

Walker Williams

# IN MEMORIAM CASSINI

For Wind Ensemble

Preview Score, not for performance



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For Wind Ensemble

c. 7:30 - 8:00

Piccolo

2 Flutes

2 Oboes

2 Bassoons

3 Clarinets in Bb

Bass Clarinet

Soprano Saxophone

Alto Saxophone

Tenor Saxophone

Baritone Saxophone

3 Trumpets in Bb

4 Horns in F

2 Trombones

Bass Trombone

Euphonium

Tuba

Percussion 1: Vibraphone, One Timpano, Bowed Cymbal, Tam-tam

Percussion 2: Crotales, One Timpano, Bowed Cymbal, Crash Cymbal

Percussion 3: Glockenspiel, One Timpano, Bowed Cymbal, Snare Drum

Percussion 4: One Timpano, Bowed Cymbal, Bass Drum

The Cassini Program was a joint effort between NASA, ESA, and ASI (the US, EU, and Italian space agencies); the mission goal was to gather as much data as possible about Saturn, as well as its rings and moons. The Cassini-Huygens probe was launched from Cape Canaveral, Florida, on October 15, 1997, and arrived at Saturn seven years later in 2004. During the mission, Cassini gathered vast amounts of data about Saturn and its moons, particularly Titan, which was explored by the Huygens probe, and Enceladus, which has exhibited liquid water and conditions potentially suitable for life.

The mission was scheduled to end in 2008, but two extensions, the Equinox Mission and the Solstice Mission, continued Cassini's exploration until September of 2017. To prevent the possible contamination of Titan or Enceladus with microscopic organisms from Earth that might have been carried on the probe, the mission team decided to destroy Cassini by sending it into Saturn's atmosphere. Before this final mission, however, Cassini embarked on its "Grand Finale", a series of close orbits sending it between Saturn and its rings, maneuvers that were too risky to undertake earlier in the mission.

On September 15, 2017, in the final phase of the Grand Finale, Cassini entered Saturn's atmosphere and was destroyed.

This work is loosely programmatic; my goal was to use the science as a basis to tell a story, and to try to capture the emotions that Cassini's images have brought into our collective imagination. The beginning and ending are modeled after specific elements in the story of Cassini, but the middle sections are more of an artist's rendition than an attempt at a detailed portrayal of the mission. Much more information on the Cassini Mission, including images, art, and sound recordings (including the radio emissions that were my inspiration for the section at measure 33) can be found at the NASA/JPL website.

Walker Williams  
2017

#### Performance Notes:

The timpani in this piece are not used as a single melodic instrument, but rather as individual drums. Each percussionist will have their own timpano, as well as a cymbal and bow, for the section at measure 33. Pitch/size is not specifically indicated, but larger drums are preferable, and the largest available timpani should be given to players 2 and 3. In the sections starting at measure 2 and measure 117, the timpani should be tuned to their lowest respective notes.

The low brass pedal in the sections starting at measure 3 and measure 117 should create the effect of a low-frequency rumbling noise. The specific pitches are unimportant, except that the players should not all be playing the same pitch.

The whispering effects (starting in measure 32) can be placed very far forward in the mouth, creating a quasi-whistling noise. The notated pitch indicates relative pitch of 'shhh'.

The aleatoric percussion from measure 80-94 should be unmetred and uncoordinated between the parts. The speed of the notes is not relative to the tempo marking, so the accelerandos in this section do not indicate an increasing speed of mallet percussion notes.



11  $\frac{4}{4}$

$\frac{3}{4}$  (18)

$\frac{4}{4}$

$\frac{3}{4}$

$\frac{5}{4}$

Initial Approach to Saturn

Picc. *p*

Fl. 1 *p* *pp* *a shimmering texture*

Fl. 2 *p* *pp* *a shimmering texture*

Ob. 1

Ob. 2

Bsn. 1 *p*

Bsn. 2

Cl. 1 *p*

Cl. 2 *p*

Cl. 3 *p*

B. Cl. *mp* *mp* *solo, rich and round*

Sop. Sax.

A. Sax.

T. Sax.

Bari. Sax.

Preview Score, not for performance

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

Tpt. 2

Tpt. 3

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tbn. 1

Tbn. 2

B. Tbn.

Euph. *pp* *p* *solo, rich and round*

Tba.

