Robert Nazaryan and Hayk Nazaryan

Foundation Armenian Theory of Special Relativity In One Physical Dimension By Pictures

Yerevan - 2016

100 Years Inquisition In Science Is Now Over
Armenian Revolution In Science Has Begun!

2007

Crash Course in Armenian Theory of Special Relativity

September, 2016 - Yerevan, Armenia

Robert Nazaryan and Hayk Nazaryan

Foundation Armenian Theory of Special Relativity In One Physical Dimension by Pictures

Dedicated to the 25-th Anniversary of Independence of Armenia

Yerevan - 2016
Authorial Publication

UDC 530.12

Creation of this book - “Foundation Armenian Theory of Special Relativity by Pictures”, became possible by generous donation from my children:

Nazaryan Gor,
Nazaryan Nazan,
Nazaryan Ara and
Nazaryan Hayk.

I am very grateful to all of them.
We consider the publication of this book as Nazaryan family’s contribution to the renaissance of science in Armenia and the whole world.

Nazaryan R., UDC 530.12
Foundation Armenian Theory of Special Relativity In One Physical Dimension by Pictures
R. Nazaryan, H. Nazaryan - Yerevan, print partner, Auth. Pub., 2016, 76 pages

First Armenian publication – June 2013, Armenia, ISBN: 978-1-4675-6080-1
Illustrated Armenian Publication (Volume A) – August 2016, Armenia, ISBN: 978-9939-0-1981-9
Illustrated English Publication (Volume A) – September 2016, Armenia, ISBN: 978-9939-0-1982-6
Illustrated Armenian Publication (Volume B) – November 2016, Armenia, ISBN: 978-9939-0-2059-4
Illustrated English Publication (Volume B) – December 2016, Armenia, ISBN: 978-9939-0-2083-9

Contents

If you have the strong urge to accuse somebody for what you read here, then don't accuse us, read the sentence to mathematics. We are simply its messengers only.

Armenian Theory of Special Relativity Is a New and Solid Mathematical Theory, And it Satisfies the Conditions to be Called a New Theory

1) Our created theory is new, because it was created between the years 2007-2012.
2) Our created theory does not contradict former legacy theories of physics.
3) The former legacy theory of relativity is a very special case of the Armenian Theory of Relativity when coefficients are given the values $s = 0$ and $g = -1$.
4) All formulas derived by Armenian Theory of Relativity, has a universal character because those are the exact mathematical representation of the Nature (*Philosophiae naturalis principia mathematica*).

Chapter A

The Most General Transformations Between Coordinate Systems And Initial State Condition

The Most General Transformation Forms And The Most General Transformation Equations

- *Time-space coordinates transformation forms between two reference systems*

A_01

Direct transformations		Inverse transformations
$\begin{cases} t' = t'(t,x,v) \\ x' = x'(t,x,v) \end{cases}$	and	$\begin{cases} t = t(t',x',v') \\ x = x(t',x',v') \end{cases}$

- *Initial state condition for all coordinate systems*

A_02

When $t = t' = t'' = \cdots = 0$

Then origins of all coordinate systems coincide each other on the one origin in 0 point

- *Time-space coordinates differentials direct transformation equations*

A_03

$$\begin{cases} dt' = \dfrac{\partial t'}{\partial t}dt + \dfrac{\partial t'}{\partial x}dx + \dfrac{\partial t'}{\partial v}dv \\ dx' = \dfrac{\partial x'}{\partial t}dt + \dfrac{\partial x'}{\partial x}dx + \dfrac{\partial x'}{\partial v}dv \end{cases}$$

- *Time - space coordinates differentials inverse transformation equations*

A_04

$$\begin{cases} dt = \dfrac{\partial t}{\partial t'}dt' + \dfrac{\partial t}{\partial x'}dx' + \dfrac{\partial t}{\partial v'}dv' \\ dx = \dfrac{\partial x}{\partial t'}dt' + \dfrac{\partial x}{\partial x'}dx' + \dfrac{\partial x}{\partial v'}dv' \end{cases}$$

Possible Two Cases Depending on Characters of the Observing Coordinate Systems

- *In the case of inertial observing coordinate systems (Case **A**)*

$$\begin{cases} v = \text{constant} \\ v' = \text{constant} \end{cases} \Rightarrow \begin{cases} dv = 0 \\ dv' = 0 \end{cases}$$

A_05

- *In the case of arbitrary observing coordinate systems (Case **B**)*

$$\begin{cases} v \neq \text{constant} \\ v' \neq \text{constant} \end{cases} \Rightarrow \begin{cases} dv \neq 0 \\ dv' \neq 0 \end{cases}$$

A_06

My shelf is full of unpublished articles and books in theoretical physics, which I believe one day it will be revealed to the scientific community worldwide (06-Dec-2015)

Chapter B

Examining the Case of Inertial Systems When Time – Space Coordinates are Homogenous but are Not Isotropic

In the Case of Observing Inertial Systems Transformations and Coefficients Notations

- *Relative velocities are constant (Case **A**)*

$$\begin{cases} v = \text{constant} \\ v' = \text{constant} \end{cases} \Rightarrow \begin{cases} dv = 0 \\ dv' = 0 \end{cases}$$

B_01

- *Time-space coordinates differentials transformation equations become*

Direct transformation equations

$$\begin{cases} dt' = \dfrac{\partial t'}{\partial t}dt + \dfrac{\partial t'}{\partial x}dx \\ dx' = \dfrac{\partial x'}{\partial t}dt + \dfrac{\partial x'}{\partial x}dx \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} dt = \dfrac{\partial t}{\partial t'}dt' + \dfrac{\partial t}{\partial x'}dx' \\ dx = \dfrac{\partial x}{\partial t'}dt' + \dfrac{\partial x}{\partial x'}dx' \end{cases}$$

B_02

- *Notations for the case of direct transformations of the coordinates differentials*

Definition of beta coefficients

$$\begin{cases} \dfrac{\partial t'}{\partial t} = \beta_1(t,x,v) \\ \dfrac{\partial t'}{\partial x} = \beta_2(t,x,v) \end{cases}$$

and

Definition of gamma coefficients

$$\begin{cases} \dfrac{\partial x'}{\partial t} = \gamma_1(t,x,v) \\ \dfrac{\partial x'}{\partial x} = \gamma_2(t,x,v) \end{cases}$$

B_03

- *Notations for the case of inverse transformations of the coordinates differentials*

Definition of beta coefficients

$$\begin{cases} \dfrac{\partial t}{\partial t'} = \beta'_1(t',x',v') \\ \dfrac{\partial t}{\partial x'} = \beta'_2(t',x',v') \end{cases}$$

and

Definition of gamma coefficients

$$\begin{cases} \dfrac{\partial x}{\partial t'} = \gamma'_1(t',x',v') \\ \dfrac{\partial x}{\partial x'} = \gamma'_2(t',x',v') \end{cases}$$

B_04

Direct and Inverse Transformation Equations For Time - Space Coordinates Differentials

- *Coordinates differentials direct transformations expressed by new coefficients*

B_05

$$\begin{cases} dt' = \beta_1(t,x,v)dt + \beta_2(t,x,v)dx \\ dx' = \gamma_1(t,x,v)dt + \gamma_2(t,x,v)dx \end{cases}$$

- *Coordinates differentials Inverse transformations expressed by new coefficients*

B_06

$$\begin{cases} dt = \beta_1'(t',x',v')dt' + \beta_2'(t',x',v')dx' \\ dx = \gamma_1'(t',x',v')dt' + \gamma_2'(t',x',v')dx' \end{cases}$$

In the Case of Homogenous Time – Space, Beta and Gamma Coefficients Need to Satisfy

- *Time-space coordinates direct transformations coefficients depends only* v

B_07

Property of beta coefficients

$$\begin{cases} \beta_1(t,x,v) \equiv \beta_1(v) \\ \beta_2(t,x,v) \equiv \beta_2(v) \end{cases}$$

and

Property of gamma coefficients

$$\begin{cases} \gamma_1(t,x,v) \equiv \gamma_1(v) \\ \gamma_2(t,x,v) \equiv \gamma_2(v) \end{cases}$$

- *Time-space coordinates inverse transformations coefficients depends only* v'

B_08

Property of beta coefficients

$$\begin{cases} \beta_1'(t',x',v') \equiv \beta_1'(v') \\ \beta_2'(t',x',v') \equiv \beta_2'(v') \end{cases}$$

and

Property of gamma coefficients

$$\begin{cases} \gamma_1'(t',x',v') \equiv \gamma_1'(v') \\ \gamma_2'(t',x',v') \equiv \gamma_2'(v') \end{cases}$$

In the Case of Homogenous Time – Space, Coordinates Differentials Transformations Between Two Inertial Systems Become

- *Coordinates differentials transformation equations in case of time-space homogeneity*

Direct transformation equations

$$\begin{cases} dt' = \beta_1(v)dt + \beta_2(v)dx \\ dx' = \gamma_1(v)dt + \gamma_2(v)dx \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} dt = \beta'_1(v')dt' + \beta'_2(v')dx' \\ dx = \gamma'_1(v')dt' + \gamma'_2(v')dx' \end{cases}$$

B_09

Reminder

Time - Space is only homogenous but not isotropic,
therefore all derived formulas are asymmetric.
Beside that, in direct and inverse transformation equations for now
unprimed and primed corresponding coefficients are different functions.

