PARIS M. HEROUNI

ARMENIANS AND OLD ARMENIA

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ARCHAEOASTRONOMY
LINGUISTICS
OLDEST HISTORY

YEREVAN, 2004

ՊԱՐԻՍ Մ. ՀԵՐՈՒՆԻ

ՀԱՅԵՐԸ ԵՎ ՀՆԱԳՈՒՅՆ ՀԱՅԱՍՏԱՆԸ

(ՀԻՄՔԵՐԸ ՀԱՅՈՑ)

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ԵՐԵՎԱՆ, 2004

ПАРИС М. ГЕРУНИ

АРМЯНЕ И ДРЕВНЯЯ АРМЕНИЯ

АРХАЕОАСТРОНОМИЯ
ЛИНГВИСТИКА
ДРЕВНЕЙШАЯ ИСТОРИЯ

ЕРЕВАН, 2004

TO THE BRIGHT MEMORY OF

MY FATHER ***MISSAK HEROUNI (SACHIAN)***

AND

MY MOTHER ***SEDDA HEROUNI (AZATTIAN)***

THIS BOOK IS DEDICATED

I am very grateful to Mrs. Zarouhi & Mr. Hrach Davidyan and Mrs. Elvina Makarian (USA) for their financial support in this book publication.

Paris Herouni

"If I were asked where one can see the most
miracles on our planet, I would name Armenia.
... I loved your country, her gifted people.
And leaving from, I have left here my heart."

ROCKWELL KENT
1962 [107]

INTRODUCTION

This book is about the Armennian* nation, its real prehistoric and ancient history recovery, about its language, knowledge, national state, civilization and development from the very beginning until 301 AD when in Armennia the Christianity was adopted as a State religion.

The recovery of Armennian old history is very important also for all the World old history because the history of old civilizations on the Earth has now too many ununderstandable and unexplained facts and enigmas. The answers to many of them are in the Armennian old history.

It seems this book is the first scientific attempt to demonstrate that Armennian civilization, arisen in the Armennian homeland, is the first in the World and the cradle of all other civilizations.

I understand that this new concept seems very unusual (though it is not in contradiction with Bible) and it is too difficult to accept it, because the old history of the World is now very distorted and Armennian old history is made out by political reasons mainly. Ambitions "to forget" the words Old Armennia, Armennians, Armennian language also continue now. For example, now instead of "Armennoid race" is often in use "Anterior Asia race", instead of "Armennian Culture" - "Cour-Aracsian Culture", instead of "Armennian Mesopotamia" – "North Mesopotamia", instead of "Armennian Highland" – "Eastern Turkey", etc. Even there was an attempt to rename Mount Ararat.

But I believe that one day the truth will win. Someone must begin the fight for the truth and I am doing it, in spite of too much potential opposition from many sides.

I understand also that the problem I want to solve is scientifically very complex. It is related to different specific directions such as history, archaeology, anthropology, linguistics, ethnography, astronomy, mathematics, geo-

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* Today the form "Armenia" is in use, phonetic pronunciation of which is [armi:nia]. But it is wrong. The accurate pronunciation should be [armenia]. So in this book everywhere I have written double "nn", i.e. "Armennia", to show everybody the right pronunciation.

logy, mineralogy etc. It was necessary to collect data from them to one unit. I have read many special books and made many notes and calculations during the last 15 years. I hope this book can demonstrate the truth. Of course, the problem is too big and this book is just the first step on the way to its solution. I think, the final will be achieved by scientists of new generation. This process has begun now in Armennia.

Writing this book I don't aspire to fame, to make revolution in the history. In my main scientific directions, which are radiophysics, radiotechnics, radioastronomy, I have enough serious achievements in the area of large antennas, telescopes, radioholography, radar, antenna metrology, solar power units, etc., which are known in the World and in use in developed countries. But being an Armennian scientist, member of the Armennian National Academy of Sciences, I can not be apathetic to the present big distortions of truth about my country, my nation.

There are very many facts in honour of my concept. The main and important of them are presented in this book, in three main parts: PART 1, "Carahunge – the Prehistoric Wonder in Armennia", about the big and developed Observatory, the oldest one in the World, which was in active operation more than 7500 years ago; PART 2, "Armennian Language Analysis", about large, important and interesting information which is kept in the language and comes from the oldest times; PART 3, "Armennian Old History", about the beginning of Armennian civilization in Armennia more than 40 thousand years ago and its development until the Christianity adoption in 301 AD.

Fortunately I am not alone in my opinion about big distortions in the World old history. U.K. scientist Graham Hancock in the beginning of his book "Fingerprints of the Gods" (Heineman, London, 1995) expresses gratitude to five researchers (giving their names) "who saw that there was something very distorted in the World history, who have courage to stand against that their brain did not agree with, and initiated by this the evolution of basic knowledge which become already irreversible".

This book is scientific one, but I aspired to make it at the same time as popular as possible. I hope the book will be interesting for many readers in many countries.

ACKNOWLEDGEMENT

I am very thankful to Dr. J.G.Gallagher (DERA, U.K.) for discussing and editing my preliminary original English text of PART 1, to Dr. Sci. S.M.Martirosyan, Ph.D. K. Martirosyan for computer processing of the final text, tables, figures, and also to my wife Angela Herouni for edition and grammatical correction of my English.

PART 1

CARAHUNGE – THE PREHISTORIC WONDER IN ARMENNIA

"Per Apera ad Astra"
("Through Difficulties to Stars")

In Armennia, near town Sisian (200 km from Yerevan, capital of Armennia) there is the prehistoric Monument, consisting of hundreds large standing Stones (Fig. 1). Many of these Stones contain holes running through their upper part (Fig. 2).

Archaeological excavation had been carried out only near (around) the Monument, where ancient sepulchres and a settlement dated III-II millennium BC were discovered [1 - 4]. But the Stone Monument itself was not investigated. There have only been just assumptions about these Stones containing likely religious [1], spiritual [2] or other significances. Local residents of Sisian call the Monument "Standing Stones" or "Protruding Stones" and tell that it was built presumably for religious or fortification purposes and also that old people were looking at stars through the holes.

The first supposition about eventual astronomical function of the Monument (along with other surmises) was published by archaeologist O.Khnkikian in 1984 [4].

1.1. FIRST RESEARCH

Believing to my supposition that the Monument was a very old and big Observatory, I decided to do my own investigation using astronomical methods. I have undertaken (at my own expense) scientific expeditions (8 persons and 4-day-long each time) on the equinox and solstice days in 1994, 1995, 1996, 1997, 1999 and 2001. The detailed topographic map of the Monument, as well as the latitude, longitude, magnetic deviation of place, angular heights of ridges on the horizon, azimuth and elevation angles of the holes in Stones and other features were measured. The catalogue of 223 stones with their sizes and condition was completed and all these Stones were numbered. Many observations of sky sources, photo and video films of the moments of Sun and Moon rising, setting and culmination were done. A comparison of measured and calculated values was completed. Many prehistoric Stone Astronomical Instruments were discovered and accuracy of them was determined. Furthermore, I have established the date of the Observatory, using the Earth axis precision and other laws.

The results of Carahunge research are printed in Armennia [5, 7, 8, 9, 11, 12, 14], Russia [10, 16], Italy [6, 17], Canada [13], France [15], Argentina [17a].

This book contains results of all 6 expeditions and of many computer calculations, especially for stars rising, setting and culmination moments in the past, to demonstrate the age of Carahunge.

I consider now that the Carahunge Monument had three main functions: a) Temple of AR (Sun in Armennian) – Main God of old Armennia, and of His "Secretary", Tir God – patron of science, written language and art, b) Large and developed Observatory and c) University.

It will be demonstrated in this book that Carahunge Observatory was very developed and in active operation more than 7500 years ago (VI millennium BC) during more than 5500 years (I millennium AD), so it is the oldest Observatory in the World.

It is also obvious for me that the Carahunge should be researched much more thoroughly, and also by archaeologists and different specialists during many years.

1.2. THE SITE AND NAME OF MONUMENT

The Carahunge site is on latitude of 39° 34′ and longitude of 46° 01′ on the mountain plateau having altitude 1770 m and occupies a territory of about 7 hectare on the left side of the Dar river canyon, the tributary of the river

Vorotan (at 2 km). The underground river comes to the surface 5 km from the Monument and at 4 km, near village Shakki, it drops down a fall of 30 m.

In the distance of 29 km (linear) to the East from the Carahunge Monument is the village Carahunge, near new town Goris. In the distance of 80-90 km to N-E, in Lernayin (Nagorni) Karabakh or Artsakh there are two another villages having the same name Carahunge. Near one of them there are holes in rocks (not investigated yet).

In Armennia in total (including the Historical Armennia) there are many old megaliths, menhirs, stone observatories, old universities, etc. Especially in region of Carahunge Monument there are many old megaliths, tombs and universities, as some famous traditional early medieval universities and Christian old abbeys in Tatev, Gladzor, Shoushi.

Armennian historian Stepanos Orbelian in his book "History of Syunic" (I-XII centuries) mentioned that in Tsluk (Yevalakh) region of Armennia, near town Syunic or Sisakan (now Sisian) was a village Carunge [18]. This name in Armennian means "Stone Treasure" or "Foundational Stones".

The word "car" in Armennian is "stone", the word "hunge" or "hunch" – is "voice", "echo", "sound". So the name "Carahunge" means "Speaking Stones".

Having above-mentioned data I called the Monument "Carahunge", i.e. Speaking Stones. Indeed, these Stones told old astronomers much interesting information about Space, and now also tell us (and will tell) much new and unexpected information about old times.

1.3. THE STONES OF CARAHUNGE

The Carahunge Monument consists of the following parts: the Central Circle, the North Arm, the South Arm, N-E Alley, the Chord (crossing the Circle) and Separate Standing Stones (see map, Fig. 3). General view of Carahunge central part from helicopter is shown in Fig. 4.

The heights of the stones range from 0.5 to 3 m (above ground) and weight up to 10 tons. They are basalt (andesit) stones, eroded by time and covered with moss and lichen of many colours. The inside surface of holes preserved much better. There are also many broken and unnumbered stones.

Stones were picked up from neighbouring canyon and lifted (hauled) by animals (bull, horse). Then in the Observatory the holes in stones and astronomical instruments were made.

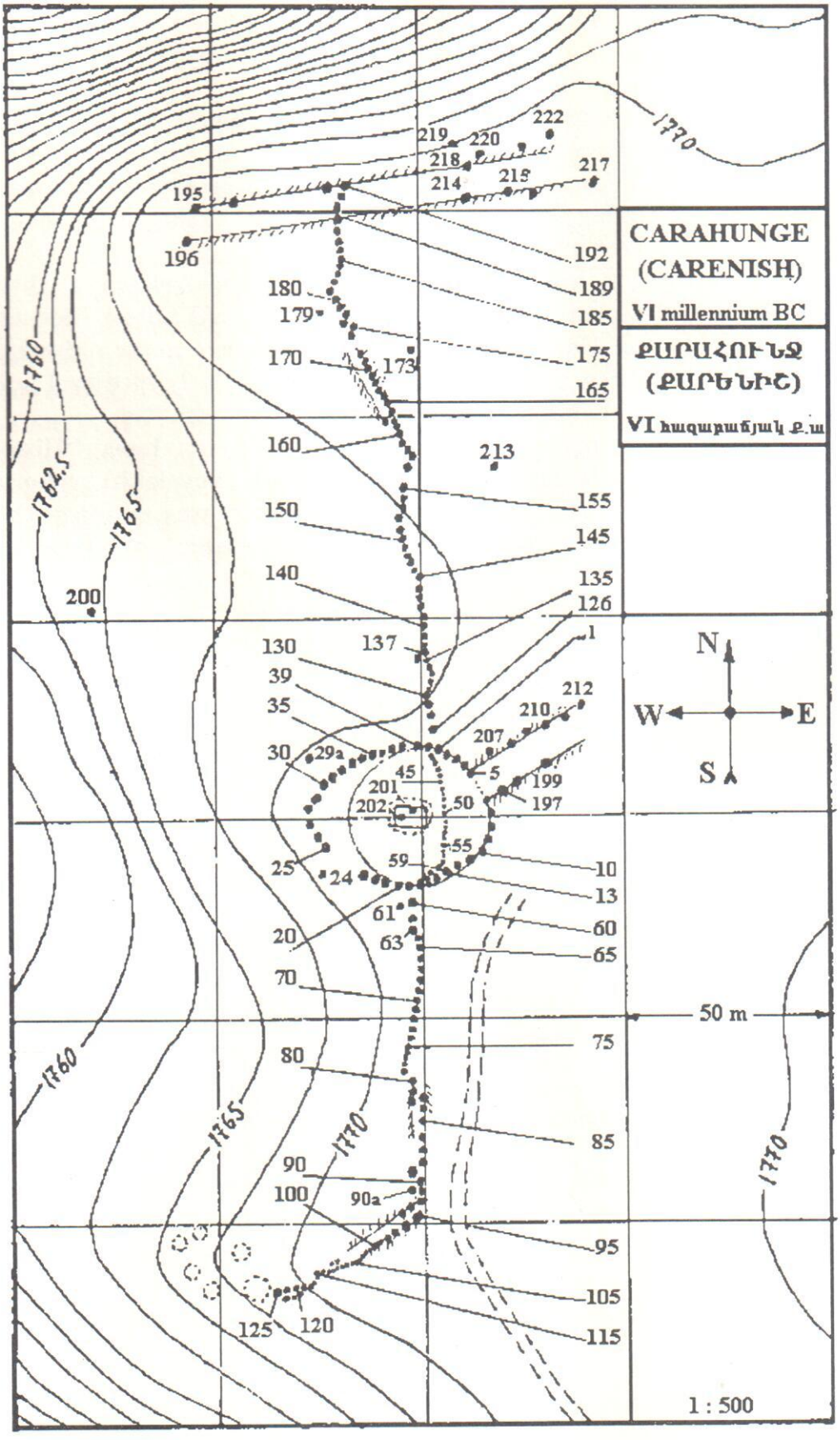

Fig. 3. The Map of Carahunge Monument

The Monument was designed, built and used by Armennians, native inhabitants, who created here civilization more than 40 thousand years ago (see below, PARTS 2,3).

The information about quantity and condition of numbered 223 stones is in Table 1.

Table 1

CARAHUNGE STONES									
	Numbers	Total quantity	Total with holes	Stan-ding	Standing with holes	Lying	Lying with holes	Declining	Dam-aged
Central Circle	1-39 +29a	40	-	15	-	9	1	10	2
Chord	40-59	20	6	8	3	1	-	3	6
South Arm	60-125, +90a,+62a, 64a, 65a	70	27	25	16	32	10	2	17
North Arm	126-196 214-222	80	49	28	18	35	30	3	21
NE Alley	197-199 208-212	8	2	2	-	4	2	2	3
Separate Stones	200-202 207, 213	5	1	1	-	2	1	-	-
Total		223	85	79	37	83	44	20	49

1.4. THE CENTRAL CIRCLE

It consists of 40 stones and is egg-shaped to the West, with sizes of 45 x 35 m. Approximately in the middle of Circle there are ruins of perhaps some religious temple having proportions about 7 x 5. It is interesting that the same proportions has the famous ancient Garni Temple (20 km from Yerevan) of Sun God AR (see PART 3, Fig. 62).

Apparently the Central Circle and NE short Alley (directed to the sunrise point in Summer solstice day) served for solemn ceremony in honour of AR.

There were no sacrificial altars (Stones) and sacrifice in Armennia. The AR God was kind to nature, to people, to Armennians – His children. He gifted life generously and unselfishly.

1.5. THE NORTH ARM

It goes to North from the Central Circle and consists of 80 stones (numbered), 49 of which have holes. The length of the Arm is 136 m and it has at the northerly end of the Arm western and eastern alleys of about 50 m length each one.

1.6. THE SOUTH ARM

It goes to South from the Central Circle for 75 m, then turns approximately to WW-S and continues for 40 m more. It consists of 70 stones (numbered), 26 of which have holes. After the end of South Arm there are circular tombs 3 m to 8 m in diameter.

1.7. NORTH-EAST ALLEY

It has a length of 36 m and width of 8 m and is directed approximately to the Sunrise side at the Summer solstice day. The Alley includes 8 stones (numbered, including lying ones), 2 of which (lain) have holes. All NE Alley is on bank of about 0.5 m in height.

1.8. THE CHORD

Chord crosses the Central Circle and is as the continuation of North Arm pending to connect it with South Arm. The Chord includes 20 (numbered) relatively small stones, 6 of which have holes.

1.9. SEPARATE STANDING STONES

They stay at the East as well as at the West sides of the Arms at a distance of up to 90 m and more. There are minimum 5 of such stones. One of them (lying) has a hole. Possibly Separate Stones have been used as Heel stone in Stonehenge (as bead on gun).

1.10. ABOUT SOME STONES

Stones №№ 50, 71, 85 have two holes each. The lying stones №№ 90, 92, 125 have holes pierced partially (are not finished) and these stones are not too mossy. This suggests that both sky observing and new instrument making work in Observatory were carried on simultaneously over a long period of time and were suddenly interrupted.

Many stones are declined or lying extracted from ground. Many stones are broken (especially their hole parts).

1.11. SOME PARTICULARITIES

The North and South Arms have the slit paths of about 1-1.5 m in width, paved (covered) by stone plates (Fig. 5). Along paths in opposite side of Stones there are small stones, which perhaps served as "seats" for observers. The seats probably had also a wooden superstructure to fix the head of observer.

Many Stones look like men and animals (Fig. 6).

1.12. MEMBERS OF EXPEDITIONS

In Fig. 7 some regular members of our expeditions are shown: (from left) camera-man M.Nersesian, consultant V.Azoyan, historian P.Safian, P.Herouni, tourist manager O.Bakhshian, film director R.Hovanesian, driver S.Manoukian, mechanic V.Karapetian. A lot of work was done also by topographers S.Hakopian and M.Hovsepian, photographer G.Bagdasarian, astronomer R.Mnatsakanian, programmer L.Tatevosian and many others.

In Fig. 8 a working moment of our expedition in Carahunge in 1994 is shown.

It was Dr. of History P.G.Safian, who first paid attention to the stones №№ 207-222 at the North part of the Monument (Fig. 9).

1.13. OUR GUESTS' FINDINGS

Dr. H.P.Kleiner, the specialist (studied also archaeology) from Switzerland, who took part in our expedition in 1995 (Fig. 10), paid attention to the stone № 68 having a bowl with water, the reflected ray from the surface of which composes a definite angle with top of the neighbouring stone № 69. He noted separately standing stone № 200 that could be an analogue of the Heel stone of Stonehenge. He also found a little cutter made from obsidian (Fig. 11).

Professor N.G.Bochkarev (astronomer), President of Euro-Asian Astronomical Society (Moscow), who took part in our expedition in 2001 with his two students (Fig. 12), discovered another Periscope-Stone (№ 90a), which was lying between other lying stones near South Arm Stone № 90 (Fig. 13). "Carahunge is a very serious Observatory" – was the first main opinion of Professor Bochkarev, who further using other methods also came in 2003 to the same estimation of the Carahunge Observatory age equal to 7500 years and agreed that Carahunge is the World oldest Observatory [96].

With the 7500 years of Carahunge age agreed also Armennian historian Professor G.A.Galoyan [75, p. 12].

1.14. THE HOLES IN STONES

The Holes all the way through Stones in Carahunge is a unique phenomenon in ancient monuments (observatories). The Holes made in these massive Stones ensure the highly stable and accurate pointing directions. Some Holes in Stones are shown in Fig. 14. The weight and hardness of the Stone make it a very reliable instrument for observing celestial objects over many centuries. The long time stability of these stone astronomical instruments is even much more than of modern telescopes.

Most of holes are directed to different points of the real horizon. Some holes point above horizon and look up to the sky.

In Table 2 the Azimuth and Elevation angles of unbroken (or almost unbroken) Holes measured by our expeditions in 47 normal standing Stones are presented.

The Holes are 4-5 cm in diameter and are located 15-20 cm below the top of the Stones. From the both sides Holes are broadened conical to diameter about 12 cm. The surface of the inside of the Holes is clean and smooth as if they had been polished (Fig. 14). Holes had been made by instruments having obsidian enters put in fired clay.

The Holes in Stones are the clearest indication that Carahunge had the astronomical function. They even allow to calculate the age of Carahunge Observatory (and of each Stone with Hole) with high accuracy, as it is shown below.

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Table 2. Azimuth and Elevation of unbroken Holes in normal standing Stones

Table 2

SOUTH ARM				
№ №	Stone Number	Azimuth (degree) compass	corrected	Elevation (degree)
1.	60	168	170	7.3
2.	62	180	181	50
3.	63	100	102	3
4.	64	265	267	5.5
5.	66	70	76	7.5
6.	67	90	94	4
7.	71	285	287	33
8.	76	125	125	18.5
9.	78	265	267	24
10.	79	90	94	2.5
11.	81	255	257	20
12.	84	325	327	15
13.	85	70	76	10
14.	89	80	85	3.5
15.	97	135	134	25
16.	98	135	134	10
17.	99	305	316	6
18.	108	230	232	2
19.	109	0	5	18
20.	110	135	134	5.5
21.	122	325	327	16

NORTH ARM				
№ №	Stone Number	Azimuth (degree) Compass	corrected	Elevation (degree)
1.	126	40	43	6
2.	128	0	5	9
3.	129	110	111	7
4.	137	0	0	90
5.	138	290	291	23
6.	139	245	248	10
7.	143	25	28	8
8.	146	215	216	17.5
9.	147	135	146	10
10.	151	215	216	5.5
11.	152	0	5	5
12.	160	255	257	7
13.	161	60	65	4.5
14.	162	220	222	10
15.	163	230	232	5
16.	164	215	216	7
17.	165	250	252	10
18.	177	229	227	13
19.	181	335	338	7
20.	183	115	116	21.5
21.	187	60	64	7.5

CHORD				
№ №	Stone Number	Azimuth (degree) Compass	corrected	Elevation (degree)
1	40	90	94	1.5
2	44	310	322	15
3	51	310	311	2.5
4	53	180	181	22.5
5	55	260	262	20

In the Table 2: Az = 0° – is the North,
Az = 90° – is the East, etc.

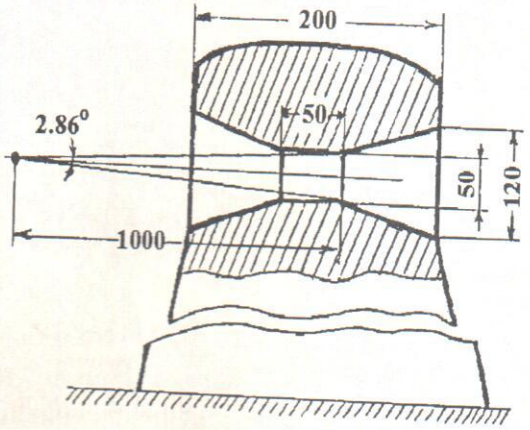
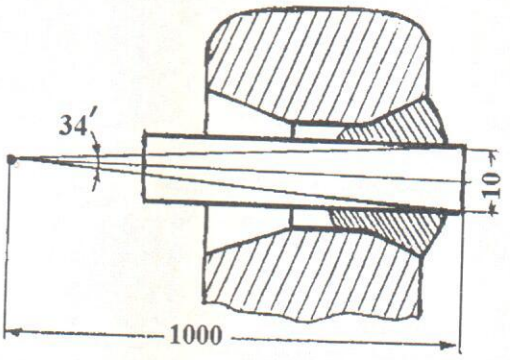


Fig. 15. Scheme of the Hole in Stone



(Dimensions in mm)

Fig. 16. Scheme of the Hole with pipe

If the eye of observer is at a distance of 1 m from the external edge of cylindrical part of the Hole, then the horizon is seen in angular limit 2.86° = 172′ (Fig. 15).

Considering that position of the Sun or Moon may be fixed by the eye in the centre of the Hole with accuracy equal to its angular size (32′), we achieve the accuracy of observation (or fixing) of their position equal to about (172-32) : 2 : 20 = 3.5′ (or 14 sec. of time).

I presumed that this accuracy could be increased if to observe through a pipe (made, for example, from bamboo or rush having inside diameter about 10 mm) interposed and fixed in a Hole by means of clay (Fig. 16).

For a particular moment, such as Sunrise, it is necessary to correct the position of pipe. This can be done at the moment while clay is still wet. The next day, when the clay hardens, it can be removed (with pipe) from the Hole for using again for the same event next days or year (years). Using the pipe, the horizon angular limit will be 34′ and the accuracy of the Sun and Moon observations, from the same distance of 1 m, will be equal then to about (34-32) : 2 : 2 = 0.5′ = 30″ (or 2 sec of time!). For the star and planet observation it was possible to use a thin yarn cross in pipe and then the accuracy will be equal to 34′ : 2 : 20 = 0.85′ = 51″ (or 3.4 sec. of time).

To work with said high resolution it was necessary also to fix the head of observer (his chin and brow, i.e. eyes) using some simple wooden construction.

In the autumn equinox of 1997 and days close to it we made successful experiments with the pipes (having an inside diameter of 1 cm) for the Sun and Moon rising and setting moments observation using the stones №№ 66, 67, 79 and others. In Fig. 17 the stone № 66 with the pipe in the hole is shown. Fig. 18 presents three of our pipes in the clay, removed from the holes. Some of the results of our observations are given in Fig. 19 - Sunrise moment through the pipe in Stone № 67 on 22 September 1997, and in Fig. 20 - Moonrise through the pipe in Stone № 79 on 21 September 1997. This experiment shows the possibility of using pipes in Carahunge many thousand years ago.

In favour of the pipes using in Carahunge times testifies also the important fact that the edges of all Holes are conical broadened. Using a sketch as

Fig. 1. Carahunge (fragment). A line of standing stones.

Fig. 2. Carahunge (fragment). Stones with holes.

Fig. 4. Carahunge, central part. A view from helicopter.

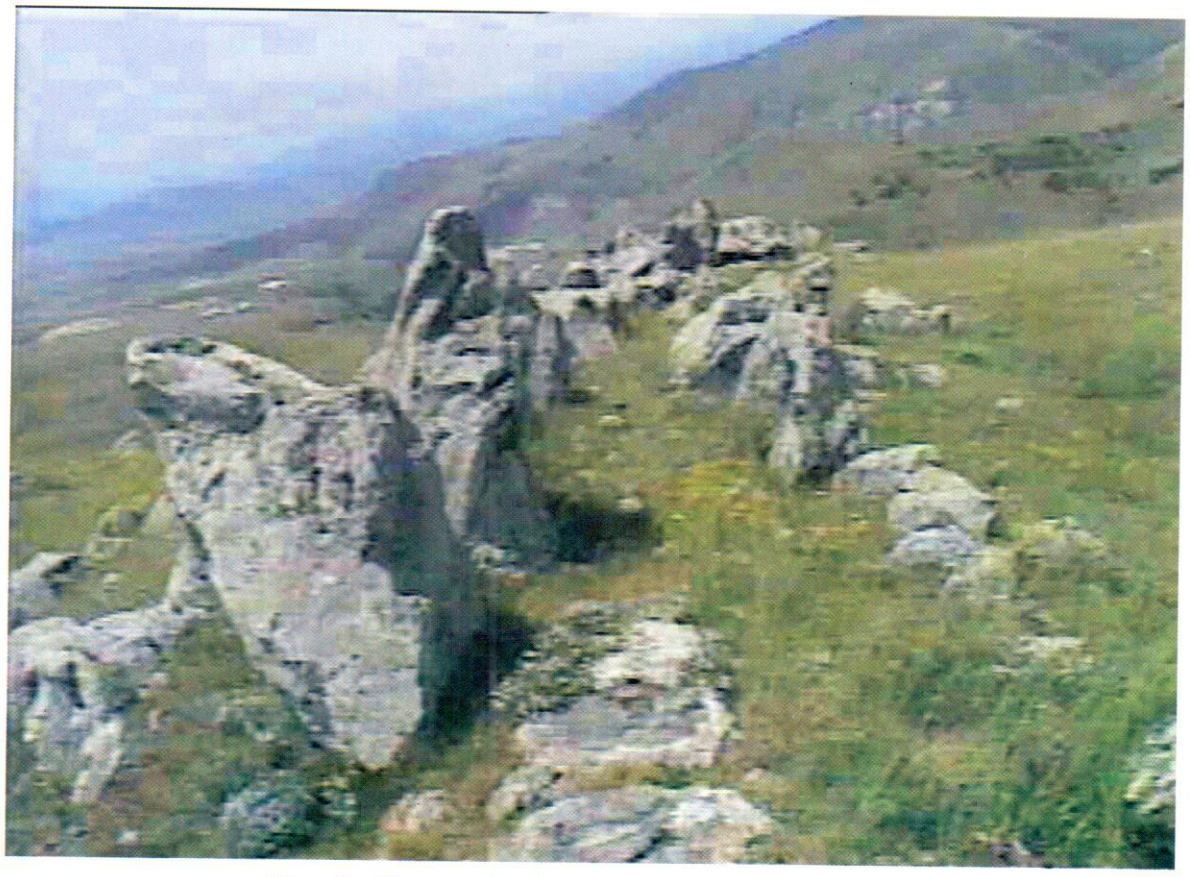


Fig. 5. The path along stones of South arm

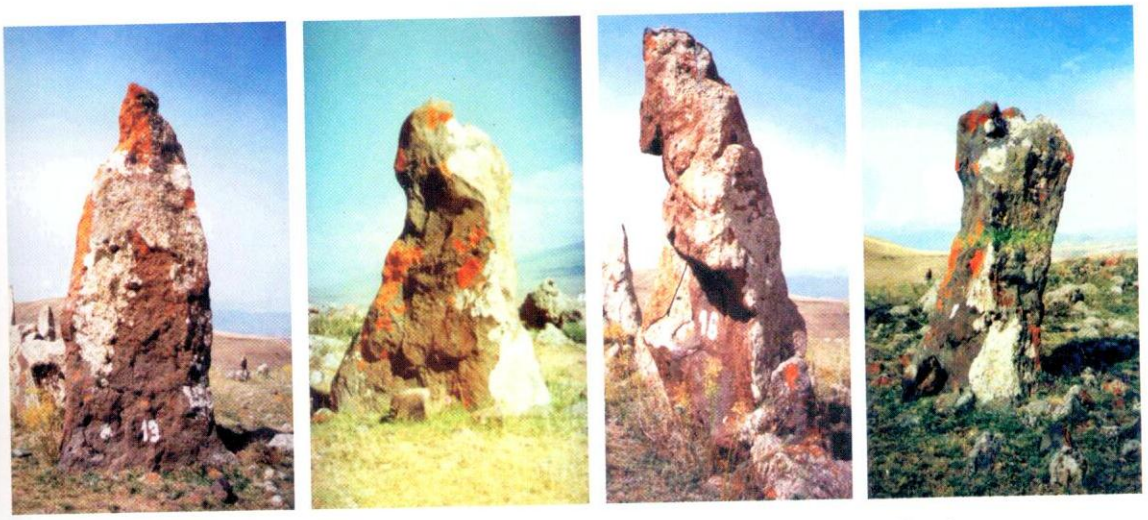


Fig. 6. Stones like king and animals (bear, dog, lion)

Fig. 7. Regular members of our expeditions in Carahunge

Fig. 8. Working moment at first expedition in 1994

Fig. 9. Member of expeditions PhD P.G.Safian near lying stone

Fig. 10. Our guest H.P.Kleiner from Switzerland in Carahunge, 1995

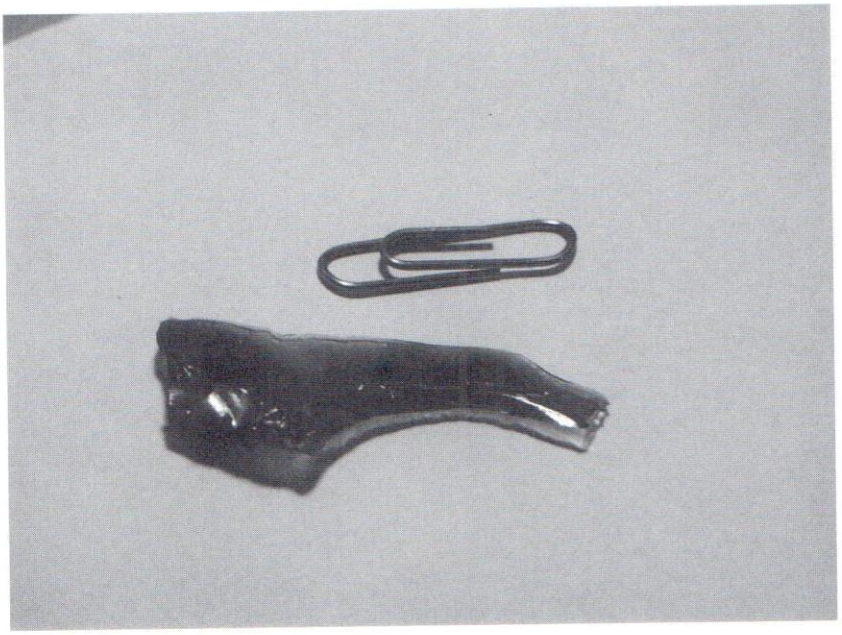


Fig. 11. Small cutter from obsidian

Fig. 12. Our guest Prof. N.G. Bochkarev from Moscow in Carahunge

Fig. 13. The new found Periscope-Stone No 90a

Fig. 14. Holes in stones

Fig. 17. Stone No 66 (Eagle) with pipe in Hole

Fig. 18. Pipes in clay, removed from Holes

Fig. 19. The Sunrise moment through pipe in Hole of Stone No 67 on 22.09.1997

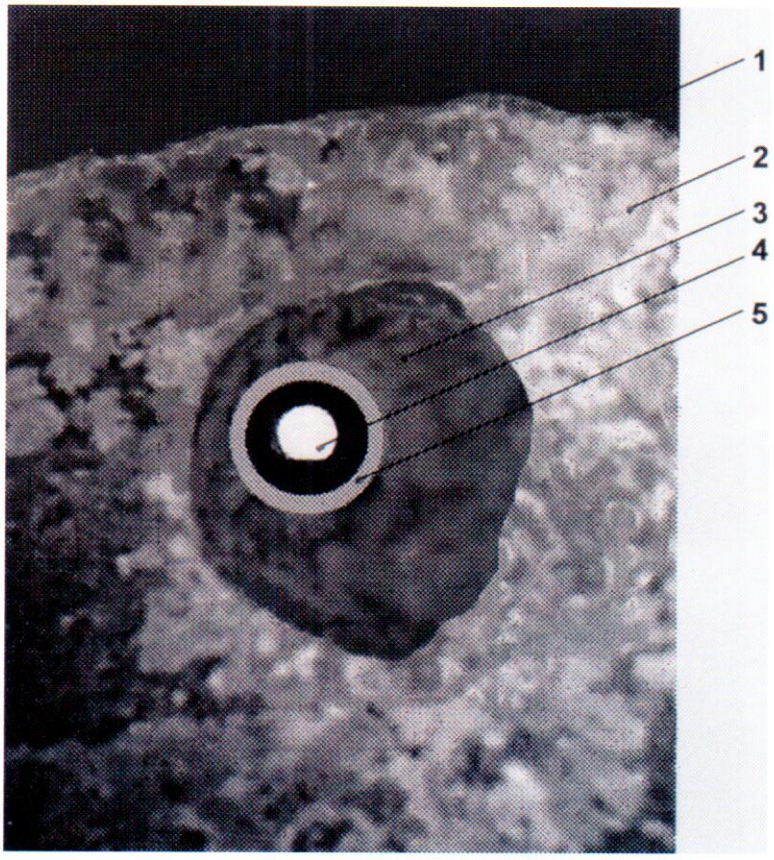


Fig. 20. The Moonrise moment through pipe in Hole of Stone No 79 on 21.09.1997
(1-sky, 2-Stone, 3-clay, 4-the Moon, 5-pipe)

in Fig. 16 we can calculate that the pipe with inside diameter of 10 mm and outside diameter of 24 mm (so wall thickness is 7 mm, which becomes bamboo) can be declined in Hole to the angle ±25° to any side from hole axis. Thus, such a pipe, having the high angular (and time) resolution for observations, gives the possibility to be fixed in Hole for a wide angular directions and to use each Hole for different celestial sources observation or the same source for different moments of time. This is the reason why Holes have been made with conic broadening in Stones.

The presence of Holes with narrow diameter (4-5 cm and 10 mm) directed to definite fixed points on the Sky gives the unique possibility to make exact calculations of the age of Carahunge Observatory using astronomical methods, even with more accuracy than it is possible to achieve by well-known Carbon method.

1.15. STONE ASTRONOMICAL INSTRUMENTS

All Stones with Holes, single ones or groups of 2 or 3 Stones (including also some stones without holes) are the unique Astronomical Instruments for different observations of celestial sources: the Sun, the Moon, stars, planets and others.

To project, build and use such stable and accurate instruments for different scientific purposes it was necessary to have the preliminary accumulated knowledge in astronomy, mathematics and technology, to have written language, to have high experience in methods of observations and calculations, for a long time of thousands years before building of Carahunge.

At that time there was no one to learn from, so it was necessary to accumulate knowledge from zero, which was very slow process and needed too much time. This was the main reason why the development of Armennian civilization required about 40 – 10 = 30 thousand years. The development of other civilizations (Sumer, Egypt, Greece or other) required less than one thousand years only, because they had teachers, who were Armennians.

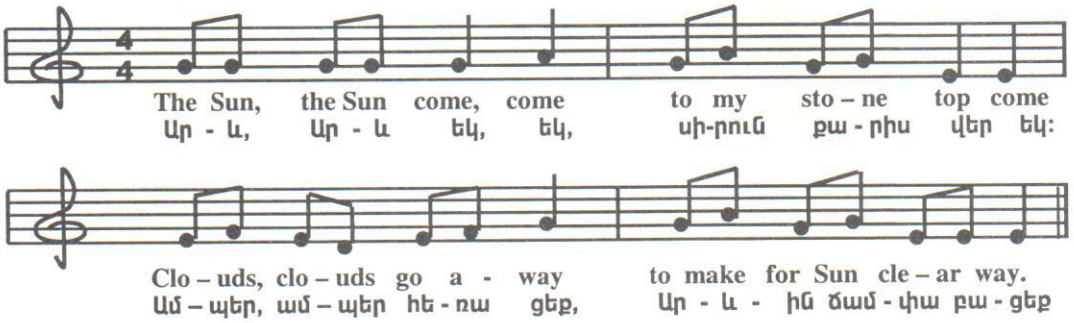
So there are grounds to presume that astronomy in Armennia started about 25000 years ago, and the first and simple work with simple instruments in Carahunge began more than 20000 years ago. Then 15000 years ago more complicated instruments were built.

In Carahunge at present there are more than 80 Astronomical Instruments, which have been built and were in use from about 8000 up to 2000 years ago (see below).

Every astronomer who makes observations using astronomical instruments knows very well the frequent misfortunes with clouds coming to shield the object of observation at the very important moment. Especially when the moment you need will take place only after just one year (or more). At Carahunge we met also these obstacles during our observations of the rising, setting and culmination moments of the Sun, Moon and stars.

And at each that time I remembered the Armennian old, nice and simple song, which, I am sure, was a song of old astronomers. Here is this song.

Melodically *Armennian Old Song of Astronomers*



In Carahunge, indeed, there is three-stone astronomical instrument, where the Sun comes every equinox midday to the top of the main stone (see Item 1.28).

This song indeed is nice and simple (i.e. old) and at the same time is marvellous address to the Nature, to the God.

I shall present below a few unique Stone Astronomical Instruments of Carahunge with the results of our observations and calculations for their age dating.

1.16. SINGLE STONES WITH HOLES

Many Single Stone Astronomical Instruments were investigated during our expeditions. They were appropriated for the Sun, Moon, planets and stars observations.

For the Sun observations there are 17 "Sun-Stones", including Sunrise Stones №№ 65, 161, 187 for Summer solstice; №№ 97, 98, 100 for Winter solstice; Sunset Stones №№ 52, 99 for Summer solstice; №№ 108, 169, 177 for Winter solstice; and №№ 40, 55, 63, 64, 67, 79 for Spring and Autumn equinoxes days Sunrise and Sunset moments. About the Instrument for Sun culmination moment in equinoxes see Item 1.28.

For the Moon observations there are 14 "Moon-Stones", including Moonrise Stones №№ 161, 187, for culmination declination δ = +18.7°; №76 for δ = - 18.7°; №147 for δ = +29°; Moonset Stones № 138 for δ = +18.7°;

№№ 108, 163 for $\delta = -18.7°$; №№ 44, 51, 99 for $\delta = +29°$; №№ 146, 151, 162, 164 for $\delta = -29°$.

About planets observation see Item 1.29.

Stars observation results see in Items 1.23, 1.24, 1.25.

We made preliminary calculations and a line of observations using "Sun-Stone" Instruments, and received very interesting and unique results. Here some of them are shown. Fig. 21 presents the Sunrise moment when looking through Hole in Stone № 67 at equinox of 22.09.1997. In Fig. 22 the Sunrise through Hole in Stone № 63 at equinox of 22.09.1997 is shown. In Fig. 23 the Sunrise through Hole in Stone № 66 at Solstice of 23.06.2001 is shown.

Single Stone Instruments in Carahunge Observatory were widely used during many millennia.

1.17. THE OLDEST CALENDAR (AOC AND AFC)

In Armennia the Solar Calendar was in use for all times. And this is understandable because the Sun was the Main God. There is no data that the Moon calendar was ever used, although it was known and the Moon period of rotation around Earth was not difficult to measure.

Prehistoric astronomers looking through any Single "Sun-Stone" Hole (or using other older simple instruments) could fix the azimuth (position on horizon) of Sunrise (or Sunset) point at any day and define (even without pipe) that this point moves along the horizon from day to day for value up to 30 arc min, at days close to the equinox days, which is almost equal to the angular diameter of Sun (32′), and comes back to the same first position (from the same side) after 365 days, which made one year.

It is obvious that such a simple observation could be done much earlier than the time of developed Carahunge, when for agricultural and other work the calendar becomes necessary. That time was, perhaps, about 23 thousand years ago when the Armennian Oldest Calendar (AOC) was established having the beginning of year on the Spring equinox day Areg 1 (now March 21) *.

It was also defined that once per year, in Summer Solstice the star Sirius rises just before Sunrise, i.e. the year by Sirius also includes 365 days as

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* Perhaps at that time, in 22946 BC, the Armennian favourite old God Vahagn (fighter of dragons and evil) "was born". The value 22946 years comes from the supposition that these events took place 14 "Armennian periods" before Armennian King Hayk's victory in 2492 BC (14 x 1461+2492=22946). So later Armennian period was called also the "Haykian period".

Solar year has. This takes place because of accidental combination of precession and self movements of Sirius.

This Solar AOC was so-called "movable". The festal days slowly moved along all year round (with period of 1461 years) because real Solar year includes about a quarter day more than 365 days (365.25 : 0.25=1461).

The developed Carahunge Observatory (7500 years ago) gave much better possibilities to make observations during many years and with much higher accuracy (30″ or 2 sec. of time with pipes). So at that time it was found out that Solar year consists of about 365.25 days. So to "stop" the "movable" calendar, i.e. to "fix" the festal days with the Sun real movement during the year, it was necessary to add in Calendar one more day once per four years. Thus the "fixed" (immovable) Calendar was invented and developed in Carahunge with the moment of year beginning at 6 o'clock in the morning (or in midday) of Spring equinox day, at Areg 1 (March 21). Thus Armennian Fixed Calendar (AFC) was established in Carahunge, and the period of 1461 years was called "the Armennian period".

Armennians used both "movable" and "fixed" calendars in parallel more than five thousand years (up to the end of XIX century AD), and taught people of other countries these calendars, especially Sumers and Egyptians whose civilizations began in III millennium BC.

Using both AOC and AFC during very long time Armennian astronomers found out that the additional quarter day in year (365.25) being accumulated in "movable" calendar gives one whole year after each 1461 years (0.25 x 1461 = 365.25). This period of 1461 years (or 1460 for "fixed calendar") was called the "Armennian period" (or "Armenian cycle"). The same duration has "Sirius cycle", or so-called "Sotis" *.

It was corrected later that Armennian cycle and Sirius cycle have a little difference of 12 days, i.e. 12 min. per year (0.002%) because the Solar year has a little less duration (365.242 days), than Sirius year (365.25 days).

AFC as well as Armennian Cycle and Sotis were known and were in use also in Old Egypt [19].

The "fixed" calendar, of course, is more convenient in using. It entered Europe by July Caesar (with the help of Egyptian astronomers, as Sosigen from Alexandria) on January 1, 45 BC (so-called "Old Style") and later it was corrected by Pope Gregory III (with the help of Polish astronomer Copernicus) in 1582 AD ("New Style", which is in use now)**. Armennia admitted the Julian calendar in 122 AD (by King Artashes II).

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* Let me note that "Sirius" or "Sotis" means in Armennian "The loved one in the house of Holy person", where Holy person is perhaps Armennian King Hayk. In Old Egypt there was a festal day "Siruhis" which in Armennian is "My beloved woman" (see also Fig. 44).

** To turn to Old Style it is necessary now to add to the date 12 days.

1.18. KING HAYK'S CALENDAR (HBT)

Much more information is known about Armennian next old fixed calendar, called "Hayots Boun Tomar" (HBT) – Armennian Basic Calendar (ABC) started in 2492 BC by order of Armennian King Hayk (about 2493-2444 BC, P.H.), who had the title "Kesar", i.e. "Half AR", "Half Sun", "Half God", because Armennian King was in the same time the Main Patriarch, or "Son of Sun" and representative of the Main God – Father AR on the Earth. The word "kes" in Armennian means "half", so Kesar was "Half God". The word "Kesar" later overpassed to Europe via Greece and was used as "Caesar" (in Rome and Byzantium), "Caeser" (in Germany), "Czar" or "Tsar" (in Russia), etc., but already in the meaning of "emperor".

As it was told by Movses Khorenatsi, Armennian famous historian of V century AD, the Nakharar (King) Hayk worsted the Babylon army which came to occupy Armennia, killed the Babylonian king Bel (Nemrod) in battle and ordered to celebrate this day every year and to rename the months of year after the names of His sons and daughters [20]. About Kesar Hayk see also Item 3.30.

The date 2492 BC was recovered by Armennian historian of XIX century AD Ghevond Alishan [21]. It was known, that New Year (Navasard 1) in 428 AD by "movable" ASC coincided with August 23 by Julian (Hulian) Calendar (or with August 11 of present calendar). Using this fact and "Armennian Cycle" of 1460 years he calculated that 1460 - 428 AD = =1032BC+1460 = 2492 BC. As G.Alishan wrote, the same figure of 2492 BC is shown by old authors Aphriakanos and Yevsebios as the date of Bel's death [21].

Armennian Basic Calendar (HBT, ABC) consists of 12 months 30 days each, so 360 days plus 5 (or 6 once per every four years in fixed HBT) Additional days (the New Year celebrations). Each month and each day of month, as well as each of 24 hours of day have their own names – Armennian words. Armenian scientist of VII century AD Annannia Shirakatsi tells these names [22]. I have presented here the names of months of HBT and corresponding dates of present calendar:

HBT (ABC)	New Style
1. Navasard (Նավասարդ, daughter of Hayk), 1-30	August 11 – Sept. 9
2. Horri (Հոռի, daughter), 1-30	September 10 – Oct. 9
3. Sahmi (Սահմի, daughter), 1-30	October 10 – Nov. 8
4. Tre (Տրե, son of Hayk), 1-30	November 9 – Dec. 8
5. Caghots (Քաղոց, son), 1-30	December 9 – Jan. 7

6. Arats (Արած, son), 1-30 ----------January 8 – Febr. 6
7. Mehekan (Մեհեկան, daughter), 1-30 ---------- February 7 – March 8
8. Areg (Արեգ, daughter), 1-30 ----------March 9 – Apr. 7
9. Ahekan (Ահեկան, old name) *, 1-30 ----------April 8 – May 7
10. Mareri (Մարերի, daughter), 1-30 ----------May 8 – June 6
11. Margats (Մարգած, old name), 1-30 ----------June 7 – July 6
12. Hrotits (Հրոտից, son), 1-30 ----------July 7 – Aug. 5
13. Avelyats (Ավելյաց), 1-5 ---------- August 6 – Aug. 10

Additional (Avelyats) 5 days were named by names of 5 known at that time planets [19].

In "fixed" HBT one more day (once per 4 years) of leap year was added to month Mehekan.

The names of days of month were the Armennian names connected with the names of sacramental mountains, heathen temples and Gods:

1. Areg (Արեգ)
2. Hrand (Հրանդ)
3. Aram (Արամ)
4. Margar (Մարգար)
5. Ahranc (Ահրանք)
6. Mazdegh (Մազդեղ)
7. Astghik (Աստղիկ)
8. Mihr (Միհր)
9. Dzopaber (Ձոպաբեր)
10. Mourts (Մուրց)
11. Yerezkan (Երեզկան)
12. Ani (Անի)
13. Parkhar (Պարխար)
14. Vanatour (Վանատուր)
15. Aramazd (Արամազդ)
16. Manni (Մանի)
17. Assak (Ասակ)
18. Massis (Մասիս)
19. Annahit (Անահիտ)
20. Aragats (Արագած)
21. Grgourr (Գրգուռ)
22. Kordouic (Կորդուիք)
23. Tsmak (Ծմակ)
24. Lousnak (Լուսնակ)
25 Tsron (Ցրոն)
26. Npat (Նպատ)
27. Vahagn (Վահագն)
28. Sis (Սիս)
29. Varag (Վարագ)
30. Gisheravar (Գիշերավար)

The beginning of day was 6 o'clock of morning (Solar time, of course). The names of hours of day were also Armennian words:

* It were renamed 10 names of months, so 2 names retained their old names. Probably King Hayk had only 10 children.