Perc. *Vibraphone with pedal, motor off pp* *p* *Crotales ppp*

Perc. *Glockenspiel ppp*

Perc. *sus. cymbal on timpano (roll) pp*

Musical score for woodwinds and strings, measures 21-28. The score includes parts for Piccolo, Flute 1 and 2, Oboe 1 and 2, Bassoon 1 and 2, Clarinet 1 and 2, Bass Clarinet, Soprano Saxophone, Alto Saxophone, Tenor Saxophone, and Bari Saxophone. The music features complex rhythmic patterns with triplets and dynamic markings such as *pp*, *p*, *mp*, *mf*, and *f*. The tempo changes from *poco rall.* to *a tempo* and back to *poco rall.* with corresponding time signature changes.

Preview Score, not for performance

Musical score for brass and percussion, measures 21-28. The score includes parts for Trumpet 1 and 2, Horn 1, 2, 3, and 4, Trombone 1 and 2, Baritone Trombone, Euphonium, Tuba, Percussion, Glockenspiel, and B.D. (Bass Drum). The music features dynamic markings such as *pp*, *p*, *mp*, and *mf*. Specific performance instructions include *straight mute* for trumpets and *sus. cymbal* for percussion. The score concludes with a *B.D.* (Bass Drum) part.

a tempo  
29  $\frac{3}{4}$

$\frac{4}{4}$  poco accel. (33) Mysterious ( $\text{♩} = \text{c. } 60$ )

rit. . . . .  $\frac{3}{2}$

**Saturnine Radio Emissions** *freely, somewhat distant*

**Instrumentation:** Picc., Fl. 1, Fl. 2, Ob. 1, Ob. 2, Bsn. 1, Bsn. 2, Cl. 1, Cl. 2, Cl. 3, B. Cl., Sop. Sax., A. Sax., T. Sax., Bari. Sax., Tpt. 1, Tpt. 2, Tpt. 3, Hn. 1, Hn. 2, Hn. 3, Hn. 4, Tbn. 1, Tbn. 2, B. Tbn., Euph., Tba., Perc. (bowed cymbal on timpano \*), Perc. (arco), Perc. (bowed cymbal on timpano \*), Perc. (bowed cymbal on timpano \*), Perc. (bowed cymbal on timpano \*).

**Tempo/Time Signature:** a tempo,  $\frac{3}{4}$ , poco accel., (33) Mysterious ( $\text{♩} = \text{c. } 60$ ), rit.,  $\frac{3}{2}$ .

**Performance Instructions:** *freely, somewhat distant*, *whisper: Shhh*, *air note*, *tutti*, *arco*.

**Dynamics:** p, mp, mf, f, n, n<mf, n<f.

# Awe Inspiring (♩ = c. 50)

**3**  
**40**  
**4**  
**3**

The Ring Plane

Preview Score, not for performance



This page contains the musical score for measures 222 through 233. The score is arranged in a standard orchestral format with multiple staves for each instrument family. The instruments included are Piccolo, Flutes 1 and 2, Oboes 1 and 2, Bassoons 1 and 2, Clarinets 1, 2, and 3, Bass Clarinet, Soprano Saxophone, Alto Saxophone, Tenor Saxophone, Bari Saxophone, Trumpets 1, 2, and 3, Horns 1, 2, 3, and 4, Trombones 1 and 2, Euphonium, Tuba, Violin, Crotchet, Glockenspiel, and Percussion. The score features various musical notations such as dynamics (pp, p, mp, mf, n), articulation (accents, slurs), and performance instructions like 'Shhh' and 'a. 1 stopped'. The percussion part includes a 'sus. cymbal on timpano (roll)'. The page number '46' is in the top left, and rehearsal marks '222', '233', and '50' are at the top. The page number '6' is in the top left corner of the entire document.

52 **4/2** **3/2** **3/2** **4/2** **3/2** **3/2**

Picc. *n* *p* *n*

Fl. 1 *n* *p* *n* *pp* *mp* *n*

Fl. 2 *pp* *mp* *n*

Ob. 1

Ob. 2

Bsn. 1 *pp* *n* *p*

Bsn. 2 *pp* *n* *pp*

Cl. 1 *mp* *n*

Cl. 2

Cl. 3

B. Cl. *mp* *n*

Sop. Sax.