But in the Case of Homogeneous Time – Space, Transformations Can be Written Also Without Differentials

- *Time-space coordinates transformation equations in natural order form*

Direct transformation equations

$$\begin{cases} t' = \beta_1(v)t + \beta_2(v)x \\ x' = \gamma_1(v)t + \gamma_2(v)x \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} t = \beta'_1(v')t' + \beta'_2(v')x' \\ x = \gamma'_1(v')t' + \gamma'_2(v')x' \end{cases}$$

B_10

- *Time-space coordinates transformation equations in legacy form*

Direct transformation equations

$$\begin{cases} t' = \beta_1(v)t + \beta_2(v)x \\ x' = \gamma_2(v)x + \gamma_1(v)t \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} t = \beta'_1(v')t' + \beta'_2(v')x' \\ x = \gamma'_2(v')x' + \gamma'_1(v')t' \end{cases}$$

B_11

Chapter C

Implementation of the Relativity Postulate

Special Theory of Relativity Postulates

- *Special theory of relativity postulates*

$$\begin{cases} 1. & \text{All fundamental physical laws have the same mathematical functional forms in all inertial systems.} \\ 2. & \text{There exists a universal constant velocity } c, \text{ which has the same value in all inertial systems.} \\ 3. & \text{In all inertial systems time and space are homogeneous (Special Relativity).} \end{cases}$$

C_01

- *Because of the relativity (first) postulate, corresponding coefficients of direct and inverse transformations must be the same mathematical functions*

Beta functions identity and Gama functions identity

$$\begin{cases} \beta'_1(\;\;) \equiv \beta_1(\;\;) \\ \beta'_2(\;\;) \equiv \beta_2(\;\;) \end{cases} \quad \text{and} \quad \begin{cases} \gamma'_1(\;\;) \equiv \gamma_1(\;\;) \\ \gamma'_2(\;\;) \equiv \gamma_2(\;\;) \end{cases}$$

C_02

Implementation of the First Postulate in Transformation Equations

- *Time-space coordinates transformation equations in legacy form*

Direct transformation equations and Inverse transformation equations

$$\begin{cases} t' = \beta_1(v)t + \beta_2(v)x \\ x' = \gamma_2(v)x + \gamma_1(v)t \end{cases} \quad \text{and} \quad \begin{cases} t = \beta_1(v')t' + \beta_2(v')x' \\ x = \gamma_2(v')x' + \gamma_1(v')t' \end{cases}$$

C_03

- *Time-space coordinates transformation equations in natural order form*

Direct transformation equations and Inverse transformation equations

$$\begin{cases} t' = \beta_1(v)t + \beta_2(v)x \\ x' = \gamma_1(v)t + \gamma_2(v)x \end{cases} \quad \text{and} \quad \begin{cases} t = \beta_1(v')t' + \beta_2(v')x' \\ x = \gamma_1(v')t' + \gamma_2(v')x' \end{cases}$$

C_04

Measurements of the Beta and Gamma Coefficients

- *Time-space coordinates transformation coefficients which don't have measurements*

C_05

$$\begin{cases} \beta_1 & \Rightarrow & \text{don't have measurement} \\ \gamma_2 & \Rightarrow & \text{don't have measurement} \end{cases}$$

- *Time-space coordinates transformation coefficients which have measurements*

C_06

$$\begin{cases} \beta_2 & \Rightarrow & \text{have inverse measurement of velocity } \left(\frac{1}{c}\right) \\ \gamma_1 & \Rightarrow & \text{have measurement of velocity } (c) \end{cases}$$

My scientific work place (06-Dec-2015)

Chapter D

Reciprocal Solution Methods for the Systems of Transformation Equations

Coordinates Transformation Equations In the Form System of Linear Equations

- *System of transformation equations in legacy form*

D_01

Direct transformation equations

$$\begin{cases} \beta_1(v)t + \beta_2(v)x = t' \\ \gamma_2(v)x + \gamma_1(v)t = x' \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} \beta_1(v')t' + \beta_2(v')x' = t \\ \gamma_2(v')x' + \gamma_1(v')t' = x \end{cases}$$

- *System of transformation equations in natural order form*

D_02

Direct transformation equations

$$\begin{cases} \beta_1(v)t + \beta_2(v)x = t' \\ \gamma_1(v)t + \gamma_2(v)x = x' \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} \beta_1(v')t' + \beta_2(v')x' = t \\ \gamma_1(v')t' + \gamma_2(v')x' = x \end{cases}$$

Determinants of the Systems of Transformation Equations

- *Notations for determinants of the systems of transformation equations*

D_03

$$\begin{cases} D(v) = \begin{vmatrix} \beta_1(v) & \beta_2(v) \\ \gamma_1(v) & \gamma_2(v) \end{vmatrix} \\ D(v') = \begin{vmatrix} \beta_1(v') & \beta_2(v') \\ \gamma_1(v') & \gamma_2(v') \end{vmatrix} \end{cases}$$

- *The determinants formulas of the systems of transformation equations*

D_04

$$\begin{cases} D(v) = \beta_1(v)\gamma_2(v) - \beta_2(v)\gamma_1(v) \neq 0 \\ D(v') = \beta_1(v')\gamma_2(v') - \beta_2(v')\gamma_1(v') \neq 0 \end{cases}$$

The Solutions of the Systems of Transformation Equations

- *From direct transformation equations (D_02) we get the solutions*

$$t = \frac{1}{D(v)}\begin{vmatrix} t' & \beta_2(v) \\ x' & \gamma_2(v) \end{vmatrix} \quad \text{and} \quad x = \frac{1}{D(v)}\begin{vmatrix} \beta_1(v) & t' \\ \gamma_1(v) & x' \end{vmatrix}$$

D_05

- *From inverse transformation equations (D_02) we get the solutions*

$$t' = \frac{1}{D(v')}\begin{vmatrix} t & \beta_2(v') \\ x & \gamma_2(v') \end{vmatrix} \quad \text{and} \quad x' = \frac{1}{D(v')}\begin{vmatrix} \beta_1(v') & t \\ \gamma_1(v') & x \end{vmatrix}$$

D_06

Comparison of the New and Original Transformation Equations

- *New received forms of the transformation equations*

Direct transformation equations — Inverse transformation equations

$$\begin{cases} t' = \dfrac{\gamma_2(v')}{D(v')}t - \dfrac{\beta_2(v')}{D(v')}x \\ x' = \dfrac{\beta_1(v')}{D(v')}x - \dfrac{\gamma_1(v')}{D(v')}t \end{cases} \quad \text{and} \quad \begin{cases} t = \dfrac{\gamma_2(v)}{D(v)}t' - \dfrac{\beta_2(v)}{D(v)}x' \\ x = \dfrac{\beta_1(v)}{D(v)}x' - \dfrac{\gamma_1(v)}{D(v)}t' \end{cases}$$

D_07

- *Original transformation equations in the legacy form*

Direct transformation equations — Inverse transformation equations

$$\begin{cases} t' = \beta_1(v)t + \beta_2(v)x \\ x' = \gamma_2(v)x + \gamma_1(v)t \end{cases} \quad \text{and} \quad \begin{cases} t = \beta_1(v')t' + \beta_2(v')x' \\ x = \gamma_2(v')x' + \gamma_1(v')t' \end{cases}$$

D_08

Relations Between Coefficients

- *From comparison of the direct transformation equations, we get the relations*

D_09

$$\begin{cases} \beta_1(v) = +\dfrac{\gamma_2(v')}{D(v')} \\ \beta_2(v) = -\dfrac{\beta_2(v')}{D(v')} \end{cases} \quad \text{and} \quad \begin{cases} \gamma_2(v) = +\dfrac{\beta_1(v')}{D(v')} \\ \gamma_1(v) = -\dfrac{\gamma_1(v')}{D(v')} \end{cases}$$

- *From comparison of the inverse transformation equations, we get the relations*

D_10

$$\begin{cases} \beta_1(v') = +\dfrac{\gamma_2(v)}{D(v)} \\ \beta_2(v') = -\dfrac{\beta_2(v)}{D(v)} \end{cases} \quad \text{and} \quad \begin{cases} \gamma_2(v') = +\dfrac{\beta_1(v)}{D(v)} \\ \gamma_1(v') = -\dfrac{\gamma_1(v)}{D(v)} \end{cases}$$

Grouping of the Important Relations

- *Two important relations*

D_11

$$\begin{cases} D(v)D(v') = 1 \\ \beta_1(v)\beta_1(v') = \gamma_2(v)\gamma_2(v') \end{cases}$$

