

Roger Zare

# On the Electrodynamics of Moving Bodies

for Flute/Piccolo, Clarinet, Violin, Cello, and Piano

Flute (doubling Piccolo)

Clarinet in B $\flat$

Violin

Cello

Piano

Commissioned by Salt Bay Chamberfest's Sound Investment program through the generosity of Tom & Cally Aldrich, Derek Bermel, Becky Brown, Pamela Daley, Paul Dunkel, Peter Felsenthal & Jennifer Litchfield, Andrew Fenniman, Steve & Amy Gerson, Joe & Merna Guttentag, Ben Harris & Becky Mitchell, Caroline Janover, Marc Johnson, Phillip & Jane Johnston, Anton & Alison Lahnston, Kay Liss, George & Susan Mason, Martha Mason, Kit Pfeiffer & David Elliott, Randy Phelps, Bruce Posner & Sandy Radoff, Barrett & Barbara Silver, David & Priscilla Smith, John & Leanne Smith (in memory), Wilhelmina Smith & Mark Mandarano, and Bernie & Winky van der Hoeven.

Premiered at Salt Bay Chamberfest on August 24, 2012 in Damariscotta, Maine by Steven Copes, violin, Edward Arron, cello, Romie de Guise-Langlois, clarinet, Conor Nelson, flute, and Pedja Muzijevic, piano

*On the Electrodynamics of Moving Bodies* is titled after Albert Einstein's famous 1905 paper in which he describes his theory of special relativity. This work was commissioned by Wilhelmina Smith and the Salt Bay Chamberfest in 2012, and all concerts that year were programmed under the theme "time passing." To connect with the theme, I focused on creating a musical representation of time dilation, a mind-bending effect that happens when two objects are moving at extreme speeds in relation to each other, causing each to observe the other as moving at a slower rate of time. I am fascinated by science and love to write music about my amazement for various scientific concepts, and while I only superficially understand the premises of special relativity, I hope that this piece of music reflects the excitement that I feel while learning about the incredible scientific ideas of Einstein.

The music captures an imaginary journey that begins slowly and approaches relativistic speeds by the end. Beginning ethereally, disparate musical elements gradually coalesce into a jaunty melody. A repeated descending chord figure always occurs at the same rate of time, while the other melodic elements of the music are wildly varying in speeds as the music progresses. I use numerous downwardly bending pitches to mimic the more earthly doppler effect that occurs when a quickly moving object moves away from a listener, and even this concept gets stretched out as the piece progresses. As the overall acceleration reaches a frenetic speed, the instruments begin to pull apart, some speeding away while others become slower and heavier until one final outburst, marked in the music as "hyperspace."

Duration ca. 5'  
Score is transposed

# On the Electrodynamics of Moving Bodies 3

Roger Zare  
(b. 1985)

**Lento** ♩ = 54

ethereal

ethereal

ethereal III. II. I.

sul pont.

sul pont.

*p*

*pp*

*p*

*pp*

**Lento** ♩ = 54

*8va*

*ff*

*ff p f p*

*Red.*

4

Fl.

Cl.

Vln.

Vc.

Pno.

ord.

(III.)

sul pont.

sul pont.

(8)

*p*

*p*

6

Fl. *mp* *mf* *ppp*

Cl. *mp*

Vln. *mp* *mf* ord. 3 3

Vc. *mp* *mf* ord. 5

Pno. *pp* *p* *ff* 8<sup>va</sup>-1

8<sup>vb</sup>

9 jet whistle effect

Fl. *f* *mf* *p* ord. 3 3 5 3

Cl. *sfp*

Vln. 3 3 3 3 6

Vc. 3

Pno. *mf* *p*

(8)

Musical score for measures 11-12. The score includes parts for Flute (Fl.), Clarinet (Cl.), Violin (Vln.), Viola (Vc.), and Piano (Pno.).

- Fl.:** Measure 11 starts with a whole note chord (F#4, C#5) marked *f*. Measure 12 has a whole rest.
- Cl.:** Measure 11 has a whole note chord (F#4, C#5) marked *fp*. Measure 12 has a whole rest.
- Vln.:** Measure 11 has a sixteenth-note triplet marked *f*. Measure 12 has a sixteenth-note triplet marked *f*.
- Vc.:** Measure 11 has a sixteenth-note triplet marked *f*. Measure 12 has a sixteenth-note triplet marked *f*.
- Pno.:** Measure 11 has a whole note chord (F#4, C#5) marked *f*. Measure 12 has a whole note chord (F#4, C#5) marked *ff*. Measure 13 has a whole note chord (F#4, C#5) marked *mf*.

