic patterns, dynamics (e.g., f, mf, mp), and performance techniques like slurs and grace notes. A large, semi-transparent watermark reading "COMPOSE.JUIN.COM" is diagonally overlaid across the page.

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

53

**Adagio lacrimoso** ♩ = 56

**4**

**312**

Bass Oboe Solo  
 $\text{mf}$   
 Bassoon I, II  
 $\text{mf}$

**GG**

**312**

Bass Drum  
 very large, soft mallet  
 (the largest drum available) **B.D.**  $\text{pp}$

**312**

Cello Divisi a 3  
 $\text{pp} \ll \text{mf}$   
 $\text{pp} \ll \text{mf}$

**HH**

**Andantino Benedictus** ♩ = 84

**6**

**320**

Bass Ob.  
 $\text{mf}$   
 $\text{p}$   
 $\text{pp}$   
 $\text{mp}$

Bsn. I, II  
 $\text{mf}$   
 $\text{p}$   
 $\text{pp}$   
 $\text{mp}$   
 $\text{p}$   
 $\text{pp}$

**320**

B.D.  
 $\text{mp}$   
 $\text{mf}$   
 $\text{mp}$   
 $\text{ppp}$

**320**

Vc. Div a3  
 $\text{pp}$   
 $\text{mp}$   
 $\text{pp}$   
 $\text{pp}$   
 $\text{pp}$   
 $\text{pp}$   
 $\text{pp}$   
 $\text{pp}$

**328**

Alto flute  
 A. Fl.  
 $\text{p}$  *espress.*

E. Hn.

**328**

B.D.

II

A. Fl.      E. Hn.

B.D.      Vc. Div a3

JJ

A. Fl.      E. Hn. Solo

B.D.      Vc. Div a3

Extremely long fermata

E. Hn.      Bsn. I, II

Hn. I, II      Tbn. I, II

351

Vln. II      Vla.

Vc. Div a3