- *First Invariant relation, which we denote as* ζ_1

D_12

$$\frac{\beta_2(v)}{\gamma_1(v)} = \frac{\beta_2(v')}{\gamma_1(v')} = \zeta_1$$

Chapter E

Definition of the Coefficient g

Examining First Invariant Relation

- *Coefficient ζ_1 must have the following functional arguments*

E_01

$$\begin{cases} \dfrac{\beta_2(v)}{\gamma_1(v)} = \zeta_1(v) \\ \dfrac{\beta_2(v')}{\gamma_1(v')} = \zeta_1(v') \end{cases}$$

- *Therefore, the coefficient ζ_1 must satisfy the following functional equation*

E_02

$$\zeta_1(v) = \zeta_1(v')$$

Finding the Most General Solution for Functional Equation

- *First possible solution, which is not the general solution*

E_03

If $|v'| = |v| \Rightarrow$ then ζ_1 is an arbitrary even function

- *Second possible solution, which is the most general solution*

E_04

If $|v'| \neq |v| \Rightarrow$ then ζ_1 is constant quantity

Examining the Most General Solution

- ζ_1 *function must be a constant quantity*

$$\boxed{\zeta_1(v) = \zeta_1(v') = \zeta_1 = \text{constant}} \tag{E\_05}$$

- *Therefore, beta and gamma coefficients relations are constant*

$$\boxed{\frac{\beta_2(v)}{\gamma_1(v)} = \frac{\beta_2(v')}{\gamma_1(v')} = \zeta_1 = \text{constant}} \tag{E\_06}$$

Definition of the Coefficient g

- *From the measurements of the beta and gamma coefficients, we get for* ζ_1

$$\boxed{\zeta_1 = -g\frac{1}{c^2} = \text{constant}} \tag{E\_07}$$

- *Therefore, for the beta coefficients we obtain*

$$\boxed{\begin{cases} \beta_2(v) = -g\frac{1}{c^2}\gamma_1(v) \\ \beta_2(v') = -g\frac{1}{c^2}\gamma_1(v') \end{cases}} \tag{E\_08}$$

Time – Space Coordinates Transformation Equations and Transformations Discriminant Formulas

- *Time - space coordinates direct and inverse transformation equations*

E_09

Direct transformation equations

$$\begin{cases} t' = \beta_1(v)t - g\frac{1}{c^2}\gamma_1(v)x \\ x' = \gamma_2(v)x + \gamma_1(v)t \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} t = \beta_1(v')t' - g\frac{1}{c^2}\gamma_1(v')x' \\ x = \gamma_2(v')x' + \gamma_1(v')t' \end{cases}$$

- *Transformations discriminant formulas*

E_10

$$\begin{cases} D(v) = \beta_1(v)\gamma_2(v) + g\frac{1}{c^2}[\gamma_1(v)]^2 \neq 0 \\ D(v') = \beta_1(v')\gamma_2(v') + g\frac{1}{c^2}[\gamma_1(v')]^2 \neq 0 \end{cases}$$

Our books has been published by “print partner” publisher (16-Sep-2016)

Chapter F

Examining Origins Movement Of the Observing Inertial Systems

Making Two Abstract – Theoretical Experiments

- *Above mentioned abstract - theoretical experiments conditions*

F_01

For origin of K' and For origin of K

$$\begin{cases} x' = 0 \\ x = vt \end{cases} \quad \text{and} \quad \begin{cases} x = 0 \\ x' = v't' \end{cases}$$

- *Conditions (F_01) we need to use in the following transcription equations*

F_02

Direct transformation equations and Inverse transformation equations

$$\begin{cases} t' = \beta_1(v)t - g\frac{1}{c^2}\gamma_1(v)x \\ x' = \gamma_2(v)x + \gamma_1(v)t \end{cases} \quad \text{and} \quad \begin{cases} t = \beta_1(v')t' - g\frac{1}{c^2}\gamma_1(v')x' \\ x = \gamma_2(v')x' + \gamma_1(v')t' \end{cases}$$

First Abstract – Theoretical Experiment

- *The condition of the first abstract - theoretical experiment*

F_03

$$\begin{cases} x' = 0 \\ x = vt \end{cases}$$

- *Above condition used on transformation equations (F_02)*

F_04

From direct transformation equations and From inverse transformation equations

$$\begin{cases} t' = \left[\beta_1(v) - g\frac{v}{c^2}\gamma_1(v)\right]t \\ 0 = [\gamma_2(v)v + \gamma_1(v)]t \end{cases} \quad \text{and} \quad \begin{cases} t = \beta_1(v')t' \\ vt = \gamma_1(v')t' \end{cases}$$

Results of the First Experiment

- *The first abstract - theoretical experiment's important formulas*

$$\begin{cases} \gamma_1(v) & = & -\gamma_2(v)v \\ v & = & \dfrac{\gamma_1(v')}{\beta_1(v')} \end{cases}$$

F_05

- *The first abstract - theoretical experiment's beta coefficient formula*

$$\beta_1(v') = \frac{1}{\beta_1(v) - g\frac{v}{c^2}\gamma_1(v)}$$

F_06

Second Abstract – Theoretical Experiment

- *The condition of the second abstract - theoretical experiment*

$$\begin{cases} x & = & 0 \\ x' & = & v't' \end{cases}$$

F_07

- *Above condition used on transformation equations (F_02)*

From direct transformation equations

$$\begin{cases} t' & = & \beta_1(v)t \\ v't' & = & \gamma_1(v)t \end{cases}$$

and

From inverse transformation equations

$$\begin{cases} t & = & \left[\beta_1(v') - g\frac{v'}{c^2}\gamma_1(v')\right]t' \\ 0 & = & [\gamma_2(v')v' + \gamma_1(v')]t' \end{cases}$$

F_08

Results of the Second Experiment

- *The second abstract - theoretical experiment's important formulas*

F_09

$$\begin{cases} \gamma_1(v') = -\gamma_2(v')v' \\ v' = \dfrac{\gamma_1(v)}{\beta_1(v)} \end{cases}$$

- *The second abstract - theoretical experiment's beta coefficient formula*

F_10

$$\beta_1(v) = \frac{1}{\beta_1(v') - g\frac{v'}{c^2}\gamma_1(v')}$$

Two Experiments Results Written Together

- *First group of coefficients relations*

F_11

$$\begin{cases} \gamma_1(v) = -\gamma_2(v)v \\ \gamma_1(v') = -\gamma_2(v')v' \end{cases} \Rightarrow \begin{cases} \beta_2(v) = g\frac{v}{c^2}\gamma_2(v) \\ \beta_2(v') = g\frac{v'}{c^2}\gamma_2(v') \end{cases}$$

- *Second group of coefficients relations*

F_12

$$\begin{cases} \beta_1(v') = \dfrac{1}{\beta_1(v) + g\frac{v^2}{c^2}\gamma_2(v)} \\ \beta_1(v) = \dfrac{1}{\beta_1(v') + g\frac{v'^2}{c^2}\gamma_2(v')} \end{cases}$$

Relations Between Relative Velocities

- *Relations between inverse and direct relative velocities*

$$\begin{cases} v' = \dfrac{\gamma_1(v)}{\beta_1(v)} \\ v = \dfrac{\gamma_1(v')}{\beta_1(v')} \end{cases} \Rightarrow \begin{cases} v' = -\dfrac{\gamma_2(v)}{\beta_1(v)} v \\ v = -\dfrac{\gamma_2(v')}{\beta_1(v')} v' \end{cases}$$

F_13

- *Relative velocity satisfy the involution (self-inverse) property*

$$(v')' = -\frac{\gamma_2(v')}{\beta_1(v')} v' = v \quad \Rightarrow \quad (v')' \equiv v$$

F_14

Transformations Discriminants Formulas

- *First group of discriminants formulas*

$$\begin{cases} D(v) = \gamma_2(v)\left[\beta_1(v) + g\frac{v^2}{c^2}\gamma_2(v)\right] \neq 0 \\ D(v') = \gamma_2(v')\left[\beta_1(v') + g\frac{v'^2}{c^2}\gamma_2(v')\right] \neq 0 \end{cases}$$

F_15

- *Second group of discriminants formulas*

$$\begin{cases} D(v) = \beta_1(v)\gamma_2(v)\left(1 - g\frac{vv'}{c^2}\right) \neq 0 \\ D(v') = \beta_1(v')\gamma_2(v')\left(1 - g\frac{vv'}{c^2}\right) \neq 0 \end{cases}$$

F_16

Direct and Inverse Transformation Equations

- *First form of transformation equations*

F_17

Direct transformation equations

$$\begin{cases} t' = \beta_1(v)t + g\frac{v}{c^2}\gamma_2(v)x \\ x' = \gamma_2(v)(x - vt) \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} t = \beta_1(v')t' + g\frac{v'}{c^2}\gamma_2(v')x' \\ x = \gamma_2(v')(x' - v't') \end{cases}$$