Measure 11 is marked with a double bar line and the number 11. Measure 12 is marked with a double bar line and the number 12. The piano part includes an 8va marking and a (8) marking.

Musical score for measures 13-14. The score includes parts for Flute (Fl.), Clarinet (Cl.), Violin (Vln.), Viola (Vc.), and Piano (Pno.).

- Fl.:** Measure 13 has a sixteenth-note triplet marked *p*. Measure 14 has a sixteenth-note triplet marked *f*.
- Cl.:** Measure 13 has a sixteenth-note triplet marked *p*. Measure 14 has a sixteenth-note triplet marked *f*.
- Vln.:** Measure 13 has a sixteenth-note triplet marked *p*. Measure 14 has a sixteenth-note triplet marked *f*.
- Vc.:** Measure 13 has a sixteenth-note triplet marked *f*. Measure 14 has a sixteenth-note triplet marked *f*.
- Pno.:** Measure 13 has a whole note chord (F#4, C#5) marked *f*. Measure 14 has a whole note chord (F#4, C#5) marked *ff*.

Measure 13 is marked with a double bar line and the number 13. Measure 14 is marked with a double bar line and the number 14. The piano part includes an 8va marking and an 8vb marking. A box labeled 'A Ritmico' with a tempo marking of quarter note = 72 is present above the Flute and Clarinet parts in measure 14.

14

Fl.

Cl.

Vln.

Vc.

Pno.

*mf* 3 3 3 3

*pp*

*pp*

16

Fl. bend To Picc.

Cl.

Vln.

Vc.

Pno.

*f*

*f*

*pp*

*pp*<sup>3</sup>

*mf* 3 3 3 3

18

Fl.

Cl.

Vln.

Vc.

Pno.

*p*

*f*

bend

pizz.

*p*

*pp*

20

Fl.

Cl.

Vln.

Vc.

Pno.

*fp*

*p*

bend

pizz.

*p*

*mf*

*p*

*f*

*8va*

23 Piccolo

bend

Picc. *fp*

Cl. *fp*

Vln. *mf* *p* 0

Vc. *f* *p* gliss.

Pno. ⑧ *pp* 5 5

26 B

Picc. *p*

Cl. *fp* *p*

Vln. *p*

Vc. *p*

Pno. B *p* *8va*

Ped.



29

Picc. *pp*

Cl. *pp*

Vln. *pp* arco *ff* (port.) *f*

Vc. *pp* arco *ff* (port.) *f*

Pno. *ff* *f*

Ped.

32

Picc. *p*

Cl. *p*

Vln. *p* pizz. *p*

Vc. *p* pizz. *p*

Pno. *p*

Ped.

35 To Fl.

Picc. *pp*

Cl. *pp*

Vln. *pp* arco *ff*

Vc. *pp* arco *ff*

Pno. *ff*

Ped.

37

Picc.

Cl.

Vln. *f* 5 5

Vc. *f* 5 5

Pno. *f* 8va 6

Ped.

38 **accel.**

Picc.

Cl.

Vln.

Vc.

Pno.

**accel.**

Detailed description: This system covers measures 38 and 39. The Piccolo part has a whole rest in measure 38 and a whole note in measure 39. The Clarinet part has a trill in measure 38, followed by a melodic line in measure 39. The Violin and Viola parts have whole rests in both measures. The Piano part features a complex rhythmic pattern in measure 38 with a dynamic marking of 'f', and a melodic line in measure 39. A rehearsal mark (8) is placed above measure 38.

39

Picc.

Cl.

Vln.

Vc.

Pno.

Flute

*p*

*ff*

*ff*

**ff**

Detailed description: This system covers measures 39 and 40. The Piccolo part has a whole rest in measure 39 and a whole note in measure 40. The Clarinet part has a melodic line in measure 39 and a whole note in measure 40. The Flute part enters in measure 39 with a dynamic marking of 'p'. The Violin and Viola parts play a fast, rhythmic pattern in measure 39 with a dynamic marking of 'ff', and a whole note in measure 40. The Piano part features a complex rhythmic pattern in measure 39 with a dynamic marking of 'ff', and a melodic line in measure 40. A rehearsal mark (8) is placed above measure 39.