A. Sax. *n* *p* *mp*

T. Sax. *n* *p* *n* *p* *n*

Bari. Sax.

Preview Score, not for performance

Tpt. 1 *pp* *p* *pp* *p* *n*

Tpt. 2 *pp* *p* *pp* *p* *n*

Tpt. 3 *pp* *p* *pp* *open* *p* *n*

Hn. 1 *n* *p* *mp* *n*

Hn. 2 *n* *p* *n* *n* *mp* *n*

Hn. 3 *n* *p* *n* *n* *mp* *n*

Hn. 4 *n* *p* *n* *n* *mp* *n*

Tbn. 1 *pp* *p* *n* *n* *mp* *n*

Tbn. 2 *pp* *p* *n* *n* *mp* *n*

B. Tbn. *n* *mp* *n*

Euph. *n* *mp* *n*

Tba. *n* *mp* *n*

Vib. *n* *mp* *n*

Crot.

Glock.

Perc. *n* *mp*

*Shhh*

*whisper: Shhh*

58  $\frac{3}{2}$   $\frac{3}{2}$   $\frac{3}{4}$   $\frac{4}{4}$   $\frac{3}{4}$   $\frac{4}{4}$   $\frac{3}{4}$   $\frac{4}{4}$   $\frac{3}{4}$

*rall. . . . Majestically* ( $\text{♩} = \text{c. } 54$ )

Mission Extension, Saturnine Solstice (XXM)

Picc. *air note*

Fl. 1 *air note* *mf* *ppp* *pp*

Fl. 2 *air note* *mf* *ppp* *pp*

Ob. 1 *Shhh* *mf* *n*

Ob. 2 *Shhh* *mf* *n*

Bsn. 1 *Shhh* *mf* *n*

Bsn. 2 *Shhh* *mf* *n*

Cl. 1 *pp* *>n* *pp*

Cl. 2 *pp* *>n* *pp*

Cl. 3 *pp* *>n* *pp*

B. Cl. *solo, rich and round* *pp*

Sop. Sax. *air note* *mf* *n*

A. Sax. *air note* *mf* *n*

T. Sax. *air note* *mf* *n*

Bari. Sax. *air note* *mf* *n*

Tpt. 1 *open* *solo* *mp* *n*

Tpt. 2 *(straight mace)* *one player* *pp* *n*

Tpt. 3 *(straight mace)* *one player* *pp* *n*

Hn. 1 *mf* *n*

Hn. 2 *mf* *n*

Hn. 3 *mf* *n*

Hn. 4 *mf* *n*

Tbn. 1 *mf* *n*

Tbn. 2 *Shhh* *mf* *n*

B. Tbn. *Shhh* *mf* *n*

Euph. *air note* *mf* *n* *solo, rich and round* *mp*

Tba. *air note* *mf* *n*

Vib. *motor off* *mp* *pp*

Crot. *ppp*

Glock. *ppp*

Perc. *mf* *n*

67  $\frac{3}{4}$   $\frac{5}{4}$  poco rall. a tempo  $\frac{3}{4}$  poco rall. a tempo (73)  $\frac{4}{4}$

Picc.  
Fl. 1  
Fl. 2  
Ob. 1  
Ob. 2  
Bsn. 1  
Bsn. 2  
Cl. 1  
Cl. 2  
Cl. 3  
B. Cl.  
Sop. Sax.  
A. Sax.  
T. Sax.  
Bari. Sax.

Preview Score, not for performance

Tpt. 1  
Tpt. 2  
Tpt. 3  
Hn. 1  
Hn. 2  
Hn. 3  
Hn. 4  
Tbn. 1  
Tbn. 2  
B. Tbn.  
Euph.  
Tba.  
Vib.  
Croton.  
Glock.  
Perc.

tutti straight mute open  
tutti (straight mute) open  
a. 2  
a. 2  
tutti  
sus. cymbal glock.  
pp < p pp

76  $\frac{4}{4}$   $\frac{3}{4}$   $\frac{4}{4}$   $\frac{3}{4}$  (81) **With growing anticipation** ( $\text{♩} = \text{c. } 60$ )  $\frac{4}{4}$