- *Second form of transformation equations*

F_18

Direct transformation equations

$$\begin{cases} t' = \beta_1(v)\left(t - g\frac{v'}{c^2}x\right) \\ x' = \gamma_2(v)(x - vt) \end{cases}$$

and

Inverse transformation equations

$$\begin{cases} t = \beta_1(v')\left(t' - g\frac{v}{c^2}x'\right) \\ x = \gamma_2(v')(x' - v't') \end{cases}$$

I am a grandson of surviving victims of the Armenian Genocide
(22-Apr-2017)

Chapter G

Definition of the Coefficient s

For simplicity purposes we will use the beta and gamma coefficients without index.

$$\begin{cases} \beta_1(\quad) \Rightarrow \beta(\quad) \\ \gamma_2(\quad) \Rightarrow \gamma(\quad) \end{cases}$$

We Need to Use the Following Previous Results

- *From (D_09) and (D_10) we have the following relations between coefficients*

G_01

$$\begin{cases} \beta(v) = +\dfrac{\gamma(v')}{D(v')} \\ \gamma(v) = +\dfrac{\beta(v')}{D(v')} \end{cases} \quad \text{and} \quad \begin{cases} \beta(v') = +\dfrac{\gamma(v)}{D(v)} \\ \gamma(v') = +\dfrac{\beta(v)}{D(v)} \end{cases}$$

- *From (F_13) we have the following relations between relative velocities*

G_02

$$\begin{cases} v' = -\dfrac{\gamma(v)}{\beta(v)}v \\ v = -\dfrac{\gamma(v')}{\beta(v')}v' \end{cases}$$

Second Invariant Relation

- *From (G_01) and (G_02) we get second invariant relation, which we denote as* ζ_2

G_03

$$\frac{\beta(v')-\gamma(v')}{\gamma(v')v'} = \frac{\beta(v)-\gamma(v)}{\gamma(v)v} = \zeta_2$$

- *The most general solution of the functional equation is when* ζ_2 *becomes a constant*

G_04

$$\zeta_2(v') = \zeta_2(v) = \zeta_2 = \text{constant}$$

Definition of the Coefficient s
And Formulas for Beta Coefficients

- *From the measurements of beta and gamma coefficients, we get for* ζ_2

$$\zeta_2 = s\frac{1}{c} = \text{constant}$$

G_05

- *Therefore, we can write the second invariant relation with a new coefficient* s

$$\frac{\beta(v') - \gamma(v')}{\gamma(v')v'} = \frac{\beta(v) - \gamma(v)}{\gamma(v)v} = s\frac{1}{c}$$

G_06

- *Formulas for beta coefficients*

$$\begin{cases} \beta(v) = \gamma(v)\left(1 + s\frac{v}{c}\right) \\ \beta(v') = \gamma(v')\left(1 + s\frac{v'}{c}\right) \end{cases}$$

G_07

From this point on, all transformation equations and other important relativistic formulas we will name "Armenian". This is the best way to distinguish between the legacy and the new theory of relativity and their corresponding relativistic formulas. Also, this research is the accumulation of practically 50 years of obsessive thinking about the natural laws of the universe. It was done in Armenia by an Armenian and the original manuscripts were written in Armenian. This research is purely from the mind of an Armenian and from the holly land of Armenia, therefore we can call it by its rightful name - Armenian.

- *Armenian relation formulas between reciprocal relative velocities*

G_08

$$\begin{cases} v' = -\dfrac{v}{1+s\frac{v}{c}} \\ v = -\dfrac{v'}{1+s\frac{v'}{c}} \end{cases} \quad \Rightarrow \quad \left(1+s\frac{v}{c}\right)\left(1+s\frac{v'}{c}\right) = 1$$

- *Armenian direct and inverse transformation equations*

G_09

Armenian direct transformation equations

$$\begin{cases} t' = \gamma(v)\left[\left(1+s\frac{v}{c}\right)t + g\frac{v}{c^2}x\right] \\ x' = \gamma(v)(x - vt) \end{cases}$$

և

Armenian inverse transformation equations

$$\begin{cases} t = \gamma(v')\left[\left(1+s\frac{v'}{c}\right)t' + g\frac{v'}{c^2}x'\right] \\ x = \gamma(v')(x' - v't') \end{cases}$$

This book was dedicated to the 25-th Anniversary of the Independence of Armenia

Chapter H

Derivation of the Armenian Gamma Functions

Armenian Invariant Interval Between Two Events

- *Armenian transformation equations in the same measurement coordinates*

H_01

Armenian direct transformation equations

$$\begin{cases} ct' = \gamma(v)\left[\left(1+s\frac{v}{c}\right)ct+g\frac{v}{c}x\right] \\ x' = \gamma(v)\left(x-\frac{v}{c}ct\right) \end{cases}$$

and

Armenian inverse transformation equations

$$\begin{cases} ct = \gamma(v')\left[\left(1+s\frac{v'}{c}\right)ct'+g\frac{v'}{c}x'\right] \\ x = \gamma(v')\left(x'-\frac{v'}{c}ct'\right) \end{cases}$$

- *Quadratic form of the Armenian invariant interval*

H_02

$$\text{Ե}^2 = (ct')^2+s(ct')x'+gx'^2 = (ct)^2+s(ct)x+gx^2$$

Reciprocal Calculation of the Armenian Interval

- *Reciprocal substitution coordinates into Armenian interval formulas (H_02)*

H_03

$$\begin{cases} \text{Ե}^2 = [\gamma(v)]^2\left(1+s\frac{v}{c}+g\frac{v^2}{c^2}\right)[(ct)^2+s(ct)x+gx^2] \\ \text{Ե}^2 = [\gamma(v')]^2\left(1+s\frac{v'}{c}+g\frac{v'^2}{c^2}\right)[(ct')^2+s(ct')x'+g(x')^2] \end{cases}$$

- *Above Armenian interval expressions must be equal original interval formulas*

H_04

$$\begin{cases} \text{Ե}^2 = (ct)^2+s(ct)x+gx^2 \\ \text{Ե}^2 = (ct')^2+s(ct')x'+g(x')^2 \end{cases}$$

Equating Two Different Interval Expressions

- *Armenian gamma function of the direct transformation equations*

$$\gamma_{\text{ʑ}}(v) = \frac{1}{\sqrt{1 + s\frac{v}{c} + g\frac{v^2}{c^2}}}$$ H_05

- *Armenian gamma function of the inverse transformation equations*

$$\gamma_{\text{ʑ}}(v') = \frac{1}{\sqrt{1 + s\frac{v'}{c} + g\frac{v'^2}{c^2}}}$$ H_06

First Group of Important Relations

- *Armenian transformation equations discriminants values*

$$\begin{cases} D(v) = [\gamma_{\text{ʑ}}(v)]^2\left(1 + s\frac{v}{c} + g\frac{v^2}{c^2}\right) = 1 \\ D(v') = [\gamma_{\text{ʑ}}(v')]^2\left(1 + s\frac{v'}{c} + g\frac{v'^2}{c^2}\right) = 1 \end{cases}$$ H_07

- *Armenian gamma functions first group of important relations*

$$\begin{cases} \gamma_{\text{ʑ}}(v') = \gamma_{\text{ʑ}}(v)\left(1 + s\frac{v}{c}\right) \\ \gamma_{\text{ʑ}}(v) = \gamma_{\text{ʑ}}(v')\left(1 + s\frac{v'}{c}\right) \\ \gamma_{\text{ʑ}}(v')v' = -\gamma_{\text{ʑ}}(v)v \end{cases}$$ H_08

Second Group of Important Relations

- *This important relation between Armenian gamma functions we use in the future for the Armenian energy formulas*

H_09

$$\gamma_{\text{չ}}(v')\left(1+\tfrac{1}{2}s\frac{v'}{c}\right) \;=\; \gamma_{\text{չ}}(v)\left(1+\tfrac{1}{2}s\frac{v}{c}\right)$$

- *This important relation between Armenian gamma functions we use in the future for the Armenian momentum formulas*

H_10

$$\gamma_{\text{չ}}(v')\left(\tfrac{1}{2}s+g\frac{v'}{c}\right) \;+\; \gamma_{\text{չ}}(v)\left(\tfrac{1}{2}s+g\frac{v}{c}\right) \;=\; s\left[\gamma_{\text{չ}}(v)\left(1+\tfrac{1}{2}s\frac{v}{c}\right)\right]$$