Day time	Night time
1. (Ա).Ayg (Այգ), 6-7 h.	13. (ԺԳ). Khavarak (Խավարակ), 18-19
2. (Բ).Tsayg (Ցայգ), 7-8	14. (ԺԴ).Aghjamoughj(Աղջամուղջ), 19-20
3. (Գ).Zoratsial (Զորացնալ), 8 -9	15. (ԺԵ). Mthatsial (Մթացնալ), 20-21
4. (Դ).Tcharagaytheal (Ճառագայթեալ), 9-10	16. (ԺԶ). Shahavot (Շահավոտ), 21-22
5. (Ե).Sharaveghial (Շառավեղնալ), 10-11	17. (ԺԷ). Kamavot (Կամավոտ), 22-23
6. (Զ).Yerkrates (Երկրատես), 11-12	18. (ԺԸ). Bavakan (Բավական), 23-24
7. (Է). Shantharkogh (Շանթարկող), 12-13	19. (ԺԹ). Khothapheal (Խոթափնալ), 0-1
8. (Ը). Hrakath (Հրակաթ), 13-14	20. (Ի). Gizak (Գիզակ), 1-2
9. (Թ). Hourthapeal (Հուրթափնալ), 14-15	21. (ԻԱ). Lousakn (Լուսակն), 2-3
10. (Ժ). Thaghanteal (Թաղանթեալ), 15-16	22. (ԻԲ). Aravot (Առավոտ), 3-4
11. (ԺԱ). Aragot (Արագոտ), 16-17	23. (ԻԳ). Lousaphayl (Լուսափայլ), 4-5
12. (ԺԲ). Arphogh (Արփող), 17-18	24. (ԻԴ). Phaylatsu (Փայլածու), 5-6

The seven-day week Belt-Calendar of II millennium BC was found near town Sanahin in Armennia. The days on this Belt-Calendar are called by names of Sun, Moon and Armennian old names of five planets [19, 23].

1. Արև	Sun	-	Sunday	(կիրակի)
2. Լուսին	Moon	-	Monday	(երկուշաբթի)
3. Հրատ	Mars	-	Tuesday	(երեքշաբթի)
4. Փայլածո	Mercury	-	Wednesday	(չորեքշաբթի)
5. Լուսնթագ	Jupiter	-	Thursday	(հինգշաբթի)
6. Արուսյակ	Venus	-	Friday	(ուրբաթ)
7. Երևակ	Saturn	-	Saturday	(շաբաթ)

It is interesting that first two present English names of week-days are directly connected with Armennian names of the Sun and Moon, and Saturday is connected with Saturn.

HBT is sometimes used in Armennia until now. Many people also celebrate the old New Year (August 11). Nobody annulled the king Hayk's order of 2492 BC.

Old Egyptian Calendar (taken from HBT in III millennium BC) was like HBT [19], but had not names for days of month [19, 24].

Besides HBT in Armennia other calendars were also in use after Christianity adopting, as Hayots Mets Thvakan (HMT, Armennian Great Date) began from July 11 of 552 AD, Ecclesiastical Calendar, "fixed" calendar of Armennian scientist Hovanes Imastaser, began from 1085 AD, with the New Year (Navasard 1) at August 11 of Julian calendar.

HBT is the oldest, regular and exact Calendar in the World. In August 11, 2008 it will be completed 4500 years of HBT. Let us hope this fact will be marked in many countries by the help of International Organisations.

1.19. SUNDIALS AND SUN-CALENDARS

It is obvious that in Carahunge Observatory the Sundials and Sun-calendars were in operation from old time. But they are not saved. May be they will be found in future. It is possible to suppose that the Carahunge Stone № 63 with Hole on its back was used as the Sundial (see also Item 1.28, page 48 and Fig. 38, page 69).

At the same time it is obvious that in Old Armennia Sundials and Sun-calendars were widely used. There are many Sundials on walls and near the Medieval Christian churches till now [23]. Many of them were also found during excavations. All scales of them are calibrated from 6 o'clock morning to 18 in the afternoon.

Sundial shows on its scale the time of day by the shadow of the rod (called "gnomon"). Armennian old Sundials were called "gitsoh" (գիտցող) which in Armennian means "knowing (one)". In Fig. 24 Sundial from the wall of Armennian church "Zvartnots" (VII cent. AD) near Etchmiadzin is shown.

Sun-calendar shows on its scale the month of a year by the length of shadow of its rod. Old Armennian Sun-calendars were called "stverachaph" (ստվերաչափ) which means "shadow-meter".

We designed and made two new type Sundial-Calendars (SDC, "Git-soh-Stverachaph") built from red colour tuff (volcano-stone), one in Aragats Scientific Centre (on Mount Aragats) of our Radiophysics Research Institute (RRI) in 1987 (4480 HBT) and another one – in front of the main building of RRI in Yerevan, in 1989 (4482 HBT) [5]. Each of them has three main scales (horizontal, vertical and spherical ones) and one common rod (gnomon) declined to the angle 40° (equal to the latitude of place) and having three small crosses (for each scale), shadows of which show the months and (approximately) days of months. Horizontal scale is divided (by titanium curve lines) to months by present calendar, vertical scale – by Hayots Boun Tomar (HBT) and the spherical scale – by real solar months (Zodiac constellations).

Fig. 24. Sundial from the wall of church Zvartnots, VII cent. AD (15 km from Yerevan).

The project of SDC was done by me, calculations of hour lines and month curve lines on scales were made by Dr. V.Oskanian and ornaments on stone were chiselled by sculptor S.Panosian. All work was done in workshops of RRI.

In Fig. 25 the New Type of Sundial-Calendar (SDC) built in front of the main building of RRI, 49/4 Komitas Avenue, Yerevan, Armennia, is shown.

1.20. EARTH AXIS INCLINE

Did Carahunge astronomers know the angle of Earth Axis Incline (angle ε or Ecliptic Inclination)? Yes, because (see Fig. 26) they could measure the height (elevation angle h_1) of Sun in its summer culmination (in midday at Summer solstice, the longest day, June 22) and its height (angle h_2) in Winter culmination (in midday at Winter solstice, the shortest day, December 22)*. Then they could find the Sun declination (δ) in culmination days (angle δ_c) as

$$\pm\delta_c = \frac{h_1 - h_2}{2} . \qquad (1)$$

Of course, they had seen that during the year the Sun elevation (h) changes in limits $h_1 > h > h_2$ and declination – in limits $-\delta_c < \delta < +\delta_c$.

Reiterating these measurements many years and becoming sure that δ_c is almost not changed (and even did not depend on latitude (φ) of place, see below) they had to understand that the Sun direction in Solstices is inclined to the Earth's Equator Plane (or Sky Equator, $\delta = 0$) for the angle $\varepsilon = \delta_c$ i.e. Earth Axis is inclined to the normal to Ecliptic Plane for the angle $\varepsilon = \delta_c$. And this is the reason why we have on Earth Summer and Winter (Solstices), Spring and Autumn (Equinoxes).

Using Fig. 27 it is easy to find relation between ε, φ and Azimuth of Sunrise (Sunset) point A_s on horizon. It is the following:

$$A_s = \mathrm{arcCos}\frac{\mathrm{Sin}\delta}{\mathrm{Cos}\varphi}. \qquad (2)$$

In case of solstice days, when $\varepsilon = \delta_c$ we have for the Sunrise point:

$$A_s = \mathrm{arcCos}\frac{\mathrm{Sin}\varepsilon}{\mathrm{Cos}\varphi}; \quad \varepsilon = \mathrm{arcSin}(\mathrm{Cos}A_s \cdot \mathrm{Cos}\varphi) \qquad (3, 4)$$

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* Below (Fig. 35-37, Item 1.28) the Carahunge Three-Stone Instrument used for measurements of Sun elevation at equinox days ($\delta = 0$, $h = 90 - \varphi$) and also for measurements of latitude (angle φ) of place is shown.

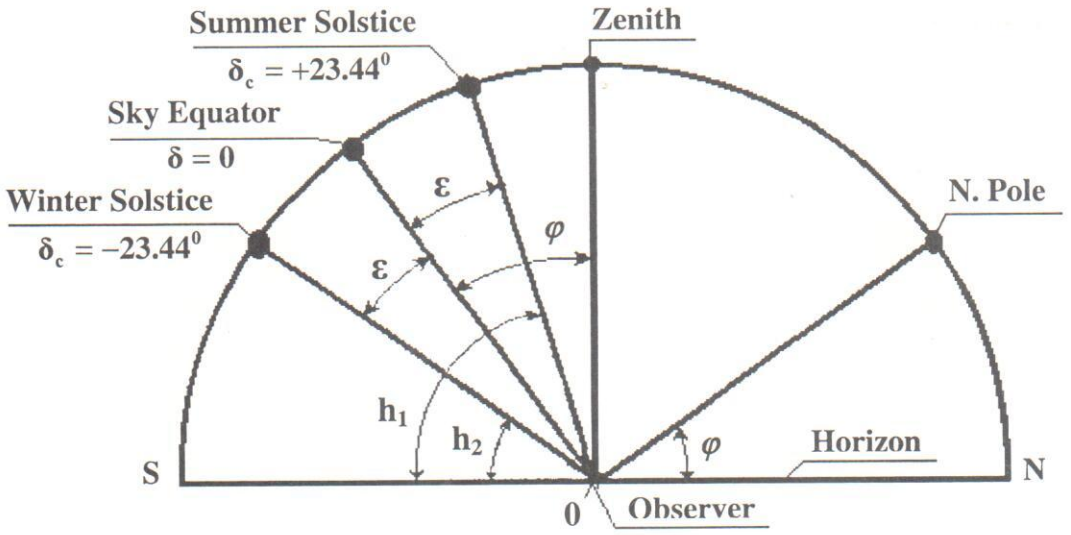

Fig. 26. The Sun culminations

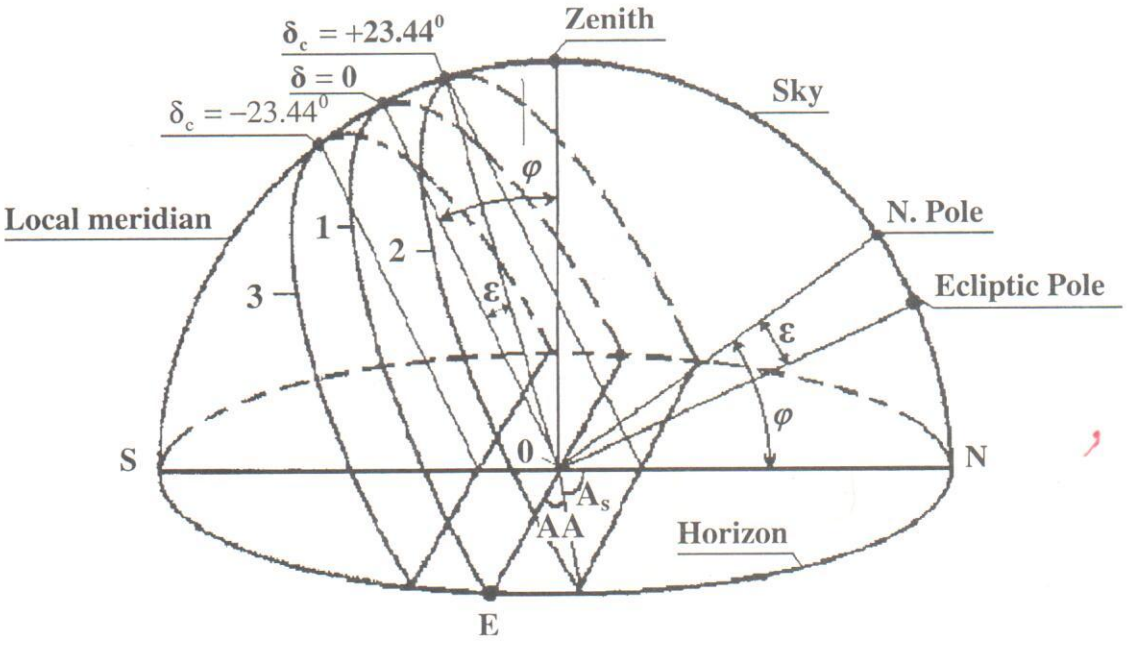

Fig. 27. Sun movement trajectories on Sky at:
1 – Equinox days; 2,3 – Solstice days
A_s – Azimuth of Sunrise point at Solstice

Did Carahunge astronomers know about Earth rotation around its own Axis? Yes, because they knew that Earth has the Axis of rotation and even knew the angle (ε) of its Incline and its Precession (see Item 1.22).

According to G. Hancock the Earth Axis Incline changes in limits from 22.1° to 24.5° with period of 41 thousand years [24]. According to Astronomical Yearbooks [25] the Ecliptic Inclination now is equal $\varepsilon = 23.44°$ and slowly decreases with speed 0.00013° (0.47″) per year*. We can use also the value for speed $\Delta\varepsilon = 0.013°$ (0.78′) per 100 year, because we are now in linear part of the sine-kind law of Inclination changing (Fig. 28). Thus the Azimuth of Sunrise point at Solstice (A_S) also decreases and angle ($90 - A_S$) as well as Azimuth Shift (ΔA_S) increases (see Fig. 26). Using equation (3) we can calculate, that when $\varepsilon = 23.44°$ and latitude $\varphi = 39.5°$ (Carahunge), $A_S = 58.97°$ and if $\Delta\varepsilon = 0.013°$ then $\Delta A_S = 0.018°$ or 1.1′ during 100 year.

Having accuracy of observations (with pipes) 30″ = 0.5′ old astronomers theoretically could mark the shift $\Delta A_S = 1.1'$ after 50 years, but practically it was impossible, because the pipes had not so high time-stability. But using Holes even without pipe (and having the accuracy of 3.5′) they had to mark ΔA_S after about 300 years (the stone instruments have very high stability). After 1000 year the shift could be $\Delta A_S = 0.18°$ or 11′ which is 3 times more than the accuracy without pipes. Finding this, they would make other new stone instruments for Sunrise (Sunset) in Solstice days directed to the new point, i.e. with some azimuthal shift, to have Sunrise point again in centre of holes.

In fact in Carahunge there are indeed a number of stones approximately directed to the present Sunrise (Sunset) point at Solstices having some shifts between holes directions (which we measured). So we know the shifts between present Sunrise point and old points. These give a possibility to calculate the age of stones and of Observatory as a whole.

Let us return to Fig. 28 and explain it a little. The variation of Earth Axis Incline is in limits ± 1.2° ($\varepsilon = 23.3° \pm 1.2°$). It practically does not change a heat value coming from Sun to the tropic, subtropical and moderate zones of the Earth. But this small change of ε is very sensible for regions, which are close to arctic zones. So Axis Incline change law (sine-kind) acts an important role near arctic, because the Sun rays are coming with too sharp angles and this conduces to forming a large glacial covering in subarctic zones, with period of 41000 years.

The last glacial period started about 32000 years ago and finished 12000 years ago (see Fig. 28). In the last 2000 years of this period ice melted very intensively and 12000 years ago the Great Deluge took place. In the result the level of ocean rose up to 100 m. It was too dangerous for Mesopota-

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* It is interesting to notify here that Armennian author of XVII century gives for this angle the value 23.5° [19]. This was a very good result because the actual value has been about 23.445°.

mia and other low altitude places but not for Armennian Highland with average altitude 1700 m (Mount Ararat 5160 m). There were clouds, lightning, rains, rough rivers, etc, but nothing dangerous for life of people, animals, and flora. Armennian Highland was the real Noah's Ark and the civilization here continued to develop. Our Present time is on linear part of Axis decline changing law, so the beginning of the next Glacial period will be after 8500 years and next Great Deluge after 29000 years (Fig. 28).

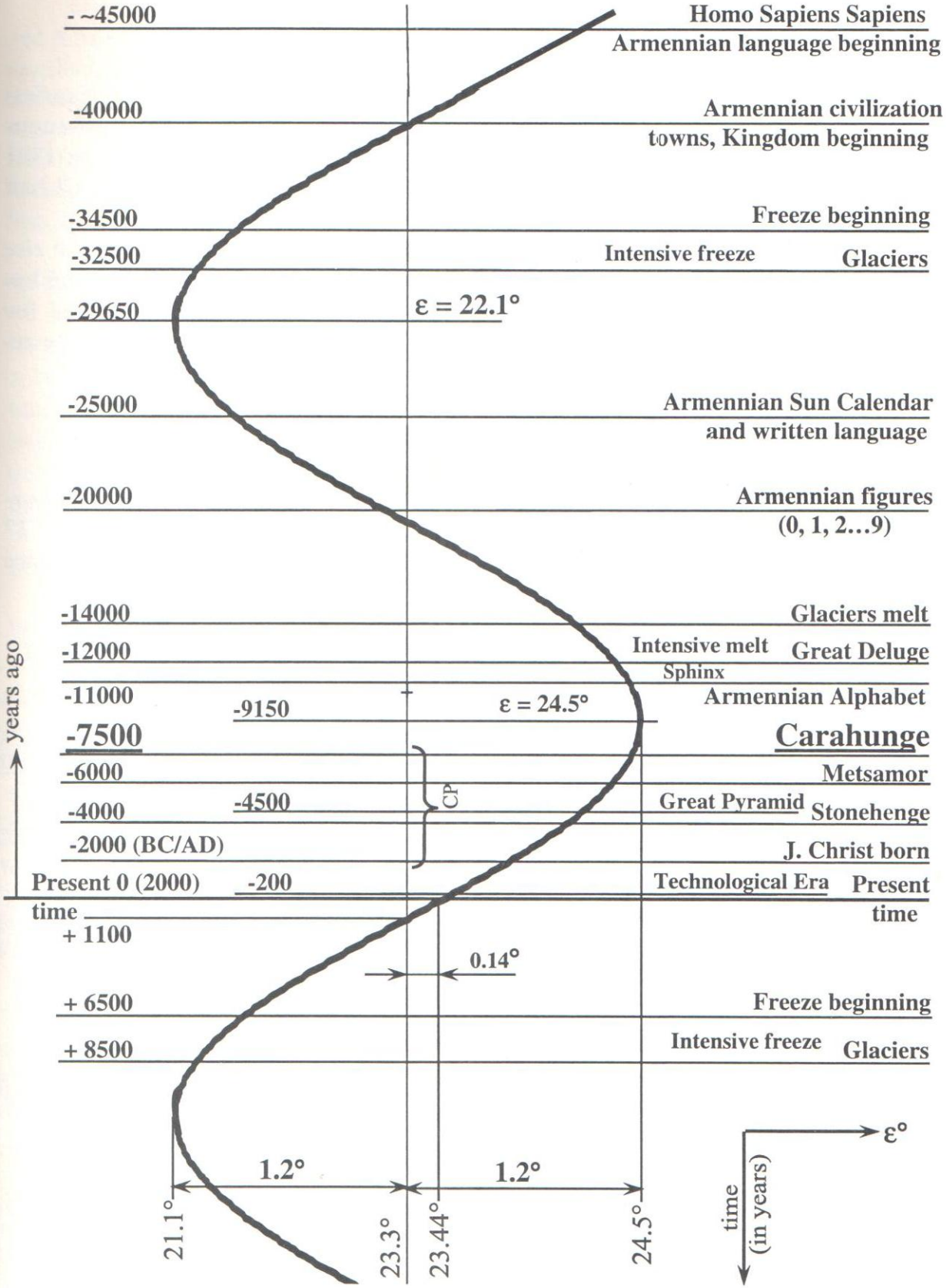

Fig. 28. The change of Earth Axis Incline and Eras evolution
(CP – The Carahunge Period)

1.21. THE AGE OF CARAHUNGE. METHOD № 1

The method of Age determination of Old Monuments (Observatories) using the "Azimuth Shift" (explained in Item 1.20) was used first by famous British astronomer N.Lockyer to calculate the age of Stonehenge in 1901 [27]. His result was: between 1880 and 1480 BC, which is very good (it had to be approximately 1850 BC for Stonehenge III)[24, 28, 29].

In Table 3 the calculated present Azimuths (Az°) for Sun and Moon rise and set points are shown in line 2 taking into account corrections on real horizon heights, refraction and Lunar parallax. The correction required for magnetic deviation is put to hole Azimuth values (line 4b). After this the resulting possible error is equal to about ±0.1° or

$$0.1° \times 1000 : 0.18° = 550 \text{ year.}$$

In column 4c the Azimuth shifts (ΔAz°) are put between Azimuth (corrected, calculated for present time) and measured directions of holes for 17 "Sun Stones" and 12 "Moon Stones". For stones with holes Azimuth shifts are in limits from 0.5° to 3°.

Table 3

SUN																				
			Sunrise									Sunset								
			Summer Solstice			Winter Solstice			Spr.,Aut. Equinox			Summer Solstice			Winter Solstice			Spr.,Aut. Equinox		
1	Now	Decl. δ°	+23.44			-23.44			0			+23.44			-23.44			0		
2		Az°	59+4=63			122+9=131			90+3=93			302-1=301			239-5=234			270-2.5=267.5		
3	Ancient Az° was		<63			>131			=93			>301			<234			=267.5		
			a	b	c	a	b	c	a	b	c	a	b	c	a	b	C	a	b	c
4	a) Stone N		65	62.5	0.5	97	133	1	40	90	-3	99	303	2	108	232	2	64	264	3.5
	b) Hole Az°		161	62	1	98	133	1	63	99	+6	52	302	1.5	169	233	1	55	260	7.5
	c) ΔAz° (shift)		187	61.5	1.5	100	130.5	0.5	67	90	-3				177	231	3			
									79	90	-3									

MOON																							
	Moonrise												Moonset										
1	+18.7			-18,7			+29			-29			+18.7			-18,7			+29			-29	
2	63+0.5=63.5			116.5+6.5= =123			129+6=135			51+6=57			294.6-4.6=290			235.4-5.4=230			309-2=307			1223-8=215	
3	<63.5			>123			>135			<57			>290			<230			>307			<215	
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
4	161	62	1.5	76	124	1	147	137	2	-	-	-	138	289	1	108	229	1	44	309	2	146	214	1
	187	62	1.5													163	229	1	51	309	2	151	214	1
																						164	214	1

There are two main possible reasons for the presence of existing different Azimuth shifts. One is, that the Observatory (the Instruments) was built continuously over different times. The second reason is, that some shift could take place following the natural conditions (earthquake, landslide, etc.) during millennia. For the second reason, it is dangerous for our problem not the parallel shifts (along or across of hole axis), but just the hole rotation around any vertical axis (the probability of which is low). Nevertheless, to minimize this second reason we average the shift values.

There are no Az shifts for Sunrise (Sunset) points at equinox days, so we have 17-6=11 "Sun Stones".

Taking all these into account we have (in Table 3) for 11 "Sun Stones" (except 6 equinoxes) the average $\underline{\Delta Az} = 15° : 11 = 1.36°$. Then the Age is 1.36 x 1000 : 0.18 = 7575 ± 550 years. Except 2 stones with $\Delta Az = 0.5°$ each, and one stone with $\Delta Az = 3°$ as extreme values we have for 8 "Sun Stones" the average $\Delta Az = 11° : 8 = 1.37°$ and the Age is 1.37° x 1000 : 0.18° = $\underline{7640}$ ± 550 years. The Age of two "youngest" stones (№№ 65, 100) having $\Delta Az = 0.5°$, is 0.5° x 1000 : 0.18° = $\underline{2200}$ ± 500 years.

For 12 "Moon Stones" presented in Table 3 we have the average $\Delta A_Z = 17° : 12 = 1.42°$ and the Age is 1.42° x 1000 : 0.18° = $\underline{7870}$ ± 550 years.

Thus, the Age of Carahunge Observatory active operation is $\underline{\text{more than 7500 years}}$ (the middle of VI millennium BC).

How long Carahunge was operating? The "youngest" stones were in operation about 2000 years ago. So work was continued before that time, but was suddenly interrupted. This is also told by three lying stones with holes pierced partially, (mentioned above, see Item 1.10).

So Carahunge Observatory was in operation during more than $\underline{5500 \text{ years}}$, from more than $\underline{7500 \text{ years}}$ ago until less than $\underline{2000 \text{ years}}$ ago.

1.22. EARTH AXIS PRECESSION

The Earth Axis (inclined now 23.44°) makes a slow conic movement with period 25920 years. This phenomenon is called Precession (Fig. 29).

As a result of Precession the stars positions (co-ordinates) on the Sky are slowly changing. In Fig. 30 the way of North Pole point on Sky during about one Precession period is shown.

The Sun slowly moves on the Sky along Zodiacal constellations in the opposite direction to its annual motion along them. As the result the Spring equinox moment comes each year a little earlier (5.5 min per 100 year, so-called Equinox Anticipation) and the Sun moves among stars on the Sky with speed 360° : 25920 year = 83.3′ per 100 year, being in each Zodiacal constellation 25920 : 12 = 2160 years.

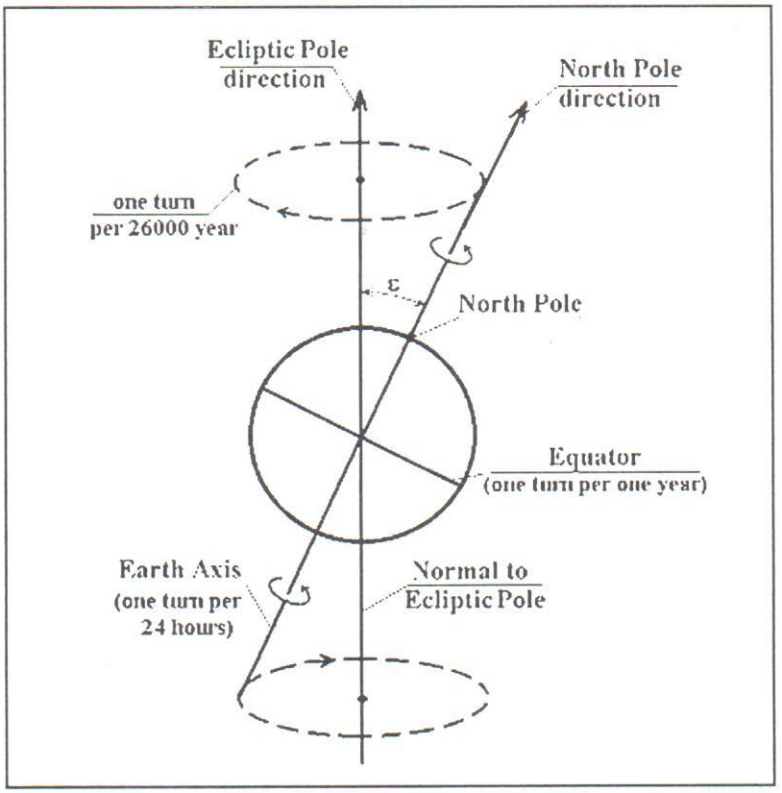

Fig. 29. Earth Axis Precession

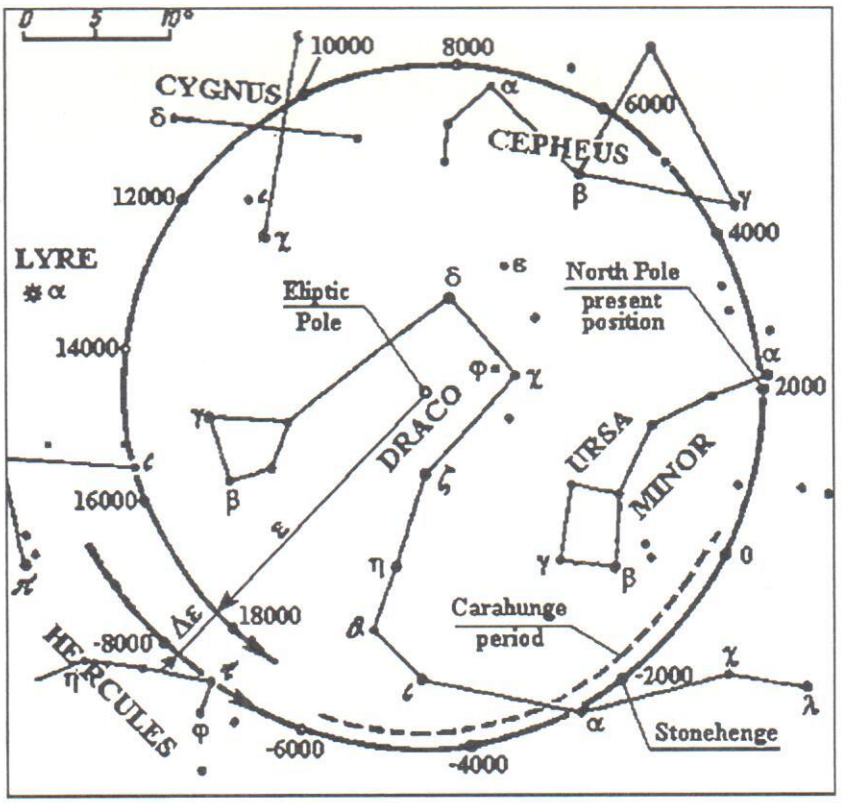

Fig. 30. The travel of North Pole point on the Sky

Could the Carahunge prehistoric astronomers espy Precession? Yes, because they could measure the shift of the Sun position regarding stars (for example in Sunrise, Sunset, and Midday moments at Equinox or in other fixed moment). This shift has the value 50″ per year (83.3′ : 100 x 60 = 50″), which they could measure in Carahunge during about 7 months.

The generations of astronomers searching the Sky during hundreds and thousands of years could know Precession even many thousand years before Carahunge. I think it was done in Armennia even 11-13 thousand years ago. So the Precession, called also the "Space Great Clock", was known to civilized people on Earth of yore.

Knowing the Precession laws, also the present position (co-ordinates) of stars and their proper motion it is possible to calculate the position of each star for any past time (as well as for future), i.e. to say, where was each given star, where (at what point of horizon) it rose (sat), where culminated, etc. thousands years ago. These calculations we can do using the following equations [30]:

$$\delta_2 = \text{arcSin}[\text{Cos}\delta_1 \cdot \text{Sin}\theta \cdot \text{Cos}(\alpha_1 + \psi) + \text{Sin}\delta_1 \cdot \text{Cos}\theta] \tag{5}$$

$$\alpha_2 = z + \text{arcSin}\frac{\text{Cos}\delta_1 \cdot \text{Sin}(\alpha_1 + \psi)}{\text{Cos}\delta_2}, \tag{6}$$

where: $\delta_1 = \delta_0 + 100\mu_\delta \cdot T$; $\alpha_1 = \alpha_0 + 100\mu_\alpha \cdot T$

$$\psi = 2305.7'' \cdot T + 0.302'' \cdot T^2 + 0.018'' \cdot T^3$$

$$z = 2305.7'' \cdot T + 1.095'' \cdot T^2 + 0.018'' \cdot T^3$$

$$\theta = 2003.87'' \cdot T - 0.427'' \cdot T^2 - 0.042'' \cdot T^3$$

where: α_0, δ_0 – is the present position of given star (rectangular equatorial co-ordinates) [25];

μ_α, μ_δ – is the proper motion of star [25],
α_1, δ_1 – is the present position of star with proper motion addition,
α_2, δ_2 – is the position of given star in past (future) time,
$\pm T$ – is the time in Julian centuries.

Using equations (2) and (5) it is possible to calculate the azimuths of given star rising A_r and setting A_s moments in the past:

$$A_r^o = \text{arcCos}\frac{\text{Sin}\delta_2}{\text{Cos}\varphi} \quad \text{and} \quad A_s^o = 360^\circ - A_r^o. \tag{7}$$

The star swell angle (ĥ), or its height over horizon (elevation) in culmination is:

$$\begin{aligned} h_2^\circ &= 90 - \varphi + \delta_2 \quad \text{when } \delta < \varphi, \\ h_2^\circ &= 90 + \varphi - \delta_2 \quad \text{when } \delta > \varphi \text{ and} \\ h_2^\circ &= \varphi + \delta_2 - 90 \quad \text{when } \delta > 90 - \varphi \end{aligned} \qquad (8)$$

When star-crossed zenith point, $h_2 = 90°$ ($\delta_2 = \varphi$).

1.23. STAR OBSERVATION. PERISCOPE-STONE. METHOD № 2

In the North Arm of Carahunge there is another unique Instrument, the Stone № 137. Its hole does not go through the stone rightly but at half way turns up and comes out from the top of stone. If to put a piece of mirror (of black obsidian) in place of turn it will be a periscope, very comfortable to observe Zenith point while sitting, because the height of the Stone is 1.2 m (see Fig. 31). On the opposite side of stone (of observer side) there is a hand-made bowl about 20 cm in diameter. This bowl with water was a level to check and to control the vertical axis of Periscope during millennia (Fig. 32).

What were they observing in zenith when the Sun and Moon never crossed zenith point in this latitude (at least during last 10000 years)? Of course, it were stars. And bright stars, because the mirror was not very good. Using given above Earth Axis Precession laws we can find, whether this occasion took place in some day in past or not (the probability of which is very low).

I researched the potentiality of 21 brightest stars of our Sky to cross the Zenith point of Carahunge at some time in past. This was our Method № 2 to calculate the Age of the Observatory. It proved that four of them had crossed the Zenith point (see Table 4).

Table 4

STARS. Periscope – Stone No 137				
Star name	Constellation	Prehistoric period		
		Years ago	Declination	Altitude
Deneb	**α Cyg**	**7630**	**39′ 34′**	**90′ 00′**
Arcturus	α Boo	3480	39° 35'	90° 00'
Vega	α Lyr	3000	39° 35'	90° 01'
Capella	α Aur	2330	39° 35'	90° 00'

The first of them was Deneb (α Cygnus), which crossed Zenith point 7630 ± 10 years ago. Then Arcturus (α Boo) 3480 years ago, Vega (α Lyre) - - 3000 years ago and Cappella (α Aur) 2330 years ago. They were in region of Zenith point at a distance ± 0.5° during a period of about ± 100 (up to ± 300) years, i.e. it was enough time to make instruments and observe them.

The Altitude shift of Deneb position from zenith point in function of time in Table 4a is shown.

Table 4a

DENEB. Periscope-Stone № 137				
J2000, $\delta_0 = 45°28'$, $\alpha_0 = 310°36'$, $\varphi = 39°34'$				
Years ago	Declination	Rising Azim.	Setting Azim.	Altitude
7400	39° 03′	35° 10′	324° 49′	89° 29′
7500	39 16	34 47	325 12	89 42
7600	39 30	34 23	325 36	89 56
7630	**39 34**	**34 15**	**325 44**	**90 00**
7700	39 44	33 58	326 01	90 10
7800	39 58	33 32	326 27	90 24
7900	40 13	33 05	326 34	90 39

We can see that Deneb position shift in the limits ± 0.5° near Zenith point took place during about ± 200 years. It is calculated also, that the next

star, which will cross the Zenith point in Carahunge, will be Vega, after 640 years.

Carahunge astronomers could see the slow shift of star position from Zenith point and understand Precession. Having accuracy of observation 30″ they could espy the star position shift after 1.7 year.

The time of Zenith point crossing by Arcturus, Vega and Cappella is not so important for us in this context of Carahunge dating because there are many other stones with age more than 7500 years and it is also known that in Armennia 4492 years ago there was started the new accurate solar Calendar (HBT, see above, Item 1.18). So more important is the time of Deneb – 7630 years ago. It allows to date Carahunge more than 7600 years, when Observatory was in active operation.

1.24. STAR IN RISING AND SETTING POINTS. METHOD № 3

In Carahunge Observatory the star systematic observations at their rising and setting points on horizon using Single-Stone Instruments were undertaken. This gave another possibility of maintaining the Calendar and calculating Precession. At the same time it gives us another possibility (Method № 3) to determine the Age of Carahunge using Precession equations (5-8, Item 1.22).

The rising and setting Azimuths of nine bright stars in Carahunge sky (4500, 6000 and 7500 years ago) were calculated and Stones directed to these Azimuth points at those times were found. Their Numbers are shown in Table 5.

Here are 31 Stones, some of which were used 2-3 times (for different stars) and they were in use for more than 50 purposes. Nine Stones were in use 4500 years ago, 12 Stones – 6000 years ago and 15 Stones were in use 7500 years ago, because their Holes are directed to the given (calculated) corresponding Azimuths in angular limit $\pm 2°$.

These calculations are not completed and here we can just say that Carahunge was in active use during the period 7500-4500 years ago. It will be shown below that the real period of activity is 7500 – 2000 years ago (see Item 1.25).

Table 5 shows also that Carahunge astronomers had special high interest in the Orion constellation stars (14 Stones for 5 stars), star Deneb (6 Stones), Canis Major stars (12 Stones for two stars) including star Sirius (5 Stones).

Table 5

STARS					
Star name, Constellation	Prehistoric period			Stone N	
	Years ago	Rising Az°	Setting Az°	Rising	Setting
1. Sirius α C Ma	4500	117.5	242.5	183	-
	6000	125.2	234.8	-	108
	7500	135.7	224.3	98, 110	162
2. Cappella α Aur	4500	51.5	308.5	-	51
	6000	63.2	296.8	161, 187	-
	7500	73.7	286.3	66, 85	71
3. Rigel β Ori	4500	120.7	239.3	-	-
	6000	132.3	227.7	98	-
	7500	146.2	213.8	147	151
4. Betelgeuse α Ori	4500	96.6	263.4	40	78
	6000	107.0	253.0	-	160
	7500	118.4	241.6	183	-
5. Deneb α Cyg	4500	39.9	320.1	126	-
	6000	38.9	321.1	126	44, 99
	7500	34.8	325.2	-	84, 122
6. Bellatrix γ Ori	4500	101.1	258.9	-	55, 160
	6000	112.0	248.0	-	139
	7500	123.6	236.4	76	163
7. Alnilam ε Ori	4500	109.3	250.7	129	-
	6000	120.1	239.9	-	-
	7500	132.3	227.7	98, 110	177
8. Alnitak ξ Ori	4500	109.7	250.3	-	-
	6000	120.4	239.6	-	-
	7500	132.6	227.4	98, 110	177
9. Mirzam β C Ma	4500	124.5	235.5	76	-
	6000	134.1	225.9	98, 110	177
	7500	147.0	213.0	147	151, 164

1.25. STARS CULMINATION. METHOD № 4

Using Precession laws we can answer the question, did Carahunge astronomers make Instruments and use them to observe stars in their upper and lower culmination moments? At the same time we can calculate the time (in past) of these observations, i.e. the Age of Carahunge (Method № 4). The research shows that these types of work in Carahunge were also undertaken.

The Table 6 shows another group of eleven stars that crossed the local meridian of Carahunge in prehistoric times at the definite elevations. We can see that using six Stones shown in Table 6 the observation was done

during the period from 7500 years ago down to 2000 years ago (four Stones of them are 7500 years old). The accuracy of Stone Hole axis directions to the calculated star Elevations in their culmination moments is ± 1°.

Table 6

STARS					
Star name	Prehistoric period				Stone N
	Years ago	Culmination	Az°	Altitude°	
Arcturus, α Boo	7500	Lower	0	8.6	128
Rigel, β Ori	7500	Upper	180	10.6	60
Alioth, ε U Ma	7500	Lower	0	18.2	109
Dubhe, α U Ma	7500	Lower	0	5.6	152
Alkaid, η U Ma	2000	Lower	0	9.6	128
Alnilam, ε Ori	7000	Upper	180	~22	53
Alnitak, ξ Ori	7000	Upper			
Sirius, α C Ma	6500	Upper			
Mirsam, β C Ma	5000	Upper			
Procyon, α C Mi	6000	Upper	180	~50	62
Betelgeuse, α Ori	3500	Upper			

In the result we can say that Carahunge was in active use during the period of 7500-2000 years ago.

The high attention was paid again to Orion (4 Stones) and also to Ursa Major (5 Stones) constellations.

1.26. CARAHUNGE DATE CONCLUSION

We considered four independent astronomical Methods of Carahunge age determination: the Sun and Moon rising and setting Azimuth shifts (Table 3), Zenith point star crossing (Table 4), Star rising and setting Azimuths (Table 5) and Star culmination Elevations (Table 6).

It is very interesting that all four Methods of dating have given the same result: Carahunge Observatory was built and operated more than 7500 years ago (middle of VI millennium BC).

Obviously the building and operation of Carahunge started much earlier (having more simple instruments), more than 15000 years ago.

Carahunge was in continuous operation more than 5500 years, up to 2000 years ago till perhaps 301 AD when Christianity was accepted as the

State religion in all Great Armennian Kingdom, by King Trdat III the Great*.

Carahunge certified that in Armennia was high civilization much more than 7500 years ago. Let us recall that it is considered that any civilization did not exist yet neither in Mesopotamia, Egypt nor anywhere else before 5500 – 5000 years ago.

1.27. PROFESSOR G. S. HAWKINS

In February 1999 I sent all my Carahunge materials including the Age calculations to Professor G. S. Hawkins (Washington D.C.) who is the top specialist on old monuments dating by astronomical methods and asked his opinion. I am very thankful to him that he kindly agreed and has done a lot of work to check my results and gave a high estimation. In Fig. 33 is shown a photo of Professor G. S. Hawkins.

In his letter of May 18, 1999 he answered me the following [31]:

"The Carahunge site is very interesting, and I have some thought to share with you." and then,

..."I am most impressed with the careful work you have done, and hope that the result will ultimately get recorded in the literature".

In his letter of June 28, 1999 he wrote that I can publish his comments in my next publication, which I am doing now with pleasure:

"The menhir-lined Avenue leading from the stone circle (of Carahunge, P.H.) is similar to the Avenue at Stonehenge, and the Avenue at Callanish. The former points to the midsummer sunrise, and the latter to the extreme point of the setting of the moon.

Both date to the third millennium BC. At Carahunge the arrangement is similar. The Avenue from the stone circle points to the extreme northerly rising of the moon in the third millennium BC. As the Stonehenge and Callanish, the Avenue is the most distinctive architectural feature of the monument." [31].

It is very interesting that Professor G. S. Hawkins sees the parallel between Stonehenge, Callanish and Carahunge.

Professor G. S. Hawkins is also painter. In Fig. 34 his painting "Stonehenge" is shown.

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* At first, in 33 AD Christianity was accepted in Armennian Pharam Aram (in Armennian: "The country of Aram's junior brother", now - Mesopotamia) with capital Arpha (later – Edessa, Urfa) by King Abgar V (12-50 AD) who in 33 AD delegated his secretary and artist Hannan to Jesus Christ with letter (inviting Him to Arpha) and received His reply letter and His portrait (the famous so-called "Mandilion") painted by Hannan (See PART 3).

1.28. THE LATITUDE AND EARTH SIZE. THREE STONES INSTRUMENT

Another unique Astronomical Instrument in Carahunge attracted my attention since first expedition. It is the ensemble of Stones №№ 60, 62, 63 standing along NS direction and located at the beginning of the South Arm. The Stones № 60 and 62 have Holes directed to different elevation angles and through which the top of the Stone № 63 is visible (Fig. 35, 36, 37).

It was in equinox day, 1994, during the 1-st expedition, when we made observations through Hole in Stone № 62, how the Sun came to the top of Stone № 63 exactly in midday. The Stone № 63 (which is apropos alike the Aries) at the said moment acquired the head!

The direction of Hole in Stone № 62 to the top of Stone № 63 makes the angle about 39.5° apropos of vertical, i.e. equal to the latitude of place.

Thus, using this Instrument, the Carahunge astronomers measured the geographical latitude of place (with accuracy 30″). They also measured the beginning (on March 21) of the year (with accuracy 2 sec.) either in the mid-day or at the moment of Sunrise using the Hole on the back of Stone № 63 directed to Sunrise point in equinox.

So they could find out that year consists of about 365.25 days and made corrections of calendar (for the day, month and year duration) and came to the "fixed" one. Besides these they could even during one year measure the Equinox Anticipation (0.83′ per year) and find out Precession of Earth Axis (see Item 1.22).

The Stone № 60 was used to help to fix and maintain the position of the top of Stone № 63, the prolonged stability of which was very important.

Stone № 63 perhaps was used also as Sundial and Sun-Calendar. During our IV expedition at equinox September 21, 1997, a piece of mirror was fixed (by clay) in the Hole on the back of Stone № 63 (Fig. 38) and reflected Sun spot which moved more than 4 cm per min. on a screen at a distance of 10m from the Stone.

So it was possible for old astronomers to measure the Sun movement with good accuracy by Right Ascension (angle α) and Declination (δ). Sure enough, in Carahunge there were special Sundials and Calendars with gnomons, which we have not found yet (or they were destroyed).

A fragment of Carahunge stones painted by Spartak G. Safian is shown in Fig. 25a.

Carahunge astronomers knew that Earth has a ball-form. To be sure for 100% they had to measure the latitude also in other latitudes, better on distance of $\pm$ equal angles $\Delta\varphi$ from the Carahunge latitude $\varphi = 39.5°$.

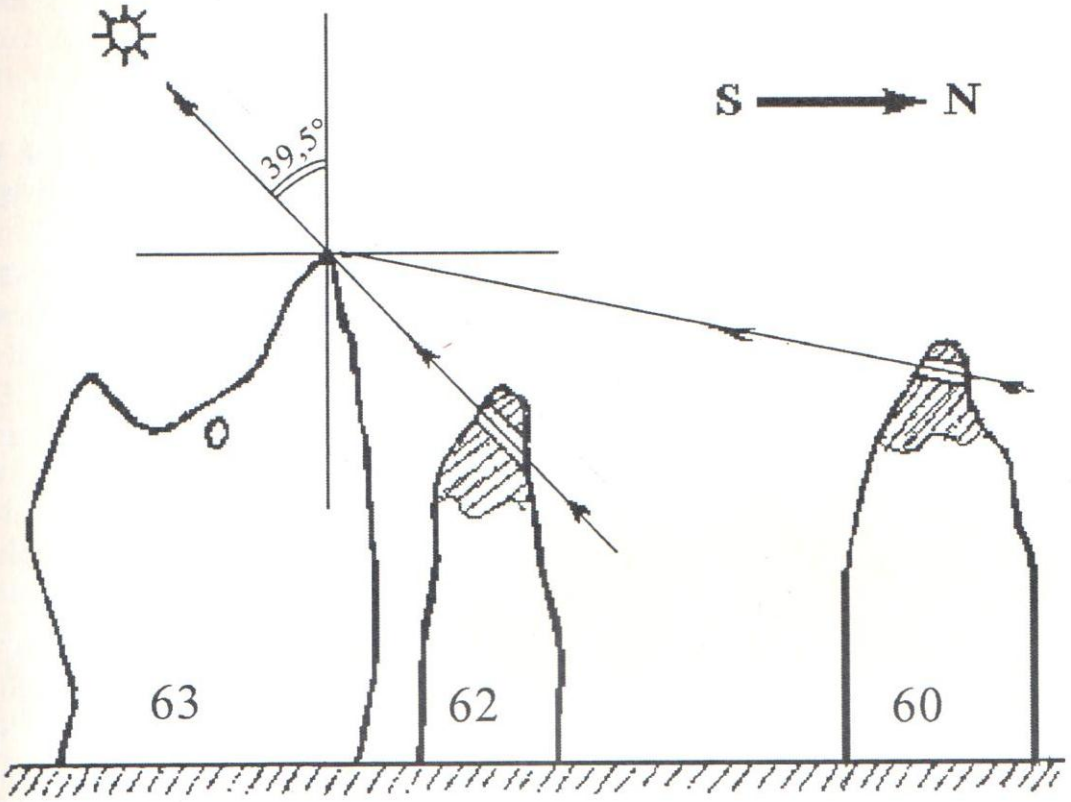

Fig. 35. Three-Stone Instrument. Scheme of operation

There are facts that they did it, for $\Delta\varphi$ equal up to $\pm 10°$, $\pm 16°$ (see below, Item 1.33). So, Armennians knew the ball-form of the Earth more than 7500 years ago.

The famous Armennian astronomer, mathematician and philosopher of VII century AD Annannia Shirakatsi (Fig. 39) in his book "Cosmology and Chronology" writes that heathen Armennian philosophers affirmed that Earth is ball-formed, and people and animals live on all its sides [22].

A very interesting illustration of this old knowledge is one prehistoric engraving in Armennia, carved on mountain rocks near Lake Sevan, about V millennium BC, see Fig. 40 [32].

The information about Earth's ball-form came to Europe first in Medieval period from Pythagoras (VI century BC) who till his age of 50 years lived and learned knowledge in Armennia and only after that came back to Greece [33].

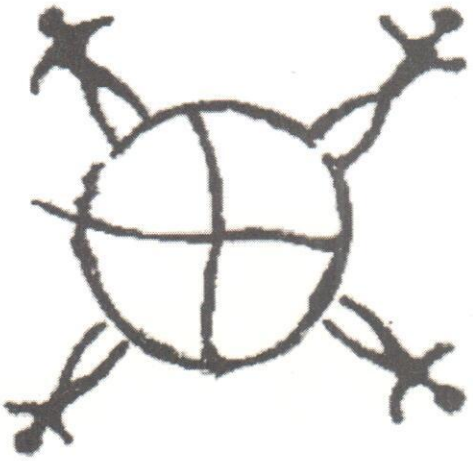

Fig. 40. The Earth is ball-formed and people live on all its sides.
Engraving on rocks near Lake Sevan (about V millennium BC).

Being able to measure latitude and knowing the ball-form of Earth, old Armennian scientists could measure also the size of the Earth. For this it was enough for them to measure the length of meridian part, say in limit $\Delta\varphi = 1°$ (or about 110 km)*, with error $\pm 1'$ (or about 2 km) which is about 2%. The value of $\pi = 3.14$ they could find experimentally with error about 1%**. Then they could calculate the Earth radius as:

$$360 \times 110 : 2\pi \approx 6300 \text{ km } \pm 3\% \approx \underline{6300} \pm 190 \text{ km},$$

which is very good result (the real value is about 6370 km).

1.29. PLANETS. HELIOCENTRIC SYSTEM

In our research of Carahunge Observatory we did not study the problem of Planets observation or calculation. It is necessary to do that in future, because I am sure the Carahunge old astronomers were interested in the Planets. Five planets (Mercury, Venus, Mars, Jupiter, Saturn) were known and had Armennian old names which were presented in Item 1.19.

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* The old length measure in Armennia was "armung" (elbow) about 0.5 m.

** Armennian mathematician V. Mirzoian confirmed that value of π was measured in Old Armennia with accuracy 0.01% (and better) using clay disks with diameter about 1m, which were excavated in Karmir Blour near Yerevan [69].

Old astronomers, of course, saw the unusual (related to stars) movement of planets. The Armennian word for "planet" is "molorak" (մոլորակ) which means "errant" or "spinning one". And indeed, they move sometimes to the back direction. So to understand their real way it was not so easy.

Old astronomers knew about planets the following (even without using any instruments):

1. Planets have different movement than stars, travel crossing constellations, and sometimes stay on one line ("parade" of planets).
2. They are visible from different sides of the Sun, sometimes in the morning before Sunrise and sometimes in the evening, after Sunset, so they perhaps rotate around the Sun.
3. Their velocities on sky are much more than stars velocities, so they sometimes outstrip stars, sometimes move to opposite direction, and they do not blink as stars, so they are much closer to us than stars.
4. Their brightness changes much so they are sometimes at more and sometimes at less distance from us, and their orbit planes are almost parallel to the Ecliptic plane of the Earth.
5. At dark nights in mountains, perhaps, it was possible to see the phases of Venus, Jupiter and understand that planets have not their own light, but are illuminated by the Sun, as the Earth and Moon (the angular size of Venus and Jupiter sometimes comes up to 40″-50″, the normal average resolving power of eye is 1′ = 60″, but many people can see twice better).
6. Mercury and Venus are nearer to the Sun than the Earth, because period of their rotation around Sun is less than Earth period, equal to one year or 365.25 days. Period of Mercury is about 2.9 months, of Venus – 7.5 months. Period of Mars is equal to about 1.9 years, of Jupiter is equal to about 11.8 years, of Saturn – 29.5 years, so they are further from the Sun, than the Earth.
7. Periods of planets rotation old astronomers could measure in Carahunge using Stones with Holes directed to their rising (or setting) points on horizon. They could also associate 11-year period of Jupiter rotation with 11-year period of the Sun activity. I think, they knew about the Sun influence on nature, flora, fauna and people on the Earth much more than we know now.
8. The Sun is the Main God, so it is natural that everything around is in His ascendancy and influence, and has to rotate around Him.