**The Grand Finale**

Picc.  $pp$

Fl. 1  $pp$

Fl. 2  $pp$

Ob. 1 *mp* *mf* *f*  $pp$

Ob. 2 *mp* *mf* *f*  $pp$

Bsn. 1 *pp* *smoothly*

Bsn. 2 *pp* *smoothly*

Cl. 1 *f*  $pp$

Cl. 2 *f*  $pp$

B. Cl.  $pp$

Sop. Sax. *f*  $pp$

A. Sax. *f* *smoothly*  $pp$

T. Sax. *f*

Bari. Sax. *f*

Tpt. 1 *mp* *mf* *f*

Tpt. 2 *mp* *mf* *f*

Hn. 1 *mf* *f*

Hn. 2 *mf* *f*

Hn. 3 *mf* *f*

Hn. 4 *mf* *f*

Tbn. 1 *mf* *f*

Tbn. 2 *mf* *f*

B. Tbn. *mf* *f*

Euph. *mf* *f*

Tba. *mf* *f*

Vib. *with pedal* *play quickly up and down this scale, non-metered*  $pp$

Crot. *play quickly up and down this scale, non-metered*  $pp$

Glock. *play quickly up and down this scale, non-metered*  $pp$

Perc. sus. cymbal on timpano (roll)

85  $\frac{4}{4}$  accel.  $\frac{3}{4}$  = c. 66 accel.  $\frac{4}{4}$   $\frac{3}{4}$  = c. 74

This page contains the musical score for measures 85 through 93. The score is divided into three sections by tempo and meter changes:

- Measures 85-87:**  $\frac{4}{4}$  time, *accel.* (accelerando). The tempo is marked  $\frac{3}{4}$  = c. 66.
- Measures 88-90:**  $\frac{4}{4}$  time, *accel.* (accelerando).
- Measures 91-93:**  $\frac{3}{4}$  time, tempo marked  $\frac{3}{4}$  = c. 74.

The instruments and their parts are as follows:

- Picc.** Piccolo: *p*, *mp*, *p*, *mp*, *mf*
- Fl. 1, 2** Flutes: *mp*, *p*, *mp*, *p*, *mp*, *mf*
- Ob. 1, 2** Oboes: *mp*, *p*, *mp*, *p*, *mp*, *mf*
- Bsn. 1, 2** Bassoons: *mp*, *p*, *mp*, *mp*
- Cl. 1, 2, 3** Clarinets: *p*, *poco marcato*, *mp*, *f*, *mf* (3rd only)
- B. Cl.** Bass Clarinet: *mp*, *mp*, *n*, *mf*
- Sop. Sax., A. Sax., T. Sax.** Saxophones: *mf*, *p*, *mf*
- Bari. Sax.** Baritone Saxophone: *mp*, *n*
- Tpt. 1, 2, 3** Trumpets: (Empty staves)
- Hn. 1, 2, 3, 4** Horns: (Empty staves)
- Tbn. 1, 2** Trombones: (Empty staves)
- B. Tbn.** Baritone Trombone: (Empty staff)
- Euph.** Euphonium: *mf*
- Tba.** Tuba: (Empty staff)
- Vib.** Vibraphone: *p*, *mp*
- Crot.** Crotales: *p*, *mp*
- Glock.** Glockenspiel: *p*, *mp*
- Perc.** Percussion: *p*, *pp*, *mp* l.u., *n*, *mp*, *p*, *mf* l.u.

accel.  $\textcircled{95}$  ♩ = c, 90  $\frac{4}{4}$  accel.  $\frac{3}{4}$  ♩ = 100  $\frac{4}{4}$  accel. ♩ = 116  $\frac{3}{4}$

Picc. *ff*

Fl. 1 *ff*

Fl. 2 *ff*

Ob. 1 *ff*

Ob. 2 *mf* *ff*

Bsn. 1 *mf* *ff*

Bsn. 2 *mf* *ff*

Cl. 1 *ff*

Cl. 2 *ff*

Cl. 3 *a. 2* *ff*

B. Cl. *ff*

Sop. Sax.

A. Sax.

T. Sax. *mf* *ff*

Bari. Sax. *mf* *ff*

Tpt. 1 *marcato* *f* *ff*

Tpt. 2 *marcato* *f* *ff*

Hn. 1 *a. 2, marcato* *ff*

Hn. 2 *marcato* *ff*

Hn. 3 *marcato* *ff*

Hn. 4 *ff*

Tbn. 1 *marcato* *f* *ff*

Tbn. 2 *marcato* *f* *ff*

B. Tbn. *f* *fp* *f* *ff*

Euph. *ff* *fp* *f* *ff*

Tba. *marcato* *f* *ff*

Vib.