- *This important relation we use for the Armenian full energy formulas*

H_11

$$\begin{cases} \left(\tfrac{1}{2}s+g\frac{v}{c}\right)^2 - s\left(\tfrac{1}{2}s+g\frac{v}{c}\right)\left(1+\tfrac{1}{2}s\frac{v}{c}\right)+g\left(1+\tfrac{1}{2}s\frac{v}{c}\right)^2 \;=\; \left(g-\tfrac{1}{4}s^2\right)\left(1+s\frac{v}{c}+g\frac{v^2}{c^2}\right) \\ \left(\tfrac{1}{2}s+g\frac{v'}{c}\right)^2 - s\left(\tfrac{1}{2}s+g\frac{v'}{c}\right)\left(1+\tfrac{1}{2}s\frac{v'}{c}\right)+g\left(1+\tfrac{1}{2}s\frac{v'}{c}\right)^2 \;=\; \left(g-\tfrac{1}{4}s^2\right)\left(1+s\frac{v'}{c}+g\frac{v'^2}{c^2}\right. \end{cases}$$

Our published books was registered in the National Book Chamber of Armenia (10-Feb-2017)

Chapter I

Velocity and Acceleration Formulas Of the Observed Test Particle

Notations for the Test Particle Velocities and Accelerations

- *Notation for the moving test particle velocities*

I_01

$$\begin{cases} u = \dfrac{dx}{dt} \\ u' = \dfrac{dx'}{dt'} \end{cases}$$

- *Notation for the moving test particle accelerations*

I_02

$$\begin{cases} b = \dfrac{du}{dt} = \dfrac{d^2x}{dt^2} \\ b' = \dfrac{du'}{dt'} = \dfrac{d^2x'}{dt'^2} \end{cases}$$

Time Derivatives of the Armenian Transformation Equations

- *Time derivatives of the Armenian direct transformation equations*

I_03

$$\begin{cases} \dfrac{dt'}{dt} = \gamma_{\text{չ}}(v)\left(1 + s\dfrac{v}{c} + g\dfrac{vu}{c^2}\right) \\ \dfrac{dx'}{dt} = \gamma_{\text{չ}}(v)(u - v) \end{cases}$$

- *Time derivatives of the Armenian inverse transformation equations*

I_04

$$\begin{cases} \dfrac{dt}{dt'} = \gamma_{\text{չ}}(v')\left(1 + s\dfrac{v'}{c} + g\dfrac{v'u'}{c^2}\right) \\ \dfrac{dx}{dt'} = \gamma_{\text{չ}}(v')(u' - v') \end{cases}$$

Relations of the Time Differentials

- *First form of relations of the time differentials*

$$\begin{cases} \dfrac{dt'}{dt} = \gamma_{¿}(v)\left(1 + s\dfrac{v}{c} + g\dfrac{vu}{c^2}\right) \\[2ex] \dfrac{dt}{dt'} = \gamma_{¿}(v')\left(1 + s\dfrac{v'}{c} + g\dfrac{v'u'}{c^2}\right) \end{cases}$$

I_05

- *Second form of relations of the time differentials*

$$\begin{cases} \dfrac{dt'}{dt} = \gamma_{¿}(v')\left(1 - g\dfrac{v'u}{c^2}\right) \\[2ex] \dfrac{dt}{dt'} = \gamma_{¿}(v)\left(1 - g\dfrac{vu'}{c^2}\right) \end{cases}$$

I_06

Moving Test Particle Velocity Formulas

- *Test particle velocity with respect to the inertial system K prime*

$$\frac{dx'}{dt'} = u' = \frac{u - v}{1 + s\dfrac{v}{c} + g\dfrac{vu}{c^2}}$$

I_07

- *Test particle velocity with respect to the inertial system K*

$$\frac{dx}{dt} = u = \frac{u' - v'}{1 + s\dfrac{v'}{c} + g\dfrac{v'u'}{c^2}}$$

I_08

Armenian Addition and Subtraction Formulas for Velocities

- *Armenian addition and subtraction formulas, expressed by direct relative velocity*

I_09

$$\begin{cases} u = u' \oplus v = \dfrac{\left(1 + s\frac{v}{c}\right)u' + v}{1 - g\frac{vu'}{c^2}} \\ u' = u \ominus v = \dfrac{u - v}{1 + s\frac{v}{c} + g\frac{vu}{c^2}} \end{cases}$$

- *Armenian addition and subtraction formulas, expressed by inverse relative velocity*

I_10

$$\begin{cases} u' = u \oplus v' = \dfrac{\left(1 + s\frac{v'}{c}\right)u + v'}{1 - g\frac{v'u}{c^2}} \\ u = u' \ominus v' = \dfrac{u' - v'}{1 + s\frac{v'}{c} + g\frac{v'u'}{c^2}} \end{cases}$$

Gamma Function Formulas for the Test Particle Moving by Arbitrary Velocity

- *Armenian gamma function formula with respect to the inertial system* K

I_11

$$\gamma_{\text{չ}}(u) = \frac{1}{\sqrt{1 + s\frac{u}{c} + g\frac{u^2}{c^2}}}$$

- *Armenian gamma function formula with respect to the inertial system* K *prime*

I_12

$$\gamma_{\text{չ}}(u') = \frac{1}{\sqrt{1 + s\frac{u'}{c} + g\frac{u'^2}{c^2}}}$$

Moving Test Particle Gamma Functions Transformations And Other Relations Between Armenian Gamma Functions

- *First form of the gamma functions transformation formulas*

$$\begin{cases} \gamma_{\text{¿}}(u) = \gamma_{\text{¿}}(v)\gamma_{\text{¿}}(u')\left(1 - g\frac{vu'}{c^2}\right) \\ \gamma_{\text{¿}}(u') = \gamma_{\text{¿}}(v')\gamma_{\text{¿}}(u)\left(1 - g\frac{v'u}{c^2}\right) \end{cases} \quad \text{I\_13}$$

- *Second form of the gamma functions transformation formulas*

$$\begin{cases} \gamma_{\text{¿}}(u) = \gamma_{\text{¿}}(v')\gamma_{\text{¿}}(u')\left(1 + s\frac{v'}{c} + g\frac{v'u'}{c^2}\right) \\ \gamma_{\text{¿}}(u') = \gamma_{\text{¿}}(v)\gamma_{\text{¿}}(u)\left(1 + s\frac{v}{c} + g\frac{vu}{c^2}\right) \end{cases} \quad \text{I\_14}$$

- *Test particle gamma functions relation formulas*

$$\begin{cases} \dfrac{\gamma_{\text{¿}}(u)}{\gamma_{\text{¿}}(u')} = \gamma_{\text{¿}}(v)\left(1 - g\frac{vu'}{c^2}\right) = \gamma_{\text{¿}}(v')\left(1 + s\frac{v'}{c} + g\frac{v'u'}{c^2}\right) \\ \dfrac{\gamma_{\text{¿}}(u')}{\gamma_{\text{¿}}(u)} = \gamma_{\text{¿}}(v')\left(1 - g\frac{v'u}{c^2}\right) = \gamma_{\text{¿}}(v)\left(1 + s\frac{v}{c} + g\frac{vu}{c^2}\right) \end{cases} \quad \text{I\_15}$$

- *From (I_15) we get also this interesting relations*

$$\begin{cases} \sqrt{1 + s\frac{v}{c} + g\frac{v^2}{c^2}}\sqrt{1 + s\frac{v'}{c} + g\frac{v'^2}{c^2}} = \left(1 + s\frac{v}{c} + g\frac{vu}{c^2}\right)\left(1 + s\frac{v'}{c} + g\frac{v'u'}{c^2}\right) \\ \sqrt{1 + s\frac{v}{c} + g\frac{v^2}{c^2}}\sqrt{1 + s\frac{v'}{c} + g\frac{v'^2}{c^2}} = \left(1 - g\frac{vu'}{c^2}\right)\left(1 - g\frac{v'u}{c^2}\right) \end{cases} \quad \text{I\_16}$$

Invariant Relation For Time Differentials

- *Time differentials invariant relation for observed test particle*

I_17

$$\begin{cases} \dfrac{dt}{dt'} = \dfrac{\gamma_{\text{ȥ}}(u)}{\gamma_{\text{ȥ}}(u')} \\[2ex] \dfrac{dt'}{dt} = \dfrac{\gamma_{\text{ȥ}}(u')}{\gamma_{\text{ȥ}}(u)} \end{cases} \Rightarrow \qquad \frac{dt}{\gamma_{\text{ȥ}}(u)} = \frac{dt'}{\gamma_{\text{ȥ}}(u')} = d\tau$$

- *Time differentials new relations for two special cases*

I_18

$$\begin{cases} u' = 0 \\ u = 0 \end{cases} \Rightarrow \qquad \begin{cases} \dfrac{dt}{dt'} = \gamma_{\text{ȥ}}(v) \\[2ex] \dfrac{dt'}{dt} = \gamma_{\text{ȥ}}(v') \end{cases}$$

Moving Test Particle Acceleration Formulas

- *Test particle accelerations transformation formulas*

I_19

$$\begin{cases} b' = \dfrac{1}{\gamma_{\text{ȥ}}^{3}(v)\left(1 + s\dfrac{v}{c} + g\dfrac{vu}{c^2}\right)^3} b = \dfrac{1}{\gamma_{\text{ȥ}}^{3}(v')\left(1 - g\dfrac{v'u}{c^2}\right)^3} b \\[3ex] b = \dfrac{1}{\gamma_{\text{ȥ}}^{3}(v)\left(1 - g\dfrac{vu'}{c^2}\right)^3} b' = \dfrac{1}{\gamma_{\text{ȥ}}^{3}(v')\left(1 + s\dfrac{v'}{c} + g\dfrac{v'u'}{c^2}\right)^3} b' \end{cases}$$