Carahunge astronomers knowing all these (and supporting it by observations with instruments) could suppose that all planets rotate around the Sun. Thus the Heliocentric Solar System becomes at first known (as hypothesis) in VI-V millennium BC. It was proved by N.Copernicus in XVI century AD, and then supported by observations of G.Galilei (XVII cent. AD), theories of I.Keppler (XVII century AD) and I.Newton (XVII-XVIII cent. AD).

1.30. UNIVERSITY

Such a large Observatory as Carahunge, of course, needed many high quality specialists, particularly hundreds observers, mathematicians and service personnel. So Carahunge had to be also a teaching centre, even if knowledge was passed just to limited circle of people (from father to son).

One confirmation that Carahunge had also been a University centre is the Stones № 160 (having height of 1.9 m) and № 161 (height 1 m) standing close together, for teacher and pupil. Both Holes look almost to the same point on the top of nearby hill where there would have been a stone used as an object of observation.

In Carahunge they had to teach observation methods for the Sun, Moon, stars, including pipe (with crossing lines), the recording of observation results and their fixation, the determination of their accuracy (metrology), astronomy, mathematics etc. The cosmology, chronology and Armennian language was also taught.

The presence of such an Observatory tells us about the existence of written language with Alphabet, figures, mathematics*, philosophy etc, and also about the existence of a stable state and order during many millennia. Because under condition when all around there was not any civilization to learn from them, it was only possible to accumulate (beginning from zero) such a high knowledge over many millennia, and by systematic work of many scientists.

Thus the Carahunge (and Armenian language, see PART 2) confirms that close to nature Armennian civilization came from very very old times, more than 30000 years ago, Armennian astronomy – more than 25000 years ago, because the development from zero level up to high one (7500 years ago) needs much more time than learning the knowledge given by ready teachers.

1.31. THE OTHER RESEARCH OF CARAHUNGE

Having my approval Professor H.G.Babayan from Stone and Silicates Institute in Yerevan with his colleagues went in 1999 to Carahunge, took samples of some Stones and about half year researched them in physical and chemistry laboratories. They could not, of course, define the absolute age of Stones, but making physical and chemical experiments with samples they found the relative ages (or difference between ages) of Stones. The results

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* "Mat-a-mat-ika" means in Armennian: "Finger follows finger", i.e. "counting". In old Armennia the decimal counting system was in use with "zero". This word means in old Armennian: "It makes the beginning, but is not material" (deep philosophy!).

were interesting: these relative ages are concurred with age differences found by our astronomical methods [14].

Another group of researches using sensitive magnetometer, found out that the distribution of natural magnetic lines inside Central Circle has spiral form.

1.32. THE CARAHUNGE NAME

I am sure the Monument in old time was called Carahunge (also Carenish). This name is saved in the names of three villages Carahunge which are not far from the Monument. One of them 30 km to East, near present town Goris, and two others (60 and 90 km to East), in Artsakh (Nagorni Carabakh).

Armennian historian of XII century Stepanos Orbelian in his book "History of Syunic" (I-XII centuries AD) notes that there was a village Carunge near the town Sisian (together with names of other existing now villages) [18]. Evidently it is the same village (settlement) just near Carahunge Monument which was excavated (by O.Khnkikian and dated II-III millennium BC [4]). And perhaps the population of Carunge migrated after 301 AD to the East and founded above-said three villages saving the name Carahunge.

"Car" in Armennian is "stone"; "Hunge" (hunch) means a "sound", "echo", "voice", because the analysis of the Armennian word "հուչ = h • ու • չ = h • u • n • g" gives: հաճելի է այն ու քաղր = It is nice and high (see Table 10 in PART 2).

Thus, Carahunge means "Resonant Stones" or "Speaking Stones". Indeed, they had much to tell to old astronomers and have much to tell us.

There is an interesting analogy between words Carahunge and Stonehenge. The "car" and "stone" are a stone, but what is "henge" is unknown, there is not the word "henge" in English language*. So the name Stonehenge is the same "Speaking Stones", and at old times, perhaps, it was called Carahunge. The name crossed all over Europe and was saved during millennia! But could this coincidence be by chance? No, because there are too many coincidences:

1. In Ireland a similar Monument dated 2500 BC is called New-Grange, i.e. the same "henge" (hunge). There are many "henges" in Europe [29].

2. In NW Scotland, on the Outher Hebrides there is Monument like Carahunge (but smaller and without holes in stones) called Callanish (about 2000 BC). "Cal or Car" is almost the same word and in Armennian is "stone". The word "nish" (which is also absent in English language) in Armennian is "sign", i.e. Callanish means "Stone Sign" (Stone Mark, Stone Marker). The is-

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* I don't agree with some authors (as [29]) trying to explain "henge" as "hang". Stonehenge doesn't have any relation with "hang".

land (where Callanish is) is called "Lewis" ("light" in Armennian), and near it there is a peninsula called "Harris". In Armennian "Arris" is "Aries", which is not only the first Zodiac constellation, but this big, nice and proud rock goat was also one of three (with "Aryuts" – Leo and "Artsiv" - Eagle beginning from letters AR) symbols of the old Armennian main and very kind God "AR" (the Sun), whose children were Armennians.

3. In the NE of France, in Brittany is a large stone Monument dated about 2000 BC which (together with the nearest town) is called Carnac. This word in Britton language was written and spoken as "Cagrneagh - Carnikh", i.e. Carnak or Carnish – also "Stone Sign" in Armennian.

4. In Egypt also there is Carnac, where is a temple of Amon – Ra (the Sun God) which is also called Carenish.

There are many other examples. And these Monuments have not only linguistic analogy, but also many other connections (see below, Item 1.34).

1.33. OTHER OLD OBSERVATORIES IN ARMENNIA

Now the Republic of Armennia is a small country in South Caucasian mountains at the North part of the large historical Armennian Highland. Nevertheless in this small Armennia there are very many petroglyphs on rocks (see for example [49]) and old observatories near lake Sevan, in Vardeniss mounts (Fig. 41) [32], in Metsamor (Ararat valley), in Syunic, in Agarak (at the foot of mount Aragats), etc.

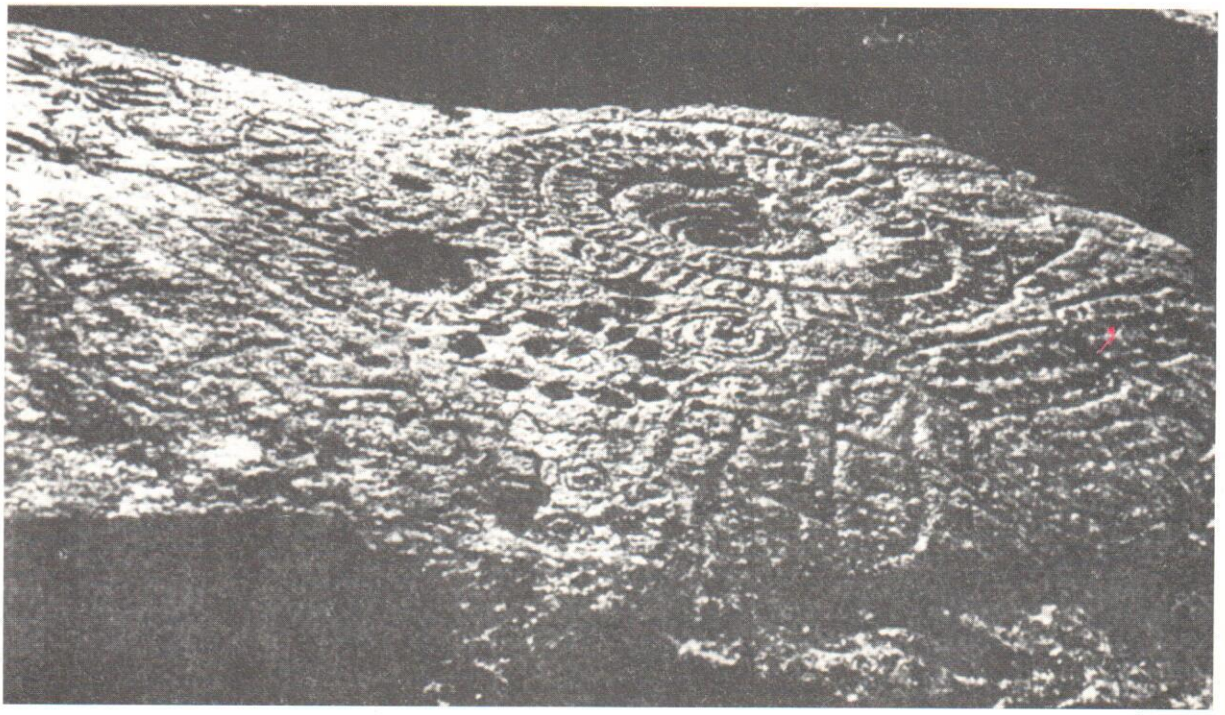

Fig. 41. An Observatory with figures carved on rock in Vardeniss mounts near Lake Sevan [32,48].

It is very interesting that another old Observatory like Carahunge (but smaller) is in 30 km from town Goris near village Khndzoresk [106].

I am sure that many old observatories are in Armennian Highland (now in Turkey). In town Van (near Lake Van) there are Standing Stones of different height. Two of them, so called "Fiancee and Fiance", are shown in Fig. 42 [34]. The Carahunge type standing stones with holes are near village Kazan or Kaghzvan (now in Turkey), to the West from the Big Ararat. My friend from Holland G.Aalten sent me photos (made by B.Corbin in 1998) of these standing stones (Fig. 43a), some of them with holes (Fig. 43b) and with carved old crosses (before Christianity) and pyramids (Fig. 43c) [35].

Fig. 42. "Fiancee and Fiance ".
Standing Stones near town Van [34].

1.34. THE ORIGINAL BRAIN CENTRE

Many scientists write that the Great Pyramid, Stonehenge, Sphinxes and other big old Monuments in Europe, Egypt, America and other places were not the culture of local population (at that time they had not such high level of knowledge) but were introduced from outside, perhaps from East, from the Mediterranean sea basin. But where from exactly and who really designed and built them is unknown yet.

There are also many other enigmas and questions in human old history having no answers. For example, why the big Monuments were built in their present places (for what it was necessary to carry many stones 50 tons each and more from distances of hundreds km), for what purposes they were built, who could build them with so high accuracy, who could make the map of Antarctica without glisters, more than 6000 years ago? In connection with this extraordinary map of 1513 AD G.Hancock (and other scientists) thinks that in very old times, more than 6000 years ago on the Earth was a high developed civilization, the place of which is unknown yet and which researched almost all Planet and gave the knowledge to other nations [24].

We can answer to these questions because Carahunge proves that in very old times the necessary knowledge (to design and build so big and accurate Monuments) had only Armennians. There are the facts that many of old Monuments have real relation to Carahunge, and were conceived and planned here. Let me tell about some of these facts.

Inside of Great Pyramid in Egypt (2450 BC, $\varphi = 30°$) nobody was interred. Nevertheless, inside of it from the funeral chamber of king a narrow (20 x 25 cm) shaft is made (in process of building) directed to the Orion belt bright star (to its culmination point at that time). And from the chamber of queen there is another shaft directed to the Sirius star culmination altitude 39.5° (at that time), see Fig. 44 [36].

But at that time the Orion constellation was called the Hayk constellation [19] and Great Pyramid was built at the time of Armennian King Hayk (2493 – 2444 BC). The Hayk constellation always was (and is) accompanied by Sirius (Alpha of Canis Major or "Big Dog" – "The loved one in house of Holy person").

The next important fact: the altitude 39.5° of queen – Sirius shaft is exactly equal to Carahunge latitude 39.5°! It is possible to be only on latitude 30°, where is the Great Pyramid.

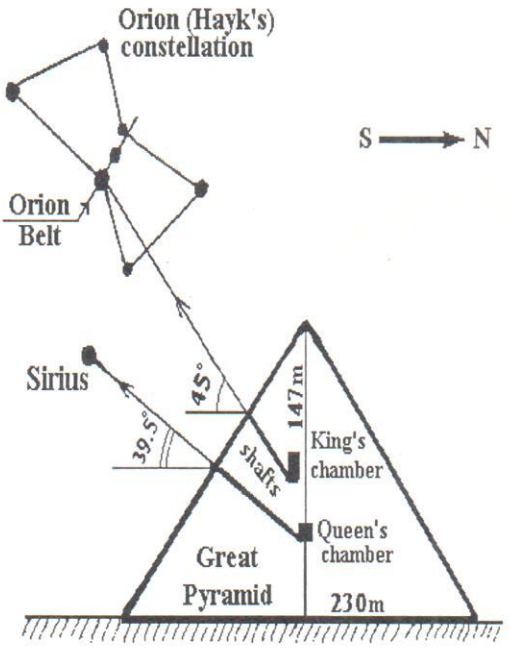

Fig. 44. The Great Pyramid [36]

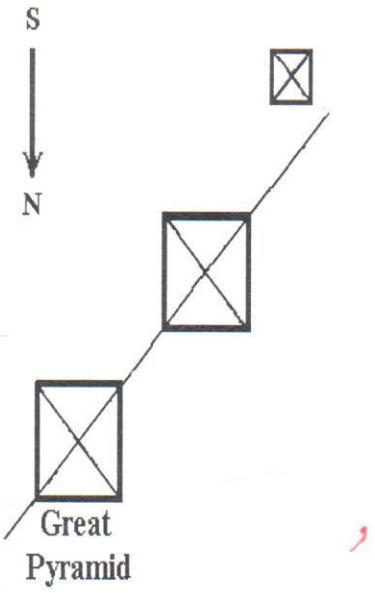

Fig. 45. Three Big Pyramids [36]

The Great Pyramid and Stonehenge are on latitudes, which are almost at equal distances from Carahunge latitude ($39.5 \pm 10°$).

As it is shown by R.Bauvel, the disposition of three Big Pyramids in Giza iterates the positions of three stars in Orion Belt, see Fig. 45 [36].

Carahunge astronomers had much interest in Hayk (Orion) and Canis Major (with Sirius) constellations during 7500 – 4500 years ago, i.e. long before the Pyramids were built (see Tables 5 and 6 in Items 1.24 and 1.25), and Great Pyramid was connected with that interest.

The Stonehenge (2000 BC) is on the latitude $\varphi = 51°$, where (and only here) the four points on the horizon of the Sun and Moon rising and setting in their extreme positions form a rectangle [28]. Besides, the altitude of the Sun in Stonehenge at noon of equinox days is almost equal to Carahunge latitude: $90° - 51° = 39°$ (difference about 0.5°).

There are underground rivers near Stonehenge and Carahunge. There are deep (30 m) wells close to Stonehenge and to ruins of VII century Armenian round temple Zvartnots (near Etchmiadzin) which, perhaps, earlier was another Carahunge.

Callanish is on latitude which is Arctic Circle for Moon [28], and its latitude is about $\varphi = 55.5°$ ($55.5° - \underline{16°} = 39.5°$ = the latitude of Carahunge).

The oldest Egyptian Observatory near present Asuan* is on latitude about $\varphi = 23.5°$ ($23.5° + \underline{16°} = 39.5°$ = the latitude of Carahunge).

It is obvious, that these four old Monuments (Stonehenge and Great Pyramid, Callanish and Asuan) were built on specially chosen (by somebody) latitudes and are closely connected with Carahunge ($39.5° \pm 10°$ and $39.5° \pm 16°$).

Of course, there were taken into account for Monument place choice also other important conditions: climate, presence of many workers, of water, etc.

All these tell us that it was in old Armennia the Original Brain Centre (OBC), where the building of different Monuments was planned. They knew astronomy, mathematics, Earth ball-form, its sizes, technology of stone treatment, etc. and had necessary enough accurate instruments including compass*, sextant, protractor and others. Of course, they measured preliminary the latitudes of many places. They were the first who divided the Sky into 12 parts (Zodiacal Constellations) and 360 degrees ($12 \times 30 = 360°$), divided day into 24 hours ($12 \times 2 = 24$), the hour to 60 minutes ($12 \times 5 = 60$min$= 1$h.), the minute to 60 seconds ($12 \times 5 = 60$sec $= 1$min), thereat 1 sec. is almost equal to 1 period of human heart rhythm. In the result the Sky (i.e. Earth) rotates with velocity 15 degree per hour, or 15 arc. minute per minute, or 15 arc. sec. per second, easy to remember.

It was decided in OBC to build at first the Great Pyramid at latitude $\varphi = 30°$, in order the elevation of Sirius extreme to be equal 39.5°, as Carahunge latitude. The difference was $39.5° - 30° = 9.5°$. To build Stonehenge on the same latitude shift, i.e. on latitude $39.5° + 9.5° = 49°$ was impossible because unfortunately, there was English Channel (La Mansh). So they de-

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* "Asu •an" in Armennian means "speaker", "speaking one".

* "com" (kohm) in Armennian is "side" (կողմ).

cided to go to φ = 51° where were good conditions and another connection with Carahunge: the equality (approximate) of Sun elevation at equinox noon to the Carahunge latitude.

It is interesting also that Carnak (latitude about 48°) in Britain (France) was built almost at the same time (2000 BC) with Stonehenge and the middle latitude between them is equal to 39.5 ± 10= 49.5°. Indeed, 48+51 = = 99 : 2 = 49.5 – 10 = 39.5°, i.e. the latitude of Carahunge.

Then the place latitudes for Callanish and Asuan Observatory, as 39.5° ± 16° were chosen. Of course, at these places at first simple observatories were built by them, as for example, the circles near Goseck, Germany (4900 BC, latitude about 50°) [104].

I think, the places were chosen by this way, although to build Monuments in these places it was necessary to do the titanic work to carry very big stones for Stonehenge and Great Pyramid from the distances of hundreds kilometres.

Why did they decide to build so big Monuments, for what main purpose?

I think, the main purpose of Great Pyramid and Stonehenge building was to tell, to lead, to bring, to inform the far future generations about the great scientific discovery they knew, the Ball-form of the Earth!

They were clever enough to understand that many scientific knowledge could be forgotten, because population on Earth at that time generally was not yet civilized, had no written language, i.e. had no long time memory. And they were right. R.Bauvel and A.Gilbert write that about 1000 years after Pyramids building it was unfortunately forgotten who built them and for what purpose [36]. Also, by G.Hawkins the real history of Stonehenge was forgotten [28].

1.35. THE GREAT SPHINX

At the first time Armennians were in Egypt much earlier, perhaps, about 12000 years ago, and built the Great Sphinx.

My opinion is the Sphinx was built to perpetuate the another great scientific discovery, the phenomenon of Earth Axis Precession, the Great Space Clock of Equinoxes.

The Great Sphinx is Lion, the symbol of Armennian main God AR (the Sun), and it looks exactly to the East, to the point on horizon, where the Sun rises each equinox day. Why was needed this orientation? G.Hancock thinks that Sphinx was built in Precession epoch of Lion constellation, i.e. between 10970 BC and 8810 BC (about 13000 – 10800 years ago). He says: "The Lion was looking to the Lion!" [24]. I can add: "And to the Sun, twice per year!".

According to modern data the Great Sphinx was built much earlier than Pyramids (more than 6000 years earlier) and may be even before the Great Deluge, because the stone material of Sphinx is much more erosioned than stones of Pyramids or temples near them [24].

Let me add that next Lion epoch will be between 14950 AD and 17110 AD. So the Great Sphinx is looking indeed to the very far future!

To the question "Who built the Sphinx?" many modern scientists answer that it was done by some very old and great civilization on the Earth, the place of which is unknown yet.

G.Hancock tells that French mathematician R.A.Shwaller de Lubich in his books "Temple de l'Home", "Roi de la theocratic Pharaonique" (XX century AD) noted that the science and culture in Egypt were much more developed and complicated than the modern scientists think [24]. He tells also that well known geologist John A.West in his book "The Serpent in the Sky" said that Egyptian civilization possibly is not the result of development in limits of the Nile Valley but is the heritage of much earlier, more great but still unknown civilization which "outstripped dynastic Egypt and all other famed civilizations for thousands years" [24]. And he said also that the Great Civilization, perhaps, preceded Great Deluge, which allow to suppose that Sphinx already existed at that time [24]. And G.Hancock said also the opinion of the famous American geologist R. Schoch: "I am going by the way of the science, which leads me to the dedication that Sphinx was made much earlier than it was deemed" [24].

I am glad that there are such opinions. I think that the said "unknown yet the Oldest and Great Civilization" might be only Armennian Old Civilization in Armennia, because there is the developed Carahunge of 7500 years old and there are no other variants.

1.36. COSMOLOGY, PHILOSOPHY, THEOLOGY

In Old Armennia the Cosmology, Philosophy and Theology together were developed. This is possible to explain using Armennian Language (see PART 2), especially some words, for example:

- The word Universe (Տիեզերք - Tiezzerc) means in Armennian "Edges of people home (place)" (see Table 10). There is also another old Armennian word for Universe, which is perhaps, older one. It is Աստ (Ast) which means "The home (place) for beautiful life". So the Universe was in close connection with life, was for people life, so people are the part of Nature and live in all the Universe. This very old opinion shocks, doesn't it?
- The word Star (Աստղ - Astgh) means "The clot in the Universe", "The clot (quintessence) of the Universe (matter substance)", be-

cause "Ast" is Universe and "ղ - gh" is clot of different substances, as for example "Յուղ - Yough" is "butter" which is clot of milk. Deep philosophy!

- The word God (Աստված - Astvats) means "Omnipresent", because "Ast" is Universe and "vats" or "ats" in Armennian words show the position state of the object, as in words "դրված - put", "սփռված - widespread", "կանգնած - standing", etc. So the God is the Substance spread all over Universe or Omnipresent, which is (one of) His main quality.

Thus the Main Deity, Main God of Old Armennians was the All Universe, All Nature. The Sun (AR, AREV) was the Main God of Earth or, perhaps, for the all Solar System.

1.37. ABOUT ASTRONOMY IN OLD ARMENNIA

I am not sole in opinion about the presence of developed level of science, language and culture in Old Armennia.

At the beginning of XX century well known German historian E.Maunder and archaeologist Swarts [37], famous British astronomer and historian of astronomy W.Alcott [38] wrote that the first people who divided the sky to the constellations and named them, lived not in Egypt, not in Babylon, but in Armennian Highland (in Valley of river Euphrates) and around Mount Ararat, at latitudes from 36° to 41°, and that process was completed in III millennium BC. According to W.Alcott these conclusions are agreed also with historical and archaeological data.

E.Mounder also writes: "Egyptians, on whose ancient monuments twelve Zodiac signs were found out, told the truth that they had taken their knowledge about stars from the Chaldeans (= Urartians = Armennians, see below, P.H.), and they in their turn were teachers of Greeks at the times of Phales and Pythagoras" [37].

Zodiac signs, used till now, are ancient Armennian hieroglyphs for Zodiacs which are saved in Armennia till now, for example, in Metsamor Monument (big metallurgical plant and observatory in the Ararat Valley, V millennium BC), [39], in rock petroglyphs [32, 32a], on pages of Matenadaran* manuscripts.

The planet Earth (with human population) is denoted in present astronomy (from old times) by ring with cross on the top. This was an Armennian old sign of Earth: the ring with man on the top  , which was simpler and earlier than petroglyph shown in Fig. 40. The same structure have the

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* Matenadaran is Repository, Scientific Institute and Museum of Ancient Manuscripts in Yerevan, the capital of Republic of Armennia (see Fig. 67a on page 142).

carved ornaments on thousands Armennian famous Cross–Stones made before (Fig. 43c) and especially after the Christianity adopting (Fig. 94).

French famous astronomer and philosopher K.Flomarion [40], British scientist A.Berry [41] and others noted the high level of astronomical knowledge in prehistoric Armennian Highland.

American scientist, the well-known researcher of Stonehenge and Cal - lanish, G.S.Hawkins in 1970-s wrote to V.H. Hambartsumian, President of the Armennian National Academy of Sciences, that Stonehenge is not alone and it should be expected the presence of such astronomical culture in Armennia [3, 31]. Carahunge and this PART 1 are bright confirmation of his rightness.

Carahunge is also confirmation of other above mentioned statements and opinions about developed astronomy and culture of Old Armennia.

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1.38. ABOUT ASTRONOMY IN MODERN ARMENNIA

In the present Republic of Armennia Astronomy is also developed.

In famous Byurakan Astrophysical Observatory (BAO) led by director V.H.Hambartsumian the high level scientific results were achieved by him as well as by Professors B.Marcarian, G.Gurzadian, M.Arakelyan, L.Mirzoyan, E.Khachikian, PhD H. Baddalian and others. The interesting results were achieved thanks to cooperation with Foreign Member of the Armennian National Academy of Sciences Ye.Terzian (Director of Astronomy Department of Cornell University, NY, USA).

In BAO the Star Associations were discovered where stars are born also in present time; the new type of galaxies with ultraviolet superfluity (Marcarian galaxies); the activity of galaxy nuclears; the first space telescope "Orion" was made, etc.

The first in Armennia radioastronomical observations were done in BAO in 1950-es led by PhD-es V.Sanamian and PhD E. Mirzabekyan.

In Yerevan State University Professors G.Sahakkian and D.Sedrakkian received important theoretical results about neutron stars, Prof. B.Toumanian made interesting works on old calendars, etc.

In Yerevan Physics Institute (Yerevan and Mount Aragats) led by director A.Alikhanian the new types of telescopes for space high energy particles were made and many interesting results were achieved.

In Radiophysics Research Institute (RRI), founded in 1968-71 and heading by the author of this book, with RRI Experimental Plant "Wave" (Yerevan) led by director M.Khorasanjian, and RRI Aragats Scientific Centre (ASC, 100 hectare, Mount Aragats) led by director Dr. V.Oskanian (present director T.Tonoyan) there has been worked out the theory and projected the large radiotelescope with the Large Antenna of the new type having fixed (in ground) spherical main mirror and movable correcting secondary small mirror [42-44]. In 1960-62 was projected and built the working model of Large Antenna 5 m in diameter (0.64 m secondary mirror) for mm radio waves [43]. It was, at that time, the biggest Antenna in the World for short mm wave range.

In 1960's and 70's the entire project of large Radio-Optical Telescope with the Large Antenna and all systems was completed in RRI. The building of the first in World Radio-Optical Telescope ROT-54/2.6 had begun in 1976 in ASC of RRI on altitude 1700 m.

The main building and construction work were done during 1976 -1986 by big staff of RRI (with more than 850 persons). The huge work was done by specialists of RRI: A.Antonian (building), R.Adamian, E.Kazarian, A.Pogosian (design), M.Khorasanjian, O.Dolbakian, Dr. H.Bagdasarian (technology, manufacturing), Dr. M.Arakelian, Z.Astvatsatrian, G.Aslanian (montage, adjusting), Dr. S.Sarkisian, A.Nersesian (28 control systems making and adjusting), Dr. N.Khachatrian, N.Yeolchian, (radiometric receivers for 2, 3, 8 mm, 3, 10, 20 cm ranges), Dr. V.Oskanian (optical telescope design), G.Utunjian (300 tons antenna aluminum surface melding), V.Hovannesian (turner and welding master) and many-many others.

The main building, preparation and montage works, as well as all infrastructure: electrical grid, telephones, water and heating supply, laboratories and control buildings, hotel etc, were finished in 1985. Also the first observation of radio sources was done in 1985 [46].

During 1986 – 1987 all systems adjustment work was finished in ASC and ROT – 54/2.6 with Large Antenna 54m in diameter and Optical Telescope with 2.6m in diameter were ready (Fig. 46a,b,c). In 1988 parameters of ROT – 54/2.6 were measured and observations started.

The measured parameters of the Large Antenna are presented in Table 7 and its comparison with parameters of other large antennas in the World is presented in Table 8.

ROT – 54/2.6 Large Antenna parameters are better than parameters of any large antenna in the World, especially in mm wave range (until now). This is the most accurate, short wave, narrow beam, high gain, low noise, high sensitive and high speed large antenna in the World.

Using this unique modern Astronomical Instrument we (with Dr. A. Sarkisian, Dr. V. Oskanian. Dr. Panchenko, Dr. N.Khachatrian, A.Oskanian and others) made first observations and discovered the bright flare on Etta Gemini red giant star. Such a powerful flare was observed for

the first time for red giant type stars. The new radiosources in mm radio wave range were discovered.

It was also demonstrated (thanks to very low level of the Antenna Self Noises, 2.8K) that the "relict" background emission (of 2.7K) in Universe is absent, so the present cosmological theory of the Birth of the Universe by Big Bang is wrong [45-47].

In RRI other radio telescopes were also built: RT-18 with parabolic antenna 18 m in diameter for 3 cm – 1 m wave range; RT-3.2 with spherical doublemirror antenna 3.2 m in diameter (accuracy 7 micron) for submillimetre (0.1 mm – 3 cm) wave range, which is put on Mount Aragats on altitude of 3200 m, and others.

ROT - 54/2.6

The Results of Measurements of ROT Main Parameters

Table 7

N	Wavelength, mm / Parameter	200	30	8	3	2	1 (expected)
1.	Beamwidth	25'	3.7'	1'	22''	14''	7''
2.	Effective Area, m^2	560	560	540	520	482	350
3.	Gain	$2x10^5$	$8x10^6$	10^8	$7x10^8$	$1.5x10^9$	$4.4x10^9$
4.	Area using factor	0.7	0.7	0.67	0.65	0.6	0.4
5.	Self Noises, K	5	4	2.8	3	not measured	
6.	Sensitivity (Eff. Area / selfnoises)	112	140	193	173	not measured	
7.	Field of view, square degree	2.8	(±1 0 x 10 beam-widths)			not measured	

The ROT Comparison with the World Other Largest Antennas

Table 8

Parameter \ Antenna	ROT *Armenia*	Nobjarna *Japan*	PicoVeletta *Spain*	Effelberg *German*	Aresibo *USA*	Evpatoria *Ukraine*	Medvezhji ozera *Russia*	RATAN 600 *Russia*
1. The full diameter, m	54	45	30	100	305	70	64	7.4x580
2. Using diameter, m	32	45	30	100	260x213	70	64	74 x 329
3. Using Aperture, geometrical Area, m^2	804	15 90	707	7854	43514	3848	3217	2368
4. RMS of mirrors, mm	0.08	0.2	0.13	1.2	7.5	1	1	1
5. Shortest wavelength, mm Max. frequency, GHz	2 150	3.3 9.4	3 10	30 1	37 0.81	30 1	30 1	30 1
6. Effective Area factor (at shortest wave)	0.6	0.4	0.4	0.4	0.5	0.4	0.4	0.4
7. Effective Area, m2 (at shortest wave)	482	63 6	283	3142	21760	1539	1287	947
8. Electrical diam/103, λ (at shortest wave)	16	14	10	3.3	6.4	2.3	2.1	0.25x11
9. Self-Noise Temper., K	3	35	35	40	35	35	35	50
10. Sensitivity, m^2/K (Eft. Area / Self-noise)	161	18	8	79	622	44	37	19
11. Beamwidth, arcsec. (at shortest wave)	14	17	24	72	41x34	103	112	22x900
12. Beam cross (cut) section, $arcsec^2$	196	28 9	576	5184	1095	1060 9	12544	19800
13. Gain /106 (at shortest wave)	1514	78 0	395	44	200	21	18	13
14. Sky coverage, degree	120	12 0	120	120	22	0150	150	150
15. Latitude, degree	40	36	37	50	18	45	56	44
16. Declination of visible sources, degree	-35 +85	-24 +7 5	-24 +75	-10 +75	+24 +46	-30 +90	-19 +90	-30 +90
17. Sky coverage along source declin., degree	120	99	99	85	22	120	109	120
18. Duration of source observation, hour	8	6.6	6.6	5.7	1.5	8	7.3	8
19. Tracking accuracy, arcsec.	2	2	2	10	10	?	?	?
20. Parallel Optical-Telescope diameter, m	2.6	-	-	-	-	-	-	-

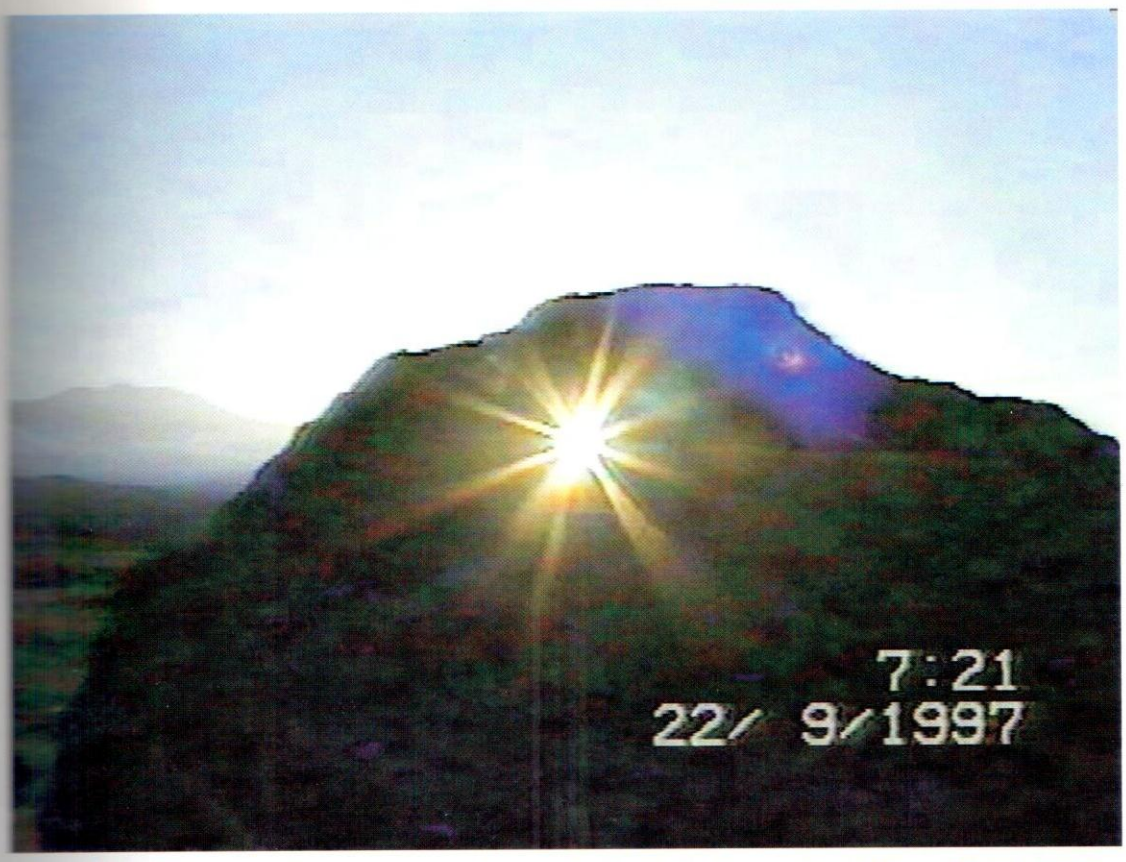


Fig. 21. The Sunrise moment through Hole in Stone No 67 on 22.09.1997

Fig. 22. The Sunrise moment through Hole in Stone No 63 on 22.09.1997

Fig. 23. The Sunrise moment through Hole in Stone No 66 on 23.06.2001

Fig. 25. The New Type of Sundial-Calendar in front of RRI main building

Fig. 25a. Fragment of Carahunge stones. Painted by S.G.Safian

Fig. 31. Periscope-Stone No 137

Fig. 32. Bowl with water in down part of Stone No 137

Fig. 33. Professor G.S.Hawkins

Fig. 34. Stonehenge. Painted by G.S.Hawkins

Fig. 36. Three-Stone Instrument (TSI)

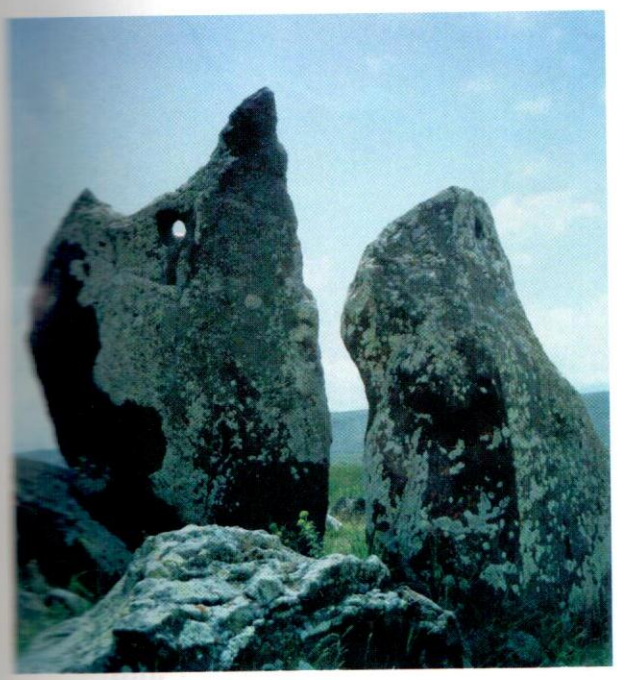


Fig. 37. Two main Stones of TSI

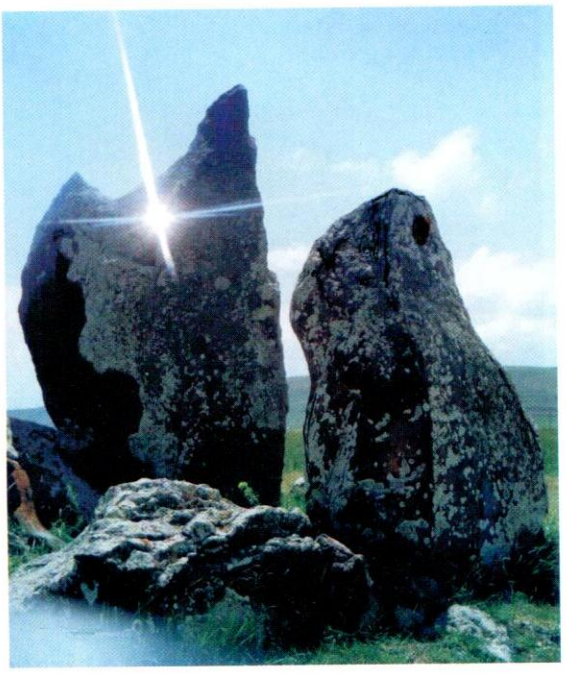


Fig. 38. Sun reflection from a mirror Put in Hole of Stone No 63. Photo by H. Bagdasarian

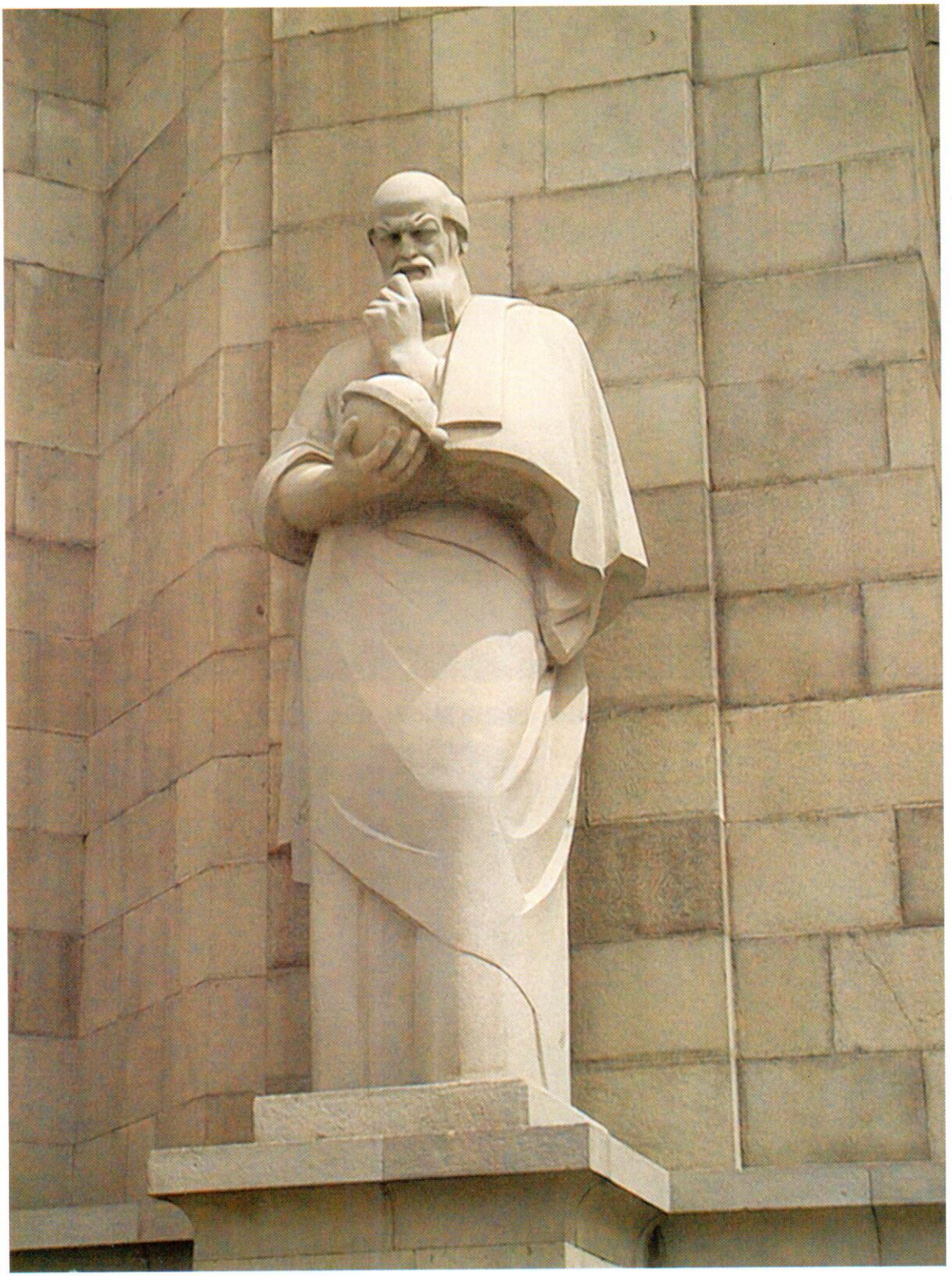


Fig. 39. **Statue of Annannia Shirakatsi, Armennian old astronomer and mathematician of VII cent. AD, with the model of ball-formed Earth**

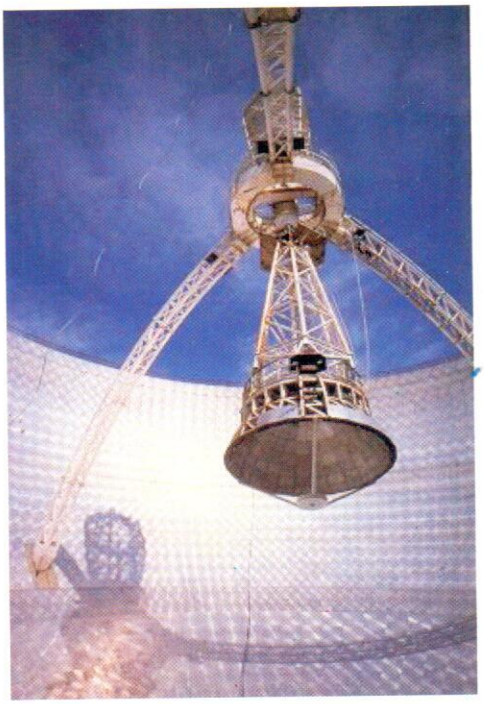
a - General view

b - Stone with hole

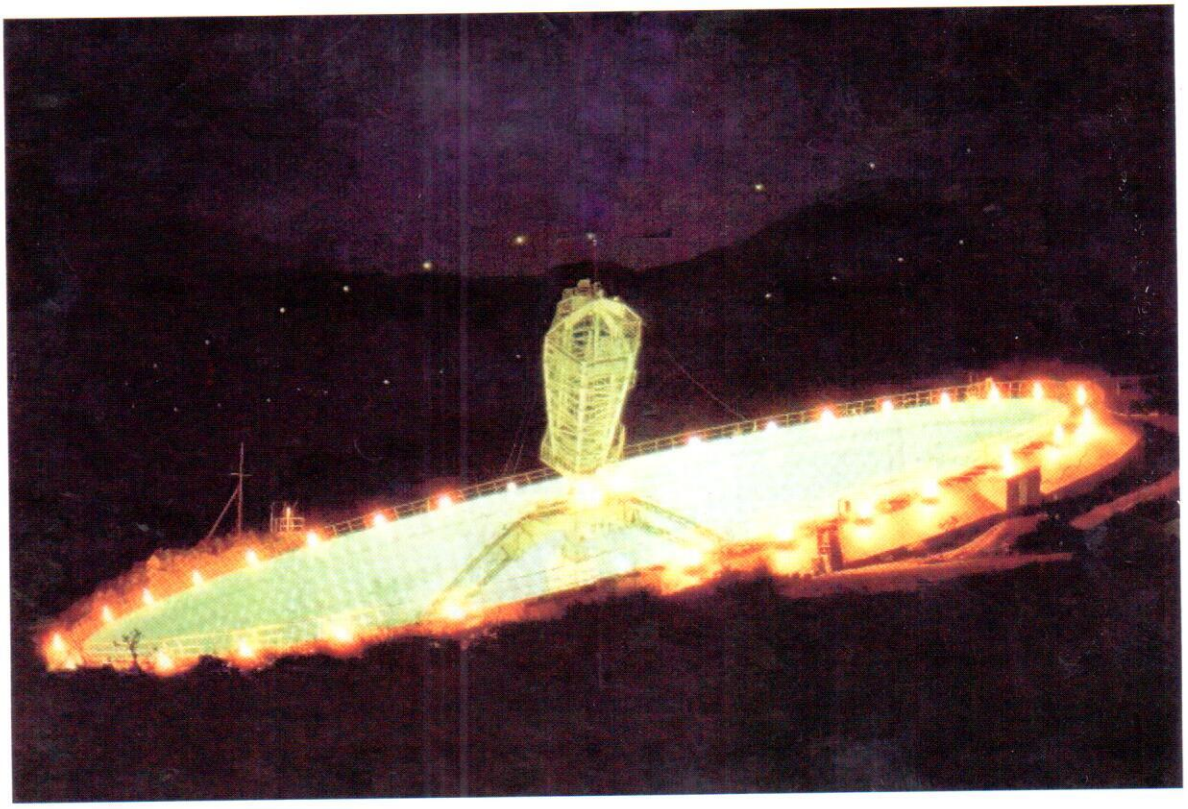
c - Stones with engraved old crosses and pyramids

Fig. 43. Standing stones near Mount Ararat [35]

a - General view from helicopter



b - Secondary Mirror



c - View at night

Fig. 46. Radio-Optical Telescope ROT-54/2.6

1.39. CONCLUSION OF PART 1
CARAHUNGE – THE PREHISTORIC WONDER IN ARMENNIA

Carahunge is the prehistoric stone Monument in Armennia, near town Sisian. It consists of hundreds Standing Stones (also lying and damaged ones) from which 223 are numbered by us. 84 of them have accurately made holes, 4-5 cm in diameter, going through stones and looking to different directions, mainly to the real horizon.

In the middle part of the Monument Stones form the Central Circle with sizes 35 m x 45 m, from which to the North and South directions the Stones Arms are going as far as 110 – 150 m as well as the short NE Alley. The territory occupied by Monument is about 7 hectares.

Beginning from 1994 we are researching Carahunge using astronomical methods. Our conclusion is the following:

1. Carahunge was very old Temple (Central Circle) of the oldest Armennian Main God AR (the Sun), very large and developed Observatory (Arms) and big University;

2. Carahunge consists of about 80 Stone Astronomical Instruments the accuracy of which is up to 30″ or 2 sec for the Sun and Moon, and 51″ or 3.4 sec for stars and planets observations;

3. The name "Carahunge" means in Armenian "Speaking Stones";

4. Using the Earth Axis Incline changing and its Precession phenomena laws and our observations results of the Sun, Moon and stars rising, setting and culmination moments using old Astronomical Instruments, as well as our calculations results of the used four independent astronomical methods we believe that:

– Carahunge Observatory had developed scientific level and was in active operation more than 7500 years ago,

– It was in continuous operation during more than 5500 years, perhaps, until Christianity adopting in Armennia as the State religion in 301 AD;

5. Carahunge is the oldest and biggest Observatory among all known old ones in the World. It is older than Stonehenge for 3500 years, than Great Pyramid for 3000 years and than the beginning of the oldest civilizations in Sumer and Egypt for 2500 years. Armennian civilization is the oldest in the World;

6. In Carahunge time prehistoric Armennian scientists knew the following:

– the Earth is ball-formed and its radius is about 6300 km;

– the Earth rotates around its own Axis with period of one day, and around the Sun with period of about 365.25 days; the old "movable" calendar (coming from about 23000 years ago) was corrected to the first "fixed" one; the Armennian Circle of 1460 years was corrected to 1461 years;

– the Earth Axis is inclined for the angle about 24° from the vertical to the ecliptic plane and this angle very slowly changes in small limits;

– the Earth Axis makes also a slow conic movement (called now Precession) with period about 25920 years, in the result of which the Spring equinox moment comes each year earlier for about 50″ (or 3.3 sec.), so-called Equinox Anticipation; the Sun slowly moves (in relation to stars on sky) with velocity 83′ (or 5.5 min.) per 100 years, i.e. lies in each Zodiac constellation for 2160 years. The Precession was, perhaps, found out in Carahunge much earlier, about 12000 years ago (so-called "the Space Great Clock");

– Carahunge astronomers have had special interest and made long time observations of stars in Orion (with its Belt) and Canis Major (with Sirius) constellations, using many specially made Stone Instruments, holes of which were directed to the rising, setting and culmination points of said stars at period of 7500 – 4500 years ago; they found out also the Sirius Cycle (Sotis) which is very close to the Armennian Cycle (difference is 12 min. per year);

– five planets were known with their periods of rotation around the Sun: Mercury – about 3 months, Venus – about 7.5 months, Mars – about 2 years, Jupiter – about 11 years, Saturn – about 30 years. So the Heliocentric Solar System was known in Armennia more than 8000 years before N.Copernicus, G.Galilei, I.Keppler and I.Newton;

– Carahunge demonstrates that 7500 years ago in Armennia were developed mathematics, technologies, written language (alphabet) as well as the state (kingdom) with law and order during millenia;

7. We understand that such a high knowledge, which had Armennian Carahunge Scientists, was achieved by systematic work during many thousand years. In Carahunge we have found developed Astronomical Instruments built 7500 years ago and designed using already high special knowledge. This means that before these Astronomical Instruments, there had been simpler ones. When was the beginning?