Crot. *crash cymbal* *ff*

Glock. *S.D.* *mp* *f* *ff*

Perc. *B.D.* *f* *ff*

# The point of arrival (♩ = c. 98)

103  $\frac{3}{4}$

$\frac{2}{4}$

$\frac{3}{4}$  (105)

$\frac{4}{4}$

The score is divided into four measures corresponding to the time signatures:  $\frac{3}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$  (105), and  $\frac{4}{4}$ . The tempo is marked as ♩ = c. 98. The performance style is 'excited, almost frantic'. Dynamics range from *f* to *ff*. The score includes parts for Piccolo, Flute 1 and 2, Oboe 1 and 2, Bassoon 1 and 2, Clarinet 1, 2, and 3, Bass Clarinet, Soprano Saxophone, Alto Saxophone, Tenor Saxophone, Baritone Saxophone, Trumpet 1, 2, and 3, Horn 1, 2, 3, and 4, Trombone 1 and 2, Baritone Trombone, Euphonium, Tuba, Vibraphone, and three Percussion parts. The percussion parts include snare, tom-toms, and cymbals. A red watermark 'Preview Score, not for performance' is overlaid on the lower half of the page.



3/4

4/4

5/4

3/4

This page of a musical score, numbered 108, features a complex arrangement of instruments. The score is divided into five measures, each with a specific time signature: 3/4, 4/4, 5/4, and 3/4. The instruments listed on the left include Piccolo, Flute 1 and 2, Oboe 1 and 2, Bassoon 1 and 2, Clarinet 1, 2, and 3, Bass Clarinet, Soprano Saxophone, Alto Saxophone, Tenor Saxophone, Baritone Saxophone, Trumpet 1, 2, and 3, Horn 1, 2, 3, and 4, Trombone 1 and 2, Euphonium, Tuba, Vibraphone, and Percussion (Crotales and Glockenspiel). The score is written in a grand staff format with various dynamics such as *mf*, *ff*, *sfz*, *fp*, and *ff* indicated throughout. The percussion parts include complex rhythmic patterns with triplets and sixteenth notes. The woodwind and brass parts feature melodic lines with slurs and dynamic markings. The overall texture is dense and orchestral.



This page contains a musical score for a full orchestra, spanning measures 123 to 128. The score is divided into several sections:

- Woodwinds:** Piccolo (Picc.), Flute 1 (Fl. 1), Flute 2 (Fl. 2), Oboe 1 (Ob. 1), Oboe 2 (Ob. 2), Bassoon 1 (Bsn. 1), Bassoon 2 (Bsn. 2), Clarinet 1 (Cl. 1), Clarinet 2 (Cl. 2), Clarinet 3 (Cl. 3), Bass Clarinet (B. Cl.), Soprano Saxophone (Sop. Sax.), Alto Saxophone (A. Sax.), Tenor Saxophone (T. Sax.), and Baritone Saxophone (Bari. Sax.).
- Brass:** Trumpet 1 (Tpt. 1), Trumpet 2 (Tpt. 2), Trumpet 3 (Tpt. 3), Horn 1 (Hn. 1), Horn 2 (Hn. 2), Horn 3 (Hn. 3), Horn 4 (Hn. 4), Trombone 1 (Tbn. 1), Trombone 2 (Tbn. 2), Baritone Trombone (B. Tbn.), Euphonium (Euph.), and Tuba (Tba.).
- Percussion:** Four Percussion (Perc.) parts.

The score includes various performance instructions such as *slow tremolo*, *f* (forte), *mf* (mezzo-forte), *p* (piano), *mf* (mezzo-forte), *mp* (mezzo-piano), and *p* (piano). It also features *tongue stop* markings and dynamic markings like *fff* (fortissimo) and *mf* (mezzo-forte). A specific instruction for the Trombone 1 part reads "don't breathe here". The percussion parts are marked with *mf* and *mp*. The score concludes with a double bar line and a fermata over the final notes.

Preview Score, not for performance