- *Definition of the invariant Armenian acceleration for observed test particle*

I_20

$$b_{\text{ȥ}} = \gamma_{\text{ȥ}}^{3}(u)\, b = \gamma_{\text{ȥ}}^{3}(u')\, b' = \text{invariant}$$

Chapter J

Foundation of the Armenian Dynamics

Armenian Lagrangians of Material Test Particle Moving Free or Under Conservative Forces

- *Armenian Lagrangian of the free moving material particle*

J_01

$$\mathcal{L}_{\text{ζ}}(u) = -m_0c^2\sqrt{1 + s\frac{u}{c} + g\frac{u^2}{c^2}}$$

- *Armenian Lagrangian of the material particle moving in conservative field*

J_02

$$\mathcal{L}_{\text{ζ}}(u,x) = -m_0c^2\sqrt{1 + s\frac{u}{c} + g\frac{u^2}{c^2}} - U(x)$$

Where m_0 is rest mass of the material test particle.

Armenian Energy and Armenian Momentum Formulas

- *Armenian energy formula*

J_03

$$E_{\text{ζ}}(u,x) = \frac{1 + \frac{1}{2}s\frac{u}{c}}{\sqrt{1 + s\frac{u}{c} + g\frac{u^2}{c^2}}}m_0c^2 + U(x)$$

- *Armenian momentum formula*

J_04

$$P_{\text{ζ}}(u) = -\frac{\frac{1}{2}s + g\frac{u}{c}}{\sqrt{1 + s\frac{u}{c} + g\frac{u^2}{c^2}}}m_0c$$

Approximation of the Armenian Energy and Momentum Formulas

- *Definition of the Armenian rest mass*

$$\boxed{m_{չ0} \;=\; -\left(g - \tfrac{1}{4}s^2\right)m_0 \;\gtrless\; 0} \tag{J_05}$$

- *First approximation of the Armenian energy and Armenian momentum formulas*

$$\boxed{\begin{cases} E_{չ}(u,x) \;\approx\; m_0c^2 \;+\; \tfrac{1}{2}m_{չ0}u^2 + U(x) \\ P_{չ}(u) \;\approx\; -\tfrac{1}{2}sm_0c \;+\; m_{չ0}u \end{cases}} \tag{J_06}$$

Armenian Energy and Momentum Formulas for Rest Particle

- *Armenian energy and Armenian momentum values for rest particle*

$$\boxed{\begin{cases} E_{չ}(0,x) \;=\; m_0c^2 + U(x) \\ P_{չ}(0) \;=\; -\tfrac{1}{2}sm_0c \end{cases}} \tag{J_07}$$

- *Armenian formula for infinite free energy – hope for human species*

$$\boxed{P_{չ}(0) \;=\; -\frac{1}{2}sm_0c} \tag{J_08}$$

Armenian Energy and Armenian Momentum Formulas And Their Transformation Equations

- *Armenian energy and momentum formulas with respect to inertial system K*

J_09

$$\begin{cases} E_{\text{չ}} \equiv E_{\text{չ}}(u,x) = \gamma_{\text{չ}}(u)\left(1+\tfrac{1}{2}s\tfrac{u}{c}\right)m_0c^2 + U(x) \\ P_{\text{չ}} \equiv P_{\text{չ}}(u) = -\gamma_{\text{չ}}(u)\left(\tfrac{1}{2}s+g\tfrac{u}{c}\right)m_0c \end{cases}$$

- *Armenian energy and momentum formulas with respect to inertial system K prime*

J_10

$$\begin{cases} E'_{\text{չ}} \equiv E_{\text{չ}}(u',x') = \gamma_{\text{չ}}(u')\left(1+\tfrac{1}{2}s\tfrac{u'}{c}\right)m_0c^2 + U(x') \\ P'_{\text{չ}} \equiv P_{\text{չ}}(u') = -\gamma_{\text{չ}}(u')\left(\tfrac{1}{2}s+g\tfrac{u'}{c}\right)m_0c \end{cases}$$

- *Free particle's Armenian energy and momentum direct transformation equations*

J_11

$$\begin{cases} E'_{\text{չ}} = \gamma_{\text{չ}}(v)(E_{\text{չ}} - vP_{\text{չ}}) \\ P'_{\text{չ}} = \gamma_{\text{չ}}(v)\left[\left(1+s\tfrac{v}{c}\right)P_{\text{չ}} + g\tfrac{v}{c^2}E_{\text{չ}}\right] \end{cases}$$

- *Free particle's Armenian energy and momentum inverse transformation equations*

J_12

$$\begin{cases} E_{\text{չ}} = \gamma_{\text{չ}}(v')(E'_{\text{չ}} - v'P'_{\text{չ}}) \\ P_{\text{չ}} = \gamma_{\text{չ}}(v')\left[\left(1+s\tfrac{v'}{c}\right)P'_{\text{չ}} + g\tfrac{v'}{c^2}E'_{\text{չ}}\right] \end{cases}$$

Reciprocal Observation of the Identical Material Particles Resting in Both Inertial Systems

- *Armenian energy and momentum of the particle resting in the inertial system* K

$$\begin{cases} E_{\text{ȥ}}(v) = \gamma_{\text{ȥ}}(v)\left(1 + \frac{1}{2}s\frac{v}{c}\right)m_0c^2 \\ P_{\text{ȥ}}(v) = -\gamma_{\text{ȥ}}(v)\left(\frac{1}{2}s + g\frac{v}{c}\right)m_0c \end{cases}$$

J_13

- *Armenian energy and momentum of the particle resting in the inertial system* K *prime*

$$\begin{cases} E_{\text{ȥ}}(v') = \gamma_{\text{ȥ}}(v')\left(1 + \frac{1}{2}s\frac{v'}{c}\right)m_0c^2 \\ P_{\text{ȥ}}(v') = -\gamma_{\text{ȥ}}(v')\left(\frac{1}{2}s + g\frac{v'}{c}\right)m_0c \end{cases}$$

J_14

Very Important Formulas

- *Relations between Armenian energy and Armenian momentum quantities for reciprocal observed identical material particles (see relations H_09 and H_10)*

$$\begin{cases} E_{\text{ȥ}}(v') = E_{\text{ȥ}}(v) \\ P_{\text{ȥ}}(v') + P_{\text{ȥ}}(v) = -s\frac{1}{c}E_{\text{ȥ}}(v) \end{cases}$$

J_15

- *Armenian full energy formulas for free moving particle (see relation H_11)*

$$\begin{cases} \left(g\frac{1}{c}E_{\text{ȥ}}\right)^2 + s\left(g\frac{1}{c}E_{\text{ȥ}}\right)P_{\text{ȥ}} + gP_{\text{ȥ}}^2 = g\left(g - \frac{1}{4}s^2\right)(m_0c)^2 \gtrless 0 \\ \left(g\frac{1}{c}E'_{\text{ȥ}}\right)^2 + s\left(g\frac{1}{c}E'_{\text{ȥ}}\right)P'_{\text{ȥ}} + gP'^2_{\text{ȥ}} = g\left(g - \frac{1}{4}s^2\right)(m_0c)^2 \gtrless 0 \end{cases}$$

J_16

Force Acting on Material Particle

- *Armenian force formulas*

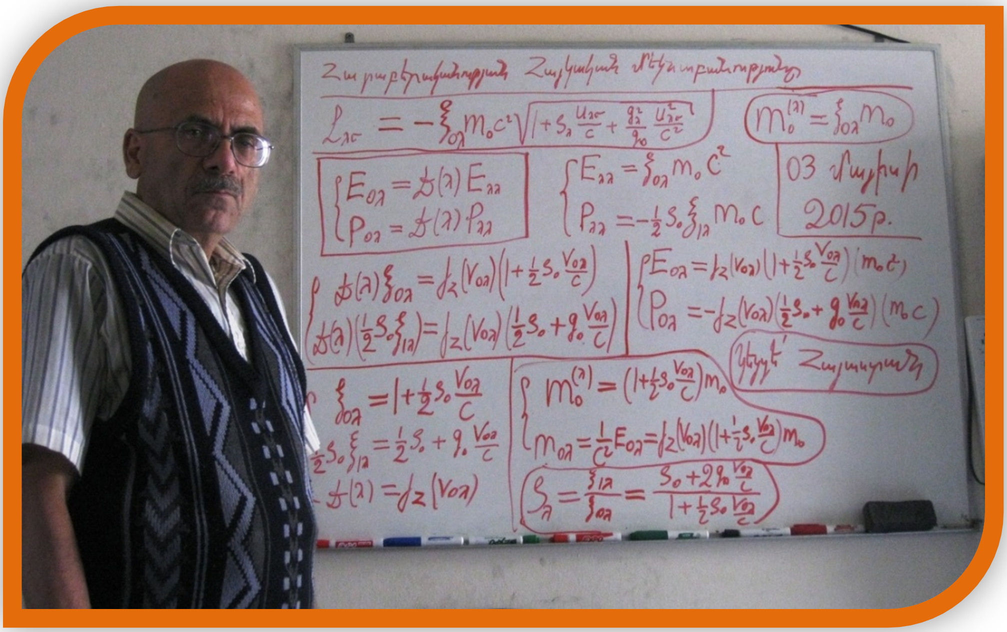
J_17

$$\begin{cases} F_{\text{չ}} = \dfrac{dP_{\text{չ}}}{dt} = -\left(g - \frac{1}{4}s^2\right) m_0 \gamma_{\text{չ}}^3(u) b \\ F'_{\text{չ}} = \dfrac{dP'_{\text{չ}}}{dt'} = -\left(g - \frac{1}{4}s^2\right) m_0 \gamma_{\text{չ}}^3(u') b' \end{cases}$$