To answer this question it is necessary to take into account that being the first civilization Armennians could not learn knowledge from anybody else because there was not any other civilization. It was just one source – Nature. They were children of the Sun, of the Nature and accumulated the knowledge little by little, starting from zero. Of course, this is a very slow process, requiring many thousand years.

Probably, Armennian language, settled life, agriculture, state, i.e. civilization began about 40 thousand years ago (which will be proved also in PARTS 2 and 3); the first sky observations and calendar began 23 thousand years ago; the first Observatories, Precession discovery and preliminary Alphabet – about 15-10 thousand years ago.

8. There are a lot of indisputable facts of analogy between Carahunge and other old monuments:

– Stonehenge and Callanish have Central Circles, NE Alleys and Arms (Callanish), as it is in Carahunge;

– Stonehenge and Great Pyramid are built in latitudes which are about ± 10° from Carahunge latitude (39.5°);

– Callanish and oldest Egyptian God RA (AR) temple and Observatory (near present Asuan) are built in latitudes about ± 16° from Carahunge latitude;

– The narrow shaft inside the Great Pyramid (made during Pyramid building), going through Pyramid from king's chamber to its South side, is directed to bright star of Orion Belt in its culmination at that time, about 4500 years ago, when Orion was called Hayk constellation (by name of famous Armennian King Hayk, about 2493-2444 BC);

– Another the same type shaft going from queen's chamber is directed to Sirius (which is near Orion) culmination point (at that time) and its inclination angle is 39.5° which is exactly equal to Carahunge latitude. This can be so only at latitude 30° where the Great Pyramid was built;

– In Stonehenge the inclination angle of the Sun at equinox days noon is also equal to about 39.5° which is latitude of Carahunge. This can be so only at latitude 51° where Stonehenge was built;

– Callanish was built on latitude about 56° which is approximately North Polar Circle for Moon; Old Observatory in Egypt (near Asuan) was built on latitude about 23.5° which is close to North Tropic Circle for the Sun;

– The word "Stonehenge" is the same as "Carahunge" because "car" in Armennian is "stone" and "henge" (the word which is absent in English) is very close to "hunge". So Stonehenge means the same "Speaking (singing) Stones";

– The word "Callanish" is very close to Armennian word "Carenish", where "car" is "stone", "nish" is "sign". So Callanish means "Stone Sign", "Stone Symbol". The island where Callanish was built is called "Lewis", which in Armennian is "light";

– Carnac in Brittany (France), the name of which in old Briton language was written as "Carnikh" or "Carnish", is the same "Stone Sign". The same means Carnac in Egypt;

9. These above mentioned facts (there are also others) tell that analogies between Carahunge and other old monuments are not accidental, which means that almost all old monuments were planned in one "Original Brain Centre", in Armennia. For what purpose?

There were two main purposes:

– the first one was to perpetuate the Great Scientific Discoveries. The Great Sphinx was built (about 12000 years ago) in honour of Precession phenomenon discovery, and Great Pyramid and Stonehenge, as well as Callanish and Asuan, were built in honour of Earth ball-form discovery;

– the second purpose was the great and noble mission of Armennian civilization – to civilize other tribes and nations. Armennians were never aggressive. They were kind and gifted knowledge bountly and unselfishly as their Main God AR gives life.

10. There is a line of almost the same old legends of many nations (as Sumerians, Egyptians, Greeks, all nations of Central America) telling that in

very old time came white and bearded kind Gods and taught them to be kind, do not make human sacrifice; they knew everything and taught them knowledge. The name of leader of Gods who came to Sumer was Ovannes, which is Armennian male name. Armennia gave knowledge to Sumer, Egypt, Babylon, Crete, Mycena, Delphi, Greece, Iran, India etc. (see PART 3);

11. My present research of Carahunge is the first and, of course, it is necessary to continue it. I am sure Carahunge is very interesting and complicated object and many new results will be achieved by many other specialists: astronomers, geologists, historians and archaeologists.

12. Carahunge belongs to all mankind as a certification of its high knowledge coming from very old times.

P.S. According to the Government decision No 1095-n of Republic of Armenia, dated 29 July, 2004, the old stone Monument near town Sisian in Armenia is named "Carahunge Observatory".

This Decision is affirmed by the President of Republic of Armenia Robert Kocharian at 11 August, 2004.

PART 2

ARMENNIAN LANGUAGE ANALYSIS

"Steed – he is powerful and beautiful"
"Ծժույգ - նա ուժեղ է և գեղեցիկ"

It is not well known that inside language much information about old times is saved. This is right especially for the Armennian language which is very old and is the first language, "The God's" language. So, the careful analysis of Armennian language can give many marvellous and unexpected results, which I shall show you here, in PART 2.

2.1. VERY OLD TIME

The early Paleolithic culture (500/300-50 millennia ago), many camps and inhabited caves with firesides, stone tools and crockery were found during excavations in Armennia (present and Historical lands) [34, 68, 93]. The people, such as Azokhians and Cromagnonians living in Paleolithic time in Armennia were the ancestors of Armennians (see PART 3).

Armennian nation began to form with emersion of Homo Sapiens in Armennia about 50-45 millennia ago. The beginning of Armennian language has the same age.

If you think that Homo Sapiens had no language, could not speak, you are mistaken. He was clever and emotional as we are. And I am sure, after just a few generations they had enough good language, in contrast to animals which can utter just some separate sounds.

Let us imagine the first man, when his conscious was just awaken. He saw and felt all Nature around: the Sun, the Moon, stars, rainbow, mounts, woods, water, air etc. He wanted to exercise his ability, to tell about his feelings to others. He was a particle of Nature, felt all positive and negative forces. The main source of creational forces was the Sun, giving light, warmth and life. He loved the Sun (AR in Armennian), respected and adored Him. The Sun was his kind God, his Father, and he was His child, he was Aryan ("Ar•yan" in Armennian means: "From the Sun land", "Sun people").

First Armennians determined four main Elements of Nature. They named them by simple first words. And these words came to the present Armennian almost without changes (Table E). Later the concept of these four Elements were transferred to all other countries and nations.

Table E

Four Main Elements of Nature				
Չորս Տարերք			Four Elements	Четыре стихии
Armennian			English	Russian
Old		Present		
1.	(h) օղ	հող (երկիր)	(g)round (Earth)	земля (шар)
2.	(h) օդ	օդ (երկինք)	air (sky)	воздух (небо)
3.	(h) օվ	ջուր (հով,ծով)	water (sea)	вода (море)
4.	(h) ուր (h) ար, Ար	հուր կրակ (արև)	fire (Sun)	огонь (Солнце)

Armennian language intensively developed and, of course, from the very beginning there were many very important words beginning with "ar": Ար (Sun), արմատ (root), արյուն (blood), այր (man), արդար (righteous), արտ (pasture), արոր (plough), առագաստ (sail), արարիչ (creator), արահետ (way), արգանդ (womb), արվեստ (art), արագիլ (stork), արի (noble), արիացի (aryan, "born in Sun land"), etc.

Even in old times Armennian language was rich and included words having deep scientific, philosophical and spiritual meanings. Just two examples: "Star" – "concentration of space (substance)", "God" – "spreaded in all Universe", "Omnipresent".

The first Armennian written language (pictures, symbols, hieroglyphs) arose in Armennia about 25000 years ago, was in use during many millennia. Even now they are present on old monuments [32, 39, 48, 49, 50].

There are many very old petroglyphs on hundred kilometers of rocks in Armennia. One of them is a vertical stick with the point on the top (¡). It was "man", "me", "I", "one". This sign with a point a little upper of the stick (i) is saved in European languages. English pronunciation is "ai". If to add the half-sound "h", it will be "hai" which in Armennian is "Armennian". English "I am" in Armennian is the same Ես եմ = "Yes (I) am". Also English "who come" in Armennian Artsakh dialect is the same Յու քյամնե = who come.

Later the symbol for "man, I, one" was developed to these:

which are the praying men. And three symbols of AR (Sun God) arose: Lion, Eagle and Aris (Aries), all three begin in Armennian with letters "ar". From that time "three" came to us as a sacred figure and sign "ա" became the first letter of Armennian Alphabet (letter "a"). It seems to me, that at first there were two symbols: Lion and Eagle, but during (after) Great Deluge the Aris was added, because this beautiful big animal stood immovable on the top of rocks and was not afraid of lightning. Aris became also the name (and sign) of the first Zodiacal constellation and the form of its horns became in Armennia the spiral ornament and the sign of Life, Sun and Eternity (Fig. 47 a, b, c).

a) Spiral ornament b) Life, Sun, Eternity c) Aries Zodiac constellation

Fig. 47. Old Armennian Signs

Armennian language confirms that Armennians in Armennia lived and live during all times. This comes also from the fact that very many geographical names, names of men and women begin with letters "ar". For example:

geographical names: Armennia (Ar • men • ia – "Sun people (Aryan) country"), Ararat (Ar • ar • at – "extra created" or "God's life place"), Aragats, Areguni (mounts), Aracs, Aratsani, Arpha (rivers), Artsakh, Aragatsotn, Armorika (lands), Arabkir, Armavir, Artashat (towns), etc,

male names: Arman (Ar•man – "Sun man", "Aryan"), Armen, Armenak, Arshak, Ara (Arayik), Arsen, Artashes, Artavazd, Areg, Artin, Aris, Artak, Arsham, etc.

female names: Arev (Arevik), Arus (Arusiak), Aracs, Arshaluys, Arpi (Arpiar), Arminne´, Armenouhi, Aregnaz, etc.

According to anthropological data Armennian names (and family names) were not changed at least during last 9 thousand years [51].

The first (preliminary) Armennian Alphabet including 19 letters arose about 15-12 thousand years ago (see below).

The Developed Alphabet with 34 letters existed in VI millennium BC. It was all-Armennian Alphabet, used also in Kilikian, Phoenician and other Armennian Kingdoms (see below). This Alphabet served as the base for all world Alphabets (see below, Tables 5, 9, 18).

Thus the basis of Indo-European family of languages began about 7000 years ago. It was Armennian language and Armennian Alphabet.

The Moscow linguists T.Gamkrelidze and V.Ivanov write that the supposed cradle of Indo-Europeans and Indo-European languages was located in Historical Armennia, from where they propagated to different directions (Fig. 48) [52].

The same opinion (particularly about consanguinity of Armennians and Celts) is given also by European scientists, for example, by D.Lang in his book "Armennia, Cradle of Civilization" [53].

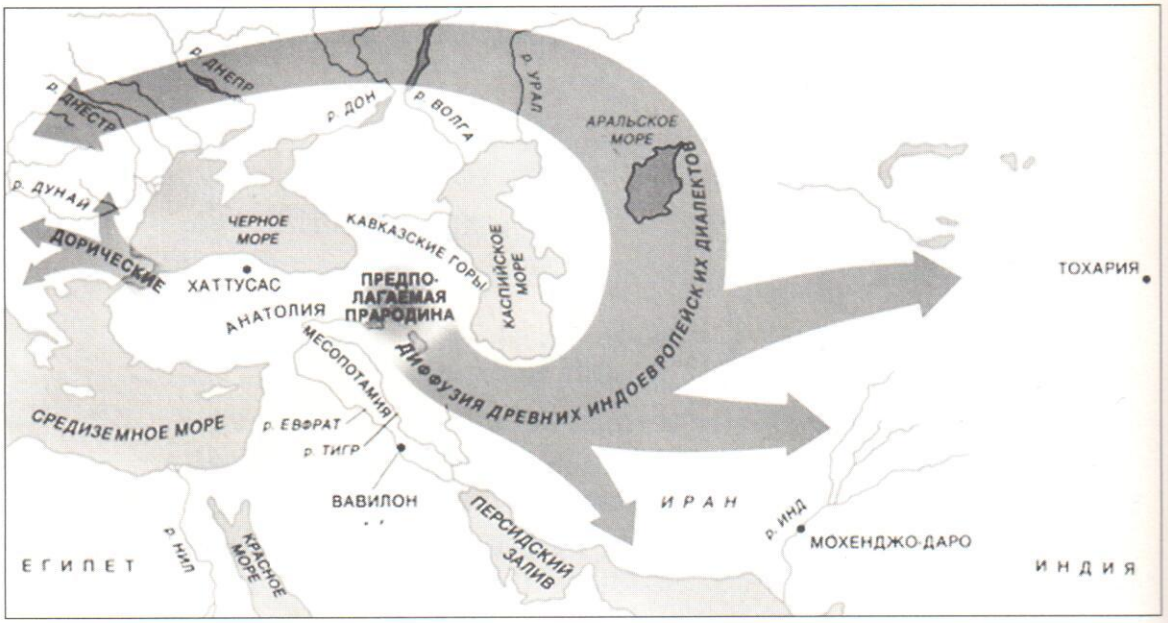


Fig. 48. The Cradle of Indo-Europeans and their Languages was in Armennian Highland [52].

2.2. ARMENNIAN ALPHABET "DISAPPEARANCE"

Straightaway after the Christianity adopting as State religion in Armennia (301 AD) the big disaster took place: all Heathen temples (except one – Garni, the summer residence of the King) and Statues were destroyed, all books were burned and abolished [20, 54, 57]. Armennian Alphabet was

disallowed as a heathen one. During about one century only the Greek and Syrian Alphabets and books were used in Armennia although Greece (and Syria) adopted Christianity after Armennia and their Alphabets were taken from Armennian Alphabet (in IX cent. BC and later).

Armennian Alphabet was reestablished in 406 AD by Mesrop Mashtots according to the order of King Vramshapuh and Catholicos Sahak. But it was said to everybody, that this was a new Alphabet presented to Armennians by Jesus Christ, although Armennian letters were chiselled on rocks from the old time and it was (and is) known that Armennian Alphabet existed before Mashtots (as for example, so called Danielian Alphabet) [20, 55]. Unfortunately all these distortions of reality continue until the present time and even such a known Soviet linguist as H.Acharian writes that before Christianity Armennians had no written language [56].

All these (especially destruction of temples, all books and monuments in 301 AD and later) were (and are) the dreadful shock to the Armennian Old History, science, culture. And all these gave possibility to many not honest foreign "scientists" to speculate and distort Armennian history (see below). In all these there is, of course, a big fault of Armennians, especially of the first Christian King of the Great Armennia Trdat III and the first Catholicos Grigor, who were Parthians (not Armennians) and who coming to the top lordship in Armennia divested Armennian nation of their own Great Old History. But this didn't remain unpunished: later Trdat III was poisoned (in 338 AD) and Grigor ended his life in mountain caves (in 332 AD). These facts were mentioned almost by all Armennian ancient historians.

Christianity is the Great religion of civilized nations and Armennians never were against Christianity, which was a continuation of kind AR God (the Sun) religion indeed. They until now are proud that Armennia is the first Christian country. But the problem is that the Old History of Armennia has to be reestablished.

2.3. MESROP MASHTOTS. ARMENNIAN ALPHABET AND WRITTEN LANGUAGE REESTABLISHMENT*

If you ask now somebody in present Armennia (from children up to Professors) "who was Mesrop Mashtots?" everybody will answer: "The creator, the inventor of Armennian Alphabet", because in all books, textbooks, encyclopedias is said the same. But it is wrong. In reality Mesrop Mashtots performed titanic work to restore and reestablish Armennian written language. The statue of Mesrop Mashtots in Yerevan is shown on Fig. 49.

* The material concerning this Item was written in 1987 (30 pages in Russian), but was not published. The work was based on old sources only [20, 54, 55, 57 and others]. Here the shortened and edited version is presented.

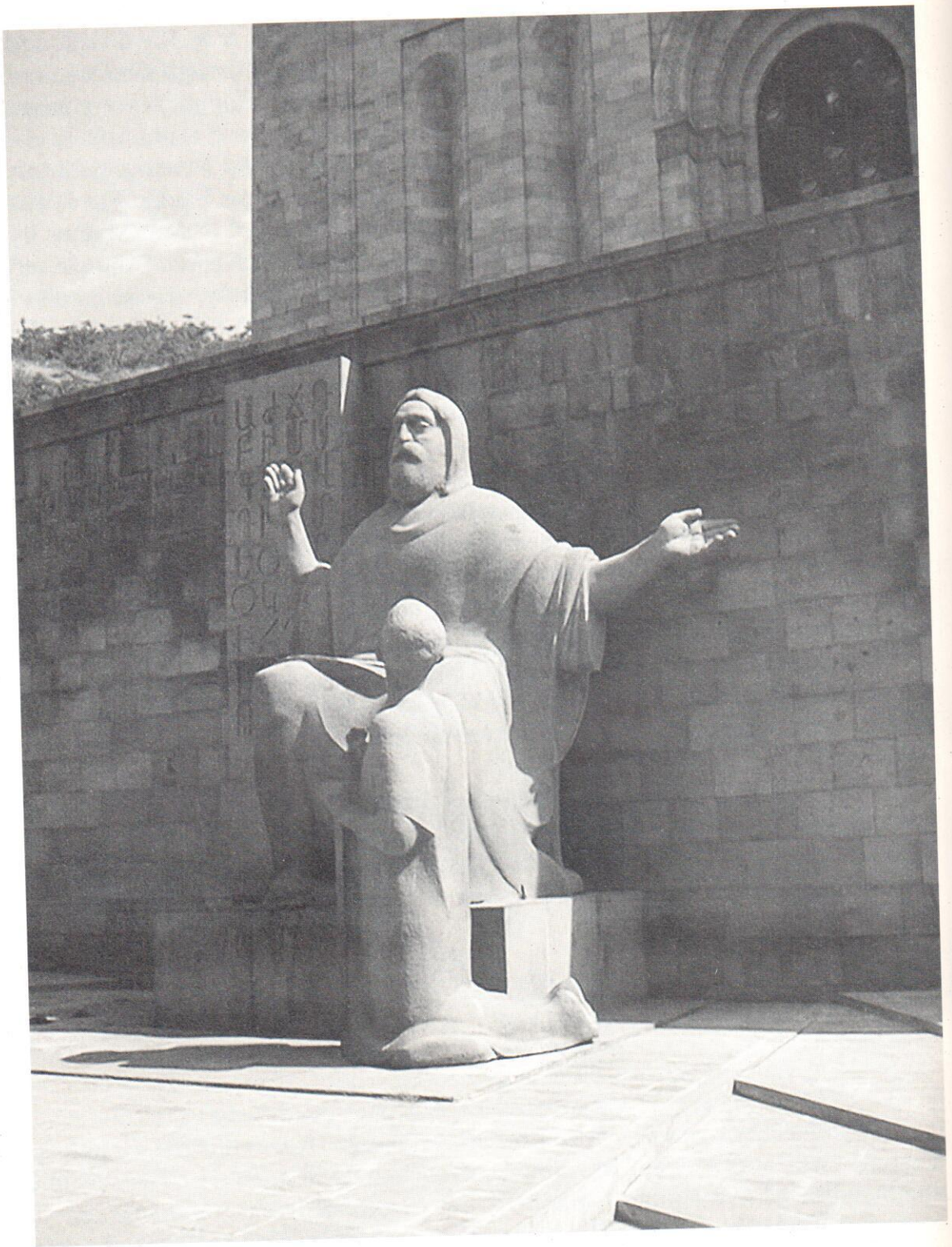


Fig. 49 The statue of St. Mesrop Mashtots (with pupil) near Matenadaran in Yerevan.

The Christianity adopting in Armennia is a very big historical fact (event) and had, of course, deep political, economical and social roots and reasons.

In the beginning of III century AD Roman Emperor Caracalla decided to vanquish Armennia. In 215 AD he invited Armennian King Khosrov I Arshakouni, disloyally put him to jail (where he died) and sent to Armennia legions headed by Folhokrit. But legions were defeated. Trdat II (215– 252AD), son of Khosrov I became Armennian king.

Another threat came from the East. From Iran, where in 226 AD change of dynasty took place. Iranian Arshakid dynasty consanguineous to Armennian kings Arshakouni was overthrown by Sassanids. Iranian state religion was also changed to Zoroastrianism. In 230 AD King Artashir Sassanid invaded Armennia but was defeated. In 252 AD Shapouh I worsted and put his son Ormouzd as king of Armennia. But in 279 AD Armennia worsted, and Khosrov II the Great, son of Trdat II, became the King of Armennia. He was killed in 298 by Partevs (Parthians) and Trdat III the Great (298 – 330 AD), his son, became the King.

There was a constant threat to Armennia from all sides so it was necessary to think about safety. Besides, Armennia was a feudal country and the central lordship was weaker, not so powerful as in other slave-holding countries. So the decision of Trdat III to adopt Christianity at 301 AD was one of the big events which had to border Armennia from threat and ensure safety. Moreover, Armennian nation was ready to adopt Christianity as continuation of their kind Sun-God religion (see PART 3). Trdat III gave the Church large rights and lands (more than lords had) to be powerful and able to support the central lordship, the King.

But as a result of Christianity adopting in Armennia another big disaster for Armennian old history, culture and written language took place.

The famous Armennian historian of III-IV century AD Agatangel, the secretary of the King Trdat III and a witness of Christianity adopting events, wrote [54, indents 777, 778, 786, etc.]:

"Then [Grigor] with king, lords and army, received for general pacification the advice of approval (means from the God, P.H.) to destroy, rout, fully annul and obliterate blandishment that nobody would interrupt and interfere the achievement of celestial freedom.

And then king immediately ordered (with general approval) to give to blissful Grigor the duty to bury in oblivion, subvert non-gods called Gods by old ancestors and by him. Then the king himself with all his army moved from Vagharshapat (now Etchmiatzin, P.H.) to Artashat to destroy there the temple of Goddess Anahit*, destroyed and shattered all around, trophied gold and silver.

...First they came to heathen temple of Tir God and the heathen school of art and interpretation of dreams... and began to destroy, then calcined, shattered unless demolished it...", etc.

---

* The head of this statue is kept in the British Museum.

The same was written by Armennian historians of V century AD: Khorenatsi [20], Koryun [55], Byousand [57] and others. Armennian old culture was destroyed. On the foundations of destroyed famous Pre-Christian Temples the Christian Churches were built, including the Central Cathedral in Etchmiatzin. Armennian Alphabet and written language were abolished, after that the Greek and Syrian ones were put in use, including for prayers in churches*.

But after one hundred years the King of Armennia Vramshapouh (389-417 AD) became sure that the State can not function normally without its own written language. And Catholicos Sahak became sure that people did not understand Christianity well because services in churches were conducted in Greek and Syrian languages. So they decided to restore Armennian written language (but to say to everybody that it has been gifted to Armennians by Jesus Christ). They entrusted Mesrop Mashtots, who was the personal translator of the King, to restore Armennian written language. They of course knew that Alphabet existed from very old time, and I am sure, they had it (plus one more copy, which was brought from Syria, from Bishop Daniel [20, 55, 57]). But they could not use it because didn't remember phonetical sounds of many letters. Koryun** wrote [55] that Mashtots at first even tried to write, translate and teach Armennian language, but could not.

It is obvious for me that to recover phonetical pronunciations of the letters it was necessary to find just one Armennian book. But unfortunately all of them were burnt 100 years ago. But as exception one book could be secretly kept by somebody. Mashtots sought for it in different regions of Armennia with big difficulties, for more than two years, but could not find. What? Koryun didn't say "a book", because might not, he was not allowed, the possible existence of Armennian books was a big secret. Koryun says: "Mashtots looked for, looked for, had many difficulties but did not find". And nobody from present historians thinks and understands what Mashtots sought and could not find in Armennia.

I asked historian Professors in Yerevan:

- Why did Mashtots, to "invent" Alphabet, go abroad? And why did he travel with the group of his pupils? Let him sit at home and invent!

The answer is:

- I shall explain you. He went to big foreign towns with big libraries as Eddessia, etc., studied Greek, Syrian and other Alphabets and, taking from those the best, created Armennian Alphabet.

I said:

- That is nonsense.

- Why?

- Because Mashtots, Sahak and many others in Armennia knew very well these languages and Alphabets. In Armennia there were Greek schools and

---

* After Christianity adopting Grigor invited to Armennia four hundred Greek ana Syrian monks, gave them titles of bishops and put them over all armennian churches. Koryun was the pupil of Mashtots.

** Koryun was the pupil of Mashtots.

Mashtots graduated from one of them. Read Koryun! One hundred year four hundred Greek and Syrian bishops read in Armennia their books in their languages. So it was not necessary to go abroad (and with a group of pupils) to study these alphabets.

- ? (silence)

- I know why he went abroad (and with pupils).

- Why?

- Because he needed to understand the phonetical pronunciations of all Armennian letters and for this he needed to find just one book in Armennian. He could not find any Armennian book in Armennia, so having the decision of the king and the Catholicos, he went abroad with pupils to find a book in big libraries, because Armennian books were not burned there as it was done here. And he found the book in town Sammosat*. I even know which book he found.

- Which book?

- It was, perhaps, Agatangel, "History of Armennia", because it is an important and famous book telling about Christianity adopting in Armennia. This is also the reason why Armennian Church kept it during 1700 years rewriting it almost once per century and why this book now is translated into many European languages.

- But there is even an opinion that Agatangel lived in V century AD.

- That is wrong opinion. Agatangel lived in III-IV centuries and was, as he wrote, eyewitness of Christianity adopting in 301 AD. That is the false opinion of the false "scientists" who tell that Armennian Alphabet and written language were absent before Mashtots. Because the book by Agatangel is an excellent confirmation that Alphabet and written language were present in Armennia for about one hundred years before Mashtots.

Koryun tells that in Sammosat Mashtots saw in his dream Armennian letters carved on rocks** (Mashtots and Koryun knew that the letters are carved on rocks in Armennia from the old time). Then he gave letters to one calligrapher in Sammosat to amend a little their configurations.

When Mashtots came back to Armennia he was triumphally met by the King, the Catholicos and people. It was in 406 AD. The Armennian written language schools were opened, translation of many books, including Bible, was done. Then in IV and V centuries in "unlettered" Armennia (with "not" any scientists before Mashtots) many famous scientists (historians, philosophers, mathematicians, etc) suddenly appeared.

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*Edessa and Sammosat were old Armennian towns in Armennian Mesopotamia Kingdom and Komagena (see PART 3).

** I think Mashtots had with him Armennian Alphabet taken from Armennia (with Daniel's letters copy) and also a copy of Armennian letters carved on rocks in Armennia at about III millenium BC and presented here in next Item 2.4. (Table 9).

Everything in the result was all right, besides the "nuisance" that from that time until now people think that written language and Alphabet in Armennia were absent before Mashtots, who "created" letters.

There are many other historical facts which confirm that Armennian Alphabet and written language existed before Mashtots and before Christianity adopting. Here are some of them.

1. Agatangel [54, §189] tells that at the time of King Trdat (means Trdat III the Great, 298-330 AD or Trdat II, 215-252 AD, P.H.) the art of written language was propagated in Armennia.

2. Koryun [55], Khorenatsi [20] and others confirmed that before Mashtots there was Armennian Alphabet, even in Syria, at Bishop Daniel. This Alphabet is not kept, so different authors give different figures of quantity of letters in Daniel's Alphabet: 17, 19, 22, 24, and 29.

3. Historian Vartan (page 50) wrote that Armennians had Alphabet consisting of 22 letters at the very old time [56].

4. Philostrat (175-249 AD), historian of emperor Carracalla, in his book "Dianna of Apollo", tells that in Armennian Tauros mountains was caught a big panther with golden collar, on which it was written in Armennian: "From the Armennian King Arshak (127-114 BC, P.H.) to the God Dionysus" [57a, 66].

5. Armennian historian Engikkian [66, pp. 239-240] wrote that in 1788AD he saw the collection of Inzle, English ambassador in Istanbul (at sultan Hamid I), including about 100 thousand old coins collected in Asia Minor, and found there 12 types of coins of Roubennians (Armennian Kilikia dynasty) with legible Armennian letters կ, ճ, պ, տ, etc.

Engikkian also wrote [66, p.75] that in the same famous collection of Inzle he had seen hundreds of coins of Armennian King Partev Arshakouni (113-114 AD, P.H.). On the one side of coins there was an altar with fire, on the other side – the portrait of king, and over edges there were Armennian words with letters հ, տ, պ, կ, ճ and others.

6. Armennian linguist, historian and musicologist Minnas Bjshkian (1777-1851) found in one of Armennian churches placed in South part of Odessa town (founded on seaboard of Black Sea by Armennians came from Edessa Armennian Kingdom) the book with Armennian letters of VII century BC [66a].

7. It is known that Hyksoses (who were Armennians) had the Alphabet (with letters almost similar to Armennian ones) in XVII century BC.

8. The king of Armennian Mesopotamia Abgar V Yervanndouni (12-50 AD) sent a letter to Jesus Christ, Palestine (Israel), inviting him to go and live in his capital Edessa, and received His answer (see PART 3). There is the opinion that these letters were in so-called Aramean language. But it is wrong. The letters were in Armennian, using Armennian Alphabet, because (see next position):

9. I show in Item 2.15, that so called Aramean (or Aramaean) language and Alphabet in reality were Armennian ones, and Armennian King Artashes I the Kind (189-160 BC) on his boundary stones in Armennia wrote inscriptions in

Armennian language with Armennian letters about 600 years before Mashtots (but not in so-called Aramean, as the wrong opinion dictates). Thus, so-called Aramean (semitic) language and Alphabet never existed and all "Aramean" inscriptions (there are many of them) are in Armennian with Armennian letters.

Parthian-Armennian Arshakids-Arshakouni Dynasty in Armennia (62-428 AD) brought Armennia not only to loss of her Old History but also to loss of her independence in 428 AD when the Great Armennia was divided between Iran and Byzantium (just 22 years after "Alphabet creation" by Mashtots).

The independence of the Great Armennia was reestablished in 885 AD by the King Ashot I Bagratouni (885-890 AD).

2.4. PRESENT ALPHABET AND LANGUAGE.

Present Armennian Alphabet is the same Mashtots Alphabet of 406 AD and has 36 letters plus three additional letters (և, օ, ֆ) which were put later at the end, so 39 letters total.

Analysis shows (see below) that letter "օ" was in Armennian old Alphabet, but Mashtots excluded it, perhaps, as having meaning of "(heathen) soul" and superseded by letter "ո", he replaced also the letter "ր" from the second position in old Alphabet as important part of the word "ԱՐ (the Sun)" to the fifth position from the end in his Alphabet.

In Table 9 the present Armennian Alphabet (with transcriptions [58, 59]), and thousands years old Armennian letters carved on rocks [48, 49], also Phoenician of 13-9th century BC [60] and so-called "Aramean" of 10th century BC [56] Alphabets are shown. We can see that all letters are the same or have almost the same structure*.

Armennian Alphabet is rich (39 letters) and represents many phonetic sounds (so it could be used also as international transcription).

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* Dr. of Sci. S. M. Martirosian in printing this book found out that in "Word" program of computer memory under the title of "Font name: Aramean, File name: ARAMIAN. TTF" there is the same present Armennian Alphabet (see Tables 9 and 9a).

Table 9a

Font name: Aramian,
Filename: ARAMIAN.TTF

աբգդեզէըթժիլխծկհձղճմյնշ
ոչպջռսվտրցւփքևօֆ

ԱԲԳԴԵԶԷԸԹԺԻԼԽԾԿՀՁՂՃՄՅՆՇ
ՈՉՊՋՌՍՎՏՐՑՒՓՔՕՖ

Table 9

ARMENNIAN ALPHABET

present letters	trans-cription	pronunc. as in word	petro gliphs on rocks (from III millen. BC)	Phoenician letters (13-9 c. BC)	"Aramean" letters (10 cent. BC)	present letters	trans-cription	pronunc. as in word	petro gliphs on rocks (from III millen. BC)	Phoenician letters (13-9 c. BC)	"Aramean" letters (10 cent. BC)
Ա, ա	A, a	arm				Յ, յ	y	yes			
Բ, բ	b	bad				Ն, ն	n	nine			
Գ, գ	g	got				Շ, շ	sh	ship			
Դ, դ	d	did				Ո, ո	vo	void			
Ե, ե	ye	yet				Չ, չ	ch	cheep			
Զ, զ	z	zoo				Պ, պ	p	-			
Է, է	e	ten				Ջ, ջ	dž	jam			
Ը, ը	ə	about				Ռ, ռ	ŕ	red current			
Թ, թ	th	ten				Ս, ս	s	son			
Ժ, ժ	ž (jh)	-				Վ, վ	v	van			
Ի, ի	i	tree sit				Տ, տ	t	-			
Լ, լ	l	leg				Ր, ր	r	green			
Խ, խ	kh	lough (Irish)				Ց, ց	tś	tsetse			
Ծ, ծ	ts	-				Ու, ու	u, w	pull			
Կ, կ	k	book				Փ, փ	ph	pen			
Հ, հ	h	hat				Ք, ք	c	cock			
Ձ, ձ	dz	-				Եվ, և	yev	-			
Ղ, ղ	gh	-				Օ, օ	o	over			
Ճ, ճ	tch	-				Ֆ, ֆ	f	fall			
Մ, մ	m	men				39	-	-	36	26	28

Present Armennian language has been developed during many thousand years (it began more than 40000 years ago) and is rich. It has many thousand roots, 150000 words and about 60 dialects. The words, beginning with "ar", make a big part, about 3% of all words [72], so "ar" is the main root of Armennian words.

Armennian grammar is also rich. For example, nouns have seven cases, verbs have 14 tenses, etc.

Some dialects now are almost forgotten. Even some of dialects of Armennian population of Anatolia (Asia Minor) are almost forgotten because of the genocide of Armennians taken place in Turkey at the end of XIX and beginning of XX centuries AD. There is an interesting book by M.M.Zourikian about almost forgotten Arabkir (the big town, now in Turkey) dialect, printed in Russia in 1993 [64]. This book consists of many examples of words identical in Armennian, Russian and English.

2.5. ARMENNIAN LANGUAGE ANALYSIS. METHOD №1

Armennian language at first stage of development, i.e. during many thousand years, was the only one. There were not other languages around to adopt from them foreign words. So new words were formed on the basis of available words with more simple phonetic sounds, being already in use and signifying simpler notions. So the development of language was going on according to definite laws "from simple to the complex". The process of consecutive development was going on.

If all these are right, we can (going back in time) find out the etymological sense of parts of many present words and even of each letter, i.e. the sense of the first simple sounds come from old time. I attempted to do this and the results were excellent.

The main Method of determination of Armennian letters' sense (meaning) is to choose some quantity of mainly short (i.e. old) words with given letter and find out the main similarity between these words, i.e. the meaning of the given letter.

Let me show here an example of this Method for the letter ձ (dz). We can take a group of words with this letter:

1. ձի (horse)
2. ձու (egg)
3. ձայն (sound)
4. ձող (stick)
5. ձուկ (fish)
6. ձեռք (arm)
7. ձոր (gorge)
8. օձ (snake)
9. ձգել (pull)
10. ձոն (ode)
11. ձագար (funnel)
12. տանձ (pear)
13. ընձուղտ (giraffe, long camel)
14. սանձ (bridle)
15. բարձր (high)

What common, general quality or meaning have these words, these subjects? What is their main similarity?

You can see that the main meaning is "երկար, երկարուկ", i.e. long, oblong, long-kind, long-shaped. Indeed, the horse, for example, is long-kind animal, it has long face, long neck, long body, long tail, long legs, etc. So the meaning of letter ձ (dz) is "long, long kind". Then we can understand that giraffe in Armennian means "long camel" because "ուղտ" in Armennian is camel.

We can do so and find out the meaning of each letter. The fact that all letters have meanings, tells us that Armennian language is very old and developed consecutively from the simple elements (sounds) to more and more rich words.

Combination of some two or three letters also gives a new meaning, which is possible to find out using the same Method. For example, the meaning of "ակ" (ak) is "source, eye, circle, ring, hole"; the meaning of "ատ" (at) is "cut", the meaning of "ամ" (am) is "eat" or "baby", so the word "ատամ" (attam, tooth) means "to cut to eat"; the meaning of "լիզ" (liz) is "pure water, source".

2.6. ELEMENTS (LETTERS) DICTIONARY (ELD)

The found meanings of all Armennian letters and combinations of some two and three of them are presented in Table 10: Elements (Letters) Dictionary (ELD). This is the first edition of ELD and it could be, of course, corrected and expanded in future.

The words "element" and "letter" in Armennian are almost the same word: "տարր" (tarr) and "տառ" (tar), so the name of Table 10 in Armennian is "Տարրերի Քառարան (ՏՔ)".

ELD includes all 39 letters of Armennian Alphabet, plus 86 combinations of two letters and 37 combinations of three letters; total 162 positions.

ELD is wonderful, unique and marvelous. It allows to understand, to explain, to find out etymological sense of many-many words, names. For example: ատամ (tooth) = ատ (at) · ամ (am) = "cut to eat", Արամ (Aram) = Ար (Ar) · ամ (am) = Sun child (son of Sun).

ELD and its use confirm that Armennian Language is very old, was developed independently and many Armennian words were adopted by other languages. Of course, ELD is favorable first of all for Armennian old words (which make majority in present Armennian) and not good for modern-made long words and for some words adopted later (beginning from I millennium BC) from foreign languages.

Table 10

ELEMENTS (LETTERS) DICTIONARY (ELD)

Letter	Meaning	Letter	Meaning
ա	կյանք (life), հավերժ (eternal), տաք (warm), մեկ (one), առաջին (first), մարդ (man)	յ	ես (I), մարդ (man, person), յուր, քո (your)
բ	բերք (harvest), բարիք (good), բերել (bring), բարձր (high), բարի (kind), երկու (two)	ն	նա (he, she), այն (it, that), բան (thing), ներքև (down)
գ	գեղեցիկ (lovely), գերազանց (excellent), գլուխ (head), ավել (more), մաս (part), խելացի (brainy), նշան ⊕ (sign ⊕)	շ	շատ (many, much)
դ	դեպի (to the…), դու (you), ուղիղ (straight), դիմաց (opposite), ձգտել (aim), նշան ⊖ (sign ⊖)	ո	հոգի (soul), ոգի (spirit), սուրբ (holy, saint), օր (day), որդի (son)
ե	ես (I), մենք (we), արի (come), լինել (to be), ելք (exit), գետ (river), հաջորդ (next), էություն (entity)	չ	փոքր (little), թույլ (weak), վատ (bad), չէ, ոչ (no, not)
զ	սկիզբ (beginning), առաջ (fore), դեմք (person, face), վեր (up), զենիթ (zenith)	պ	կլոր (round), շրջապատում (encircled from all sides), պտույտ (turn over), բոլոր (all), պարույր (spiral), տարածք (region), պատրաստ (ready), ընտրված (chosen)
է	էակ (entity), կա (there is), է (is)	ջ	հաճելի (nice, enjoyable, pleasant)
ը	ընկեր (friend), միասին (together), հետ (with), բարեկամ (relative)	ռ	հանգիստ (quiet), դանդաղ (slow), մեծ (big)
թ	ունակ, կարող (be able), համար (for), պես (as), թույլ (weak); նշան ⊙ (sign ⊙)	ս	մոտիկ (close), սեր, սիրել (love, like), զավակ (child), իմս (my), սիրուն (beautiful), այս, սա (this), սիրտ (heart)
ժ	ուժ (force), ուժեղ (powerful), բռունցք (fist), սպառնալ (threaten)	վ	դեպի (to the…), մեջ (into), վրա (on the…), որպես (how, as)
ի	մարդ, իսաև (man), մարմին (body), ինձ (me), իմ (my), ինքը (he, she, it), իր (his), բան (thing)	տ	հիմք (base), տեղ, վայր (place), տուն (home, house), բուն (nest), փակ (closed), ավարտված (completed)
լ	լավ (good), լայն (wide), մեծ (big), արագ (quickly), ճիշտ (right), լրիվ (total), լույս (light), նշան ⊜ (sign ⊜)	ր	անել (do, make), տալ (give), տեր (lord, owner), կրել (bear, carry), զույգ (pair)
խ	վիճակ (condition), գեղեցիկ (beautiful), բարձր աստիճան (high degree)	ց	մինչև (until), հաջորդ (next)
ծ	ծիլ (sprout), ծայր (point, nib), ազատ (free), ծագել (rise), աճել վեր (grow up)	ու	ունենալ (have), ունի (has), տվյալ (given), ու, ույ (and)
կ	մաս (part), կտոր (piece), կես (half), փոքր (little), զույգի մեկը, թայը (one from pair), կեր (food), կայուն, կանգնած (stable, standing)	փ	համարյա (almost), մի քիչ (a bit), փուչ (empty), վատ, փիս (bad), հավասար (equal)
հ	հարել, դեպի (trend, to the…), պաշտել (adore), բարձր (high), նման (like)	ք	ամուր (hard), հերոս (hero), քաջ (brave, hardy), տաք (warm), ապահով (safe), հուսալի (hopeful), կարողություն (ability), կայուն (stable), նշան ⊗ (sign ⊗)
ձ	երկար (long), երկարուկ (oblong, long-kind), նշան ⊗ (sign ⊗)	և	(տես եվ, see եվ)
ղ	կենտրոն (centre), խտացվածք (compact, concentrate), կորիզ (nucleus, pit)	օ	կլոր (round), կետ (point), ոչինչ (nothing), զրո (zero) (նաև տես ո, see also ո)
ճ	ավելի (more), առավել (moreover), անշարժ (fixed), լիքը (full)	ֆ	ետև (back), ֆոն (background), թիկունք (rear), ծածկված (covered), բովանդակություն (contents)
մ	մարդ (man), մեծ (big, great), մուտք (input), մեջ (inside), իմ (my), ինձ (me), մեկ (one)		

Table 10
(continuation)

Letters	Meaning	Letters	Meaning
ազ	առաջին (first), ազատ (free), ազգ (nation)	եվ	գումար (sum, ⊕), եղավ (become)
աժ	ցածր (low)	ետ	տուն գալ (come home), հետք (trace)
ալ	կարմիր (red), պայծառ (bright), փայլ (sparkle), ողջ (all), ամբողջ (whole), տաք (hot)	էջ	կին (woman), գեղեցիկ (beautiful)
		ըն	միացում (union)
ախ	վիշտ (grief), դարդ (worry)	ժա	բարձր (high)
ած	արված (made), վիճակ (condition)	իա	իա, յան (from… side), երկիր (country)
ակ	սկիզբ, ակունք (beginning), աղբյուր (source), աչք (eye), կլոր (round), անցք (hole), անիվ (wheel), հոսել (flow), գործել (to act)	իգ	(տես էգ, see էգ)
		իզ	հետք (trace), ուղի (way), պարզ (clear)
ահ	վախ (fear), վտանգ (peril), հրեշ (monster), մահ (death), վատ (bad)	ին	մարդ (man, person), ինքը (he, she)
աղ	խտացված (clotted), զտած (purified), սեղմված (compact), կորիզ (nucleus), մաքուր (pure, clean)	իս	ես (I), մարդ, իսան (man), իմ (my)
		իվ	քայլել (walk), գնալ (go)
ամ	ուտել (eat), երեխա (child), փոքր (little), տարի (year), ամամ (eat), ուտելիք (food)	իտ	միտք, մտածող (thought, thinker)
		իր	իրավատեր (rights owner)
այ	ես (I)	լա	փոքր (little)
ան	որևէ առարկա (any object), յան, կողմ (side), ուղղություն (direction), բան (thing), այն, նա (that, he, she, it)	լե	ցածր (low), տափակ (flat), իջնել (descend)
		լի	ջուր (կանգնած) (water (still)), լցնել (pour in)
ապ	թռնել (jump), գնալ (go), հասնել (reach)	լս	լսել (hear)
աջ	լավ (good)	լվ	լվալ (wash), ջրել (to water)
առ	աճել (grow), երկարել (prolong)	կա	կարող (able), վարպետ (master)
աս	այս, սա (this), ես (I), խոսել (speak), առաջնային (ace, first)	կը	շուն (փոքր ընկեր), dog (little friend)
		կի	կես (half), երկու նմանություններից մեկը (one of two equals)
ավ	լավ (good), մեծ (big), տեր (lord)	կո	այստեղ, հրես (here)
ատ	կտրել (cut), կտոր, մաս (piece, part), հատ, հատիկ (pip, granule), ատոմ (atom)	հա	այո (yes), դրական (positive)
ար	Ար, արև (Sun), պայծառ (bright), ապրել (live), աշխարհ (world), բախտ (luck), արարիչ (creator)	հո	աղոտք (prayer)
		մա	կերակրել (suckle), մայր, մամա (mother)
աց	հաց (bread), յաց (their)	մե	ինձանից (from me)
բա	բարի (kind), բարձր (high)	մու	մուգ (dark), մութ (murky), մուտք (input, entrance)
բի	երկու (two), կրկնակի (twice), շատ (many)	յա	ես (I), յան, կողմ (side), յա, երկիր (country)
բն	բուն (nest), բնություն (nature)	յո	հոգս (care)
գի	գիր (written language), գիրք (book), գիտելիք (knowledge)	յու	դուք (you), յուր, քո (your)
		ոլ (օլ)	գունդ (sphere), պտույտ (rotation), հոլ (whirligig)
գն	գնալ առաջ (go forward)	ող (օղ)	օղակ (ring), գունդ (ball), կլոր (round), լիարժեք (valuable)
գր	գեր (fat), գրել (write), գրիչ (pen)		
դժ	ժխտել (disavow), բացասական (negative)	ոս (օս)	բարձր (high), հոգիս (my soul)
դր	դրական (positive)		

ղու	երկու, կրկնակի (two, double), դու (you)	անտ	նախ (before), դեմ (against)
ել	ելնել (rise), բարձրանալ (get up)	ասպ	թամբած և զինված ձի (saddled and armed steed, horse)
եղ	(տես աղ, see աղ)	աստ	տիեզերք (space), ետև (back), ֆոն (background)
եռ	երեք (three), աշխույժ (spicy, active)	արա	հավերժ անել (always do, create)
աս	(տես աս, see աս)	երկ	զույգ (pair), անջատ (separate)
առ	ցածր (low), ցավ (ache, pain)	զատ	ջոկած (chosen)
վա	վայր (place), վայրի (wild)	զին	զենք ուղղված առաջ (weapon directed forward)
տի	անչափ (infinite), անեզր (boundless)		
ղա	առաջնորդ (leader)	զոր	բանակ (army)
ուլ	կիսապտույտ (semicircle), խոյ, այծ (goat)	իղա	աղջիկ (girl)
ուկ	(տես ած, ված, see ած, ված)	իկա	գալ (come), գտնել (find out), գումար (sum), ջոկել (select)
ում	լույս (light), լուսավոր (bright)	լիզ	մաքուր ջուր (pure water)
ուն	հիմնական (basic)	լիկ	դեմք (face), պատկեր (pattern)
ուպ	ընկնել (fall)	լիվ	լվացվել (bath), լվանալ (wash)
ուռ	ծուռ (curve), կոր (arch)	ծան	երկար (long)
ուս	բարձր (high), հասուն (ripe)	կար	պինդ (solid), ամուր (tough), կարծր (hard)
ուր	այլ, ուրիշ (other), հեռու (far), դուրս (outs`ide), ցուրտ (cold)	կամ	լուսաբաց (early morning)
		հատ	հատիկ (particle)
օր	լրիվ (all, full, complete), ամբողջ (whole), ցիկլ (cycle), օր (day)	հետ	հայր (father), գլուխ (head), մազեր (hair)
		յան	կողմ (side, land, country)
ով (օվ)	ջուր (շարժվող) (water (moving)), ծով (sea) հեղուկ կաթ (liquid (milk))	պատ	չորս կողմից պատած տարածք (place surrounded with wall)
ոմ	մեծահոգի (generous, big hearted)	պար	պարիսպ (round castle wall)
ոտ	ոտքի թաթը (foot)	պել	հավաքել (collect)
պա	պար (dance)	սան	որդի (son), կնքաորդի (godson)
պու	նեղ (narrow), կետ (spot)	սել	տանել (carry)
ռու	ուղիղ (direct, straight)	ված	առարկայի վիճակը՝ դրված, բերված, սփռված (condition of object : placed, brought, stretched)
		վող	գնդաձև (ball-formed)
ազե	ծնող (parent), մայր (mother)	տեր	ամենի հիմքը (base of everything)
ալք	ալիք (wave), ծալք (fold)		
աղե	ասել (say, speak), խոսել (tell, speak)	տիր	ամենի տերը (lord of everybody)
ալտ	տաք (warm)	ույս	բարձր (high)
այա	մայր (mother)	ույր	մարդ (man), էակ (essence)
այր	ես անեմ (I do), տղամարդ (man, male)	քար	ամուր (tough, hard)

I am sure that ELD was known in old Armennia. Later as the secret of heathen priests, especially after adopting Christianity in Armennia as State religion (301 AD), it was buried in oblivion.

ELD and its use confirm that Indo-European languages adopted many words and roots from Armennian, but opposite process in old time almost did not take place.

At the same time many words and names of Indo-European and other languages may be decoded by ELD. It means that these words were taken from Armennian language or were constructed using ELD.

Unfortunately Armennians don't know that many foreign words (and names) in modern Armennian, adopted from European languages, are really old Armennian words. For example, atom, antenna, litre, zenith, mathematics, zero, etc. Armennian meanings of these words are presented in Table 11.

Table 11

English	Armennian	meaning	
		In Armennian	English translation
atom	ատոմ, ատ • ոմ, հատ	կտրած, կտոր, մասնիկ (ոմ–հետագա հունական վերջավորություն է)	cut, piece, particle ("om" is the ending added later by Greeks)
antenna	անտենա, այն • տենա	հեռվից երևացող (նավի կայմը)	seen from far away (mast of ship)
liter	լիտր, լի • տ • ր	թարմ (անալի) ջրի աման	container for fresh water
zenith	զենիթ, զ • ե • ն • ի • տ	մտավոր վերը լինող կետն է	it is the supposed upper point
mathematics	մաթեմատիկա, մատ • է • մատ • իկա	մատը մատին գա (հաշվել)	finger comes to finger (count)
zero	զրո, զ • ր • ո	սկիզբ տվող (բայց) աննյութական	giving the beginning (but) not corporeal
Liza (Elizabet)	Լիզա (Եղսապետ) լի • զ • ա	վերին ջրի կյանք (մաքուր մարդ)	upper water life (clean, honest woman)
Marcaret (Margo)	Մարքարիտ (Մարգո) մար • քար • ի • տ	ծովի քարե տան ապրողը	(she) lives in sea stone home

These (and other) old Armennian words and names shown in Table 11 were adopted first by Greek then by Latin languages. Then the medieval and last centuries scientists (physicists, astronomers, technologists and others), looking for names for their new findings or inventions, often took (used) these Greek or Latin words. So, old Greek and Latin languages played the role of "termin suppliers". The above said means that this role in more old time played Armennian language. Thus the situation (which seemed too strange at first) when ELD gives the Armennian meanings of "not Armennian" words becomes understandable. These words were formed from Armennian using ELD. For example:

"Paris" (Pharis, town) = փառք (ի) • իզ = "The way of glory";

"Zevs" = զ • և • ս = "(He) becomes the first person (God)";

"Jupiter" (God) = Յ • ու • պ • ի • տեր = "I (am) lord of big region people" (imperial ambitions of Roman Empire);

"America" = Ա•մ•ե•ր•իկա = "I - first man (who) made (this) coming" (perhaps, the words of Columbus; it is known that on his ship there was one Armennian monk and a few merchants).

2.7. ELD USING

I shall show here a line of examples of ELD using. Some old words or part of them is necessary to read (interpret) from right to left, or possibly from the middle, because now we use another disposition of letters. If interpretation of some word gives rambling (incoherent) result, it means that this word is not old Armennian.

a. Human Beings

- մարդ (man, person) = մ • ար • դ = արևին ձգտող մեկը = one aspiring to the Sun
- այր (male, female) = այ • ր = ես անեմ = I shall do
- արի, արիացի (man, aryan) = ար • ի = ԱՐ-ի մարդ (ազնվացեղ) = the Sun man (noble) = ա • ր • ի = կյանք տվող մարդ = life giving man
- հայր (father) = հ • այր = բարձր մարդ = high (top) man, male
- մայր (mother) = մ•այր = մեծ (իմ) մարդ = (my) top female
  (the same structure of words հ•այր and մ•այր tells about equality of man and woman in old Armennia; the same in English: fa • ther, mo • ther; "ther" (տեր) in Armennian is "lord")
- զավակ (child) = զ • ա • վ • ա • կ = աչքիս վրա կյանքի սկզբից = (they are) my love (from) life beginning
- որդի (son) = ո • ր • դ • ի = ոգի տվող (ոգևորող) դեպի ինձ = (he) giving me encouragement
- տղա (son, boy) = տ • ղ • ա = կյանքի կենտրոնական հիմք = central base of life
- դուստր (daughter) = դ • ու • ս • տ • ր = տվյալ տան տիրոջ սիրելին = favorite of lord of given house
- աղջիկ (girl) = աղ • ջ • ի • կ = մաքուր, հաճելի փոքրիկ = pure, pleasant child
- եղբայր (brother) = եղ • բ • այր = մաքուր, բարի այր = pure, kind male
- քույր (sister) = քու • յր = հուսալի մարդ = reliable female
- տաղանդ (talent) = տաղ • ան • դ = երգող (պարող) մարդ; (հինչպես և կշռի հին չափ = 30 կգ= 60 մին) = singer (dancer); also old measure of weight = 30 kg = 60 min

- մի, միճ (one, first, alone) = մ • ի, մ • իճ = մեկ մարդ, առաջին, միակ, միայնակ (հինչպես և կշռի հին չափ = 0.5 կգ = one, first, single, alone; also old measure of weight = 0.5 kg)
- յար (beloved) = յ • ար = իմ արևը = my sun
- սիրտ (heart) = ս • ի • ր • տ = տեղ (որ) կրում է մարդու սերը = place carrying human love
- սիրել (to love) = ս • ի • ր • ել = այս մարդուն վեր հանել = to elevate this man (woman)
- արյուն (blood) = ա • ր • յ • ուն = իմ կյանքի հիմք տվողը = (it) gives basis for my life
- ասպետ (knight) = ասպ • պետ = թամբած, զինված ձիու տեր = lord of saddled and armed horse
- արմունկ (elbow) = ար•մ•ուն•կ = ապրողի (մարդու) մի հիմնական մասը (նույնպես երկարության հին չափ = 0.5 մ) = one of main parts of man (also old measure of length = 0.5 m)

b. Animals, Birds

- ձի (horse) = ձ • ի = երկարուկ մարմնով (կենդանի) = oblong body (animal). There are ten words for horse because it was first tamed in Armennia.
- նժույգ (steed) = ն • ժ • ույ • գ = նա ուժեղ է ու գեղեցիկ = he is powerful and beautiful
- ասպ (horse) = աս • պ = սա պատրաստ (թամբած, զինված) = it is ready (saddled, armed)
- երիվար (horse) = եր • ի • վար = ինձ ցած գցող = (horse) me down-maker
- հովատակ (horse) = հ • ով • ատ • ակ = (ձի) կաթի աղբյուրից կտրած = (horse) cut (from) milk source
- մատակ (horse) = մ • ատ • ակ = մեծ (ազնիվ) մասի (ցեղի) սկիզբ (հիմնադիր) = source (founder) of big (pedigree) part (sort)
- զամբիկ (horse) = զ • ամ • բ • իգ = առաջին ճուտ բերող էգ (հոի ձի) = female with first foal (pregnant)
- քուռիկ, քուռակ (stallion) = քու • ռակ = սկզբից ամրացող = becoming stronger
- մտրուկ (young female horse) = մ • տր • ու • կ = տան մեջ եղած փոքրիկը = little horse which is at home
- ջորի (mule) = ջ • որ • ի = օրվա հաճելի կենդանի = pleasant daily animal
- առյուծ (lion) = ա • ռ • յու • ծ = դու կյանքդ անում (վարում) ես ազատ = you lead your life freely
- արջ (bear) = ար • ջ = ապրող հաճելի = living pleasantly
- վագր (tiger) = վ • ա • գ • ր= գեղեցիկ կյանք վարող = leading beautiful life
- կով (cow) = կ • ով = հեղուկ ուտելիք (կաթ տվող) = liquid food (milk giver)

- արիս (oven) = ար • իս = (ինչպես) իմ սիրելի արևը = (as) my loved sun
- օվաճ (կետ) (whale) = օվ • աճ = ծովային կենդանի = sea animal
- արծիվ (eagle) = ար • ծիվ = արևի թռչուն = sun bird
- արագիլ (stork) = ար • ա • գ • ի • լ = ճիշտ իմ գլխին մի արև = (as) sun over my head
- ծիտ (bird) = ծ • ի • տ = իր վերին բնում աճող = growing (in) its upper nest
- շուճ (dog) = շ • ուճ = շատ հիմնական (կենդանի) = very basic (animal)
- հավ (hen) = հ • ավ = հարող տիրոջը = close to master

c. Astronomy

- Ար (Sun) = ա • ր = կյանք տվող = life giver
- Արեգակ (գիտ.) (Sun, sci.) = ար • ե • գ • ակ = պայծառ (լինող) գեղեցիկ կլոր = bright beautiful disk
- Լուսին (Moon) = լուս • ին = նա իմ լույսն (է) = it (is) my light
- մոլորակ (planet) = մոլոր • ակ = մոլոր (-ածև) շարժվող (լույսի) աղբյուր = source (of light) moving by curve (by loop)
- Փայլածո (Mercury) = փայլ • ա • ծ • ո = փայլուն և տաք ծագման օրը = bright and warm in rising day
- Արուսյակ (Venus) = ար • ուս • յ • ակ = ես արևի բարձր աչքը = I am high eye of the Sun
- Աստղիկ (Venus) = աստղի • կ = աստղի կեսը = half star
- Լուսաբեր (Venus) = լուս • ա • բեր = լույս (ցերեկ) բերողը = (who) brings light (day)
- Հրատ (Mars) = հր (հուր) • ատ = կրակի կտոր = piece of fire
- Լուսնթագ (Jupiter) = լուսն • թագ = light corona
- Երևակ (Saturn) = երևա • ակ = երևա կլորով (անիվով) = (is) seen (with) ring (or wheel)
- աստ (space) = ա • ս • տ = սա կյանքի (հավերժ) տեղը (Տիեզերք) = this (is) place of (eternal) life (Universe)
- աստղ (star) = աստ • ղ = տիեզերքի (նյութի) խտացվածք = concentration of Space (material)
- զենիթ (zenith) = զ • ե • ն • ի • թ= մտավոր նա վերը լինող է = it is supposed to be upper (point)
- նադիր (nadir) = նա • դ • ի • ր = նա իր դիմացի (նի) զույգը = pair of its opposite (point of Zenith)
- վեր (acme, above, overhead) = վ • եր = դեպի երկինք = up to the sky
- վար (bottom) = վ • ար = դեպի արև (հարավ) = to the Sun (South)
- հորիզոն (horizon) = հ • որ • իզ • ո • ն = դեպի ցերեկվա լրիվ ներքևի ուղին = to the bottom line (of the) full day
- թագ (corona, crown) = թ • ա • գ = (նրա) գլխի համար հավերժ = for (his) head forever

- Քարահունջ (Carahunge Observatory) = քար • հ • ու • ն • ջ = հնչող քարեր կամ Խոսող Քարեր = resonant stones or Speaking Stones. It is probable that Armennian word "հունչ" (sound) in old time was written with letter "ջ" (հունջ), because "ջ" has a meaning "nice", but "չ" has a meaning of negation.

d. Nature

- Երկիր (մոլորակ) (planet Earth) = ե • ր • կիր = մեզ կրողը = (who) carries us
- սար (mountain) = ս • ա • ր = սիրուն կյանք տվող = (it) gives beautiful life
- քար (stone) = ք • ա • ր = ամուր (երկար) կյանք ունեցող = (it) has hard (long) life
- ջուր (water) = ջ • ու • ր = հաճույք ունի տալ (հաճույք պատճառող) = giving joy
- լիճ (lake) = լի • ճ = կանգնած ջրով լիքը = full of stagnant water
- գետ (river) = գ•ետ(ք) = գեղեցիկ հետք (հոսք) = beautiful mark (motion, flux)
- ձայն (sound) = ձ • այն = երկար է այն = it (is) long (prolonged)
- ծով (sea) = ծ • ով = ազատ ջուր = free water
- օվկեան (ocean) = (ծ)ովք • է • այն = ծովք (ծովեր) է այն = it is (many) seas
- ծիածան (rainbow) = ծ • ի • ա • ծ • ան = իմ առաջ ծագած (մի) ազատ բան = something free rose in front (of) me
- բազալտ (basalt) = բ • ազ • ալ • տ = ցեղի բարձր տաք տուն (քարայր բազալտե ժայռերում) = high and warm home of tribe (grotto in basalt rocks, very many in Armennia)
- գրանիտ (granite) = գ • ր • ան • ի • տ = մարդու տունը սիրունացնող = it makes man's home lovely
- ապսիդիան (obsidian) = ապ • սա • դա • ան = սատանայից դուրս թռած (սատանայի եղունգ) = jumped out of satan (nail of satan)
- տուֆ (touf) = տ • ու • ֆ = ծածկված տեղում է = (is) in covered place
- ագատ (agate) = ա • գ • ատ = հավերժ գույներ կտրվածքում = eternal colors in cutting (pare)
- զմրուխտ (emerald) = զ • մ • րուխտ = գեղեցկացնում է մարդու արտաքինը = makes beautiful man's appearance
- մարգարիտ (pearl) = մար • գար • ի • տ = ծովի քարե տան (ապրող) մարմին = body (living) in sea stone home
- ադամանդ (diamond) = ա • դ • ամ • ան • դ = նա ձգտող դեպի հավերժ տարիներ = it aims to eternal years
- գոհար (շողակն, բրիլիանտ) (brilliant) = գ • ո • հ • ար = գեղեցիկ հոգի նման արևին = beautiful soul looking like Sun

e. Armennian male names

- Արամ (Aram) = Ար • ամ = ԱՐ-ի զավակ = child of Sun (Aryan)

- Արման (Arman) = Ար • մ • ան = ԱՐ-ի մարդը = man of Sun (Aryan)
- Արմեն (Armen) = Ար • մեն (ք) = ԱՐ-ի մարդիկ = people of Sun (Aryans)
- Արա (Ara) = Ար • ա = ԱՐ-ի (տված) կյանք = life (given) by Sun
- Արեգ (Areg) = Ար • ե • գ = ԱՐ (-ի նման) լինել գեղեցիկ = to be beautiful (as) Sun
- Արամա(յ)իս (Aramayis) = Ար • ամ • ա • իս = իմ կյանքը՝ ԱՐ-ի զավակից = my life (comes) from child of Sun
- Արտավազդ (Artavazd) = Ար • տավ • ա • զդ = դու ԱՐ-ի տված առաջինը = you (are) first given by Sun
- Արշակ (Arshak) = Ար • շ • ակ = արևով լի աչք = the eye full of Sun
- Տիգրան (Tigran) = տ • ի • գ • ր • ան = նա մարդկանց տունը (կյանքը) գեղեցկացնող մարդ = (he is) man (who) makes beautiful home (life) of people
- Դավիթ (Davith) = դ • ա • վ • ի • թ = ուղակ մարդ ուղիղ կյանքի մեջ = able man in straight life
- Վահան (Vahan) = վ • ահ • ան = նա դեպի վտանգը (պաշտպան) = he (is opposite) to the peril (soldier, protector)
- Վահե (Vahe) = վ • ահ • ե = դեպի վտանգը ելնող (ասպետ) = (he) rises against peril (knight)
- Վահագն (Vahagn) = վ • ահ • ա • գն = դեպի վտանգը (նրա բունը) գնացող (հերոս, չարի ոչնչացնողը) = (he is) going against peril of life (hero, fighter of evil)
- Մինաս (Minas) = Մին • աս = արտոնյալ խոսող (նախագահ) = speaker
- Ազատ (Azat) = ազ • ատ = ի սկզբանե անջատ (անկախ) = free (independent) from the beginning
- Հովաննես (Hovannes) = հ • ով • ան • ես = նման ջրային (ծովային) (մեծ) կենդանու = like water (sea) (big) animal
- Հաբեթ (Habeth) = հա • բ • ե • թ = միշտ բարի լինել կարող = able to be always kind
- Նար (Nar) = ն • ար = նա արև, առաջնորդող = he (is) Sun, leader

f. Armennian female names

- Արև, Արևիկ (Arev, Arevik) = Ար • եվ = ծագած Արև = the rose Sun
- Արուս, Արուսյակ (Arus, Arusyak) = Ար • ուս = Արևի ուսին (առջևից) = on Sun's shoulder (Venus, over the Sun)
- Արինա (Arina) = Ար • ի • նա = նա ԱՐ-ի մարդ = she (is) the Sun human being
- Արփի, Արփինե (Arphi, Arphine) = Ար • փ • ի = նա համարյա արև = she almost Sun
- Արաքս, Արաքսյա (Aracs, Aracsia) = Ար • ա • ք • ս = արևոտ կյանք, տաք և սիրելի = Sunny life, warm and lovely
- Արմինե, Արմիկ (Armine, Armik) = Ար • մի • նե = նա իմ արևը = she (is) my Sun

- Ալվարդ (Alvard) = ալ • վարդ = ալ վարդ = red rose
- Ազնիվ (Azzniv) = ազնիվ = honest, noble
- Սեդա (Sedda) = ս • ե • դ • ա = սիրով ելավ դեպի կյանք = (she) came to life with love
- Լիզա, Եղսապետ (Liza, Elisabet) = լի • զ • ա = վերին (մաքուր) ջրի (պես) կյանք = upper water life (life as clean water)
- Մարքարիտ, Մարգո (Marcaret, Margo) = մար • քար • ի • տ = ծովի քարե տան ապրողը = (she) lives in sea stone home
- Անժելա (Angela) = ան • ժ • ել • ա = նա ուժեղ (վեր) ելնող մեկը = she is one (who) powerfully rises up
- Անուշ (Anush) = ան • ու • շ = նա ունի շատ (քաղցր), նա շատ քաղցր է = she has many (sweet), she (is) very sweet
- Լիա, Լիլիա (Lia, Lilia) = լի • ա = ջրային կյանք (ծաղիկ) = water life (flower)
- Զարա, Զարուհի (Zara, Zaruhi) = զ • ար • ա = սկզբի (ծագող) արևի կյանք = initial sun's life
- Անահիտ (Anahit) = ան • ա • հ • ի • տ = նա կյանք է բարձր մարդու տանը = she (is) life at home of high man (top person)
- Մար (Mar) = մ • ար = Արևի մայրը (ծով, օվկեան) = mother of Sun (sea, ocean)
- Մարե (Mare) = մար • ե = ծովի էակ = entity of sea
- Մարի (Mari) = մար • ի = ծովի դուստր, (ծովինար) = daughter of sea (Tsovinar)
- Մարիամ (Mariam) = մար • ի • ամ = ծովի դստեր զավակ, փոքրիկի մայր = child of sea daughter, mother of child
- Մարինե (Marina) = մար • ի • նա = նա ծովի (ծովային) կին = she (is) sea woman
- Նարա, (Նարինե) (Nara, Narine) = ն • ար • ա = նա արևի ծնունդ = she (is) the Sun born
- Նաիրա (Naira) =նա • ի • ր • ա = նա կյանք անող մարդ = she life-doer woman
- Թամար (Thamar) = թ • ամ • ար = փոքրիկ արևի պես = as a little sun

g. Geographical names in (old and present) Armennia

- Արմենիա (Armennia) = Ար • մեն • իա = Արևի մարկանց յան (ապրելավայր) = The Sun men country
- Հայաստան (Hayastan) = Հայ • աստան = հայերի երկիր = Armennians' country
- Արարատ (Ararat) = ար • ար • ատ = ստեղծված հատուկ = created exclusively
- Արագած (Aragats) = ար • ա • գ • ած = նա գեղեցկացնում է ԱՐ-ի (մարդկանց) կյանքը = it makes beautiful the Sun (people's) life

- Արագածոտն (Aragatsotn) = արագած • ոտն = Արագածի փեշեր (շրջանը) = foots of Aragats (its region)
- Վան (Van) = վ • ա • ն = նա կյանքի մեջ (է) = it (is) in life
- Սեվան (Sevan) = ս • ե • վան = նա կյանքի հաջորդ սիրտը = it (is) next heart of life
- Կապուտան, Ուրմիա (Kaputan, Urmia) = կապու(յ)տ • ան; ուր • մի • ա = նա կապույտ մի կյանք ունեցող = it has one blue life
- Սիփան (Sipan) = ս • ի • պ • ան = ինքը սիրուն կլոր սար = it (is) nice round mountain
- Եփրատ (Euphrates) = ե • փր • ատ = մասերը (երկրի) հավասարեցնող (կապող, միացնող) ելք, (կյանքի գետ) = it links parts (of country), (the river of life)
- Տիգրիս (Tigris, river) = տ • ի • գ • ր • ի • ս = սիրելի իմ զույգ (կազմող), գեղեցիկ իմ տեղ = my lovely (one of) pair, my beautiful place
- Արազ, Արաքս (Araz, Aracs) = ար • ազ = (հոսող դեպի) առաջին արև (արևելք) = (flux to) first Sun (to East)
- Երասխ, Արաքս (Eraskh, Aracs) = եր • աս • խ = սա երկար ու գեղեցիկ (գետ) = this long and beautiful (river)
- Արցախ (Artsakh) = ար • ցախ = արևոտ անտառ = sunny wood
- Արտաշատ (Artashat) = ար • տ • ա • շատ = շատ արևոտ կյանքի տեղ = very sunny place of life
- Արմավիր (Armavir) = ար • մ • ա • վիր = արևի մարդկանց կյանքի վայր = the life place of Sun people
- Տավր (ոս) (Tavr (os)) = տ • ա • վ • ր = (իր) վրա է կրում կյանքի տեղերը (լեռնաշղթա) = it carries the places of life (montain ridge)
- Կիլիկիա (Kilikia) = կի • լի • կի • ա = (իմ) կեսը ջուր (ծով), կեսը կյանք (ցամաք) = (my) half (is) water (sea), half (is) life (land)
- Փյունիկիա (Phoenicia) = փ • յ • ու • ն • ի • կի • ա = հավասար ես ունեմ՝ այն (ծովային) կեսը և (մյուս) կեսը կյանք (ցամաքը) = I have equally: the (sea) half and (other) half (is) life (land)

2. 8. "TREES" OF LETTERS. METHOD № 2

Method № 2 of Armennian Language Analysis shows that the main part of Armennian words were developed beginning from simple voices (separate letters) to more complex words. We already know the meanings of each letter and some of two and three letters together (Table 10).

Now we can see the development of words from the very simple to the other more complicated ones by adding other letters. The specific "trees" (just one "arm" of them) are presented in Table 12 for the letter "զ" (z) and in the Table 13 for the letter "կ" (k).

Table 12

1→	2→	3→	4→	5→	6
զ (z) (begin-ning)	ազ, զա (first)	զան, զանել (hit) զանազան (multifarious)	զանգ (tang, bell)	զանգակ (bell)	զանգակատուն (steeple)
				զանգված (mass)-noun	զանգվածային (mass)-pronoun
			զազան (beast) զազանանոց (zoo)	զավազան (cane)	զավազանակոթ (cane handle)

Table 13

1→	2→	3→	4→	5
կ (k) (part, half)	կա (there is, have)	կար (seam, joint)	կարծր (hard)	կարծիք (opinion)
		կաթ (milk)	կաթիլ (drop)	կաթել (dribble)
		կամ ((I) am, or)	կամք (will, volition)	կամքով(ի) (forceful)
		կավիճ (clay)	կավիճ (chalk)	կավճոտ (marred by chalk)
			սակավ (little quantity)	սակավաթիվ (low number)

This procedure is possible to do with each Armennian letter. And Armennian language will be acquired. Tables 10, 11, 12 and 13 confirm the logical, consecutive and alone evolution of Armennian language and its very old age. At that time (many thousand years ago) it was not possible to adopt any words from other languages, because they were absent. So the Armennian is the oldest language on the Earth, beginning more than 40000 years ago, when Homo Sapiens emerged in Armennia.

2.9. ARMENNIAN LANGUAGE DECODING

When I was working out ELD and its use, I had constantly an unusual feeling that I am decoding very old manuscripts or petroglyphs, which are very important and magic. I even called (just for myself) ELD a "Magic Dictionary".

Indeed, ELD and its use makes understandable very many things: all words, names, the mind and feelings of people from Paleolithic and Neolithic time (the stone age) until now, their relation to Nature and to each other, their love for the beauty and kindness.

Tables 10, 11, 12, 13 confirm that Armennian language and Alphabet are the first, developed alone (there was nobody to adopt words from) and arisen from the very old time.

Armennians from the very old time spoke and speak until now to each other, spoke with their main God AR (Sun) and with their other Gods in Armennian language, which is the oldest language on the Earth, is God's language, which gave the beginning to all Indo-European languages and alphabets.

2.10. ARMENNIAN AND OTHER LANGUAGES. METHOD № 3

Armennian was the basic language for all Indo-European family of languages. So there are many hundreds of words which are the same (or almost the same) in these languages. These words were adopted from Armennian.

If some words are the same in several languages, it means all these languages adopted these words from one of these languages. From which one? From the language where these words have meaning.

In Table 14 some words are presented which are the same in Armennian, English and Russian* and were adopted from Armennian. Some of words of Table 14 were decoded above, in Items 2.6. and 2.7.

Table 14 is not strange, because many Armennian words were adopted by Indo-European languages. For example, English language adopted 55% of words from French language, which comes from Celts (who were Armennians, see PART 3) and 10% from Latin, which comes from Etruscans (who were Armennians) and from old Greek language, which was formed by many words adopted from Armennian. In Table 14a some European names with their Armennian interpretation (etymology) are shown.

Many Armennian words were adopted also by not Indo-European nations, for example, old Egyptian, Arabian, Turkish and other nations. In Table 14b some Jewish names adopted from Armennian ones are shown.

Ethiopian letters are almost the same as Armennian ones till now.

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* It is pity but I know only the said three languages. But I know that many words (as ocean, mother, hero, czar, Aryan, carpet, soap, car, mathematics, antenna, liter, atom, cat, zero, etc.) of Table 14 are the same also in many other languages.

Table 14

№	Amennian	English	Russian	№	Amennian	English	Russian
1.	օվկեան (nu)	ocean	океан	30.	նոր	new	новый
2.	նավագնացություն	navigation	навигация	31.	կատու	cat	кот
3.	մայր	mother	мать	32.	բաթան	cotton	вата
4.	հեր (հայր)	father	(отец)	33.	կոկորդիլոս	crocodile	крокодил
5.	հերոս	hero	герой	34.	վագր	tiger	тигр
6.	կեսար	caesar	царь	35.	պատկեր	pattern, portrait	портрет
7.	փարաւոն	pharaoh	фараон	36.	բերդ	fort (berth)	форт
8.	պատրիարք	patriarch	патриарх	37.	Աղբիոն	Albion	Альбион
9.	ակ(ն)	eye	око (окно)	38.	արք ...	arch...	архи ...
10.	սանիկ	son	сын	39.	ամեն	amen	аминь
11.	դուստր	daughter	дочь	40.	որբ (ան)	orphan	(сирота)
12.	արիացի	aryan	ариец	41.	զերո	zero	зеро
13.	կին	queen	женщина	42.	թումբ	tomb	тумба
14.	կարպետ	carpet	ковер	43.	սատանա	satan	сатана
15.	կարմիր	carmine	кармин	44.	հոլ	to hole	юла
16.	միս	meat	мясо	45.	կըկու	cocoo	кукушка
17.	կով	cow	корова	46.	պարկ	park	парк
18.	դուռ	door	дверь	47.	ես եմ (այ եմ, հայ եմ)	eom, I am	есьм, я есть
19.	տուն	town (home)	дом	48.	կորիզ	core	косточка
20.	ստամոքս	stomach	(желудок)	49.	ամեն	amen	аминь
21.	քար (stone, hard)	carat (character)	карат (характер)	50.	պորտ	port	порт
22.	քարտեզ	chart	карта	51.	գինի	wine (gin)	вино
23.	կառք	car	карета	52.	շաքար	sugar	сахар
24.	մաթեմատիկա	mathematics	математика	53.	մարմար	marble	мрамор
25.	անտենա	antenna	антенна	54.	դեվ	devil	дъявол
26.	ատոմ	atom	атом	55.	նանի	nanny	няня
27.	լի (ջուր)	liquid, lymph	ливень, лимфа	56.	եթեր	ether	эфир
28.	լիտր	litre	литр	57.	զեփյուռ	zephyr	зефир
29.	լիզել	lick	лизать	58.	պուտ	spot	пятно
				59.	կողմնացույց	compass	компас
				60.	ծուռ	curve	кривая

Table 14a

№	Armennian names	Etymology (see Table 10)	European names
1.	Ալեքսան (Alecsan)	ար • ե • ք • ս • ան = he beautiful and hard (as) rising Sun	Alexander
2.	Արտուր (Artour)	(he) has sunny house	Arthur
3.	Արսեն (Arsen)	ար • ս • ե • ն = he comes (as) beautiful Sun	Arsen
4.	Անդրեաս (Andreas)	ան • դ • րե • ա • ս = beautiful life comes to him	Andrew
5.	Հրանդ (Hrand)	գ • ր • ան • տ = you make him (to be) high	Grant
6.	Դավիթ (Davith)	դ • ա • վ • ի • թ = able man in straight life	David
7.	Հակոբ (Hakob)	հ • ակ • ո • բ = (he) adore source of kind soul	Jacob, Jack
8.	Սամվել (Samvel)	ս • ա • մ • վ • ել = (he) beautiful life arose for us	Samuel
9.	Ստեփան (Stephan)	ս • տ • ե • փ • ան = he almost soul of our home	Stephen
10.	Գասպար (Gaspar)	գ • աս • պ • ար = he (is) beautiful as Sun	Casper
11.	Գրիգոր (Grigor)	գ • ր • ի • վ • գ • ո • ր = (the) man making love with excellent soul	Gregory
12.	Անահիտ (Anahit) Աննա (Anna)	ա • նա • հ • ի • տ = her life trends to my home ան • նա= it is she	Anna Ann
13.	Եղսապետ (Yeghsapet)	եղ • սա • պետ = she (is) chief of nucleus (purity)	Elisabeth
14.	Ելենա (Yelena)	ել • է • նա = go to her (she was good)	Helen
15.	Մարգարիտ (Marcarit)	մար • գար • ի • տ = (she) life in sea stone home	Margaret

Table 14b

№	Armennian names	Their interpretation, meanings (see Table10)	Jewish names
1.	Աբրամ (Abram) Աբրահամ(Abraham)	Ա • բ • ր • ամ = son of kind life leader	Abram, Abraham
2.	Սահակ (Sahak)	ս • ա • հ • ակ = my life adores the source = I adore the Sun	Isahak
3.	Հակոբ (Hakob)	հ • ակ • ո • բ = (he) adore (the)source of kind soul = adoring the Sun	Iakov
4.	Մովսես (Movses)	մ • ո • վ • ս • ես = I with love to the holy man	Moisey
5.	Իսրայել (Israel)	իս • ր • ա • ել = (the) man making rising life	Israel
6.	Դավիթ (Davith)	դ • ա • վ • ի • թ = able man in straight life	David
7.	Սողոմոն (Solomon)	ս • ող • ոմ • ոն = he (has) holy, generous, wide heart	Solomon
8.	Լեվոն (Levon)	լ • եվ • ո • ն = he become as (right) holy	Levon, Levan
9.	Ահարոն (Aharron)	ա • հա • ր • ո • ն = he (as) holy, making positive life	Aaron
10.	Եփրեմ (Ephrem)	ե • փ • ր • ե • մ = (the) man coming to do equal entity	Ephim, Efim
11.	Զարա, Զարուհի (Zara)	զ • ար • ա = life as rising Sun	Sara
12.	Լիա, Լիլիա (Lia)	լի • ա = water life (water flower)	Lia
13.	Իրա, Իրինա (Ira)	ի • ր • ա = woman leading life	Ira

2.11. ARMENNIAN OLD PRELIMINARY AND DEVELOPED ALPHABETS AND FIGURES. METHOD № 4

Carahunge confirms (see PART 1) that more than 7500 years ago there was written language and alphabet in Armennia. Without them such a big and developed Observatory as Carahunge could not operate for a long period of time, getting high results which require centuries of observation. It was impossible without written language to fix results, to accumulate knowledge and to reach high level of knowledge.

Of course, the first Alphabet was much earlier of Carahunge time and was simple, with minimal quantity of letters, giving possibility to signify just main concepts. This Preliminary Alphabet was born perhaps about 17 thousand years ago (XV millennium BC) and had less than 20 letters. Then, developing step-by-step, this Alphabet after about 7000 years grew to Developed Alphabet with 34 letters (VIII millennium BC) and was in use at Carahunge time (VI millennium BC). These letters are shown in Item 2.4 (Table 9) and are on rocks in Armennia (dated III millennium BC).

Can we restore that Preliminary Alphabet? Let us try. We could keep the following main principles (Method № 4):

1. Old letters had to be almost similar to letters of Developed Alphabet presented in Table 9;
2. The letters "ր" (r), "լ" (l) and "ռ" (rr) have close pronunciation, so it could be one old letter;
3. In Armennian Alphabet there are few groups of letters by three ones in each, which are phonetically close one to another. These are: "գ, կ, ք" (g, k, ck), "դ, տ, թ" (d, t, th), "բ, պ, փ" (b, p, ph), "ձ, ծ, ց" (dz, ts, ts'), "ու, վ, ֆ" (u, v, f), "ժ, շ, չ" (ž, sh, ch). We can take middle ones;
4. Each next letter in Preliminary Alphabet can be chosen depending on maximal quantity of words which could be formed by adding the given letter. I think, this was the necessary reason of new letters arising;
5. The first letter should be "ա" (a), because it means "first, one" (see Table 10), it is a vowel and wide spread in Armennian.

Position 4 was the most difficult. I formed many words using different next letters to find out the necessary order of letters. The second letter was "ր" (r), because with "ա" (a) it gives ԱՐ = AR = Sun = ար (ar) and this pair is the most spread in Armennian language (about 3% of all words).

Then it was proved that these two letters (sounds) with another two letters (half-sounds) "հ" (h) and "յ" (y) give about 30 words (and "important" ones). For example: հայ (Armennian), այր (man), հայր (father), այ (I), հա (yes), ահ (fear), յար (lover), արա (do it), յարա (wound), etc.

The next productive letters were "է (ե)" (e, ye) and "ն" (n), which give additional more than 35 words and names, then letter "տ" (t) with close sounds "դ, թ" (d, th) giving additional more than 40 words, then letter "մ" (m) adding more than 50 words, then letter "կ" (k) with sounds "գ, ք" (g, ck) adding more than 120 words, etc.

Doing this, I took 19 letters which form thousands of words (a whole language!). These letters are the following: ա, ր, յ, հ, ե, ն, տ, մ, կ, օ, պ, ի, ծ, ս, վ, ը, խ, շ, ջ. I put them in two lines of 10 and 9 letters (see Table 15).

Table 15

ARMENNIAN PRELIMINARY ALPHABET (and FIGURES), 10 millennium BC									
1	2	3	4	5	6	7	8	9	0 (10)
ա (i)	բ լ	յ ձ	հ	ե է	ճ	տ դ թ	մ	կ գ ք	օ ո
կյանք the life	տվողին giver	ես I	պաշ-տեմ adore	էությունը entity	նրա his	հիմքն է is base	իմ (և) my (and)	զույգը pair (es-sence)	հոգևոր of soul
պ բ փ	ի	ծ ձ ց	ս զ	վ ու ֆ	ը	խ	շ ժ չ	ջ ճ	-
բոլոր all	մարդ-կանց people	ծիլերը springs	սիրո of love	դեպի to the	միաց-ման union	նշանը sign	շատ very	հաճելի nice	-

After doing this I was very surprised by two findings:

① These two lines of letters mean two whole phrases in Armennian (see Tables 10 and 15) which in English will be the following:

- I adore the life giver (the Sun), his entity is my base and pair (essence) of my soul,
- The love springs of all people – to (are) the sign of very nice union.

This is indeed a marvellous appeal to kind God, to love, to unity, coming to us from the distance of 12 thousand years!

② The configuration (structure) of these letters is almost similar to the configuration of present ten figures (0, 1, 2….9), see Table 15.

This means that these letters were used also as figures, evolution of which gives the present configuration of the figures.

All these confirm the following:

1. Method № 1 and the interpretation of Armennian letters meanings (see ELD, Table 10) is right;
2. Method № 2 ("trees" of letters, see Table 12) is right;
3. Method № 4 and restoration of Armennian Preliminary Alphabet is right;
4. Present figures and decimal counting system (with zero) were born in Armennia about 10 thousand years ago. Perhaps, this was kept in secret and was not adopted (say, by Greeks in I millennium BC) and then decimal

system with zero was forgotten in Christianity time, and was again invented later in Medieval Europe.

5. Table 15 demonstrates that in Preliminary (12 thousands years ago) and in Developed (VI millennium BC) Alphabets the same letters as in present Armennian Alphabet were used.

The decimal counting system was forgotten for a long time. Meanwhile it was (and is) very simple and convenient system, which is easy to understand, learn, remember and use. Let us remind that children learn to count using ten fingers and the word "mathematics" in Armennian is "մատ • ե • մատ • իկա", which is "finger comes after finger". It is good that this word was not forgotten.

Table 15 also tells, that at the very beginning the letters as figures were used. So perhaps they were used as a table like it is shown here in Table 15a, which consists of 19 letters, and figures from 0 to 90000. Arithmetical operations with this Table 15a are easier than with Table 17 shown below. For operation signs, perhaps, the following letters were used: "զ" or "եվ" for ⊕, "դ" for⊖, "ձ" for ⊗, "բ" for ⊙ and "լ" for ⊜ (see Table 10), thereat these letters are absent in Tables 15 and 15a.

Table 15a

	0	1	2	3	4	5	6	7	8	9
միավորներ units	o	ա	բ	յ	հ	ե	ճ	տ	մ	կ
տասնավորներ tens	o	աo	բo	յo	հo	եo	ճo	տo	մo	կo
հարյուրավորներ hundreds	o	պ	ի	ծ	ս	վ	ը	խ	շ	ջ
հազարավորներ thousands	o	պo	հo	ծo	սo	վo	ըo	խo	շo	ջo
տասնյակ հազարավ. ten thousands	o	պoo	հoo	ծoo	սoo	վoo	ըoo	խoo	շoo	ջoo

2.12. FIGURES NAMES MEANINGS

At first, about 10000 years ago, the line of Preliminary Alphabet of the first ten letters was used as a decimal figures system (see Table 15a). The similarity between letters and figures is present not only for the first line of letters but also for the second line (see Tables 15 and 15a).

Later the configuration of figures changed a little (to be the difference between figures and letters) and figures have gotten the present form. At the same time initial figures received the names, which are in use until now.

These Armennian old names of figures are possible to decode using ELD, Table 10. And the result is very interesting: the names indeed have their own meaning, sense which is shown in Table 16, "Figures names meanings". This circumstance again confirms that the present figures have Armennian derivation.

Table 16

FIGURES NAMES MEANINGS			
basic letter	meaning of letter (see Table 10)	figure, its name	meaning of figure name
ո (ո)	կետ, ոչինչ point, nothing	0 զ • եր • ո →	սկիզբ տվողը, (բայց) հոգևոր (աննյութական) giving the beginning (but) spiritual (non-material)
ա (ա)	մեկ, առաջին one, first	1 մ • ե • կ	իմ լինի կեսը (ես ինքս) be my half (myself)
ր (ր)	զույգ pair	2 երկ • ու • u	զույգ ունեցանք մոտիկ (կպած) (we) have close pair (together)
յ (ձ)	ես (երկարեցի) I (oblonged)	3 եր • ե • ք	հաջորդն եղավ ամրացնող next makes harder
հ (u)	հարել դեպի trend to the…	4 չ • օր • u	սա (դեռ) ոչ լրիվ (հինգ մատ) this not completed yet (to be five fingers)
է (վ)	ես եմ I am	5 հ • հն • գ	մարդու գլխի նման (ավարտված) like human's head (completed)
ն (ր)	այն it	6 վ • ե • ց	իմ հաջորդ (ձեռքի) վրա on my next (hand)
ш (խ)	հիմք base	7 յ • n • ք	մարդու հոգու համար for human soul
մ (շ)	մարդ man	8 ու • ք	(սա) ունի կարողություն (it) has ability
կ (գ)	մաս part	9 հ • ն • ը	նա մարդու ընկերն (է) it (is) friend of man
ո (օ)	մեծ big	10 տ • ա • u	իմ կյանքի տունը (ավարտած) house of my life (completed)
		20 ք • u • ա • ն	նա կյանքի զավակ (է) կայուն it (is) stable child of life
		30 եռ • ես • ուն	երեք (տասնյակ) ես ունեցա three (tens) I have
		40 քառ • աս • ուն	չորս (տասնյակ) ես ունեցա four (tens) I have
		50 հի • u • ուն	(նա) հինգ զավակ (տասնյակ) ունի (he) has five children (tens)
		100 հ • ար • յուր	հարող ձեր արևին trend to your Sun (life)
		1000 հ • ազ • ար	հարող ազգի արևին trend to nation's Sun (life)

Notes

1. The first thing we can see in this Table 16 is that the meanings of all figures were chosen with main purpose to make the learning and remembering of them as easy as possible.
2. Mesrop Mashtots perhaps knew something about old meanings of letters, because using letters as figures he put for 10, letter "ժ" (ուժեղ, powerful), for 100, letter "ճ" (առավել, moreover), for 1000, letter "ռ" (մեծ, big, great).

2.13. MEDIEVAL FIGURES – LETTERS.

From early Middle Ages up to now (sometimes) Armennian letters instead of figures were used. The same was in Europe. In Table 17, 36 of Mashtots' Armennian letters and their use as figures from 1 to 9000 are shown. In VII century AD the first tables of addition, subtraction, multiplication and division were constituted by Armennian mathematician and astronomer Annania Shirakatsi [22].

Table 17

	1	2	3	4	5	6	7	8	9
միավորներ units	Ա	Բ	Գ	Դ	Ե	Զ	Է	Ը	Թ
տասնավոր tens	Ժ	Ի	Լ	Խ	Ծ	Կ	Հ	Ձ	Ղ
հարյուրավորներ hundreds	Ճ	Մ	Յ	Ն	Շ	Ո	Չ	Պ	Ջ
հազարավորներ thousands	Ռ	Ս	Վ	Տ	Ր	Ց	ՈՒ	Փ	Ք

It is evident that this system of figure – letters had no zero and is "ninemal" (not decimal) which is more difficult in use. This shows that old Armennian decimal system with zero was forgotten indeed because Table 17 is more complicated in use than above Table 15a.

2.14. ARMENNIAN AND OTHER ALPHABETS

Everybody learns at school and university that all alphabets were taken (adopted) from Phoenician and some of them also partly from so-called Aramean. And everybody learns that old Greek high culture comes from Crete-Mikenian culture. And almost all countries quickly adopted Phoenician alphabet during I millennium BC.

High culture and alphabet are not able to arise in small countries or islands, more over during a short period of time. For high culture and alphabet development and accumulation from zero, many thousand years, great experi-

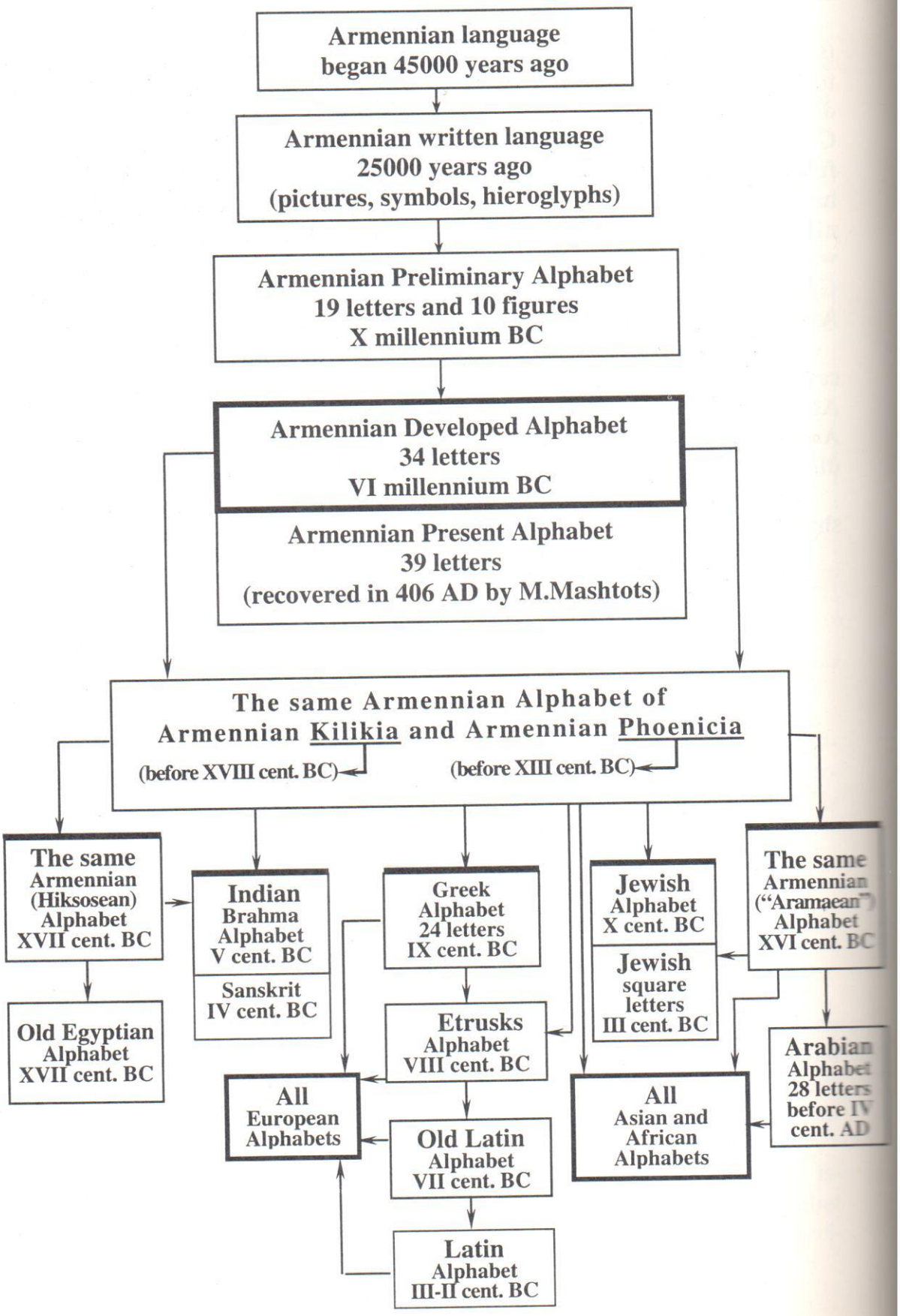
ence of great nation with high knowledge, technology, dialects, etc. are necessary.

Carahunge, Armennian Language Analysis and many other factors (see PART 3) confirm that necessary conditions and evolution of knowledge, technology, alphabet took place only in Old Armennia with its many kingdoms, including Araratian, Kilikian, Phoenician and many other kingdoms. German historian M.Rimshneider tells that all Greek culture was taken from Kilikians, Phoenicians, Hittites and Halides (Urartians) who were inhabitants of Araratian kingdom [61]. All these four countries were Armennian kingdoms (see PART 3). M.Rimshneider also tells, that Greek Alphabet was adopted from Kilikia [61]. I think it is right because Kilikia is closer to Greek than Phoenicia, and Kilikian Alphabet was the same Phoenician-Armennain Alphabet.

Armennian Alphabet arose in the Great Armennia about 15-12 thousand years ago. The fact that Phoenician Alphabet is the same Armennian Alphabet is shown in Table 9. From 26 Phoenician letters 12 are the same Armennian ones (46%), 12 letters are similar (46%) and only 2 letters are different (8%) from Armennian letters "q" (z) and "u" (s).

In Table 18 the evolution "tree" of Armennian and Other Alphabets is shown.

Table 18. Evolution of Armennian and Other Alphabets



2.15. ARMENNIAN AND SO-CALLED "ARAMAEAN" ALPHABET. METHOD № 5

Table 18 shows that all Alphabets come from Armennian Alphabet. In literature it is said that all Alphabets come from Phoenician, including so-called "Aramaean" Alphabet [60].

Phoenicia as well as Kilikian, Hittites kingdoms and many other countries in West Asia and Anatolia were Armennian Kingdoms and from very old time spoke Armennian language and used Armennian Alphabet. Nevertheless in XIX and the beginning of XX centuries the opinion was that Hittites language was semitic. But the results of excavations of Hittites capital town in Anatolia in 20-es of last century confirmed that their language was Indo-European.

Who were Arameans (Aramaeans)? It is said [60] that they were semitic tribes coming from Arabia and in XIV-XI centuries BC lived in Anterior Asia. But "Aram" is typical (very old and present) Armennian name ("Son of Sun") and Armennians lived (and spoke Armennian) in Armennian kingdoms of Anterior Asia much earlier than so-called "Aramaeans". The impression is that "Aramaeans" are prepensely concoct tribes with their semitic background and language. Why was it done?

There are two textbooks for universities "History of Armennian Nation", in Armennian [63, p. 43] and in Russian [62, p. 38], where there are photos of two different boundary (lands dividing) stones with chiselled inscriptions. Below those photos it is written: "The boundary stone of Artashes I. In Aramaean language".

Artashes I the Kind was Armennian king of Great Armennia in 189-160 BC. He built capital town Artashat (188 BC) near river Aracs in Ararat valley and a citadel with the help of famous marshal Hannibal, who returned to his old fatherland after Carthage downfall (146 BC) by Romans.

It was strange to me why did Armennian king inscribe on stones for Armennian people of Armennia in foreign (so-called "Aramaean") language? It was impossible. Why did historians believe that some "Aramaean" tribes (existed only 3 centuries and even did not have a country) had Alphabet, but Great and old Armennian kingdom had not? I think, that "Aramaeans" never existed. They were Armennians living in Armennian kingdoms of Anterior Asia and used, naturally, Armennian language and Alphabet. To confirm all these I decided to try to read those inscriptions on stones in Armennian. And the result was excellent.

I rewrote the stone letters (as they were) and saw that many of them are alike Armennian present letters. The letter which is repeated more than others could be "a" because it is specific for Armennian language.

I found "Aramaean" Alphabet in some books, including "Armennian written language" of H.Acharian [56, p. 514] and was very surprised. In table of letters "Aramaean" letters which are identical with Armennian ones

were put not in line with the corresponding Armennian letters but in lines of other letters (not similar). For example, “Aramaean” letter “պ” similar to Armennian “պ” is put against Armennian “մ”, “լ” is put against “ղ”, “ղ” – against “հ”, “փ” and “տ” – against “կ”, “ի” – against “ծ”, etc.

I understood why this confusion was done. It was said from the begining of Christianity adopting that Armennians had no written language (before Mashtots) and Armennian books were burned, but chiselled inscriptions on stones were impossible to damage everywhere. So the “Aramaean” (semitic) language was devised and letters in Alphabet were purposely confused to make impossible to read Armennian old inscriptions in Armennian.

I put “Aramaean” (and also Phoenician) letters in a table accurately against similar Armennian letters (see Table 9 in Item 2.4) and espied that from 28 “Aramaean” letters 17 are the same Armennian letters (61%), 7 are similar (25%) and 4 are different (14%). Here are these Armennian letters to which correspond “Aramaean” ones:

- The same letters: ա, գ, զ, ի, լ, կ, հ, ղ, մ, ն, պ, ռ, տ, ր, ց, ք, օ (four vowels),
- Similar: դ, ե, է, ժ, յ, շ, վ (two vowels).
- Different: բ, խ, ճ, ս (no vowels).

After this I easily read these inscriptions (of II century BC) in Armennian!

In Fig. 50 the photo of stone in that book [62] is shown, and in Table 19 the text of inscription is presented in old Armennian (inscriptions are 2200 years old), present Armennian and English translation. In Fig. 51 the photo of another stone from the book [63] is shown and in Table 20 the text of inscription is presented.

Fig. 50. Inscription on stone from the book [62].

Fig. 51. Inscription on stone from the book [63].

Inscriptions decoded:

Table 19 (see Fig. 50)

Old Armenian	Present Armennian	English translation
Ակ ք* ղռիեն Արտահտ՝ ավ է հողի այս գահապան հապ	Սկսած (այս) կանգնած քարից Արտահտ՝ տերն է հողի այս թագավորը հապ	Beginning from (this) standing stone until Artait, (the) lord of this land is (the) king hap

Inscriptions decoded:

Table 20 (see Fig. 51)

Old Armennian	Present Armennian	English translation
ք** ղռիեն տի ավելք զ՝ հո[ղ]եր գահապանքա	(Այս) կանգնած քարից մինչև վերջ (արևելք) հողերն (են) թագավորի	From (this) standing stone until the end* (East) are lands of the king

All these mean that Armennian written language (Alphabet) existed about 600 years before Mashtots (about 2200 years before us), and all so-called "Aramaean" inscriptions are Armennian ones in Armennian language.