- *Armenian interpretation of Newton's second law*

J_18

$$\begin{cases} F_{\text{չ}} = m_{\text{չ}0} b_{\text{չ}} \\ F'_{\text{չ}} = m_{\text{չ}0} b_{\text{չ}} \end{cases} \quad \Rightarrow \quad F'_{\text{չ}} = F_{\text{չ}}$$



Armenian interpretation of Newton's laws of mechanics and dynamics (09-Jul-2015)

Conclusions

We showed that the «Armenian Theory of Special Relativity» is full of fine and difficult ideas to understand, which in many cases seems to conflict with our everyday experiences and legacy conceptions. This new crash course book is the simplified version for broad audiences. This book is not just generalizing transformation equations and all relativistic formulas; It is also without limitations and uses a pure mathematical approach to bring forth new revolutionary ideas in the theory of relativity. It also paves the way to build general theory of relativity and finally for the construction of the unified field theory – the ultimate dream of every truth seeking physicist.

Armenian Theory of Relativity is such a mathematically solid and perfect theory that it cannot be wrong. Therefore, our derived transformation equations and all relativistic formulas have the potential to not just replace legacy relativity formulas, but also rewrite all modern physics. Lorentz transformation equations and other relativistic formulas is a very special case of the Armenian Theory of Relativity when we put $s = 0$ and $g = -1$.

The proofs in this book are very brief, therefore with just a little effort, the readers themselves can prove all the provided formulas in detail. You can find the more detailed proofs of the formulas in our main research book «Armenian Theory of Special Relativity», published in Armenia of June 2013.

In this visual book, you will set your eyes on many new and beautiful formulas which the world has never seen before, especially the crown jewel of the Armenian Theory of Relativity - Armenian energy and Armenian momentum formulas, which can change the future of the human species and bring forth the new golden age.

The time has come to reincarnate the ether as a universal reference medium which does not contradict relativity theory. Our new theory explains all these facts and peacefully brings together followers of absolute ether theory, relativistic ether theory and dark energy theory. We just need to mention that the absolute ether medium has a very complex geometric character, which has never been seen before.

Chapter K

Different Scientific Letters

Enlighten The World With Armenian Theory of Relativity (Annus Mirabilis - 21 December 2012)

15 April 2014

Dear Researcher of Truth,

I am pleased to send you our original article in letter format and full article (in Armenian), entitled: "Armenian Theory of Special Relativity - One Dimensional Movement", also other supplemental materials, for your consideration and records – 100 anniversary of Armenian genocide.

In our 4 page article-letter we provide only important results from our main research manuscript by Robert Nazaryan and Hayk Nazaryan, published in June 2013 by Yerevan State University (in Armenian language, 86 pages).

It is our pleasure to inform you and the scientific community that in our main research-manuscript we have succeeded to build a mathematically solid theory of relativity in one dimensional space, which is an unambiguous generalization of the Lorentz transformation equations. Our article is the accumulation of all efforts from mathematicians and physicists to build a more general transformation equations of relativity in one dimension.

It is worth to mention that Lorentz transformation equations and all other Lorentz relativistic formulas can be obtained from the Armenian Theory of Special Relativity as particular case, by substituting $s = 0$ and $g = -1$.

In our main research, we derive general transformation equations for relativity in one physical dimension for homogeneous and anisotropic time-space continuum. Accordingly we build a new relativistic theory and received many amazing relativistic formulas.

As you can see from our article-letter, we are a few steps away from constructing a unified field theory, which can

change the face of modern physics as we know it now. But the final stage of the construction will come after we finish the Armenian Theory of Relativity in three dimensions.

Our published manuscript creates a paradigm for advance studies in relativistic kinematics and dynamics. Armenian energy and momentum formulas (which the world has never seen before), have unpredictable applications in applied physics. For example, by manipulating the time-space constants s and g we can obtain numerous fascinating practical results. Our manuscript would be of interest to a broad readership including those who are interested in theoretical aspects of teleportation, time travel, antigravitation, infinite free energy and so on...

Furthermore Armenian momentum formula for rest particle - is the formula for the future, which shows how we can unleash unlimited free energy from a vacuum.

Please address all correspondence concerning this main research and published manuscript to Ministry of Education and Science of Armenia or Yerevan State University Physics Department. Thank you for your consideration of our scientific research, which can enlighten the World!

Sincerely,

Robert Nazaryan

Physics Department,

Yerevan State University, Armenia

Dirty Games of the Scientific Journals

15 October 2014

Dear Reader,

We have sent our article entitled "Armenian Theory of Special Relativity Illustrated" to thousands of so called theoretical physicists all over the globe and submitted our article to hundreds of major scientific magazines.

Only from a few physicists we got a reply back but they responses seemed like it was coming more from loan brokers or physicians than from scientists. None of them addressed the subject of the article on whether or not our new and generalized relativistic formulas or the new theory are correct or not.

From the editors of the scientific journals we almost always get the same answer: "*not suitable for our journal*", "*not appropriate for our journal*", "*… we regret to inform you that we have concluded that it is not suitable for publication*", "*I am sorry to inform you that your submission entitled 'Armenian Theory of Special Relativity Illustrated' will not be considered for publication … and will be removed.*"

Every time when I receive a rejection letter from editors, I remember this horrible game which I have heard a long time ago that was played with small fishes by people to satisfy their own sadistic nature. The horrible game goes somewhat like this. A group of sick twisted people raising fishes in a dirty and poisonous environment and then putting them in clean unpolluted water where the fishes start to suffer and die because they are not used to living in such a clean environment. All this is happening to satisfy the sadistic nature of a few men that enjoy watching how fishes die.

The reason why I am telling you this sad story is because every time I receive rejection letters from scientific journal editors, I always remember this horrible game.

These "poor fishes" which I speak of in this case are all scientific journal editors who are born in an intoxicated scientific environment and educated by design in pseudo-scientific universities which we have today, but more importantly they can never even imagine the existence of a pure theoretical physics.

Otherwise how can we explain the fact that they don't even have the ability or decency to just compare with each other two simple algebraic formulas and conclude which one is more general and elegant?

What factors are blinding them to see the reality and generality that is so obvious?

I have just one logical explanation that they all have been educated in corrupt "toxic" institutions and they are working in the companies with a hidden agenda and that's why they never even assumed the existence of pure "clean" theoretical physics.

That's why they cannot stand to see simple or general and elegant physical formulas. They also get frightened by even just reading the title of the article which causes them to not look at the content at all.

But their days are numbered and ether energy age has begun!

Robert Nazaryan

Physics Department, Yerevan State University, Armenia

17 December 2014

Dear German Researcher,

First I would like to thank you for your letter and genuine questions.

Second I hope you have had a chance to read my letter to Her Excellency Chancellor Angela Merkel which shows my philosophical and political mindset that I am carrying for more than 40 years.

Our research is really original, which has the aim to end the chaos and speculations in the theory of relativity and in theoretical physics at large, using only mathematical logic to build a theory of relativity in one dimension, then in 3 dimensions and finally to build the unified field theory.

This situation is very similar to that of Euclid's time, where Euclid with the power of logic and a few axioms ended all the speculations and confusion in geometry and brought peace to mathematics.

As I understand it after Heisenberg's quantum theory (1925) and Dirac's relativistic quantum theory (1928) – theoretical physics came to a halt. Eighty five years have passed from those days and no progress has been made in theoretical physics at all. And in that existing long lasting vacuum in theoretical physics, opportunist "physicists" are promoting artificial and false theories like "string theory", "super string theory", "K theory", "big bang theory" and so on, which is leading Europe and the whole world into another dark age.

Dear fellow researcher I have for many years been thinking about how to use rest particle asymmetric momentum energy and till now I don't have any idea how to do that because I am not that good of an experimental physicist. We need a new Faraday who can in some spectacular way tune into very complex time-space fabrics and harness energy from it like a windmill.