Comparison of present Armennian letters with old Armennian (Phoenician and "Aramaean") letters (Table 9) shows that most of them are the same. Thereat, it is necessary to remember that present letters configuration has been corrected few times, and old letters on rocks and stones were outside for a long time and are very suffered.

Boundary stones of Armennian King Artashes I the Kind (189 – 160 BC) with inscriptions are in Armennian language with Armennian letters.

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* The meaning of letter "ք" is "standing" according to Table 10.

** I think, "the end" means Lake Sevan, because this stone is put in the basin of Lake Sevan.

2.16. CONCLUSION OF PART 2

Armennian language arose in Armennia beginning from the time of Homo Sapiens, 40 – 45 thousand years ago.

It developed step by step from simple sounds to words, main of which began (and begin) from "ar" (the Sun, the name of old Main God of Armennians).

All these are confirmed by Armennian language analysis.

The first written language (symbols, pictures, hieroglyphs) arose about 25 thousand years ago. Many of these signs came to us and are in use in Armennia and in other countries (for example, signs of Zodiacal constellations), which confirms the priority of Armennian written language.

The fact that Armennians have lived in Armennia for all times is confirmed also by many geographical names in Armennia, as well as many Armennian male and female names beginning with "ar". All Armennian main names came without any change from Paleolithic time (more than 10 thousand years).

The fact that the cradle of Indo-Europeans and Indo-European languages was Armennia (Armennian Highland, Mount Ararat), and that from the very old time (more than 7 thousand years) there was a developed astronomy are confirmed by many European authors [52, 53, 37, 38, etc.] and also by Carahunge (PART 1). This is also confirmed by the presence in Armennian language of many words which have meaning, sense in Armennian and which are in use (adopted) by many other languages (see Table 14).

The first, Preliminary Alphabet (19 letters) arose in Armennia more than 12 thousand years ago (in X millennium BC). It was the first Alphabet in the World. Together with the first Alphabet arose and were in use ten figures (with zero), decimal reckoning and mathematics (this word means in Armennian "finger comes after finger", i.e. reckoning). Later the decimal system and zero were forgotten and were invented again in Medieval Europe.

The Developed Armennian Alphabet (34 letters) arose in VI millennium BC and these letters are in use until now (with some correction). All other Alphabets in the World came from this Alphabet (Table 18).

In the life of this Alphabet there was an interruption for one century after Christianity adopting in Armennia as state religion in 301 AD. Then, in 406 AD Mesrop Mashtots reestablished the written Armennian language with the existed Armennian Alphabet of 36 letters. Later three more letters were added, so present Armennian Alphabet includes 39 letters.

The analysis of Alphabet and Armennian language shows that each Armennian letter has also a definite sense, meaning (coming from old time), which is shown in Table 10 "Elements (letters) Dictionary" (ELD). The Method of ELD composition is shown in Item 2.5. Using of ELD shows that almost each Armennian word becomes understandable (even many foreign words and names). The meanings of letters were used in Armennia and other countries, perhaps, until I millennium AD, and later were forgotten.

Consistent and logical development of Armennian language, i.e. formation of new words by adding a new part (parts) to the existed word, is confirmed by ELD and presence of "trees" of letters, two examples of which are given in Tables 12 and 13.

All these confirm also that Armennian language and Alphabet are the first which were developed alone (from nobody it was possible to adopt words) and came to us from very old time.

I think, I was able to restore the Armennian Preliminary Alphabet with 19 letters (see Item 2.11) coming from X millennium BC (Table 15). First 10 letters decoded by ELD gave the sentence: "I adore the life giver (the Sun), his entity is my base and pair of my soul". The next 9 letters gave another sentence: "The love springs of all people - to the sign of a very nice union". These were very big surprise for me. And this means that independent Tables 10 and 15 are right.

The second big surprise was the analogy between letters (of the first and second lines in Table 15) and figures 1, 2, 3, ...0 (10) which we are using now.

All these confirm that Table 10 (ELD) and 15 are right, and that present figures and decimal system of counting with zero come from 12 thousand years old Armennian Preliminary Alphabet. This is confirmed also by Table 16, because the names of present figures have definite meanings (explanation) in Armennian. All these demonstrate also that the letters used in Preliminary and Developed Alphabets were the same as the present Armennian letters.

I was also able to read in Armennian the inscriptions on land boundary stones of Armennian King Artashes I the Kind (189 -160 BC). It is said in different books that these inscriptions are in semitic Aramaean language.

The reading of inscriptions in Armennian language confirms that:

- Armennian Alphabet existed before Mashtots (for about 600 years as minimum) and
- So-called "Aramaeans", "Aramaean" language and Alphabet were in reality Armennians, Armennian language and Alphabet (Tables 15, 19, 20).

Armennian Language was the first language in the World, the God's language, the basis of all Indo-European languages and the International Language until II-I millennium BC.

Armennian Alphabet was the first alphabet from which all other alphabets were adopted.

3. 7. THE GREAT ARMENNIA IN 10 – 5 MILLENNIA BC

In the period of X -V millennia BC the Great Armennia still was the single state (with other Armennian kingdoms) in the World and Armennians were the single civilized nation, having high culture, knowledge and Alphabet.

The Great Armennia existed on territories between Black and Caspian seas in Trans Caucasus (South Caucasus) on the both sides of river Cour (Kura), around mountains Ararat and Aragats, lakes Sevan, Van and Urmia, on the all Armennian Highland and Mesopotamia (Edessian Kingdom)*.

Along with the Great Armennia there existed other Armennian kingdoms in Kilikia, Phoenicia, Asia Minor, and Mesopotamia*.

The English historian A. Gilbert wrote that much before Pyramids building and much before the travelling of Jewish forefather Abraham from Haldean Ur (Armennian Ar will be more correct, P.H.) to Khevron (Chevron), one nation of Indo-European birth already existed, who was the ancestor of Persians and Europeans and who had the kings dynasties [33]. It seems to me A. Gilbert knew but did not say the truth that it was Armennian nation.

German historian M. Rimshneider wrote that all Greek culture was taken from Kilikians, Phoenicians, Hittites and Chaldeans, which were Urartians or inhabitants of Araratian kingdom [61].

Other nations, states and civilizations began to form in Sumer, Egypt, Babylon, Iran, etc. with help of Armennians in III millennium BC and later.

Armennians were never aggressive, had no chauvinistic or imperialistic ambitions. Being the first in the World civilized nation, they were noble, clever and kind. Their Great Mission was to civilize all tribes around and beyond. They came to other lands to help local tribes to form states, as it was in Egypt, Sumer, Babylon, Ethiopia, India, Middle Asia, etc.
But Armennians heroically defended their fatherland, often by less forces than enemy had.

3. 71. ENIGMAS IN WORLD OLD HISTORY

The Old History of Armennia is made out from the World Old History. By this reason in the World Old History there are many enigmas and mysteries, when there are many facts but there are no answers, explanations for them. Let us present here some of these enigmas.

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* Let us remember the Item 3.1. "Anthropological data".

The Questions

1.a. Who built the Great Pyramid 4500 years ago? And Great Sphinx much earlier?

1.b. Why were they built? For what purpose?

1.c. Why were they built in their present places (sites)? For what were the great works done?

2.a, b, c. The same questions for Stonehenge, New-Grenge, Carnak and other big old monuments (4500-4000 years ago).

3. Who and why built the pyramids and temples in tropical woods of Central America more than 6000 years ago?

4. The enigma of geographical maps. There are a few medieval time maps on which the different regions of Earth are shown, which have the high accuracy impossible for that time. On these maps there are shown even regions not discovered yet at that time.

For example, there is so-called map of admiral Piry Rase dated by 1513 AD, which presented Antarktida, discovered at 1818 AD, so more than 300 years before the discovery! Admiral wrote on margin of map that he made this map using more ancient sources (which are not saved). The more interesting is that Antarctica on this map is shown without ice-covering as it is now. By the geophysical data this was more than 6000 years ago! Moreover, this map concurs with the map of Antarctica made in XX century using modern methods of seismography by international scientific expedition [24, p.9-17].

The question (No. 4) is who and why made this map more than 6000 years ago? The consequence of scientists is one: in prehistoric time a high civilization, existed on not known yet place of Earth, had researched almost the whole Planet and transited their knowledge to other nations [24].

There are also other examples of such astonishing old maps made with very high accuracy [24].

The Answers

The main and general answer is that Carahunge and other data (including linguistic ones) are attested to say: at that time the necessary knowledge, instruments and technology had Armennians only.

The more detailed answers of above questions in PARTS 1 and 2 were done. Here we can repeat them just shortly.

Answer to questions 1a and 2a is that the Great Pyramid and Stonehenge and many other monuments were built by Armennians, by Original Brain Center (Item 1. 34.), particularly by Armennian Kesar Hayk (Item 3. 30).

Answer to questions 1b and 2b is that the Great Pyramid and Stonehenge were built as the Observatories and memorials to keep for far future generations the information about the great scientific investigation that Earth is ball-formed (Item 1. 28.). The Great Sphinx was built to keep

for far future the information about another great investigation of Earth Axis Precession phenomenon (Item 1. 22. and 1. 35.).

Answer to questions 1c and 2c is that to demonstrate the ball-form of the Earth some monuments were built at the latitudes which are at the equal distances (by latitude) from Carahunge. For example, the Stonehenge and the Great Pyramid are at latitude distances of about ± 10° from Carahunge; the Callenish (Scotland) and the oldest observatory and Amon-RA (the Sun) Temple in Egypt (near present Assuan) are in latitude differences of ± 16° from Carahunge.

Answer to question 3 is that Armennians in 15-2 millennia BC researched almost all Planet. Their great mission was to teach local tribes everywhere, to propagate knowledge, kindness, humanity and the kind religion of the Sun God AR. This attests also the existence of the same old legends of different nations in different places. According to these legends, in the old time to their countries came white-faced and big bearded (the main indications of Armennoid race) Gods, who knew everything and taught them kindness and knowledge. Such legends have not only Sumerians, Hindus, etc. but also the inhabitants of all countries of Central America (Peru, Bolivia, Chile, Mexico, etc.).

Answer to question 4 is the following. Such accurate maps could be prepared by the scientists who knew mathematics, geometry (including spherical geometry and trigonometry), who had very accurate instruments for measuring the latitude and longitude of place and had big oceanic ships. Such astronomical and other instruments had in Carahunge time (7500 years ago) Armennian scientists. Carahunge attests that they knew also mathematics, geometry, trigonometry and had high experience of accurate measurements with accuracy of 30 sec. of arc or 2 sec. of time. In the same time Kilikian and Phoenician Armennians had at that time big oceanic ships ("nav" in Armennian) and high level of navigation. Thus 6000 and more years ago the necessary knowledge and possibility had only Armennians.

3. 72. ARMENNIANS IN AMERICA

There are many enigmas in Old History of Central America, coming from the period of many thousand years ago, i.e. before the well known period of Mayas, Aztecs (Mexico), Incas (Peru, Bolivia, Chile) cultures of II millennium BC- II millennium AD. These enigmas include the presence of the same old legends of population of all said countries and the presence of old towns, temples and pyramids of Ziggurat type (step by step) as they are in Babylon, Ur (Ar in Armennian) and Egypt.

G. Hancock writes that old legends of Incas are taken from the book of Khose de Akosta, Spanish scientist and priest (XVI century AD), about

Incas descent after the Great Deluge: "From the lake Titikaka came Virakocha God ... and the augmenting of the human genus began". In other legends of the Andes Mountains inhabitants it is said that Virakocha (Wiragocha) was a white-faced and bearded man of middle height. He called the people as his sons and daughters. He travelled and made miracles, cured diseases "by touching", was very kind, taught people medicine, metallurgy, agriculture, stock-raising, art of witting (later forgotten) and understanding of complex bases of technique and building [24, pp. 48, 49, 54]. Many legends said that Virakocha and his people went back by water, moving by ocean (Pacific) in ships without oars [24, p. 88].

G. Hancock tells also that in town Tiauanako of lake Titikaka region the local Indians-Aymara speak until now in about 10000 years old language of Virakocha. In opinion of some linguists the Aymara language is the oldest in the World and has a rich and strong structure of syntax [24, p. 87].

It is interesting that in Armennian Titikaka means "t•i•ka = there is the house of men", and Aymara means "hay•mar•a = Armennian from sea", or "from mother Armennia". The name Virakocha in Armennian means "Vir•a•koch = called from above = վերեն կոչված". Armennian philologist Dr M.Sarkisian proves that Aymara language is very close to Armennian because from 600 words in English-Aymara dictionary she has found 54 words which are similar to Armennian words [101].

G. Hancock describes the old Temple in Tiauanako (Bolivia) with big statue of Virakocha, "Sun Gate" and square Calasasaya, which in Ayamara language means "The place of vertical standing stones" [24, p.72]. In Armennian the word Calasasaya means "Car•sas•haya = big standing stones of Armennians" or "Car•sas•ia = the place of big standing stones". These and other examples mean that Aymara and Armennian languages are close one to another indeed. This impression becomes more trustworthy if to take into account that by G. Hancock Calasasaya was a 15-17 thousand years old observatory and Stone Calendar [24, p.74]. Of course, it was not so developed observatory as Carahunge, because in standing stones of Calasasaya there are not holes, so accuracy of observations was not very high. But all these agree with our supposition that the first observatories in Armennia were built about 23 thousand years ago (see Item 1. 17.).

The same old legends, coming from ancestors of Mayas and Aztecs, have the people of Mexico. G. Hancock tells the legend from the notes of Khuan de Torkvemada, Spanish chronicler (XVI century AD), that Quetzalcoatl (Mexican analog of Virakocha) was "the rosy man with lengthy beard ... He was a mighty built white man with high forehead, big eyes and big beard ... He condemns sacrifices besides fruits and flowers. He was known as the God of peace...". This wise teacher "came from behind of sea in the boat which moves itself without oars ... He taught people to use fire ... He also built houses and taught couples to live together as husband and wife..." [24, 97].

According to G.Hancock S.G. Morly, the top researcher of Maya writes that the same "Great God ... of pantheon of Maya was the great organizer, founder of towns, author of laws and calendar ... His main streaks and biography are so realistic that it is fully probably he was a real historical personage, major law-maker ... which was the reason of his deification". G.Hancock writes here that "All legends rightly affirm that Quetzalcoatl came to Central America from afar (from behind, "from the East Sea") and later again sailed away to the same direction..." [24, p. 96, 97].

All these and other legends confirm that the "Gods" came in old time to Central America, built with local population big towns, very long roads (about 15000km !), temples and pyramids. As the bright example of the presence of developed old towns we can note also Machu-Pikchu in the beautiful mountains of Peru. This town was built too far from roads, so G. Hancock writes "Who ever went ... to build Machu-Pikchu here, he had to have the very serious reasons for that" [24, p. 57].

Machu-Pikchu has astronomical orientation and was built at the foot of double-headed big mountain which is very like to the Great and Small Mount Ararat (see Fig. 84). The town was built much earlier than was Inkas civilization [24, pp. 36-53]. R. Muller, Professor of astronomy of Potsdam University, found out that the important elements of Machu-Pikchu buildings have astronomical orientations. Using the laws of Earth Axis Precession he calculated that the town was built between 4000 and 2000 BC, so about 6000 years ago [24, p. 60].

Fig. 84. Machu-Pikchu, the old town in Central America [24].

In town Cuzco (Peru) there is the old temple of the Sun with name Qozikancha (with images of Virakocha) [93, p. 355]. This name is very close to Armennian word Carikanch = cari•kanch = stone's call = քարի կանչ, which is almost the same as Carahunge (Speeking Stones).

The astronomical dating of the age of old towns, particularly Tiauanako with Sun Temple, Sun Gate, Pyramid and Calasasaya square, were done at 1927-1930 by scientists A.Poznansky, Prof. of La-Pas University, Dr F. Bekker from the "Specula Vaticanica", Prof. A. Kolsutter from Bonn University. All they demonstrated that Tiauanako is about 17 thousand years old [24, p. 76].

Have we enough bases to say that all these large activities in Central America at old time were done by Armennians? I think "yes", because:

1. there are many the same legends of all countries of Central America, that in old time the kind, clever "gods" with high knowledge came from the East and then returned back to the East by sea. This book shows that Armennians in old time (17-4 thousand years ago) were also kind, clever and with high knowledge;
2. the "gods" were white and bearded men with high forehead and big eyes, which are the indications of Armennoid race;
3. in the old time Armennians went to many other lands and seas and everywhere the local population deified them thanks to their kindness, high knowledge and volition to help. They disallowed sacrifices and taught knowledge, building, language and trust to the kind Sun God. The main God of local tribes was also the Sun.
4. the "gods" language was Armennian, because many old, even present names of towns, buildings and old "gods" (as Virakocha) as well as many words of some languages (as Aymara) have Armennian interpretation.
5. the "gods" built towns, roads, Sun-God Temples and Ziggurat type pyramids with astronomical orientation. They had big ocean ships, high accurate instruments and navigation, which at that time had only Armennians.

3. 73. ARMENNIAN ASIA MINOR: HITTITIAN KINGDOM, PHRYGIA , LYDIA

It is known that Armennian race was sole inhabitant of Asia Minor from the old time. In Asia Minor there were a number of Armennian old Kingdoms. About the Armennian Kingdoms of Komagena, Tsopc, Kappadokia and Armennia Minor we said in Item 3. 10. About Kilikia it was in Item 3. 11. About Troy (Illion) will be in next Item 3. 27. This Item 3. 26. is about Hittitian Kingdom, Phrygia and Lydia.

Hittitian Kingdom

It is known that Hittitian State was in central part of Asia Minor during 17-12 centuries BC and Hittitian language (Hattiti) was Indo-European [87]. But what was before the said centuries? The book "Ancient civilizations" says: "Hatti seems to have been in origin a very ancient name

for the district around the city Hattush... The inhabitants of this district in the III millennium BC spoke Hattiti and would therefore have had first right to the name of "Hattite" if they had not been pre-empted by the people of the later kingdom, of which Hattush was the capital" [93, p. 111].

What was before III millennium BC is unknown. Let us remember here the anthropological data (see Item 3. 1.) that 10 thousand years ago all Asia Minor was populated by Armennoid race only, i.e. by Armennians, from whom came Indo-Europeans and Indo-European languages. Before about the middle of XX century AD it was said everywhere that Hattitean language was Semitic. But after the excavations of Hittitean capital Hattush with big library it was demonstrated that Hittitean language is Indo-European. Now it is known that many Hittitian words (and grammar) are the same as Armennians or very close to them [64].

It is known also that Hittitean country (state, then Empire) was in close contacts with Great Armennia and other Armennian Kingdoms, particularly with Kilikia, the kings of which were at one period brothers (from the one dynasty) with Hittiean kings. They received from Great Armennia many goods, finery and weaponry.

Phrygia

After the fall of Troy (13c. BC) this country is known in the history as Phrygia, which was located in NW of Asia Minor, with its capital Gordion. According to historical data Phrygia existed from 10-8 cent. BC to 2-3 cent. AD. The language is separate branch of Indo-European family (as Armennian also). The language is represented with inscriptions, glosses and personal names [70, p. 376; 1986]. It is obvious that these writings must be read in old Armennian language.

Lydia

Lydia located in SW of Asia Minor was, as Phrygia and other countries in Asia Minor, inside other (bigger) Armennian Kingdoms (as Kilikia, Hittites, Troy and others) in different times. Lydia was independent state at 7-6 cent. BC. The language was Indo-European.

3. 74. ARMENNIAN TROY

Our knowledge about Troy and Trojan Kingdom comes from "Iliad" of Homer (IX-VIII cent. BC) and results of excavations of German archaeologist H.Schliemann in 1870-1890 on a hill lying about 6km from the Dardanelles Channel. Excavations were continued by W.Dorpfeld and then, in 1932-1938 by American expedition led by W.Semple and C.Blegen.

Troy was a big old town surrounded by many settlements, the age of which now is under discussion (2500-1900 BC) [93, p. 144]. Trojan War was in XIII cent. BC. By the other sources Troy existed in IV millennium BC and was placed on the bank of old bay, [97, p. 25, 144, 145; 98].

The map of Troy excavations is shown in Fig. 85 [93, p. 142] and Mrs. Schliemann wearing Trojan jewellery – in Fig. 86 [93, p. 143].

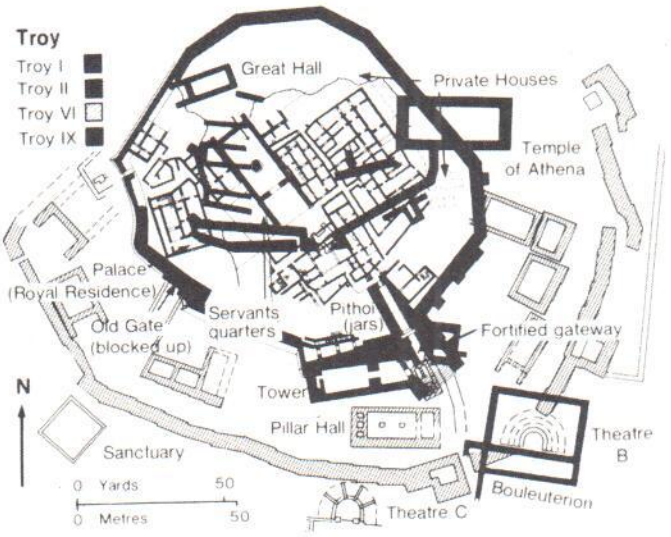


Fig. 85. Troy. Map of excavations [93].

Fig. 85a. Mrs. Schliemann wearing Trojan jewellery [93].

It is important for us how old really was the Trojan country. I am sure that it was more than 10 thousand years ago when Armennians lived here (Armennoid race) and it was Armennian country (Kingdom) having much more territory than in later period. I am sure that this will be affirmed by the new excavations, and all old Trojan writings are necessary to read in Armennian language (as well as old Egyptian, Sumerian, Babylonian and others).

In XIII century BC when Trojan War took place, Greeks were not formed yet as one nation. Homer calls them as Acheans and Danayans. There were separate little town-states and island-states. Developing Greeks needed the trade ways, especially to the East, including Black Sea basin (West was not developed yet). But on the routes to the East (marine and overland), on Dardanelles Channel there was the Trojan Kingdom. Dardan is the old word which in Armennian means: D•ar•d•an = way to the AR, to Him (to the God).

Homer named Troy Illion which is Armennian name (Illion – Arian=Ar•i•an=the town of Sun people). To conquer the routes to the new lands, Greek little states joined at first in one army and led by Agamemnon (one of little kings), using hundreds of ships, came to conquer Troy. To help Trojans to defend, there came troops from a number of Eastern countries. From Armennia it was the King Zayrmayr of Nairi Country (z•ayr•mayr = mother's first son), who fell in Trojan War.

In fact it was the first World war between the developing West (Greece) and the East, which lasted ten years. Greeks could not win but at the end did it by the cheat, for what they were punished by their own Gods. All these are known from Homer's "Iliad".

The question is: could "Iliad" be Greek epos (or poem). Of course not, because:

1. In "Iliad", from the very beginning, Achean-Danayan (Greece) main heroes as Achilles and Agamemnon are presented negatively. They are arguing, huffing, calling one another sordid, etc. In the result Achilles disowned war (during one year) and said to Agamemnon that he had nothing against Trojans, tamers of horses (i.e. against Armennians). When Achilles killed Hector, he fastened the body to the tail of his horse and drew it over the ground. Hector's father, the white-haired old Priam, the King of Troy, came and kneeled imploring Achilles to give him his son's body to bury, but Achilles refused. Homer presents many other negative moments in actions of Greeks. But Homer used other epithets for Trojan heroes, as noble Priam, noble Hekuba, etc.

Is it possible to be in any national epos, that their own heroes are called "sordid", but the opposite persons (of ten-year war enemy) called "noble"? I think, impossible.

2. The Greeks own Gods did not like Greece heroes. The main Gods, Zeus and Poseidon, are kept nonchalant. Only Athen-Warrior (ugly-born

from the head of Zeus with her helmet) patroned Greeks. The patron of Trojans (-Armennians) was, of course, Apollo – the Sun God.

3. When after ten-year war Greeks did not win and decided to go back, Hodiseus devised guile with big wooden horse, and Greeks became able to kill Trojans, when they were sleeping at night and to burn Troy.

For this dishonest and ignoble victory the Gods strictly castigated Greeks. On their back way home Poseidon made a powerful storm and more than half of Greek ships were sunk to bed. Agamemnon on coming back to his town saw that now the king was another man. Zeus disallowed Hodiseus to return home during 20 years, etc.

4. The names of Trojan heroes had Armennian meanings: King Priam (descendant of the God-King Dardan) – "leader of people"; his wife Hekuba – "devoted and generous"; their son Hector – "devoted protector of homeland"; their son Paris – "the man from the God (AR) surround"; their daughter Kassandra – "she is child of master, devoted to his life".

5. It is under discussion until now who and from where was Homer. The Greece philosopher Loukian (II century AD) wrote that in his dream came Homer and on question "from where you are and what is your real name?" he answered that he is from Eastern Babylonian countries (old Greeks almost everything on east called "Babylonian"), and his name there was Tigran [99, pp. 398, 399]. It is known that Tigran is (and was) the popular Armennian name (Tigran= "the man (who) makes beautiful home (life) of people"). The name Tigran had also some Kings of the Great Armennia.

All these confirm that "Iliad" is Armennian (Trojan) epos and Homer (Tigran) was Armennian poet.

3. 75. CULTURE IN GREAT ARMENNIA

Excavations in Armennian Highland

Near Armennian historical town Arhan (now Ergani in Diarbekir region of Turkey) 9500-year-old town with very high culture was excavated in 80-es of last century [91]. The monumental houses of this town were built according to one general project. Many tools, instruments and weapons made from copper and marks of developed agriculture were found.

It was, of course, Armennian town (ar•h•an = town of AR worshipers), so the Copper Age in Armennia began about 10 thousand years ago, or more than 5000 years earlier than it is accepted in general.

Territory of present Armennia

Carahunge Observatory, the oldest in the World, was built and operated more than 7500 years ago (see PART 1). It was a large and developed

observatory with many stone astronomical instruments of high accuracy. Old Armennian scientists had very high knowledge. They knew that the Earth is ball-formed, measured its sizes. They knew that the Earth rotates around its own axis and around the Sun, knew mathematics, cosmogony, written language. They projected and built other large monuments in other latitudes, as the Great Pyramid and Stonehenge.

Science, of course, is connected with culture, art. For example, Armennian researcher of Shakespeare E. Vandanian thinks that Armennian theatre was born about 8000 years ago [108].

Developed Armennian Culture (so-called Cour-Arracsian Culture) of the period from 8000 years ago and earlier, until II mill. BC presented by the results of many excavations on the territory of present Armennia between rivers Cour (Kura) and Aracs (Stengavit, Shannidar, Mokhrablour, Vannadzor, Lehashen, Aggarak, etc.). The artifices were made from stones, wood, copper, bronze, gold, silver, glass and further (III-II mill. BC) from iron and steel. These are tools, instruments, statuettes, finery, dishes, etc. Many of the same artifices were found in other countries, particularly in Europe, appertained to III-II mill. BC.

The inhabitants of this territory were always Armennians. Why did they call this culture "Cour-Arracsian" and their language "Hourite-Urartian", instead of Armennian? These authors use whatever words just not to say "Armennia, Armennian, Armennians". Why?

In Fig. 80 the bronze statuette of the Aries is presented (XIV-XIII cent. BC) found by archaeologist Professor T. Khachatourian during excavations near village Arrich on the North slope of Mount Aragats. The Aries stands on anchor which was necessary to fix the statuette on cart. The body of Aries is empty inside where metallic balls are put. When the cart moved, the tinkle was ringing out and "evil spirits" ran away. Specialists say, that to cast (found) such a figure, it was necessary to have the high technology.

Metsamor was a big old metallurgical plant, placed with its Museum in Ararat Valley, about 30 km from Yerevan. Here, beginning from V mill. BC, metal was smelted in big quantities. It was at first copper, gold, silver, bronze, then (from III-II mill. BC) iron and steel, and also beads from colour glass. The production of Metsamor plant was widely sent abroad. Many excavations in Metsamor were done [92].

3. 8. THE GREAT ARMENNIA IN 5 – 1 mill. BC

Before III-II mill. BC in the World there were no wars, because the main power had the Great Armennia and other Armennian old Kingdoms and Armennians were not aggressive, never wanted to occupy the territories of other people or countries. They went to many other lands with the single noble mission to propagate the humanity and kindness, to teach knowledge other people, to help them to federate their own first states.

But when other peoples (nations) learned knowledge, they began to make weapons and many of them began to kill one another, to start wars, to occupy other territories. The era of total nobility on the Earth finished, and there came the era of avidity: ambitions to be rich, powerful, to domineer over others became usual relations. Unfortunately this new era lasts until now.

Attacks on Armennia took place also, and in result Armennia very suffered from all sides. But the civil wars in Armennia never took place.

The first war in the World took place in the middle of III millennium BC, when army of giants from Babylon led by commander Bel came to occupy Armennia. But Bel was killed by Armennian Kesar Hayk in battle in 2492 BC and Babylonian army ran away (see Items 1.18 and 1.30).

Here I want to show the opinion of other authors about Armennians.

German researcher Magda Neimann wrote: "It is known to everybody who knows history of Armennia, that it was the single country in the World, where castes, slaves, villeins never existed from the very beginning of political being of Armennia until now: Armennians never have the concept about some contemptible class" (p. 88). "All foreigners, who were captivated during war or came to Armennia by one's free will received, on territory of Armennia the full freedom and equal rights with Armennians" [90, p. 89].

"Armennian State consisted of four estates: nobility (lord's genuses), priests, townsmen and villagers. They were just in natural relations with each other and kept mutual and common interest" (p. 89).

"The woman in Armennia was not a subject of special cult, but she had a very honorary place at home. There were never hetaeras in Armennia. Along of hallowed tradition of monogamy the wife of Armennian always was devoted friend of husband and authoritative hostess of family hearth" (p. 89).

Russian historian S. Glinka in his book "Review of Armennian nation history", 1833, S.Petersburg, wrote: "Armennians never war for the war. They war for Fatherland which was present in their hearts and described on their old shields, or they war for independence which was treasured higher than their own life". The main problems of State were decided together with public meetings [89].

This was demonstrated once more during last event in 1990-es, when all Armennian nation stood to protect the independence of Nagorni Karabakh,

the Armennian own old territory with Armennian population, which in Soviet time, in 1920-es was (with Nakhichevan territory) coercively devolved to Azerbaijan (turks) without Armennia assent.

3. 81. ARMENNIAN KESAR HAYK

According to the Bible (and also by Movses Khorenatsi [20, p. 12]) the Armennian Kesar Torgom, the father of Hayk, was the third after Iafet (Habeth), son of Noah. By the name of Kesar Torgom Armennia was also called (sometimes until now) "Torgom's home (dome)".

In the middle of III millennium BC the son of Torgom, Prince Hayk with his family, top scientists and masters (more than 300 people) went to the South lands and started to build there the ziggurat type pyramid (Tower) with the help of local tribes.

Around this giant building a town soon arose, which later was called Babylon after the name of Armennian commander Bab (բ•ա• բ = the kind life bringer), who later became the first King of Babylon.

When the bigger part of Tower was built, some conflict between Hayk and local commander Bel (by Bible Nebrot, the third after Cam, the son of Noah) took place, and the building of the Tower stopped. Hayk with his people (more than 300 person) returned to Armennia.

M. Khorenatsi wrote that in Armennia, on the way to Ararratian land, Hayk rested near Lake Van, built the lord-house and gave it to his grandson Kadmos enthroning him as a Lord of Lake Van land.

Then Hayk came to Ararratian land and became the Armennian Kesar (the King and Main Priest), after his father Torgom. At that time Hayk had four sons, six daughters and many grandsons. The statue of Hayk in Yerevan was shown in color Fig. 68.

M. Khorenatsi calls Hayk as "Famous and brave nakharrar, and marksman of the powerful bow" [20, p.18; 79, p.109]. He does not call Him "Forefather of Armennians". But now sometimes in use "our ancestor", which is not right. The word "nakharrar" in Armennian means: "nakh•arar = precreated (man); նախ•արար = նախապես ստեղծված", so it means the top man standing before, over other men, so the king, the main priest, so it is the highest administrative (and clerical) title in countries, which is the same as very old Armennian word Kesar. The word nakharrar came from M. Khorenatsi to us, and in present Armennian is in use as "minister". So it is more exact to call Hayk as Kesar or King.

When Hayk had left Babylon, commander Bel began to act as a king there, but the first official King of Babylon was Bab (after Bel death).

Bel sent (with his son) the letter to Hayk where it was said: "You are living in terribly cold land, but... comply with me and live calmly where you

want in my country". But Hayk answered with rigid refusal, that he did not want to return to Babylon [20, p. 19]. Then angry Bel gathered from the local tribes a big army (of pedestrian giants) and went to occupy Armennia. When he came up to Lake Van, Kadmos (the grandson of Hayk) urgently arrived in Araratian land and informed Hayk about Bel's Army coming.

Kesar Hayk quickly gathered army and went to meet Bel. Both armies met in Hayots Dzor (Armennian Gorge) to the North from Lake Van.

The battle started and terrible clatter rang around. Hayk with a group of men of courage broke through Bel's Army to the position on hill where Bel was standing with the group of his warriors. Bel was dressed in helmet from iron, copper plates on bosom and back, armour on legs and arms. He wielded double-edged sword and a very long pike.

Hayk went forward, hoisted his taut big bow and his three-head* arrow breached body of Bel between shoulders and pierced into ground. Bel fell flat and died. His army was shattered and exiled from Armennia [20, p. 19-23].

This battle was in 2492 BC. Hayk ordered to celebrate this day of victory each year and Armennian new calendar (HBT) started (see Item 1.18).

Armennian nation deified Kesar Hayk. The sculpture of Hayk in Yerevan with his big bow is shown in Fig. 63.

After Hayk Armennian Kesar became his son Aramaniak.

We can try to calculate approximate dates of life and activity of Torgom, Hayk, and others, using the following known data:

1. Aramaniak, son of Hayk, was born in Babylon,
2. Torgom was the third after Iafet, son of Noah,
3. Bel was the third after Cam, son of Noah,
4. On the back way from Babylon Hayk stayed in Armennian place near Lake Van, built palace for Kadmos, son of Aramaniak,
5. The Hayk-Bel battle took place in 2492 BC.

Besides we can suppose the following:

1. Torgom was 30 years old when Hayk was born (in 2544 BC),
2. Bel was for 15 years older than Hayk,
3. Aramaniak was 17 years old when Kadmos was born (in 2509 BC),
4. Kadmos became the Lord of Van land when he was 15 years old and in 2495 BC he was 17 years old,
5. Torgom, Hayk and Aramaniak, each of them lived 100 years.

Using these known historical facts and our suppositions, we can now calculate and reival approximately, that:

1. Torgom was born in 2574 BC (and Bel – in 2559 BC),
2. Hayk was born in 2544 BC (when Torgom was 30 years old),

---

* His arrow had three heads (pikes) because the main God AR had three symbols: Aryouts (Lion), Artsiv (Eagle) and Aris (Aries).

3. Hayk went to Babylon land in 2526 BC when he was 18 years old (at that time Torgom was 48 years old, and Bel - 33),

4. Hayk left Babylon in 2495 BC, when he was 49 years old (Torgom - 79, Bel - 64). He was in Babylon and built Tower during 31 years,

5. Hayk returned to Armennia (at first in Van) in 2494 BC, when he was 50 years old (Torgom – 80, Bel - 65),

6. Hayk became the Kesar of Armennia in 2493 BC, when he was 51,

7. Bel with army left Babylon in 2493 BC, when he was 66 years old,

8. The Hayk – Bel's battle was in 2492 BC, when Hayk was 52 years old (Torgom – 82, Bel – 67, Aramaniak – 34, Kadmos – 17),

9. Aramaniak was born in 2526 BC,

10. Kadmos was born in 2509 BC (when Aramaniak was 17 years old) and became the Lord of Van in 2494 BC, when he was 15 years old.

These calculations are better to understand, beginning at the first from the last positions (10, 9).

Thus, we can also write:

Torgom – life period 2574 – 2474 BC and King ? – 2493 BC,

Hayk – life period 2544 – 2444 BC, Kesar 2493 – 2444 BC,

Aramaniak – life 2526 – 2426 BC, Kesar 2444 – 2426 BC,

Kadmos – life 2509 – 2409 BC,

Bel (Nebrot) – life 2559 – 2492 BC,

Babylon Tower was in building during 2526 – 2495 BC.

We can suppose also the following:

1. Hayk went to Egypt in about 2490 BC and built the Big Pyramid during about 10 years (perhaps, it was finished after Hayk's departure). For his kindness and high knowledge he was deified by Egyptians, became the Pharaoh and founded the IV Dynasty of Egyptian Pharaohs. He left Egypt in about 2480 BC and, perhaps, promised to Egyptians to return back. But he could not do it. So, maybe, Egyptians were waiting for him and identified him with the God Osiris, who periodically died and revived again. If all these took place, then it is understandable why in Big Pyramid nobody was buried whereas sarcophagus (also for his wife) was prepared.

2. After return to Armennia for one-two years Hayk in 2477 BC went to France (Bretain) and GB, where staying for about 10 years, founded simple observatories, the first simple variants of present Carnak in Bretain, Stonehenge in England, New-Grenge in Ireland and Callanish in Scotland. They were almost similar to Carahunge in Armennia but later were rebuilt to the present condition, being used for other purposes (as cult). Besides Callanish which is similar to Carahunge until now (the word "Carenish" in Armennian means "Stone Sign").

3. Hayk returned to Armennia in about 2467 BC, when he was about 77 years old. After his death (in about 2444 BC) the Kesar of Armennia became his son Aramaniak (until about 2426 BC).

3. 82. ARMENNIANS IN BABYLON

The town and State Babylon arose in South Mesopotamia during the process of building of Babylon Tower by Armennian Kesar Hayk, approximately at the period of 2526 – 2495 BC, when at that place many workers were settled.

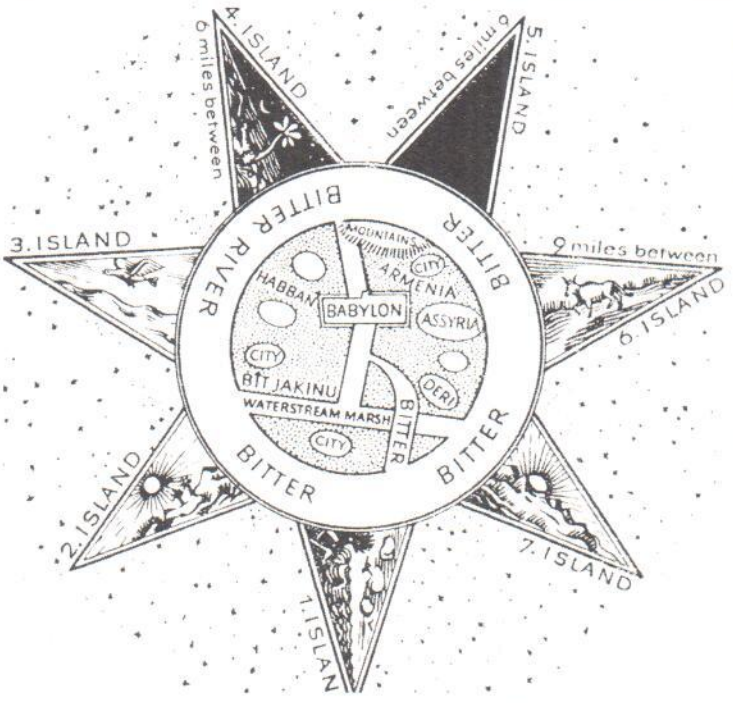
In this land from the old time many Armennians lived. The first King of this land was Armennian Bab (from 2492 BC). Bab in Armennian means "kind life bringer". After his name this land was called Babylon, which in Armennian means "came Bab (having) big soul" or "benign Bab came".

From the old time Babylon was in friendly relations with the Great Armennia, Armennian Kilikia and Lydia. The flush period of Babylon was at King Khammurapi (18 cent. BC), which in Armennian means "strong father".

In 626 – 538 BC and later Babylon was called Haldean (or Now-Babylonian) Kingdom where kings were so-called Halds or Haldeans. They were Armennians with high knowledge. The word "Hald" in many countries and for very long times (sometimes until now) was in use (means) as "sage men", "magi", and in Armennian means "h•al•d = h • ar • d = (to) the Sun worshippers".

According to handbooks the flush period of Haldean Kingdom was at King Nabukhodonosor II (605 – 562 BC). His name is very distorted by adding different parts. The main part is the first one "Nab", which in Armennian means "na•b = he (is) kind".

In the book "History of Old World" by D. Reser and E. Cherkassova it is said: "Later the terms "Babylonian" and "Haldean" became synonyms". "Babylon under Haldean Dynasty again achieved heyday" [117, p. 231].



In Bible the town "Ur Haldean" is noted. It will be more accurate to read this name as "Ar Armennian".

There are many old maps where Armennia is shown. In the book of British historian Rouben Galichian more than 120 such maps are presented [109]. The oldest one (came to us) is the Babylonian clay tablet map dated from the VI cent. BC, the scheme of which is shown in Fig. 86.

Fig. 86. Babylonian map (VI c. BC), where Armenia and Harran are shown.

Here the Armennia and Armennian Harran countries, also Armennian Highland (Mountains) are presented (also Babylon and Assyria) [109, p. 36].

Assyria was a very aggressive country and a big lover of terrible wars with all countries around. M. Neiman wrote that Assyria many centuries attacked Armennia, so Armennian army with Mydian and Babylonian ones came to Ninve, capital of Assyria, and stormed it in 605 BC. Assyria was annihilated [90, p. 63].

3. 83. ARMENNIAN BEHAYNA KINGDOM

In many books on history it is said that in territory of the Great Armennia 4300 – 4200 years ago there lived tribes of Hourites (or Hayassa). These are wrong, because they were not tribes and did not have said names. They were Armennians-Aryans living all the time in the Great Armennian Kingdom.

In Armennia have always lived Armennians. And it is not necessary to devise other names for inhabitants of Armennia.

In the Great Armennia during the period of 13-6 centuries BC existed the Armennian Behayna Kingdom which consisted of two parts: Nairi Kingdom (known in 13-9 cent. BC) with capital town Van (founded in about 35 mill. BC) and Ararratian Kingdom from very old time, which was wrongly so-called "Urartu", for the period of 9-6 centuries BC. Until 9 cent. BC Araratian Kingdom had a capital town Manazkert (founded in about 25 mill. BC).

In 9 century BC Nairi was united with Ararratian Kingdom at the period of the King (Kesar) Aram (860–840 BC) having the capital town Van.

This united Armennian State was called Behayna, which in Armennian means: Be•hay•na = it (is) double Armennian = Նա կրկնակի հայկական (երկիր է).

Ararratian Kingdom is well researched for the "Urartian" period. On the territory of present Armennia many excavations were done and many old things were found: home utensil, dishes, decoration, carts, weapon, dresses, paints, etc. All these artefacts for pre–Urartian, Urartian and after–Urartian periods are the same as well as the Armennoid race for people. This means that there was not a certain "Urartu" for a short period of 9-6 centuries BC, but was Armennian Ararratian Kingdom for a very long period, which with Armennian Nairi Kingdom in 9-6 centuries BC were called Behayna.

The names of all kings of the period of 9-6 cent. BC are known (see Table of King below).

Present capital town of Armennia, Yerevan, was founded in 782 BC by the King Argist I (788 – 764 BC). On the territory of present Yerevan the old town-castle "Yerebouni" was excavated and partly reconstructed. Here

was found out the stone with cuneiform characters of King Argist I (Armennians in that time used Alphabet and also cuneiform in parallel) about the foundation of Yerebouni –Yerevan, with the text: "I am, Argist, son of Menoua, by the order of the God Hald this beautiful town built for the potency of Behayna country..." (see Fig. 87). So "Urartian" kings called their own country Behayna. In Fig. 88 another Armennian old and big castle "Amberd", on Mount Aragats, is shown.

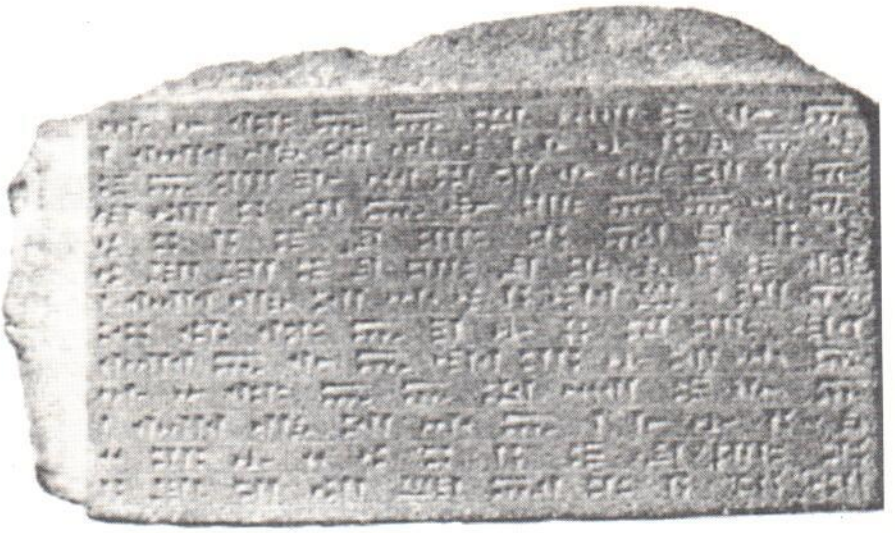


Fig. 83. The stone with script about foundation of Yerevan (in 782 BC) by King Argist of Behayna country.

3. 84. ARMENNIANS IN SYRIA, LEBANON AND PALESTINE

Armennians were in territories of present Syria, Lebanon and Palestine from the very old time (before the Great Deluge) on their way to the Phoenicia and Egypt. They played an important role in the formation of local nations.

Armennians taught inhabitants knowledge, art of houses and towns building, the adoration to the kind AR God and to other Armennian Gods.

For example, in Palestine Armennians founded the town Yerusalem (Jerusalem) (before the III mill. BC), and inhabitants of old Palestine were worshippers of Armennian Gods, particularly, of the God Vahal (Vahagn) and the Goddess Astart (Astghik).

In Lebanon the quantity of Armennians increased after the genocide of Armennians in Turkey (including Kilikia) in 1915 AD, when many Armennians from Kilikia and other regions came to the neighbouring Lebanon. Now here along the seaboard there are many Armennian villages.

So now in Palestine, Lebanon and Syria there are many Armennians and other Christians, close to Armennians.

3. 85. ARMENNIANS AND JEWS

In 586 BC Jerusalem was occupied by Babylon and part of Jews was by force transmigrated to Babylon (Babylonian captives. 586 – 539 BC).

Because the threat for Judea still existed, Jew's Seer Ieremia invoked his nation to call Armennians for help: "Boost flags, blare trumpets amidst nations, arm nations against him (Babylon), call against him Ararratian, Miniean and Askanazian* Kingdoms" [110].

King of the Great Armennia Tigran Yervandouni (560 – 535 BC) together with Iranian King Kir came and stormed Babylon, annihilated Babylon Kingdom at 539 BC and liberated Jews [90, p.64].

Armennian King Tigran II the Great (95 – 55 BC) built his second capital town Tigrannakert (southward from Lake Van) and after occupation of Jerusalem invited to Tigrannakert about ten thousand Jews (and also Greeks) – artisans. Their descendants are living in Armennia until now.

In 1960-es AD in Jerusalem lived 15 – 17 thousand Armennians. But now they are only about one thousand.

3. 86. ARMENNIANS IN EUROPE

The first Armennian expeditions to Europe took place probably in V – IV millennia BC. The main purpose was researching the lands, measuring latitudes of different points and building simple observatories having some analogy with Carahunge.

Afterwards, at the time of Armennian Kesar Hayk (the middle of III millennium BC) many Monuments were rebuilt with local tribes to have more religious designation, besides Callanish in Scotland which has kept big analogy with Carahunge until now. So, maybe, the age of Callanish is much more, than it is dated now.

About the presence of Armennians and their settlements in Europe, beginning from III millennium BC, tell also the Armennian names kept until now in Bretain (France): as Carnak (the names of Monument and town), the town Van, the mountain ridge Armorika and others. The word "Bret" in Armennian means: բ • ր • ե • տ = բարի արվեցիմ ելած (կառուցված) տներր = the houses were kindly built.

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* Armennian Kingdoms [90, p.64].

GREECE

Armennians came to Greece during V – III millennia BC from two sides: South – Crete, Mycenae and from North part – Delphi.

Crete in Armennian means: կ • ր • է • տ • է = կիսատ արված տեղ է = կտրված տեղ է (կղզի) = cut place (island).

Greek historian J.A. Papapostolou in his book "Crete" wrote: "The earliest traces of civilization... have been noted at Knossos and belong to the end of the 7th millennium BC. The man who lived in Crete at that time knew how to cultivate wheat and used primitive stone tools. ... About the middle of the 5th millennium BC the making and use of hand-made pottery vases began.

At the beginning of this period (from 2600 BC) the Neolithic elements still held sway in the way of life and art. Quickly, however, the old traits were creatively modified and the new inhabitants sought and found their own ways of exploring the rich resources of the island and came into contract with Egypt, Asia Minor and Syria. From there they secured supplies of copper, tin, ivory and gold" [111, p.13]

The word Mycenae in Armennian means: մ • ի • ք • է • ցա = մեծ մարդկանց ամրոցն եղավ ցա = it became the castle of big (top) men.

Mycenae, the old town in South Greece, was the centre of Aegean (Cretan-Mycenaean) Culture of the Bronze Age (about 2800 – 1000 BC). The bloom of Mycenae was in 1400 – 1200 BC, but about 1200 BC Mycenae was perished in fire [87, pp. 802, 1538].

In National historical Museum in Athens I have been, of course, also in halls of Crete-Mycenaean culture. Here everywhere on walls were the big Suns of gold colour with large and long rays. These Suns are the main indication or mark of the Armennian old culture. I bought there books about Crete and Mycenaean culture and was surprised, because in the books, among illustrations there was not shown even one Sun [111].