We need to trigger the scientific community and motivate current brilliant experimenters to use their brain power to unleash that universal force from Pandora's Box. For that to occur we need to spread our theoretical results across scientific communities so it can reach those experimental physicists than can finish the job.

Please don't worry about so called paradoxes. This is the job of some class of people who are not good in mathematics. If somebody succeeded in using our formulas of rest particle momentum to harness the energy from vacuum, then all the paradoxes will come to an end.

Now back to answering your question about twin paradoxes or any other paradoxes. Because of the existence of Universal Absolute Inertial System all other inertial systems are moving against that absolute system and that's why that direction is making relativity transformations and relativistic formulas asymmetric. For example if two inertial systems have

the same rod with length l, then observers in both inertial system see different lengths. In Lorentz relativity theory they are equal; this is the way which we understand the phenomena RELATIVE. But not anymore because of the existence of Absolute Rest Inertial System, space becomes asymmetric. Therefore, now is the time for Asymmetric Relativity. Please check our formulas and results in the article "Theoretical Foundation of Infinite Free Energy". I am attaching it again to this E-mail. In the meantime this article (11 pages) is still unpublished and I cannot find a publisher brave enough to publish it.

Dear friend, it would be great if you had connections that can help us publish our article so that way we can reach that particular experimenter who can build that infinite energy device, which can fuel the cosmic spaceships of the near future.

We need to reopen NASA's BPP program which will bring forth the dawn of a new technological era.

100 years of inquisition in physics is now over and ether energy age has begun!

Robert Nazaryan

Physics Department,

Yerevan State University, Armenia

The time has come to reopen NASA’s and DARPA’s exotic programs

08 March 2015

Hello Dear Fullerton Physics Department Professor,

My name is Hayk Nazaryan and I am currently a physics graduate student at California State University Northridge. I first heard about you a few days ago while I was watching the Ancient Aliens documentary on Stargates and I felt the necessary urge to write you a letter. My father Robert Nazaryan is a retired theoretical physicist and has been doing research for more than 40 years (on and off) in particular subjects such as relativity and the unified field theory. In June 2013, in Armenia, we published our book (where I am written as the coauthor) titled “The Armenian Theory of Special Relativity in One Dimension” in Armenian language. In our book we mathematically derive a whole new and more general set of relativistic transformation equations that are far more rich and beautiful than today’s Lorentz Transformation equations. This book we believe sets the ground stone for a whole new physics that is yet to come. This main research as a short communication has been published in “Infinite Energy” magazine, volume 20, issue 115, May 2014.

Couple months later we published our new article entitled “Armenian Theory of Special Relativity Illustrated” (11 pages) where we compare Armenian relativistic formulas with Lorentz relativistic formulas and illustrate how general and rich our Armenian Theory of Special Relativity really is with a spectacular build in asymmetry. That build in asymmetry is the essence and exciting part of the Armenian Theory of Relativity which is reincarnating the ether as a universal rest reference medium.

Recently we published another article titled “Time and Space Reversal Problems in Armenian Theory of Relativity” (17 pages) where we show that Armenian Theory of Special Relativity does not contradict in quality with legacy relativity, but gives a more detailed and fine description of that symmetry in physics and shows that Armenian Theory of Relativity is a Theory of Asymmetric Relativity.

Dear professor we know that today’s current technology which wreaks havoc on the environment is not the future and that there is a whole new science out there that is on the brink of being unleashed if only more like minded people like us worked together towards that goal. When we heard you talk on the show we were happy to know that there are others out there that think like we do and have an open mind to the possibilities of a creating a whole new technology that will be harmonious with nature.

The time has also come to reopen NASA’s BPP program or DARPA’s Casmir Effect Enhancement program, but this time using our everywhere existing Armenian asymmetric formulas. This will lead us to harness infinite energy from rest particle’s momentum just as we harness energy from the wind using a windmill. Going in this path we will bring forth the dawn of a new technological era.

To this E-mail we have attached our three latest articles for your consideration and we hope that by using your exceptional experimental skills and our Armenian asymmetric relativistic formulas we can in the very near future design an implosion engine for spaceships and find a way to build a device which can harness infinite energy from a vacuum and also travel across our galaxy using stargates.

100 years of inquisition in physics is now over and Ether Infinite Energy Age has begun!

Thank you for your time and I will be looking forward to your response.

Haik Nazaryan

hayk@nazaryan.am

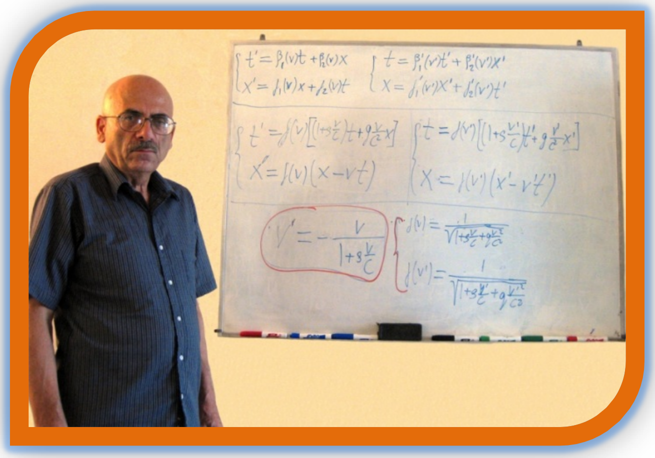
CSUN Physics Department

Our Published Articles and Books

- "Armenian Transformation Equations In 3D (Very Special Case)" , 16 pages, February 2007, USA
- "Armenian Theory of Special Relativity in One Dimension", Book, 96 pages, **Uniprint**, June 2013, Armenia (*in Armenian*)
- "Armenian Theory of Special Relativity Letter", **IJRSTP**, Volume 1, Issue 1, April 2014, Bangladesh
- "Armenian Theory of Special Relativity Letter", 4 pages, **Infinite Energy**, Volume 20, Issue 115, May 2014, USA
- "Armenian Theory of Special Relativity Illustrated", **IJRSTP**, Volume 1, Issue 2, November 2014, Bangladesh
- "Armenian Theory of Relativity Articles (Between Years 2007 - 2014)", Book, 42 pages, **LAMBERT Academic Publishing**, February 2016, Germany
- "Armenian Theory of Special Relativity Illustrated", 11 pages, **Infinite Energy**, Volume 21, Issue 126, March 2016, USA
- "Time and Space Reversal Problems in the Armenian Theory of Asymmetric Relativity", 17 pages, **Infinite Energy**, Volume 22, Issue 127, May 2016, USA
- "Foundation Armenian Theory of Special Relativity In One Physical Dimension By Pictures", Book, 76 pages, August 2016, **print partner**, Armenia (*in Armenian*)
- "Foundation Armenian Theory of Special Relativity In One Physical Dimension By Pictures", Book, 76 pages, September 2016, **print partner**, Armenia (*in English*)
- "Foundation Armenian Theory of General Relativity In One Physical Dimension By Pictures", Book, 84 pages, November 2016, **print partner**, Armenia (*in Armenian*)
- "Foundation Armenian Theory of General Relativity In One Physical Dimension By Pictures", Book, 84 pages, December 2016, **print partner**, Armenia (*in English*)

First Armenian publication – June 2013, Armenia, ISBN: 978-1-4675-6080-1
Illustrated Armenian Publication (Volume A) – August 2016, Armenia, ISBN: 978-9939-0-1981-9
Illustrated English Publication (Volume A) – September 2016, Armenia, ISBN: 978-9939-0-1982-6
Illustrated Armenian Publication (Volume B) – November 2016, Armenia, ISBN: 978-9939-0-2059-4
Illustrated English Publication (Volume B) – December 2016, Armenia, ISBN: 978-9939-0-2083-9

Authors Short Biographies



Robert Nazaryan, a grandson of surviving victims of the Armenian Genocide (1915 - 1921), was born on August 7, 1948 in Yerevan, the capital of Armenia. As a senior in high school he won first prize in the national mathematics Olympiad of Armenia in 1966. Then he attended the Physics department at Yerevan State University from 1966 - 1971 and received his MS in Theoretical Physics. 1971 - 1973 he attended Theological Seminary at Etchmiadzin, Armenia and received Bachelor of Theology degree. For seven years (1978 - 1984) he was imprisoned as a political prisoner in the USSR for fighting for the self-determination of Armenia. He has many ideas and unpublished articles in theoretical physics that are waiting his time to be revealed. Right now he is working to finish "Armenian Theory of Relativity in 3 Physical Dimensions".
He has three sons, one daughter and six grandchildren.

Hayk Nazaryan was born on May 12, 1989 in Los Angeles, California. He attended Glendale community College from 2009 - 2011, then he transferred to California State University Northridge and got his Master of Science degree in physics 2015. He is now teaching as an adjunct instructor at Glendale Community College.