The word Delphi in Armennian means: դ • ել • պ • հ • ի = (իմ) դիմաց ելած բոլոր պաշտող մարդիկ = all worshipper men stand before (me). These are the words of Armennian Main God AR (the Sun) and Mother-Goddess Haya (Earth). In honour of the AR the famous Temple of the Sun-God (Apollo) was built in Delphi, before the full formation of Greek nation with their Pantheon of Gods. "In 8 – 6 centuries BC in Greece polices (town-states) were formed in Athens, Sparta, Crete. In 5 – 4 cent. BC was the bloom of polices. The bloom of Athens was at Pericl (443 - 429)" [87, p.339].

Greek historian B. Petrakos in his book "Delphi" wrote: "From the excavations carried out in the area, we know that in the period now called "Mycenaean" (14th to 11th cent. BC) Delphi was a small village whose inhabitants worshipped a female deity, the original owner of the place,

goddess Earth. Clay figurines of this deity were found in the deepest layers of the sanctuaries of Apollo and Athena Pronaia.

Later, during the "Geometric" period (11th to 9th cent. BC), the sanctuary of goddess Earth was taken over by Apollo." [112, p.7].

I have heard that some Greek historians have the opinion that Armennians have arisen from Delphi. I am glad that they see the connection between Delphi and Armennians, I am sure that it took place vice versa: Delphi was built by Armennians.

ITALY

In I millennium BC on the NW of Apennine Peninsula (on territory of present Tuscany) lived Etruscans who had a developed civilization, which made a big influence on development of Rome. Etruscans in 7 cent. BC made a unit from their 12 town-states and in 6 cent. BC held Campania region in the South of Italy (Neapol). But in 5 –3 cent. BC they were vanquished by Roma. There is the hypothesis that Etruscans language pertain to the Indo-European family of languages. [87, p.1568].

In the book of Ancient civilizations it is said: "The question of the Etruscans is impenetrable. Basically there are only two tenable theories. Either they were an indigenous people who developed their culture as a result of contact with Greek traders and others. Or they came from West Asia at some time during the disturbances that followed the collapse of the Hittite and Mycenaean empires and settled in Italy cross-fertilizing with the native (Villanovan) population already established there. The question cannot yet be solved archaeologically, but on the whole, the second solution seems more probable: not only because the Etruscan language has close affinities with eastern scripts ... and features of Etruscan religious ceremony ... can best be paralleled from eastern sources, but because of the strength of the tradition that there was a migration from Asia Minor. It is not just the legend of Aeneans fleeing from Troy that was to figure so prominently in Etruscan art" [93, p.241- 242].

These and other sources tell that in Apennine Peninsula, in I millennium BC, the Etruscans lived, who probably came from the West Asia (Hittites) or from Balkan Peninsula (Mycenae).

All these do not contradict to existed supposition about Armennian genesis of Etruscans. I know that in Europe in 19th cent. AD the book was printed with title: "Armennian Origin of Etruscans", but could not find it.

The word "Etrusc (Tusc)" in Armennian means: է • տ • ր • ռ • ս • կ (տուսկ) = կեսը (մասը) այս տվիալ տեղի տերն է = the half (part) is the lord of this given place. This is very interesting and means also that Etruscan scripts are necessary to be read in Armennian.

Let me add that the supposition about Armennian genesis of Etruscans is right also because in I century BC Armennians were almost in all Europe.

CELTS

"Celts (Roman name Galls) were ancient Indo-European tribes, who lived in second part of I millennium BC on territories of present France, Belgium, Switzerland, South part of Germany, in Austria, North Italy, North and West Spain, British Islands, Czechia, and partly in Hungary and Bulgaria" [87, p. 567].

"Celtic languages – the group of kindred languages of the Indo-European family. Included: Gallian, Celtiberian, Irish, Menian, Welchian, Corian and British languages." [87, p.567].

"Gallia – in ancient time the region on territory between river Po and the Alps, and between the Alps, Mediterranean Sea, the Pyrenees and the Atlantic Ocean.

From the beginning of 5 cent. BC territory of Gallia was occupied by German tribes, and in the end of 5 cent. AD was included in Franklin State" [87, p.271].

Celt in Armennian means: կ • ե • լ • տ = կեսը (մասը), եկած լավ տեղ = the half (part) who came to the good place. So it is Armennian word.

Celts were Armennians, also because Armennia was the cradle of Indo-Europeans, and their languages came from Armennian language (see PART 2). There are very many facts showing this (see also below).

Celts were the main connecting link between Armennia and young Europeans, who brought to Europe Indo-European genes, knowledge, culture and civilization. Thereat Armennia never had hegemonic tendencies.

GERMANY

"Germans – old tribes of Indo-European family of languages, lived in the first century BC between the North and Baltic Seas, rivers Rein, Danube and Visla, and in South Scandinavia, and had tribal system. In 4 – 6 cent. AD they captured a big part of West Roma Empire and formed some kingdoms: westgotian, ostgotian, burgundian, frankian, langobardian" [87, p. 296]:

"German languages – the group of kindred languages of the Indo-European family:

East German ones: Gottian and others,

Scandinavian or North German ones: Swedish, Danish, Norwegian, Icelandic, Farerian,

West German: English, German, Idish, Dutch, Frizian, Africans".

The leaders of old German main tribes were Armennians with Armennian names Armen – in Armennian "(from) the Sun people", and Arman – in Armennian "the Sun man". These names were transformed to German, and country – to Germany. So Germany is the analogue of Armennia.

The tribes were united by the leader by the name of Arminius.

"Arminius (18 or 16 BC – 19, 21 AD). The leader of German tribe of Cheruski. In 9 AD routed the Roman army led by Vara in Tevtoburgian forest" [87, p. 76].

Probably, the nearest to Armennians in present Germany are Bavarians.

FRANCE

"France - ... In ancient times on territory of France lived Galls (Celts) and country was called Gallia; from the 10th cent. AD – France".

"French language – the Indo-European language of Frenchmen and French population of Belgium, Switzerland, Canada (where it is one of official languages) and of many States of Africa, Haiti, French Guiana" [87, p. 1435].

In France at the I millennium BC the Celts-Armennians lived who were the ancestors of Frenchmen. There are many marks of presence of Armennians in France. For example, the oldest Christian church in France (the church of Carolings) was built in Germini de Pre (Luara department) in 806 AD by Armennian architect Odon Le Messin (Metzn) [113]. The word "Metzn" in Armennian means "the Great". Apropos, the name Caroling in Armennian means: Caro • ling, where "Caro" is Armennian rife first male name (means "Saint Stone") and "ling or leng" means "lame". There are also many other French words and names, especially, beginning with "Ar (the Sun)", as Armaniak, d´Artanian, d´Arting, etc., which have the interpretation in Armennian.

Very many marks of Armennian presence are in Brittany Peninsula.

"Brittany (Bretagne) – the Peninsula in the West (NW) of France. The main town Ren. ... Armorikan Hills (Highness) with top height 384 m.

Brettonians – population of Brittany. ... The language is Brettonian, of Celtic group" [87, p. 168].

The name of Brittany Peninsula in ancient and medieval time was "Armorika". This word in Armennian means: Ar • mor • ika (ԱՐ-ը Մորն իկա) = the AR (Sun) to (His) Mother came. Indeed, inhabitants of Brittany every day saw as the Sun is setting into the ocean-Mother, on the West. In other words, "Armorika" is the explanation (in Armennian) of the word "West" (of the country).

Other present marks are: Armorikan Hills; the town Van (the name of Lake Van in Armennia and name of the town Van, which during the

I mill. BC was the capital of the Great Armennia); the names of the town and Old Monument "Carnac", which in Armennian means "Stone Sign" or "Stone Mark" (see PART 1), etc.

So, in France, particularly in Brittany, in ancient time the Celt-Brettonian-Armennians lived, who were the ancestors of Frenchmen.

THE UNITED KINGDOM

"The United Kingdom of Great Britain and Northern Ireland has National regions: England, Wales, Scotland, Ireland.

In the I millennium BC on the territory of present U.K. lived Celts. In 5-6 cent. AD there have come Anglo-Saxons" [87, p. 204].

Anglo-Saxons were West-Saxes who came to the U.K. in 449 AD. Here they mixed with local population-Celts (or Brettons-Armorikans-Armennians). The name England comes from VII cent. AD. The Christianity was adopted in VI – VII cent. AD, and Latin Alphabet – in VII cent. AD.

In the English oldest three-language book "The Anglo-Saxon Chronicle" (about VIII cent. AD) it is written: "The first inhabitants of this land (Britain) were the Britons, who came from Armenia ..." [104]. In Fig. 89a the first page of this book is shown. In Fig. 89b the translation of original text into modern English of 1861 is shown, and in Fig. 89c the translation on modern English of 1953 (now under title "The Laud Chronicle") is shown.

It is also interesting that both translators (of 1861 and 1953) marked that "from Armenia" is an error, it had to be "from Armorika". From the book edition time and translation time passed more than 1000 years, so it was forgotten that Armorikans (Britons-Celts) were Armennians who came to Armorika from Armennia and Armorika is old Armenian name of Briton. So author (authors) of the old book were right, saying "from Armennia".

About predominant role of Armenians (Celts) in old territory of U.K. tells also the data of analysis of the present English language, where 55% of words were taken from French (Celt-Armennian) language and 10% - from Latin group of languages.

The present population of Wales, Scotland and Ireland is more close to Armennians until now by their traditions, mentality, habits, folk songs, dances, etc.

In Oxford Dictionary is said: "Welch – the Celtic language of Wales" [58, p. 1354]. As I know, the self-name of inhabitants of Wales is "Kumri". It is interesting to note that in Armennia there is the old region with the main town having the old and present names "Kumri" or "Gumri". The town Kumri is in 120 km from Yerevan.

(a)

THE

ANGLO-SAXON CHRONICLE.

The island of Britain is eight hundred miles long, and two hundred miles broad; and here are in the island five peoples: English, Brito-Welsh, Scottish, Pictish, and Book-Latin. The first inhabiting this land were Britons: they came from [1]Armenia, and first settled southward in Britain.

[1] N.B.—The numerals in the side margin denote the pages of the Saxon text.

[2] An error for Armorica.—"De tractu Armoricano advecti," are the words of Beda, H.E. i. 1.

(b)

THE LAUD CHRONICLE (E)

The [3] island of Britain is eight hundred miles long and two hundred miles broad; and here in this island are five languages: English, British or Welsh, Irish, Pictish, and Latin.[4] The first inhabitants of this land were the Britons, who came from *Armenia* [an error for *Armorica* = Brittany], and took possession at first of the southern part of Britain.

(c)

Fig. 89. Copies of the "The Anglo-Saxon Chronicle" old book, where is said: "Britons came from Armenia". Original book in three languages (a), translations into modern English of 1861 (b) and 1953 (c).

3.87. ARMENNIANS AND SLAVS

"Slavs – the group of nations having kindred ancestry. This group includes: the East group (Russians, Ukrainians, Byelorussians), the West group (Poles, Czechs, Slovaks, Lujichians), South group (Bulgarians, Serbs, Croats, Sloventses, Macedonians, Bosnians)" [87, p. 1222].

The languages are Indo-European (of the Slavian group).

"Russians – as also Ukrainians and Byelorussians, arose from the East-Slavian tribes and founded Ancient-Russian State around the town Kiev. The nation was formed in 14-15 cent. AD. ..." [87, p. 1149].

There are a lot of information about ancestry and development of Slavs in connection with Armennians.

There is the supposition that Slavs (Russians, Ukrainians, Macedonians and others) arose in the result of contacts between Armennians (coming to the region) and local tribes.

The words "Rous", "Rossia" (Russia in Russian) and "Rousskiy" (Russian in Russian) have no explanations in Russian language. But in Armennian these three words are "Rous", "Rousastan", "Rous" and have explanations (meaning): "Ռուս" = ռ • ու • ս = (նա) մեծ է ու սիրուն = (he) is big and beautiful and "Rous • astan" = Rous country. Besides, in the Great Armennia in the first millennium BC (in Behayna-Arraratian country) in the period of 735 – 590 BC there were four Kings having name Rousa (I, II, III, IV) = (he) is big and beautiful man. So the supposition is, that at the time of one of these Kings a part of Armennians went to the North (may be led by one of King with the name Rousa) and rested somewhere in Russia. Later Armennians mixed with local tribes. Thus, at the end of I millennium BC the name of local population became Rous, and the name of their country – Roussiya.

Armennian Lord Smbat Bagratouni after his victory in Livia sailed to Crimea, went with his troop to the North and on the bank of the river Dnieper in 585 AD founded the castle Smbatas, which later grew to the town Kiev. At that time there were also other Armennian towns Armen (Romen), Artan, Artavet where lived Armennians and made valuable steel swords [115, p. 293].

3.88. CULTURE IN THE GREAT ARMENNIA

During the period of 5 – 1 mill. BC the leading role of Armennian Science and Culture all over the World was continued. This is confirmed by the big influence of Armennians and their culture on development of the

level of other nations and countries, particularly in Europe, including also the early Christian period – the first millennium BC.

It is known also the big influence of Armennians on the formation of Indo-European race and languages, on the science, technology, music, architecture, human relations, which were much more developed in Armennia. I want especially to note the beautiful Armennian Poetry, coming from the old time up to now.

This period was the time when many nations and countries arose and quickly developed. They learned also to make weapon and unfortunately the wars started in the World. The era of wars came and it continued until now. Many important problems people try to decide by force, having not yet enough experience in kindness, accumulation of which needs thousands of years.

At the same time the Great Armennia was, as before, the centre of education and learning of the kind Sun God religion. Many foreign scientists, philosophers, musicians, priests, historians and others came to Armennia or to countries where Armennian scientists, artists, priests and magi lived, such as Egypt, Babylon, Syria, etc. For example, such famous persons as Pythagoras, Zoroastra, Abraham and others.

The "father of western philosophy" Pythagoras (VI cent. BC), according to Greece philosopher Yamblicus (III – IV cent. AD) "... visited all Egyptian priests and found all wisdom from each of them. Thereby he spent twenty two years (in Egypt) in temples, learning astronomy and geometry not at all superficially meeting with all the secrets of the Gods. ... (then) in Babylon he had the great pleasure from contacts with magi, consecrating him into their old knowledge and into the most ideal service to the Gods. With their help he finished learning of arithmetic, music and other sciences. After twelve years, in the age of about 56, he returned to the Samos Island" [33, p. 53].

The famous theorem of Pythagoras Babylonians knew 1200 years before Pythagoras, so 3800 years ago, and Armennians knew it in Carahunge time, so 7500 years ago.

The founder of Persian Zoroastrism religion Zoroastrian (VII cent. BC) was born in Armennia, on the bank of river Araks (in about 630 BC) and educated in Armennia, also in Babylon.

The progenitor of Jews Abraham (about 1680 BC) lived in Chaldean Ur (Armennian Ar), then in Armennian big town Harran and, in the age of about 73, buried in Harran his father Farra and went to Palestine [33].

About influence of Armennian culture and technology on development of other countries tells also the book "Oriental Carpets (Their Iconology and Iconography from Earliest Times to the 18th Century AD)" by Volkmar Gantzhorn [59], where is shown that Carpets propagated to all the World from Armennia. It is obvious from his map, shown here in Fig. 90 [59, p. 20].

In Armenia from the old time the making of different kind of utensil, dishes, decoration, etc. from metals were traditionally developed. In Fig. 91 the Armenian female traditional silver belt of XVI century AD is shown. In Fig. 92 the bronze statuette of Aries of XIII cent. BC (the Symbol of Sun) is shown. It found out near village Arich (Mount Aragts, Armenia) by archaeologist Prof. T.Khachaturian.

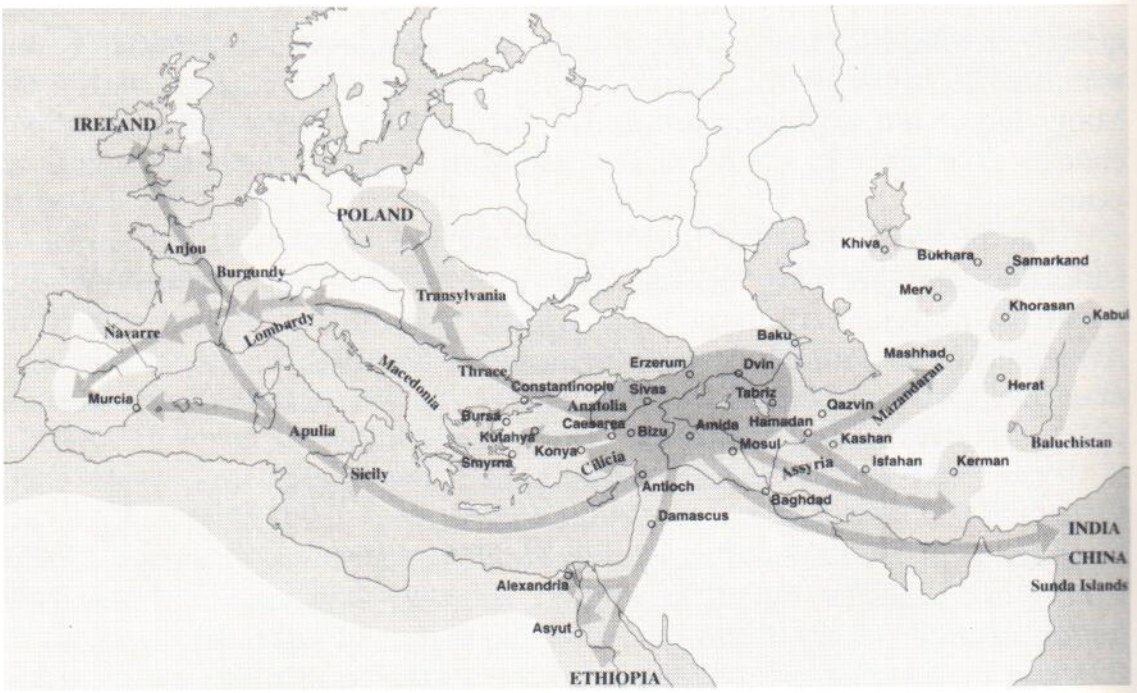

Fig. 90. Map of Carpets propagation from Armennia to the all World [59].

Formation of other nations and countries gives also the new result in the field of information about Armennia. Foreign authors, travellers and historians began to write about Armennia.

The first known information comes from Sumerian epos of III millennium BC, where is said that their ancestors came from "Arratta", which is Armennia (see Item 3.14).

After formation of Greece, Rome (I mill. BC – beginning of I mill. AD) many Greek, Roman and Byzantine travellers, warriors and historians were in Armennia and wrote about it. They are: Sfrabon, Pliniy, Procopiy, Dion, Kassiy, Tatsit, Ammian, Martsella, Ploutarkh, Ptolemmey, Theodoret, Isidor, Sintsell, Herodot, Ksenofont, Polibbiy, Tsitseron, Horatsiy, Svettoniy, Sozomen, Sokrat, Evagriy, Zonar, Sineziy, Hulian, Yevsevviy, Zosim, Michael Attalliot, Pheophan, Georgiy, Tsedren, Efremiy, Georgiy Pakhimer, Nikkita Khoniat, Doukas, Konstantin Bagrianorodniy, Nikkifor Gregoras, Lev Diakkon, Kantakkouazen and others [90, p. 63].

The new information comes also as the result of new excavations on the territory of present Armennia. For example, during present excavations near Mount Araggats (villages Aggarak and Dzorap) was found out an Armennian big town of the beginning of III – I mill. BC with developed architecture and culture [94].

3.9. THE GREAT ARMENNIA IN 1 MILL. BC – 301 AD

3.91. ARMENNIAN KESAR ARTASHES I THE KIND

In II century BC the independent Armennian States were the Great Armennia, Armennia Minor, Tsopc and Kommagena. Other Armennian countries were occupied by foreigners.

Armennian Kesar of Great Armennia Artashes I the Kind (186 – 160 BC) of Yervandouni Dynasty (which came from Haykian Dynasty) established the Dynasty of Artashesouni and began to unite Armennia. In the result of his activity the Great Armennia re-established almost his full power from the river Cour (Kura) to the river Tigris, Armennian Mesopotamia, Korduk and Armennian Mountains; from the Caspian Sea to river Euphrates and basin of river Chorokh to the Black Sea. As the King of Tsopc became Merujan, son of Zareh of Yervandouni Dynasty which came back also to the throne of Kommagena (163 BC) [68, p. 23].

In the inscriptions on stones (see Item 2.15) the King Artashes I called himself as "Artashes, the king Yervandouni, the Good (Kind) son of Zarekh". He founded in Ararat valley the new capital town of the Great Armennia – Artashat.

Movses Khorenatsi wrote: "Artashes ... created his town, with the best view of the capital town". Plutarkh wrote about Artashat "the very beautiful town".

3.92. ARMENNIAN KESAR TIGRAN II THE GREAT; THE KING OF KINGS

Armennian Kesar of Great Armennia Tigran II the Great, King of Kings (95 – 55 BC) led politics of development of economical and defensive power of Great Armennia and deliverance of other Armennian Kingdoms from Roman and Parthian aggression.

He reunited with the Great Armennia Tsopc (94 BC) and Kappadokia which was under Roman protege. In 86 BC he delivered from the Parthians Armennian Mesopotamia (Edessia, Mtsbin and other), where from the old time was Armennian Dynasty of Abgarian (Yervandouni). He returned into

the Great Armennia the regions occupied by the Parthians: "Seventy valleys", Nina, Arbel (Adiabena) and other parts of Mesopotamia and also Ekbotan, Atrapatakan (Atropatena).

Precipitating Selevkides, Tigran the Great added Syria and Kilikia to the Great Armennia and put on Syrian throne Armennian commander Bagarat as his deputy. Antiokhia, the capital town of Selevkides, in 83 BC he converted to the one of his capital towns where his coins were minted.

In Fig. 93 the silver coin of kesar Tigran II the Great is shown.

Fig. 93. Silver coin of Tigran II the Great

The lordship of Tigran II the Great propagated also over Kilikia, Phoenicia, Kommagena, Syria, Palestine with Judea and in the North over Iveria and Agouvank. Ploutarch tells that "Around Tigran were many kings with the statute of servants" [68, p.26].

The capital town Artashat was at the North part of the large Great Armennia, so Tigran the Great in 80 BC built another capital town Tigrannakkert (with theatres) in the Agdznik region, southward of the Lake Van. Ploutarkh tells that "Tigrannakkert was very rich town with big treasures and expensive bestowals for Gods, because the private persons and lords in eager rivalry widened and beautified the town struggling to be compliant to the King" [68, p. 26].

To the Tigran II the Great Jews ambassadors came with rich bestowals and asked him to be gracious to their Tsarina and people. Tigran II the Great gave hope to ambassadors of Jews Tsarina.

Armennia was attacked by Loukull with Roman army. They wade Euphrates, came via Tsopc, besieged and came into the Tigrannakkert (when Tigran II the Great was absent). In 68 BC Loukull went to Artashat direction. But near the river Aratsani was met by Tigran II the Great with Armennian army which shattered Roman army and banished them out from Armennia (68 BC).

In 66 BC from the side of Kilikia Armennia was attacked by Pompey with 100-thousand Roman Army. At the same time Armennia from the East was attacked by Parthian army with King Phraat III, who came to the Ararat valley and besieged Artashat, but was shattered by Tigran II the

Great and banished out from Armennia. Seeing this, Pompey disbelieved in his victory and they with Tigran II the Great decided to conclude the agreement of peace between Armennia and Roma (66 BC). Pompey recognized Tigran II the Great as the king of Great Armennia in its native boundaries: from basins of Euphrates and Chorokh (in West) until river Cour (Kura) and Caspian Sea (in East) and Armennian Mesopotamia (in South). The Kingdom of Great Armennia was proclaimed as the friend and ally of Roman nation. The paint of Tigran II the Great on throne is shown in Fig. 68a. on page 144.

In 64 BC Tigran II the Great concluded a peace also with Iranian Parthia.

The last period of Tigran II the Great was placid. After him the Kesar of the Great Armennia became his son, Artavvazd II (55 – 34 BC).

3.93. ARMENNIAN – PARTHIAN UNION

In 54 BC Roman army with Mark Krass crossed river Euphrates from Syria side and came to town Harran in Armennian Mesopotamia with purpose to attack Parthia.

At that time Parthian King Orrod was invited by Artavvazd II to Artashat, where the union between Armennia and Parthia was renewed and sustained by the marriage of Artavvazd II sister with Orrod's sun Pakkor.

In main battle near Harran Roman army was shattered (53 BC) and Krass was killed. His head was taken to Artashat and shown to Artavvazd, Orrod and people in theatre where the demonstration of Greece play took place.

After 15 years, when in 39 BC Prince Pakkor with army went to Syria and Phoenicia, Roman army conquered his army and killed him.

In 34 BC Mark Antoniy attacked Armennia with Roman army and came nearer Artashat, where negotiation with Artavvazd II began. But during negotiation Antoniy disloyally arrested Artavvazd. Armennian Prince Artashes attacked Antoniy to deliver his father, but could not do it. Antoniy carried off Artavvazd to Alexandria where with his wife Cleopatra put Artavvazd in jail, where he after three years was killed. In 31 BC M. Antoniy perished in battle with Oktavian and Cleopatra committed suicide.

In 31 BC Artashes II (31 – 20 BC) became the Kesar of the Great Armennia and extirpated Roman army which occupied Armennia. In 20 BC other Roman army came to Armennia, Artashes II was killed and his brother Tigran III became the Kesar of Great Armennia (20 – 8 BC) who led politics of independence from Roma. The same did his son Tigran IV (8 – 5 BC), then his uncle Artavvazd III (5 – 3 BC).

Continuation of Roman aggression against Aarmennia and Parthia gave in result more consolidation of Armennian –Parthian union and relations.

In 51 AD the King of Parthia became Vologes I Arshakid who was in allied relations with Armennian Kings. The top lords of Armennia decided to have closest relations with Parthia up to invitation of Arshakids to Armennian throne.

In 52 AD the brother of Vologes I Trdat became Armennian King Trdat I. But Emperor Neron (54 –68) did not want to agree and sent to the East, to Armennia Roman army with Corbulon, who occupied Artashat and then came and occupied Tigrannakkert (59 AD).

Trdat I in 61 AD encompassed Tigrannakkert; Vologes I came to Roman province Syria. Corbulon was forced to agree to conclude the peace agreement and to avow Trdat I as the King of independent Great Amennia. But Neron did not agree and sent to Armennia another army with commander Pet. This army was shattered by Armennian-Parthian united army (62 BC). Neron in 64 AD was forced to avow Trdat I as King of Great Armennia.

In the end of the II cent. BC the Dynasty of Arshakids became ancestral in Armennian throne as Aarshakouni dynasty. Neron, as the sign of his agreement to avow Trdat I, invited him to Roma, made a gross reception, put on his head crown and gave him huge amount of gold as compensation for restoration of Artashat after Corbulon occupation.

Roma could not occupy Armennia and turn it to Roman province, as it happened to Egypt, Syria, Kappadokia, Judaea and other countries.

3.94. DISTORTIONS OF ARMENNIAN HISTORY

Unfortunately, Armennian History is very negatively distorted. Let me show this by some examples.

1. About so-called "Urartu". According to present history, this very strange state with unknown nation suddenly arose with very high developed level, in IX cent. BC in South Caucasus and basin of Lake Van. They were able to cultivate metals (bronze, steel). Then in VI cent. BC they also suddenly disappeared; after what, in V cent. BC Armennians arose in the same place. All these are very strange.

This enigma has a simple decision, if in word "Urartu" instead of letter "u" to put letter "a". Then we will have the word "Ararta or Ararat". Indeed, it was Arraratian State of Armennian Behayna Kingdom (See Item 3.83), where Be • hay • na in Armennian means "Double Armennian Country", which was united "Nairi Armennian Country" plus "Arraratian Armennian Country". I don't know what "genius" put "u" instead of "a"

and "decided" that the language of Behayna was not Indo-European (Armennian) but "Semitic". Perhaps, it was semitic "genius", who so simply distorted all history. Of course, this and other "scientists" do not believe even the Armennian King Argist I who founded town Yerevan (capital of present Armennia) in 782 BC and wrote that he built this town in honor of Behayna Country by the order of the God Hard, i.e. the Sun. Let us note again that "hay", the main root in word "Behayna", in Armennian means "Armennian".

These "historians" ignored even the results of excavations. It is well known, for example, that all archaeological findings (parts of clothes, dishes, decorations, weaponry, utensil, carts, etc.) are the same for "preurartian", "urartian" and "posturartian" periods. Anthropological data also tell that in all these periods population in all these regions was Armennians (Armennoid race).

So nobody suddenly arose and tailed away, there was no any "Urartu". There was Armennia (Great Behayna) populated with Armennians, having high culture. Recently in this problem there is some progress. It was said above that historian M. Rimshneider wrote that Urartu is Arraratian country [61].

British specialist on Caucasian history David Lang in his book "Armennia, Cradle of Civilization" [53] has the Item 4 with name "Urartu – the First Armennian State", and in the book "The Encyclopedia of Ancient Civilization" [93] he has an article named "Urartu and Armennia" [p.117]. All this is a progress, but even these authors can not refuse from the word "Urartu".

2. The mentioned book [53] in 2004 was translated into Russian by E. F. Levina, where the name of the book is changed to "Armennians, Nation – Creator"[118]. This "little" change changes all sense of the book.

3. To conceal that Armennian language is the oldest, it was devised so-called Aramaean language (also "semitic") to make impossible to find out and read Armennian old scripts in Armennian (see Item 2.15).

4. In the book "Ancient Civilizations", edited by G. Bongard-Levin, Moscow, 1989 (in Russian) [119], Armennia is presented divided to three parts: in South Caucasus, Mesopotamia and Asia Minor (Why?). In the part of South Caucasus about Armennia (by V.M. Masson) it is said even that "so-called Great Armennia" was created by King Antiokh III as the part of Seleucidian State, said that Tigran II the Great was a vassal of Roma [p.171], etc. It is funny: the large Great Armennia "was a part" of a little Seleucidian country! Even Alexander of Macedonia with his great army passed by Armennia from South.

All these are deliberate and caddish lie. Indeed, why don't Jews-historians like Armennian History?

In all these and many other distortions of Armennian History Armennian historians, of course, are also guilty because they didn't fight against all this injustice.

3.95. CHRISTIANITY ADOPTING IN THE GREAT ARMENNIA

In Item 3.21 it was told that the Christianity arose from the kind, creative and human AR (Sun) – Father Main God Armennian religion, as its continuation and in Christianity the God-Father from the very beginning until now is the same AR (Sun) – Father Main God.

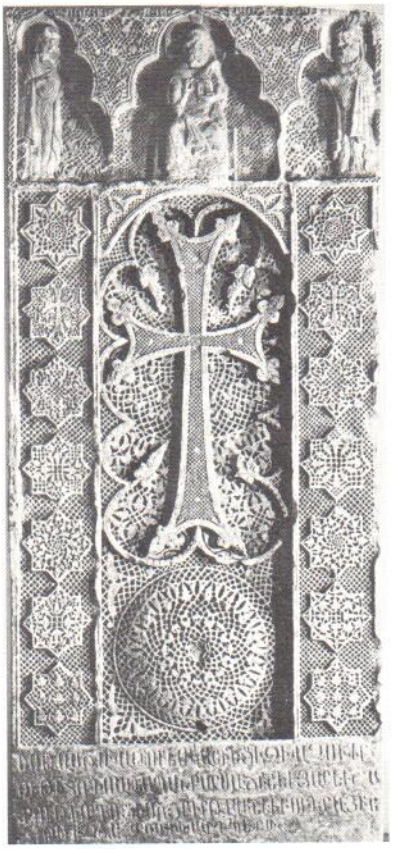

Fig. 94. Cross-stone of XIV century AD

About deep connection between Christianity and old Armenian knoleadge, culture and symbols of the AR-Father Main God period there are many facts. One of them is the structure of famous Cross-stones (☥) of Armennian Christianity period, coming to us across thousand of years. They means a man, tanding on ball-formed Earth, as it is on engraving on rock of V millenium BC, which was shown in PART 1, pages 50, 60 and Fig. 40. In Fig. 94 one of these Cross-stones (of XIV century AD) is shown.

So Christianity was born in Armennia and Armennians came to Christianity earlier and easily, being the children of the AR– Father God, noble and creative Aryans. Jesus Christ was (and is) also the Son of the Sun-Father Armennian God and preached His kind and creative religion, i.e. Jesus Christ was Armennian, as also Maria (Mariam), His Mother. They spoke, read and wrote in Armennian.

It is known, that when Jesus Christ was born, three Magi visited Him with congratulations and presents. Who were those three Magi? To find the answer to this question Adrian G. Gilbert consecrates a whole book "Magi" [33]. He told how he met some Armennian people, visited towns in Historical Armennia. He gave even the names of these three Magi: Kaspar, Melkhior (Melikh, P.H.) and Baltasar (Bagdassar, P.H.) [33, p. 21] which are Armennian names, but doesn't tell, that they were Armennians from Armennia.

At first in the World the Christianity was officially adopted by Armenians in 33 AD in Edessia, Capital of Armennian Mesopotamia country, by the King Abgar V the Great (12 – 50 AD) of the Great Armennian Yervandouni Dynasty (see Item 3.41).

In 57 AD this decision lost its official force, but in 207 AD Christianity was again officially adopted in Edessia by the King Abgar VIII the Great (177 – 212 AD) of Yervandouni Dynasty (Item 3.41).

King Abgar V the Great (12 – 50 AD), his son Sannatrouk (50 – 57 AD) and King Abgar VIII the Great, King of Kings (177 – 212 AD) were at the same time the Kings (Kesars) of the Great Armennia.

In 301 AD the Christianity was adopted officially in the Great Armennia, in Capital town Vaggarshappat, by the King Trdat III the Great (287 – 330 AD) Arshakouni.

The Central Cathedral of the Armennian Apostolic Church was built (301 – 304 AD) and named St. Echmiatsin (see Fig. 95), which means "the Sole Born (Jesus Christ) descended".

The first Catholicos of all Armennians became Grigor, son of Annat Parthev. Later he received the title "Lousavorich", which means "Bringer of light".

In 1918 the Capital town of Armennian First Republic became Yerevan and town Vaggarshappat in 1945 was renamed to Echmiatsin.

In christianity period thousands Armenian beautiful churches in territories of the present and thousands of them in territories of Historical Armenia were built. In Fig. 96 the St. Hripsime Basilica (618 AD) in Echmiatsin is shown. This Church is one of examples (masterpieces) of architectural Gothic Style foundation.

During I millenium AD many Christian churches in Europe were built by Armennian masters–stonemasons, who had in Europe their own closed society.*

* Afterwards, this society was (and is) in use mainly by Jews.

3.10. ARMENNIAN OLD HISTORY CHRONICLE

Below the of Armennian Old History Chronicle (before Christianity) is presented (Table 21, page 225).

3.11. ARMENNIAN KESARS, KINGS and DYNASTIES CHRONICLE

Below the Armennian Kesars and Kings Chronicle is presented (Table 22, page 231).

Armennia during his long History had about 1000 Kesars and Kings of 18 Dynasties. During the last 10 thousand years there were about 300 Kesars and Kings of 13 Dynasties. From these 300 the names of about 170 are known (see Table 22).

During Christianity period (after 301 AD) in Armennia has been 132 Catholicoses (Superior Patriarches) of all Armennians.

3.12. ARMENNIAN CAPITAL TOWNS CHRONICLE

Below the Armennian Capital Towns Chronicle is presented (Table 23, page 234). During her long History Armennia had 23 Capital towns.

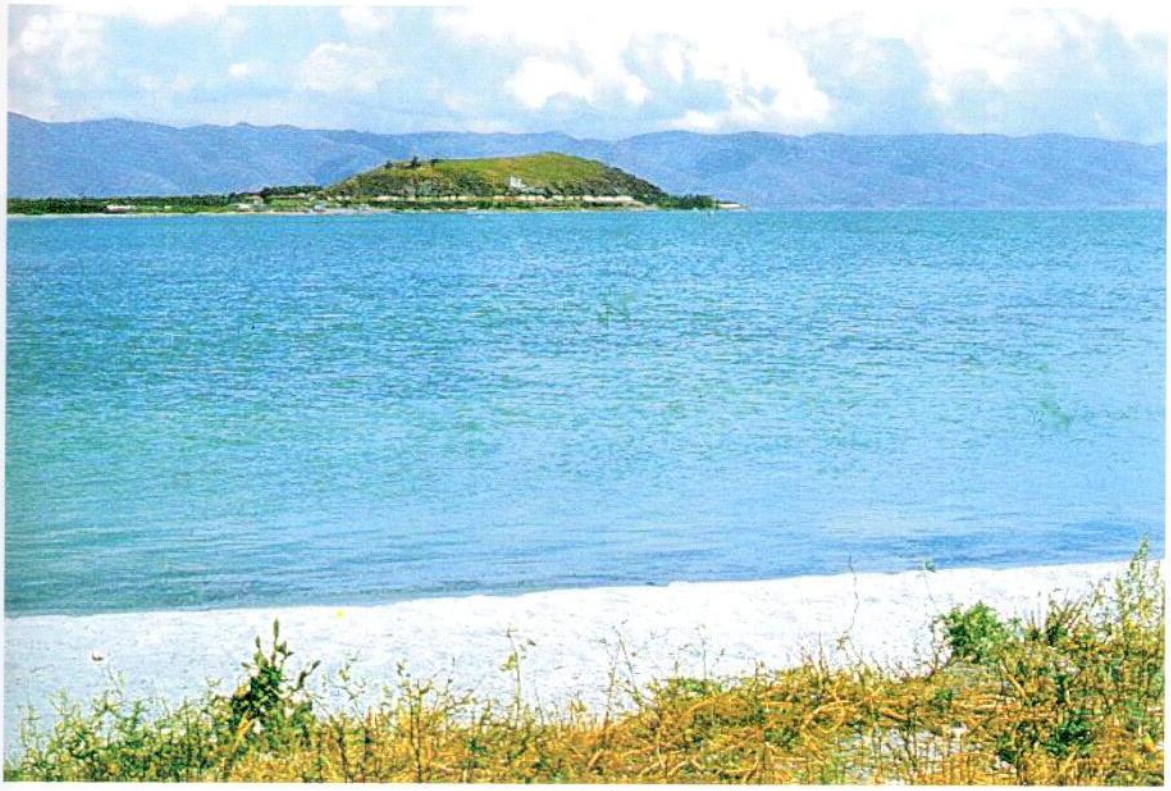

Fig. 76. Lake Sevan

Fig. 77. Lake Sevan. Sunrise. Painted by P. Herouni

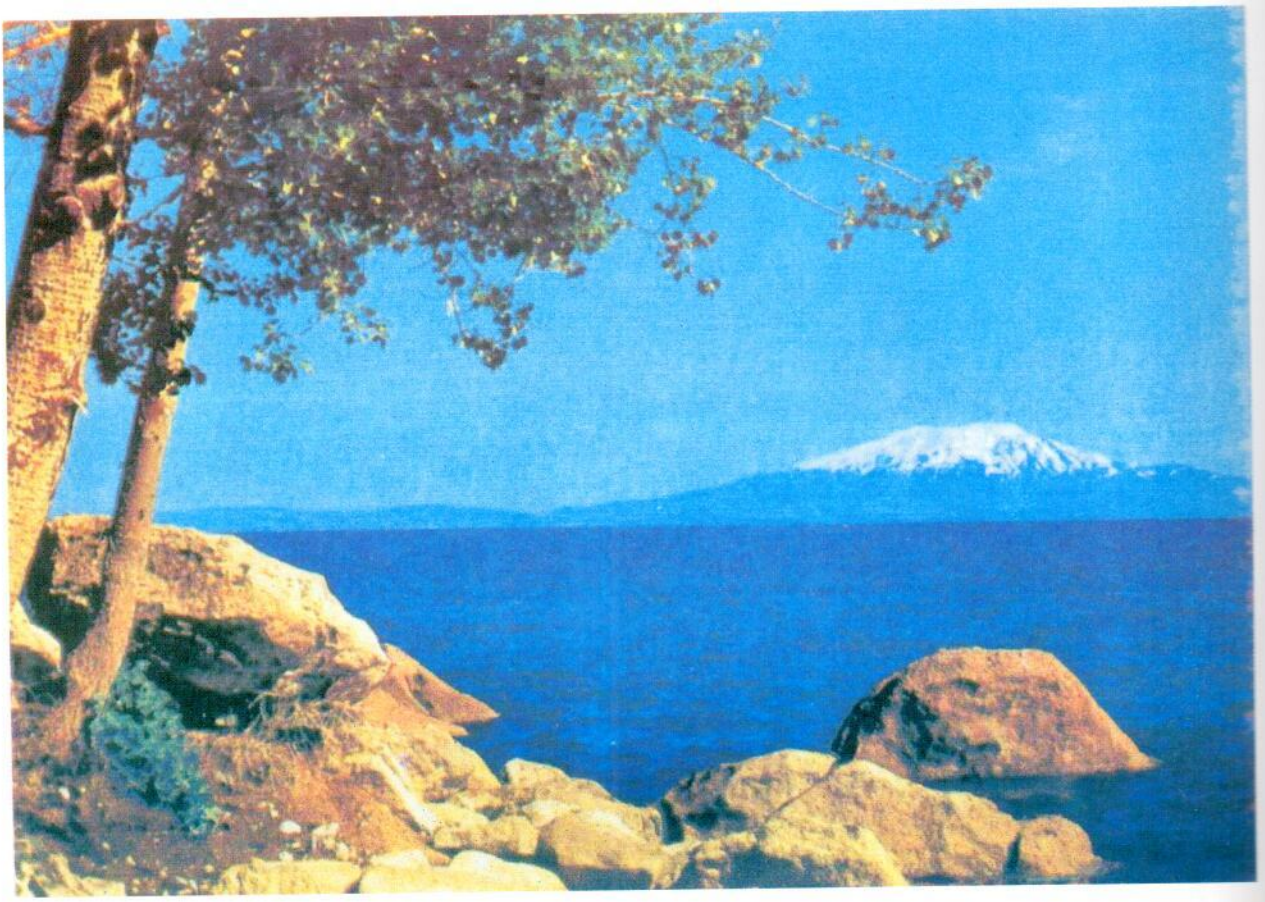

Fig. 78. Lake Van with Mount Sippan

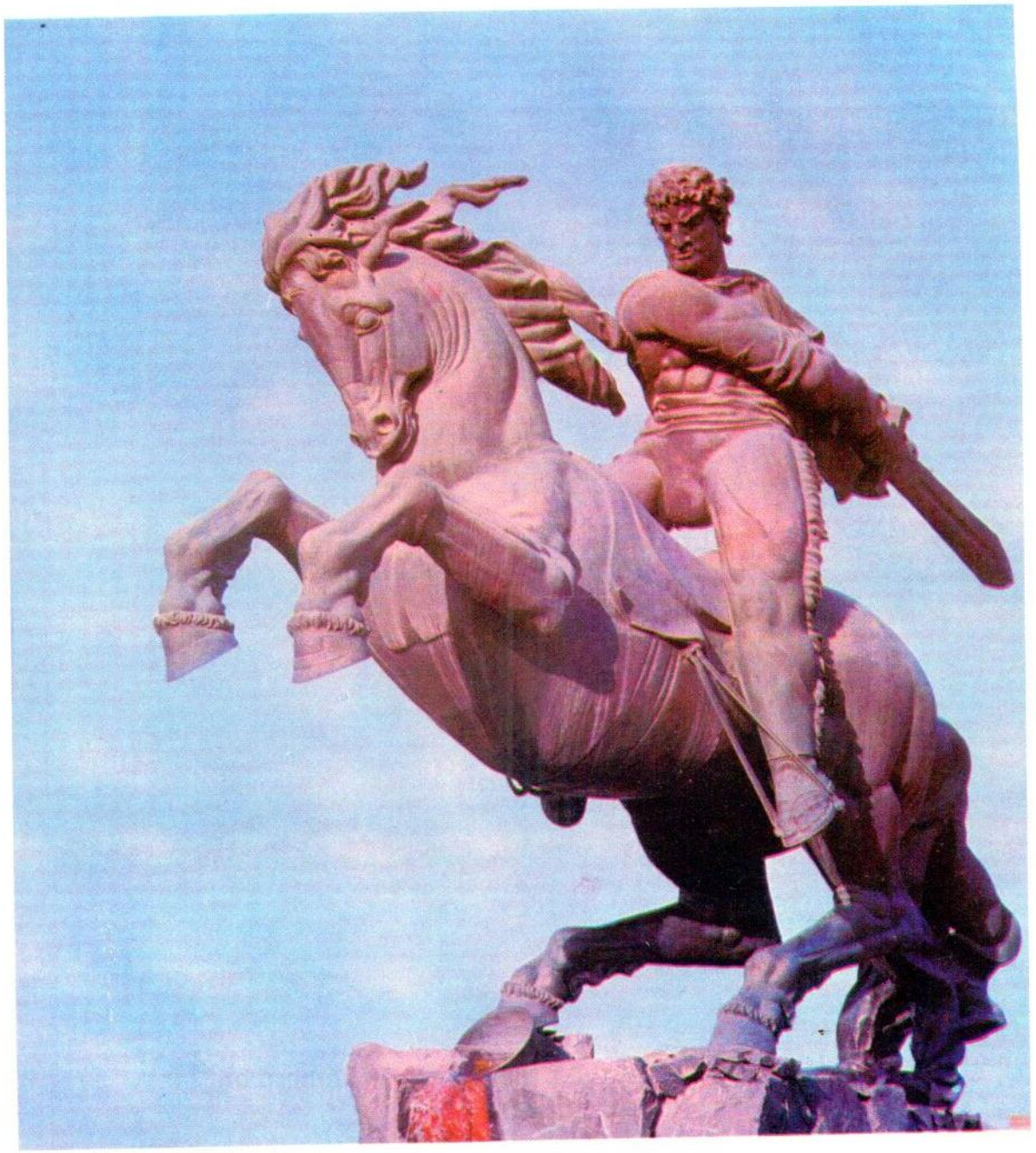

Fig. 82. David of Sassoun

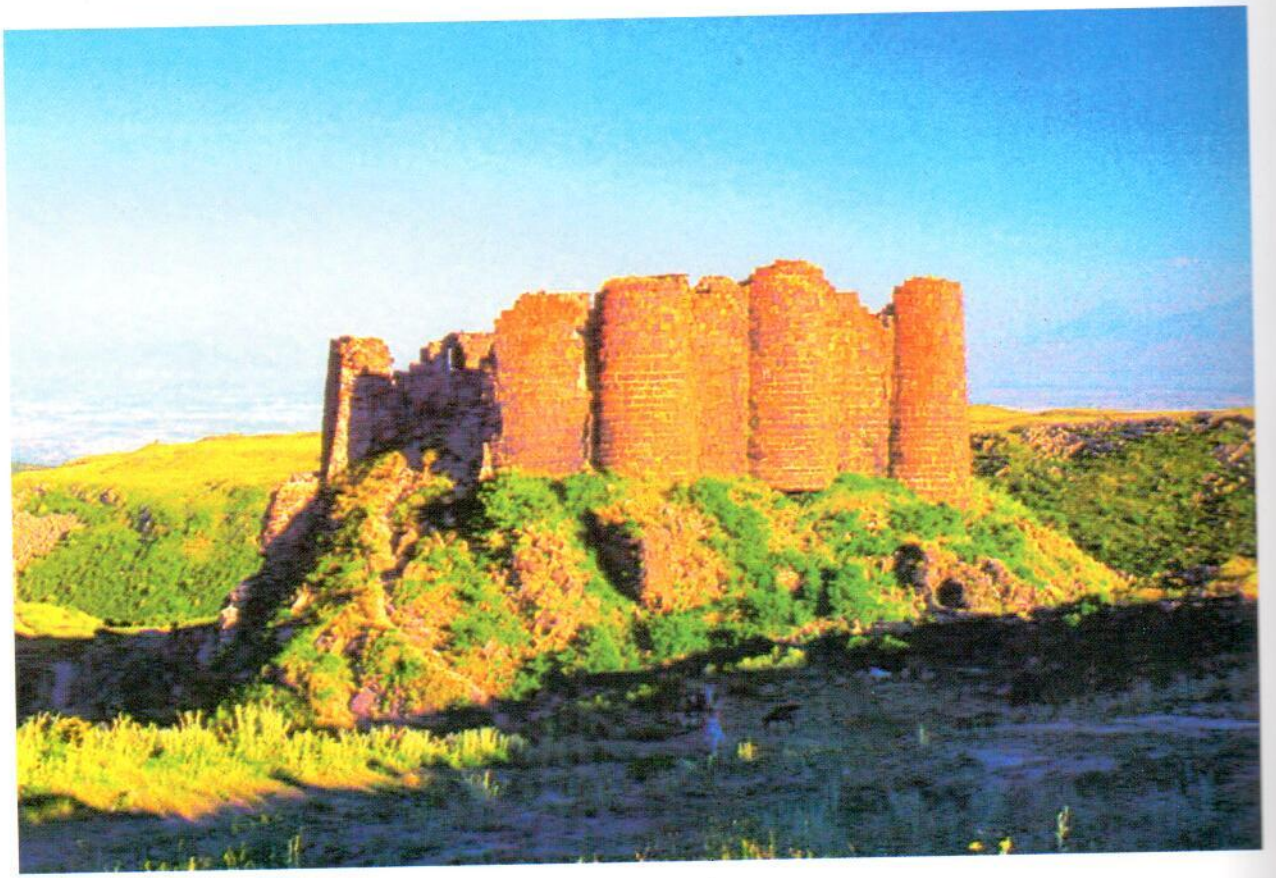

Fig. 88. **Armennian old big castle Amberd on Mount Aragats**

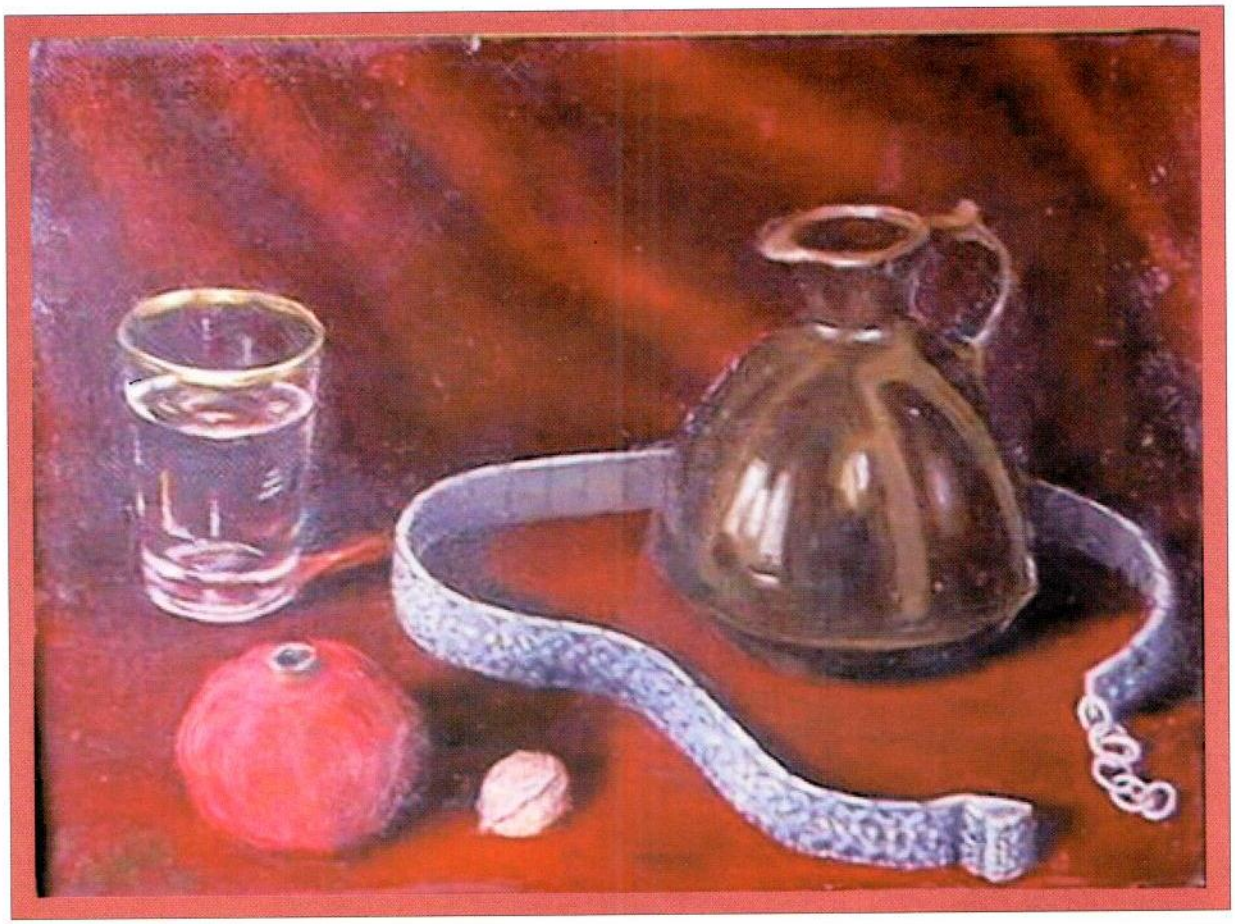

Fig. 91. **Traditional Armennian females silver belt (XVI cent. AD) Painted by P. Herouni**

Fig. 92. **Aries (the old Symbol of AR). Bronze statuette of XIII cent. BC. Found near village Arich (Mount Aragats) by archaeologist Prof. T. Khachaturian**

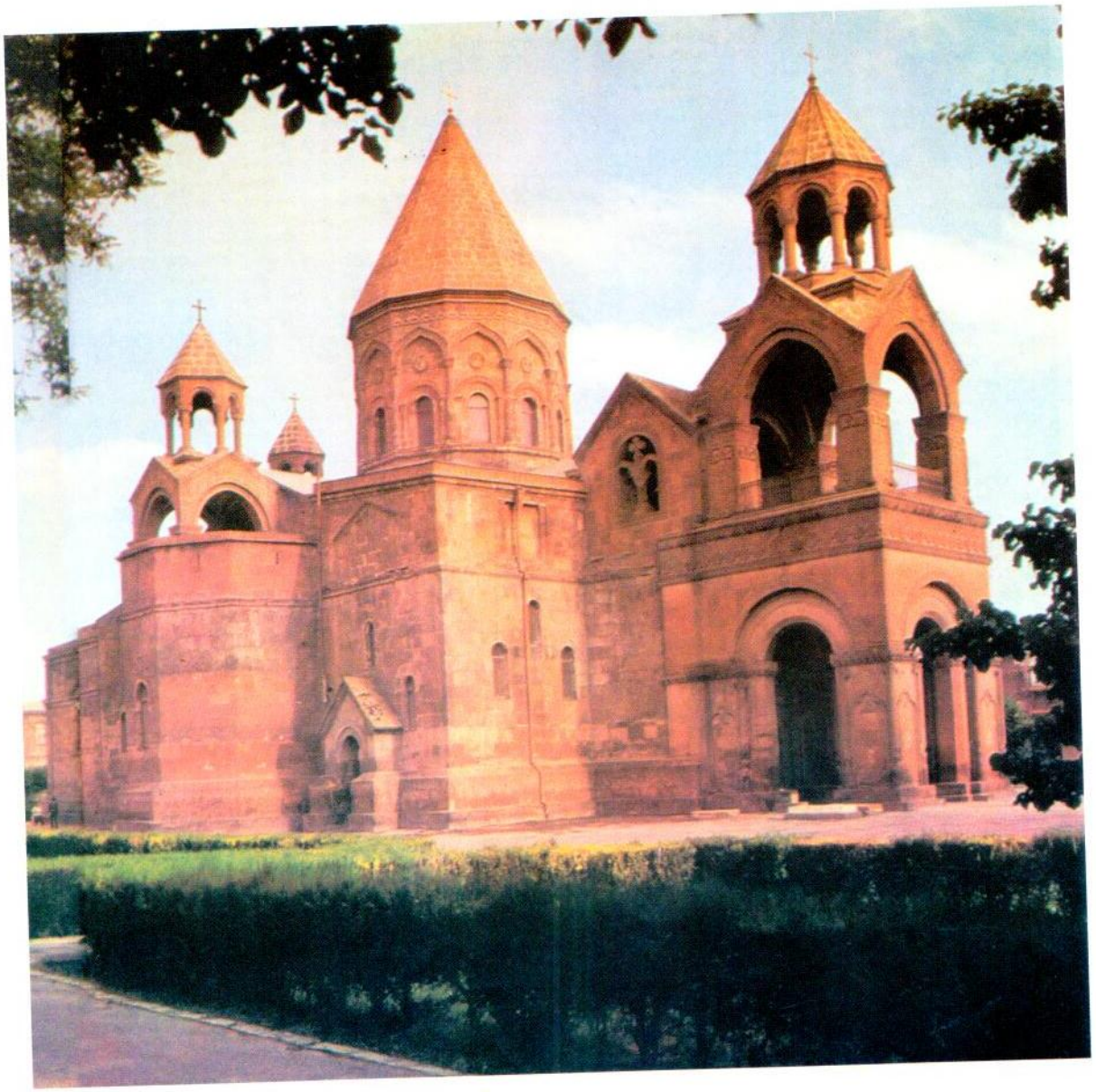

Fig. 95. St. Echmiatsin Central Cathedral (301 - 304 AD)

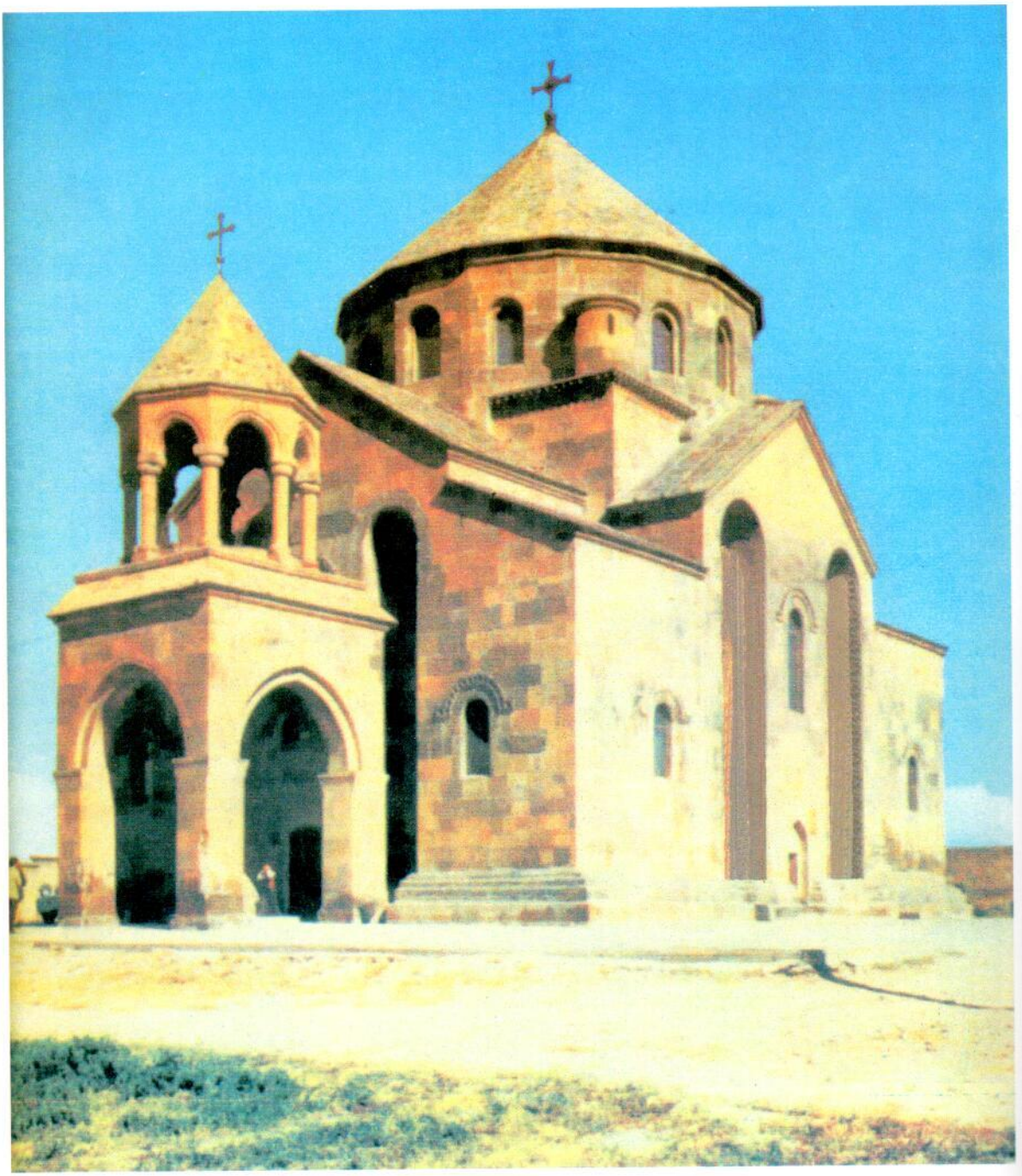

Fig. 96. St. Hripsime Basilica (618 AD), in Echmiatsin

ARMENIAN OLD HISTORY CHRONICLE BEFORE CHRISTIANITY

Years ago	millennium BC	Armenians, Armenia			Indo-Europeans of Armenian origin	Semits (Jewish, Arabian)	Other nations	The main Gods	
		Armenians (Armennoid)	Armenian territory, towns	Armenian civilization				Armenian	Other
1	2	3	4	5	6	7, 8	9	10	11
302 000	300	• Ancestors of Armenians: neadertal man, kromanions. • Close to Nature, human • Children of AR • Armennoid race	CENTRAL (MOTHER) ARMENIA • Around ARARAT • ARMENIAN HIGHLAND (Likes Van, Sevan, Urmia, rivers Cour, Araks, Euphrates, Tigris) • SAUTH CAUCASUS • Camps and Settlements in: Ararat valley, around mount Aragats, gorges of river Hrazdan, Euphrates, Aratsani, near towns Yerevan, Van, Carbert, Sevan, Armenian Tavr ridge, etc.	• Early paleolitic culture, Camps, stone tools, crockery, Clay things, fire-places. 300 millenniums ago • "Azokhian", 100-50 millen. BC in vil. Azokh, Artsakh. ARMENIAN LANGUAGE beginning, 50 mil. BC				AR-HAYR (Sun-Father) 60 mil. ago EARTH-MOTHER (HAYA) ANAHIT AR's Daughter	
50 000	48	• Homo Sapience • Aryan Armenians	• Names of places, rivers: Ararat, Aragats, Van, Sevan, Araks, Euphrates, Tigris	• Names: Aram, Arman, Hay, Armen (AR's children) • Tribes joining				NANE, AR's Daughter	
42 000	40	ARMENIA – HAYASTAN (THE GREAT ARMENIA) Formation of the first States, 40 mill. BC Aramian Dynasty 40-10 mil. BC ARAM I (Hay, Hayomard) (ADAM in Bible)	Names of Countries Centre – Ayrarat, Aragatsotn, Turuberan West – High Armenia, Tosp, Sasun, Tarron, Kilikia East – Sunic, Paitakkaran NE – Tayc, Gougarc, Utic, Artsakh South – Mokk, Aghdznic, Korduk, Arustan SE – Vaspurakan, Shirakan	• Settled life, settlements • Domestic animals: sheep, hen, dog				ADAM AR's Son	
37 000	35	Armenian Aryan civilization and State beginning from 40 millennium BC • Equality, freedom, kindness		• Agriculture: apple, grape, apricot • Town-building, art • Handicraft, tools, wheel • Aryan civilization beginning from 40 mil. BC					

Table 21-2

1	2	3	4	5	6	7, 8	9	10	11
25 000	23	• Harranian Armenian Kingdom 23 mil. BC – 4 cent. AD • Kilikian Armenian Kingdom 22 mil.-1cent AD and 11 – 14 cent. AD	+ NORTH MESOPOTAMIAN ARMENIAN (Eddessian) Kingdom Towns: Harran, Arhan (Arha, Orran, Urfa, Eddessia). KILIKIAN ARMENIAN Kingdom Towns: Tars, Sis, Addana, Hatchn, Mousaler	WRITTEN LANGUAGE (pictures, symbols, hieroglyphs) Astronomy: Sun dials and Armenian first Calendar, begun from 22946 BC, Areg I (March 21); Zodiac constellations • Epos about Vahagn (oral and songs) • Crape, wine, wheat	The beginning of Armenians propagation to Black, Mediterranean Caspian, Seas, Mesopotamia, Asia Minor, 23-20 mil. BC			VAHAGN Fighter of evil ASTGHIK, Daughter of AR; Wife of Vahagn	
22 000	20	• Armenian Phoenician Kingdom 21 mil. – 1 cent. BC • Junior Aram Armenian Dynasty (Sumer) 15 – 10 mil. BC Armenians in Sumer 9 – 8 mil. BC	PHOENICIAN Kingdom, 15 mil. – 1 cent. BC Towns: Tir, Sidon, Bibl +MESOPOTAMIA Kingdom of Junior Aram (or Armenian Sumer) Towns: Ar (Ur), Aritun, Arak, Larak, Cish	• Laws, Order • Fleet, Navigation • Tsovinar: beginning of Armenian Epos about David of Sasun (Sasuntsi David) • Armenian (old Sumerian) Culture (before Great Deluge) • Astronomy, Precession	Armenians in Sumer and in Egypt Great Sphinx. (Precession) 11-10 mil. BC			UNIVERCE AR ANAT VAHAL ASTART (Phoenic.)	
12 000	10	Great Deluge, 10 mil. BC Ararat Armenian Dynasty 10-3 mil. BC King NOAH..... (1)	Union of Ararat, Van and Mesopotamia Towns: Akori, Nakhichevan	• Preliminary ALPHABET (19 letters + 10 figures) 10 mil. BC • Domestic animals: horse, goat, bull, pig, cat, etc.	During 15-1 mil. BC Armenians searched near and far lands and seas, disseminated knowledge, civilization AR kind religion, founded Aryan (Indo-European) race and languages	Noah ..... (1) (numbered names by Bible)			
11 000	9	Habet (Iafet).....(2) (or Kesar Aram II)	+ ASIA MINOR + CAUCASUS, CRIMEA Towns: Yeraskh, Azov Arhan (Ergani, Dierbekir)	• Developed ALPHABET (34 letters), 8 mil. BC • Metal using figures • Food and clothe production technologies		Sem (2)	Ham (2)	TIR, Secretary of AR, the God of Science, Writt. language and Art	
7500	6	Kesars	Towns: Sisakan (Sisian), Mitsbin, Malatia, Arabkir, Magak, (Kesaria), Sebastia, Trabzon, Vahagn, Baggarran, Mihz, Marts, Karkathiokert (Arkath, Yerkath), Carahunge	CARAHUNGE (more than 7500 years ago) • More than 220 staying Stones • AR God Temple • Powerful Observatory • University • Sun, Moon and star observation • Fixed Calendar • Mathematics • Cosmogony, theology • Earth has ball-form and rotates		Tribes transposition to the South			

1	2	3	4	5	6	7, 8	9	10	11
7500	6	Gamer.....(3)	Towns: Shushi, Meghri, Aghdam, Gandzak, Kaghzvan (Kazan), Bakar, Aghpat and oth.	• ARMENNIAN (COUR – ARAKSIAN) high culture (from VI mil. BC) • Armenian Theatre		Arpaksat (3)	Coush..(3)		
7000	5	Trojan Armennian Kingdom 50-13 cent. BC Thiras .....(4)	• Town Troya (Arian, Ilion) 50 cent – 1225 BC Towns: Lori, Kumayri, Lichashen, Hrand, Yerezkan,	TROYAN Armenian Kingdom 50-13 cent. BC • Constellations, it's names • Zodiac Signs, completed • Metal using	Armenians in Sumer from 30 cent. BC Towns: Ar (Ur) Aritun, Kish, Aruk, Larak, Nishput	Kainan..(4)	Mes-traim....(4)		
5000	3	• Central Armenia. Thorgom Kingdom 26-4 cent. BC THORGOM..... (5) 2574-2474 BC Kesar: 2554-2493 BC	Towns: Ugarit, Ashtarak, Artashat, Metsamor Manes, (Alaverdi), Darani (Elar), Agarak	• Pyramids in Armenia • Metal production, Metsamor	Armenians - Kesars in Egypt 30-16 c. BC (I-XVIII din) First king Minass	Sagha...(5)	Egypt State from 30 c. BC	MIHR Mardouk (Son of AR)	• RA (AR) • Orion (Hayk) • Vahal Astart (Egypt)
4600	3	• Haykian Dynasty 25-1 cent. BC HAYK .....(6) 2544-2444 BC Kesar: 2493-2444 BC Son of AR (Sun) Aryan - Orio (Sagittarius), Osiris – (Ceops, Hu-Fu)	Great Armennia Armenia – HAYASTAN • Union of central Armenia, Mesopotamia, Egypt, Phoenicia, Kilikia and Hittite • Towns: Haykashen (26 c. BC), Manazkert (25 c. BC), Shengavit, Malishka (Moz)	• Building of Babylon Tower 2526-2495 BC (by Hayk) • Hayk's Victory in First Native war against Bel and his army, 2492 BC • Boun Hayots Tomar (BHT) – Fundamental Armenian Style - Fixed Solar Calendar, from 2492 BC • Building of Great Pyramid in Egypt by Hayk (2490-2480 BC) • First variants of Carnak (Bretain), Stonehenge (England), New Grenge (Ireland), Callanish (Scotland) built by Hayk (2477-2467 BC)	• Iran (Aran) • Town Delphi, III mil. BC, Temple of AR, (afterwards of Appolon of Greece) • Town Babylon 2525 - 539 BC (Hayk)	Yeber...(6)	• Bel . (5) (Nemrovd) 2540-2492 "King" 2515-2492 • Bab..(6) From 2492 BC the first king of Babylon	HAYK	Sons of RA: Orion, Osiris (Egypt)

Table 21-4

1	2	3	4	5	6	7	8	9	10	11
4400	3	Kesars: Aramanyak.....(7) (2444-2426 BC) Aramayis .....(8) Amassia .....(9) Gegham.....(10) Harma .....(11) and others	Towns: Carcenish, Armavir, (25 c.), Parga, Shilaya, Khazana, Arzan, Tsronk, Garni, Thordan, Igevan, Kapan, Arshamashat, Melitena, Kaghkhagh (Khazah), Nakgar, Khatusas, Berit (Beyrut), Vardenis, Avarna, Germuk, Germuk (Tsopk), Vanatur, Tsopaber, Ar (Haldean UR)	• Hurrits (Hayases), in 22 c. BC came from Armenia and were kings of Egypt 2100-1800 BC (VII-XII dynast.), then founded in Armenian Mesopotamia State Mitanni, 22-13 cent. BC. PHYNIKIAN (Armenian) State and Alphabet, 22 c. BC • Hiksoses in 19 c. BC came from Armenia and were kings in Egypt 1800-1600 BC (XIII-XVII dynast.) • Hetits, Halds (Hards) • Hurri-Urartian Armenian dialect • Stonehenge I (Carahunge) in Britannia 2475-2470 (then 2000 BC, 1800 BC). • Carnak in Bretain (France), before 2000 BC	• Crete – Mikenian (Armenian) culture III mil. BC • Hiksosian capital Avaris in Egypt (19 c. BC) • Hindus • Cretean written language • Town Jerusalem, built by Armenians (Harries)	Phaghek ...(7) Ragav ..... (8) Seruk..... (9) Nakovr ...(10) Thera..... (11)		Aneris (7) Abel ...(8) Cayagh (9) Abel... (10) Nin.... (11) • Babylon State 19 c. – 626 BC • Palestine • Town Jerusalem	ARAM-AZD (Son of AR)	Aram-azd – Ormuzd (Iran)
3800	2	• ARAM III...(12) (2 mil. BC) Thathoul Levon | Harran. Kingdom	Towns: Yerznka, Carashamb (20c), Ambert, Majak (Kesaria), Aniastan, Berd (Tavoush), Berd (Artsakh)	HETIT Armenian Kingdom 18 – 12 cent. BC MITANNI Armenian State 16–13 cent. BC • Callanish (Care nish) in Scotland, 1800 BC	• Iranian language • Delphians (Armenians) • Macedonians (Armenians)	ABRAM (12) Semites Forefather 1680 BC Abraham (Jewish)	Ibrahim (Arab)	• Ninuas (12) • Syria • Laws of Hamurapi 18 c. BC		• Vedic Gods: Zarun, Indra (Hindu: Ra, Ramayana)
3500	2	ARA Geghetsik..(13) (Beautiful) Ara-Araid....(14)	Towns; Aritch (15 c.) Amasia, Byurakan, Amed (Diarbekir), Artsn, Karin (Arzerum), Phaitarakan	Existence of Armenian Kingdoms: NAIRI (with capital Van) and Araratian (with the capital Manazkert)	• Town Athens, 15c. • India • Aryans in India	Isahak (13) Iakov (14) Jews	Ismail (13) Navaiof (14) Arabs	• China 14 c. BC • Assyria 14 – 7 cent. BC	ARA Geghestik	

1	2	3	4	5	6	7	8	9	10	11
3300	2	Nairi Dynasty King ZAYRMAYR, 13 cent. BC — · — Trojan King PRIAM, 13 cent. BC	NAIRI Armenian Kingdom (lakes Van, Urmia) 13 – 9 cent. BC Capital town VAN • Town Gandzak on the South of the Lake Kaputan (Urmia)	• Trojan war, 1235 – 1225 BC between Trojans with other East kingdoms against aggressors: Akheans and Danayans. • Urartians (Halds, Hards - - Armenians), 13 cent. BC	• Greeks (Crete - Mikenians and Delphians) • Ancestors of Slavs, II - I mil. BC	• Jewish tribes • Moisey (Movses) 13c.BC	• Kedma • Town Damask			YAHVE (Yegova) (Jewish) ZEVS Poseidon Appolon (Greeks)
3000	1	• Behayna Dynasty (9 - 6 cent. BC) Aram IV.... 860 – 840 ..... Mina ..... 810 – 788 Argist I ..... 788 – 764 ..... Rousa I ..... 735 – 714 ..... Rousa IV . 590 – 570	BEHAYNA Armenian United Kingdom of Nairi and Araratian (so-called Urartu) countries 9 – 6 cent. BC Capital town – Van — · —	Town Yerevan (Errebouni), 782 BC Capital of Armenia from 1918 AD • Homer (Tigran), 8 cent. • Armenian Epos Iliada, 8 cent. BC Towns of 8 cent. BC: Sarikhamish, Moku, Artchaesh	• Town Karthagen (Phoenician) 825 - 201/145 BC • Etrousks 8 – 7 c. BC • Town Roma, 754 BC • Celts, Britts, 8 c. BC - 5c. AD • Greek Alphabet, 9 c. (taken from Phoenician)	• Israel, David Kingdom 10-8c. BC • David ? - 950 BC • Solomon 965-928 BC • Jewish Alphabet (taken from Phoenician), 10c. BC • Israel kingdom 928-722 BC • Judas kingdom 928-586 BC		Town Ninve 10c. BC (Assyrian)		BRAHMA
2700	1	• Haykazouni Dynasty, 680 – 570 BC Skayvordi .. 680 – 673 BC Parouyr ..... 673 – 630 BC Hrachia ..... 625 – 624 BC	Towns: Artske (7c.), Karmir Blur (7c.), Ardvin, Agarak, Aghstev, Khndzoresk, Koualini (7c.), Vagharshapat (6c., from 1945 AD Echmiatsin)	NEW BABELONIAN (Haldean) Armenian Kingdom, 626 – 538 BC • Midia, 7 – 6 cent. BC • Lydia, 7 – 6 cent. BC	• Greece(State) • Skiphs 7c. BC – 3 c. AD			Brahmian writt. language 8–7c. BC (taken from Phoenic-an		• Zoroastrizm from about 600 BC (State religion in Iran, 3 c. AD) • Boudeizm 6-4 c. BC (India)
2600	1	• Yervandouni Dynasty 6 BC – 3 AD, Yervand I ..... 570 – 560 BC	GREAT ARMENIA (METS HAYKH) 570 BC – 1045 AD Towns: Ani (5 c.), Dvin (4 c.), Bitlis (4 c.), Amesia (4 c.), Balu(4 c.), Ervandashat (3 c.), Jugha, Julpha	• Castles, pyramids, temples in all Armenia • Temple Zvarthnots ARMENIAN MESOPOTAMIA (Edesa) Kingdom • Abgarian (Junior Yervandouni Dynasty, 312 BC – 216 AD)	• Irelands, 4 c. BC • Alexander Macedonian, 4 c. BC			• Ethiopia State • Town Alexandria 332 BC		

Table 21-6

1	2	3	4	5	6	7	8	9	10	11
2300	1	• Artashesouni Dynasty 189 BC – 1 AD Artashes I, 189 – 160 BC	Towns: Baberd (3 c.), Arshamashat (3 c.), Artamet (2 c.), Zarishat (2 c.), Artashat, 188 BC (on the place of 7 c. BC town)	After downfall of Karthagen, Hannibal (246 – 183 BC) came to Armenia (Phoenicians motherland) and helps kind Artashes to fortify the citadel of capital Artashat. • Theatre in Artashat	• Hellenism, 3-2 cent. BC • Sanskrit, 4-1 cent BC • Rome (State) 3 cent. BC	Jewish square letters, 3-2 c. BC (on base of Aramean & Phoenician)		• Selevkides 312-64 BC • Antioh III,242-187 BC		JUPITER (Roman)
2100	1	TIGRAN II the Great 95 – 55 BC King of Kings Artavazd II 55 – 34 BC	ARMENIA from sea to sea • Town Tigranakert (II capital) 77 BC	• Victories in 86, 68, 66, 55 BC over Parphians and Roman aggressors and peaceful pacts with them (66, 64 BC). • Theatre in Tigranakert	• Aghvanc State • Alania • Slavs 1-2 cent. AD • Goths 1-2 cent. AD			Kolhida Kingdom 6-2 c. BC		
2000	1 AD	• Yervandouni dynasty Abgar V, 12 – 50 AD Abgar VIII, 177 – 212 AD Arshakouni Dynasty 64 – 428 AD 21 kings Trdat I, 64 – 88 AD Khosrov II the Great 279 – 298 AD	JESUS CHRIST, THE SON OF AR–FATHER, WAS BORN Three Armenian, Magi (kings) Kaspar, Melic, Baghdasar first visited Him with presents Two Apostles: Thadeos and Bardouhimeos visited Armenia Christianity by Armenian Mesopotamia (Edessa) kings Abgar V the Great in 33 AD and Abgar VIII the Great in 207 AD first adopted			• Pilatos • Juda • Christianity was rejected in 33 AD			Holy Trinity: Father AR • Son Jesus Christ • Holy Soul	
1700	301 AD	TRDAT III the Great 298 – 330 AD	Christianity in All Armennia as State Religion in 301 AD was Adopted St. Echmiatsin				Arabian letters 4 c. AD (taken from Armenian)			

Table 22

ARMENNIAN KESARS, KINGS and DYNASTIES CHRONOLOGY

The Great Armennia

• Arramian Dynasty ..... 40-10 mill. BC

ARAM I
(Hay, Hayomard;
ADAM in Bible) ..... 40 mill. BC

——— • ———

• Harranian (Edessian) Dynasty
23 mill. BC – 4 cent. AD

Thathoul, Levon ..... 2 mill. BC

• Kilikian Dynasty

22 mill. BC– 1 cent. AD
(and 11 – 14 cent. AD)

• Phoenician Dynasty
21 mill. BC – 1 cent. BC

• Junior Aram (Mesopot.)
or Sumer Dynasty ..... 15 mill. – 10 mill. BC

——— • ———

The Great Armennia

• Ararat Dynasty ..... 10 – 3 mill. BC

NOAH (or ARAM II) ..... 10 mill. BC
HABET (IAFET)
Gamer
Thiras and others

——— • ———

• Troyan Dynasty ..... 5 mill. – 1225 BC

Dardan ..... 5 mill. BC
Priam ..... 13 cent. BC

——— • ———

The Great Armennia
(Thorgom Kingdom) ..... 3 mill. BC
THORGOM ..... 2554 – 2493 BC

• Haykian Dynasty ..... 25 – 1 cent. BC

HAYK ..... 2493 – 2444 BC
Aramaniak ..... 2444 – 2426 BC
Aramayis
Amasia
Gegham
Harma
Aram III ..... 2 mill. BC

ARA Geghetsik
(the Beautiful) ..... 2 mill. BC

Ara-Araid, Anoushavan, Paret, Arbak, Zaven, Pharnak I, Sour, Havanak, Vashtak, Haykaz I, Ampak I, Arnak, Shavarsh I, Norayr, Vatam, Kar, Gornak, Hrant I, Endzac, Gzak, Horo, Zayrmayr (Nairi Country; he fell in Trojan war, 13 cent. BC)

Shavarsh II, Perch I, Arboun, Perch II, Bazouk, Hoy, Housak, Ambak II, Kaypak, Farnak II

• Behayna Dynasty ..... 9 – 6 cent. BC
(continuation of Haykians)

ARAM IV ..... 860 – 840 BC
Sarkar I ..... 825 – 824 BC
Issponi ..... 824 – 810 BC
Mina (Menua) ..... 810 – 788 BC
Argist I ..... 788 – 764 BC
Sarkar II ..... 764 – 735 BC
Rousa I ..... 735 – 714 BC
Argist II ..... 714 – 685 BC
Rousa II ..... 685 – 640 BC
Sarkar III ..... 640 – 620 BC
Armen ..... 620 – 605 BC
Rousa III ..... 605 – 590 BC
Rousa IV ..... 590 – 570 BC

• Haykazouni Dynasty ..... 680 - 570 BC
(continuation of Haykians)

Skayvordi ..... 680 – 673 BC
Parouyr ..... 673 – 630 BC
Hrachia ..... 625 – 624 BC
Pharnavor
Phachouych
Carnak
Phavvos
Haykaz ..... ? – 570 BC

Table 22 (continuat.)

The Great Armennia

• **Yervandouni Dynasty**

6 cent. BC – 1 cent. AD
(continuation of Haykians)

Yervand I ..... 570 – 560 BC
Tigran I ..... 560 – 520 BC
Vahhagn, Aravvan, Nerseh, Zareh, Arman, Baddam, Vahhan, Artashir ..... 520 – 404 BC
Yervand II ..... 404 – 360 BC
Vahhe ..... 356 – 323 BC
(he fell in Persian battle against Alexandr Makedonian)
Yervand III ..... 323 – 280 BC
Yervand IV ..... 220 – 189 BC
Abgar V the Great ..... 12 – 50 AD
Adopted Christianity in Edessia, 33 AD
Sannatrouk ..... 50 – 64 AD
Abgar VIII the Great .... 177 – 212 AD
King of Kings
Adopted Christianity in Edessia, 207 AD

———— • ————

• **Edessian (Yervandouni-Abgarian) Dynasty** ..... 312 BC– 240 AD
Abgar I ..... 312 – ? BC
(After short interruption returned to the Edessian throne in 163 BC)
Abgar II ..... 63(53) ... ? BC
Abgar IV ..... in 3 AD rebuilt Edessa
Abgar V the Great ..... 12 – 50 AD
Adopted Christianity in 33 AD
Annanne ..... 50 – 53 AD
Manouk VI ..... 53 – 60 AD
(returned to the Old Religion)
Sannatrouk ..... 60 – 64 AD
Abgar VIII the Great,
King of Kings ..... 177 – 212 AD
Adopted Christianity in 207 AD

———— • ————

Kings of Tsopc

• **Junior arm of Yervandouni**

3 – 1 cent. BC

Sammos ..... middle of 3 cent. BC
Arsham ..... 240 – 220 BC
Csercses ..... end of 3 cent. BC
Zarreh ..... 190 – 175 BC
Arkathias ..... middle of 2 cent. BC
Mehroujan ..... end of 2 cent. BC
Artannes ..... ? – 94 BC

———— • ————

The Great Armennia

• **Artashesouni Dynasty** 189 BC – 1 AD
(continuation of Haykians)

Artashes I ..... 189 – 160 BC
Artavvazd I ..... 160 – 145 BC
Vagharshak ..... 145 – 115 BC
Tigran I ..... 115 – 95 BC
Tigran II the Great ..... 95 – 55 BC
King of Kings
Artavvazd II ..... 55 – 34 BC
Artashes II ..... 30 – 20 BC
Tigran III ..... 20 – 6 BC
Tigran IV ..... 8 – 5 BC
Arat ..... 2 BC – 1 AD

• **Arshakouni Dynasty** 64 – 428 AD
Trdat I ..... 64 – 88 AD
Sanatrouk ..... 88 – 110 AD
Ashkhadar ..... 110 – 113 AD
Partham ..... 113 – 114 AD
Vagharsh I ..... 117 – 144 AD
Bakour I ..... 144 – 161 AD
Bakour II ..... 161 – 163 AD
Tigran I ..... 164 – 186 AD
Vagharsh II ..... 186 – 198 AD
Khosrov I ..... 198 – 216 AD
Trdat II ..... 216 – 252 AD
Khosrov II the Great ..... 279 – 298 AD
Trdat III the Great ..... 298 – 330 AD
Adopted Christianity in the Great Armennia in 301 AD

Table 22 (continuat.)

Khosrov III	330 – 338 AD
Tirran II	338 – 350 AD
Arshak II	350 – 368 AD
Pap	369 – 374 AD
Varrazdat	374 – 378 AD
Arshak III	378 – 389 AD
Vramshapouh	389 – 417 AD
Artashes III	422 – 428 AD

Arshakouni (Parthian Arshakid) Dynasty in Armennia was not popular among population and lords. In result Armennia was weakened and divided between Persia and Byzantium in 428 AD.

The independence was reestablished by the King Ashot I Bagratouni in 885 AD.

The Great Armennia

• Bagratouni Dynasty	885 – 1045 AD
Ashot I	885 – 890 AD
Smbat I	890 – 914 AD
Ashot II the Iron	914 – 929 AD
Abbas	929 – 953 AD
Ashot III	953 – 977 AD
Smbat II	977 – 989 AD
Gaggik I	989 – 1020 AD
Hovhannes	1020 – 1041 AD
Ashot IV	1022 – 1040 AD
Gaggik II	1043 – 1045 AD

Kilikian Armennia

• Roubenian Dynasty

1080 – 1225 AD

Rouben I	1080 – 1095 AD
Kostandin I	1095 – 1100 AD
Thoros I	1100 – 1129 AD
Levvon I	1129 – 1137 AD
Thoros II	1145 – 1169 AD
Rouben II	1169
Mleh	1169 – 1175 AD
Rouben III	1175 – 1187 AD
Levvon II	1187 – 1219 AD
Zabbel Queen	1219 – 1252 AD
Fillip	1222 – 1225 AD

• Hethoumian Dynasty

1226 – 1375 AD

Hethoum I	1225 – 1269 AD
Levvon III	1269 – 1289 AD
Hethoum II	1289 – 1296 AD and 1299 – 1301 AD
Smbat	1296 – 1298 AD
Kostandin II	1298 – 1299 AD
Levvon IV	1301 – 1308 AD
Oshin	1308 – 1320 AD
Levvon V	1320 – 1342 AD
Kostandin III or Gviddon	1343 – 1344 AD
Kostandin IV	1345 – 1363 AD
Kostandin V	1365 – 1373 AD
Levvon VI	1374 – 1375 AD

(He died in Paris in 1393 and is buried in Saint-Denis' Basilica)

Table 23

CAPITALS OF ARMENNIAN KINGDOMS CHRONOLOGY

No	CAPITAL	DATE (BC/AD)	KINGDOM	KING	DYNASTY	Date of TOWN built
1	2	3	4	5	6	7
1	ARAM, VAN (near Lake Van)	40 – 10 mill. BC	ARMENNIA, MOTHER HAYASTAN	ARAM I (ADAM)	Arramian 40 – 10 mill. BC	40 mill. BC
2	HARRAN	23 mill. – 4 c. BC	ARMENNIAN MESOPOTAMIA (North.)	?	Harranian	23 mill. BC
3	TARS	22 mill. BC–1c.AD	KILIKIAN	?	Kilikian	22 mill. BC
4	AR (UR) (before Great Deluge)	15 – 10 mill. BC	ARMENIAN SUMER	JUNIOR ARAM	Junior Arramian from 15 mill.BC	15 mill. BC
5	TIR	21 mill. – 1 c. BC	PHOENICIAN	?	Phoenician	21 mill. BC
6	NAKHIJEVAN	10 – 9 mill. BC	ARMENNIA, MOTHER HAYASTAN	NOAH	Araratian	10 mill. BC
7	YERASKH	9 – 3 mill. BC	ARMENNIA, MOTHER HAYASTAN	HABETH	Araratian	9 mill. BC
8	TROYA	5 mill. – 1225 BC	ARIANIAN (ILION) 50-13 cent. BC	DARDAN, PRIAM (the last King)	Arian 50 – 13 c. BC	50 c. BC
9	HAYKASHEN	25 – 9 cent. BC	THE GREAT (MOTHER) ARMENNIA	HAYK Kesar 2493-2444 BC Life 2544-2444 BC	Haykian 25 – 9 cent. BC	2494 BC Hayk
10	BABYLON	25 – 19 cent. BC	BABYLONIAN	BAB, from 2492	Haykian	2525 BC Hayk
10a	NOR (NEW) BABYLON	7 – 6 cent. BC	NEW BABYLONIAN (HALDEAN), 626 – 538 BC	NAB, 620 – 604 BC (flush years)	Araratian	2525 BC Hayk
11	HARUS (Hatusas)	626 – 538 BC	HARUSIAN (Hettian) 18 – 12 cent. BC	HATUSIS 1650 – 1620 BC	?	18 cent. BC
12	VARAKAN	16 – 13 cent. BC	MITANI 16 – 2 cent. BC	?	Harritian 16 – 13 cent. BC	22 cent. BC
13	VAN	13 – 8 cent. BC 9 – 6 cent. BC	NAIRI, 13 –9 cent. BC MOTHER HAYASTAN BEHAYNA 13 – 6 cent. BC	? ARAM IV 860 – 840 BC	Nairian 13 – 9 cent. BC Araratian 9 – 6 cent. BC	35 mill. BC
14	MANAZKERT	9 cent. BC	ARARATIAN	ARAM IV 860 – 840 BC	Araratian	25 cent. BC Manazkert
15	ARMAVIR	6 – 3 cent. BC	GREAT ARMENNIA 570 BC – 1045 AD	YERVAND I 570 – 560 BC	Yervandouni 6 c. BC–1 c. AD	775 BC Argist I

Table 23 (continuat.)

1	2	3	4	5	6	7
16	YERVANDASHAT	3 cent. BC	GREAT ARMENNIA	YERVAND IV 220-189 BC	Yervandouni	3 cent. BC
17	ARHAN (Urha, Orran, Edessia)	312 BC – 216 AD	ARMENNIAN MESOPOTAMIA (North)	ABGAR I 312 - ? BC	Yervandouni--Abgarian	23 mill. BC
18	ARTASHAT	188 – 163 BC 66 – 163 AD 186 – 335 AD	GREAT ARMENNIA	ARTASHES I 189 – 160 BC TRDAT I 64 – 88 AD VAGHARSH II 186 – 198 AD	Artashesouni 189 BC – 1 AD Arshakouni 64 – 428 AD	188 BC Artashes I
19	MTSBIN	145 – 115 BC	GREAT ARMENNIA	VAGHAR-SHAK Arshakouni 145 – 115 BC	Artashesouni	6 mill. BC
20	TIGRANAKERT	77 – 55 BC	GREAT ARMENNIA	TIGRAN II THE GREAT 95 – 55 BC King of Kings	Artashesouni	77 BC Tigran II
21	VAGHARSHAPAT (Echmiatsin from 1945)	130 AD 163 – 428 AD	GREAT ARMENNIA	VAGHARSH I 117 – 144 AD	Arshakouni	6 cent. BC
22	DVIN	335 – 885 AD 914 – 929 AD	GREAT ARMENNIA	KHOSROV III 330 – 338 AD ASHOT II 914 – 929 AD	Arshakouni	335 AD Khosrov III
23	BAGARAN	885 – 890 AD	GREAT ARMENNIA	ASHOT I 885 – 890 AD	Bagratouni 885 – 1045 AD	6 mill. BC
24	SHIRAKAVAN	890 – 914 AD	GREAT ARMENNIA	SMBAT I 890 – 914 AD	Bagratouni	7 cent. AD
25	KARS	929 – 961 AD (963 – 1064 AD Kars kingdom)	GREAT ARMENNIA	ABBAS, 929 – 953 AD (MOUSHEGH I)	Bagratouni	9 cent. BC
26	ANI	961 – 1045 AD	GREAT ARMENNIA	ASHOT III 953 – 977 AD	Bagratouni	16 cent. BC
27	SIS	1080 – 1375 AD	KILIKIAN 1080 – 1375 AD	ROUBEN I 1080 – 1095 AD	Roubenian 1080 – 1225 AD	6 mill. BC
28	YEREVAN	1918 – till now	REPUBLIC of ARMENNIA I – 1918, II – 1920, III – 1991	-	-	782 BC Argist I

INSTEAD OF EPILOGUE

Year 1992 ... An Armennian young man, aggrieved with all the World, tried to remember the truth which was forgotten by his nation. He came to far Tibet, hoping to find his soul teacher. He roamed for a long time, hungry and thirsty. After long searching, broken down and covered with wounds, he at last saw a lama, who was plunged in prayer with closed eyes. Around him the snow and ice have melded due to his huge energy. Lama opened his eyes and smiling said at once: "What have you lost in these lands, the mad son of the Sun?"

Then he cured the Armennian's wounds and some days later, when parting, he told him: "The source of truth you are looking for so long time, is in your beautiful country called Armennia, which is the cradle of civilization. You are the first Aryans. You forgot about that, but your enemies remember it. I can teach you nothing, the knowledge is inside you. Go back to your country and you will find the truth in your wonderful mountains." [120].

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INFORMATION

Professor Paris M. HEROUNI

(Curriculum Vitae)

Father, Misak M. Herouni (Sachian), was born in town Hatchn (Kilikia) in 1906, deceased in Yerevan in 1986.

Mother, Seda N. Herouni (Azatian), was born in town Igdir in 1908, deceased in Yerevan in 1982.

He is married, has two sons and a daughter.

1. Was born 17 December 1933 in Yerevan, in family of teachers. Armenian. Graduated V. Chkalov 10-year School N30 in Yerevan, in 1951.

2. LABOUR ACTIVITY

1951 - 1957 –	Radiotechnical Department of Moscow Power Institute
1957 - 1960 –	Radioengineer, Scientific operator then Chief of Radiophysics Constructing Bureau in Byurakan Astrophysical Observatory, Armenia
1960 - 1968 –	Vice Director of Science and Chief of SHF Division in Radiophysics and Electronics Institute of Armenian Academy of Science (town Ashtarak)
1968 - 1971 –	Director of Armenian Radiophysics Department (Yerevan) of All-Union Physics-Technical and Radiotechnical Research Institute (Moscow)
1971 - still – now	Director; from 1983 President of All-Union Radiophysics Measurement Research Institute (RMI) in Yerevan; from 2000 – with name Radiophysics Research Institute (RRI)
1983 - still – now	Head of "Antenna Systems" chair of RRI in State Engineering University of Armenia, Yerevan

3. SCIENTIFIC DEGREES AND TITLES

1965 –	Ph. D. (Radiotechnics, defended degree in Moscow)
1968 –	Associate Professor, State Engineering University of Armenia, Yerevan
1972 –	Doctor of Sci. (Radiophysics, defended degree in Moscow)
1982 –	Correspond.- Member of Armenian Academy of Science, Yerevan
1983 –	Professor (Radiophysics, RRI)
1996 –	Member of National Academy of Science of Armenia, Yerevan
1999 –	Member of Engineering Academy of Armenia, Yerevan
2001 –	Member of International Academy of Ecology and Life Protection Sciences (IAELPS), S.–Petersburg
2001 –	Member of Technological Academy of Armenia, Yerevan

4. HONORARY TITLES

1985 – Honorary Villager of Teher, Armenia

1998 – Honorary Member of Artists Union of Armenia, Yerevan

2003 – Honoured Scientist, IAELPS, St.Petersburg

5. SCIENTIFIC (THEORETICAL AND TECHNOLOGICAL) ACTIVITY

He founded a line of the first in the World scientific directions, which are accepted now and in use in developed countries.

In Theory:

5.1. Theory and calculation Methods of the Large Doublemirror Antennas with Fixed Spherical Main Mirror (1958 – 64),

5.2. Theory and equations of Electromagnetic field Diffraction on the Holes (apertures) of different configurations; Methods of Near Field Transformation to Far Field (1963 – 65),

5.3. Radioholography. New Methods of field determination in space by measurements of complex field near (NF) the emitting or scattering objects (1964 – 68),

5.4. Methods of Near-to-Far Field (NF – FF) measurements of antenna parameters (1967 – 70),

5.5. Theory and Methods of Parameters Determination of Scattering Objects (RCS) by NF-FF Measurements (1984 – 87),

5.6. Theory of field diffraction in antenna edges when illuminated the part of main aperture (1963 – 64),

5.7. The Antenna Metrology. Theory and Primary Standards of Antenna Parameters (1970 – 75),

5.8. Statistic Theory and Methods of Multi-beam Antenna Parameters Measurement (1970 – 72),

5.9. Theory and Methods of Antenna Parameters Measurement on Spherical Surface in NF (1980 – 84),

5.10. Theory and Methods of calculation of the New type of powerful Solar Power Station with one fixed spherical Collimator (1991 – 94),

In Experiment he:

5.11. Projected, built and used Doublemirror Antenna with Fixed Spherical Main Mirror of 5 m in diameter (DAS-5) which at that time was the largest in World in short mm waverange (1959 – 62),

5.12. Projected, built, adjusted and used the First Radio-Optical Telescope (ROT-54/2.6) – the "Herouni Mirror Radiotelescope"(name of Patent) – the Large Antenna of which with diameter 54m has the best parameters among all Large Antennas in the World (1960 – 88),

5.13. Disavows, due to exceptionally low level of ROT-54/2.6 Self Noises, the existence of so-called "background emission" and the cosmogonic theory of Universe formation by "Big Bang" (1988 – 92),

5.14. Espied the powerful Radio-Flare on the Etta Gemini red giant Star; the powerful flares on this type of stars were unknown (1985),

5.15. Received (measured) the first in the World Radiohologramm (of complex field in aperture of 0.5m antenna at wavelength 8 mm),

5.16. Projected and built at first in the World many high effective Automatic Systems of equipment for NF – FF Parameters Measurement of different type Antennas on different wavelengths (1968 – 93),

5.17. Projected and built eleven the first in the World National Primary Standards of Antenna Parameters and Phase Shift Angle on SHF and Microwaves (1971 – 91),

5.18. Projected and built the first System of equipment with the Antenna of 18m in diameter for parameters measurement of on-board antennas of flying crafts under conditions of their real flight (1976 – 79),

5.19. Projected and built at altitude 3200m the unique Antenna of submillimeter waverange (0.1mm – 3cm) with diameter of 3.2m (1987 – 91),

5.20. Presented the "AREV" Project of the New Type of Powerful, high effective and ecologically pure Solar Power Plant and built 70% of the first Prototype with output power of 350 kW (1992 – 2004),

5.21. Using astronomical methods Proved that Prehistoric stone big Monument near town Sisian in Armenia was the first in the World, large and developed Observatory "Carahunge" having the age more than 7500 years (1994 – 2002),

5.22. At the first in Armenia projected and built Antennas and Radioreceivers for waveranges of 50cm and 8mm (1957 – 62).

6. Professor Paris Herouni has 350 published Scientific Works, including 243 Printed ones, 3 Monographs and 23 Patents.

He also spoke many times on the air and TV, printed articles in newspapers and magazines with science popularization.

There were many publications about him and his works in mass media of USSR, Russia, Armenia, USA, France, U.K., Italy and other countries.

7. SOME MAIN SCIENTIFIC PUBLICATIONS.

FOUNDATION OF NEW SCIENTIFIC DIRECTIONS

1957 – First Patent Application

1958 – First Publications (in Russian)

1959 – 62 – Design and Construction of 5m Spherical Doublemirror Antenna of mm Waverange

1960 – 64 – Design and Calculation of Spherical Doublemirror Antennas. "Radiotechniques and Electronics", (RE), v.9, No 1, p.3-12, Moscow, 1964 (in Russian).

– Waves Diffraction and Far Field Pattern of Spherical Doublemirror Antenna. "News of Armenia Acad. of Sci., Physics", Yerevan, 1964

Founded the New Direction on Large Antennas Construction, 1964

1964 – 65 – The field of Round and Rectangular Holes in Far Field. RE, v. 10, No 9, p.1594-1599, Moscow, 1965 (in Russian).

Founded the New Direction on Near-to-Far Field (NF-FF) Transformation, 1964

1968 – Five Meter Spherical Antenna of mm Waverange, "Antennas", Collected Articles, v. 4, p.3-15, Moscow, 1968 (in Russian).

Obtained the First in the World Radiohologramm (in Aperture of 0.5m Antenna, in 8 mm wave), 1968

1968 – 70 – Antenna Parameters Measurement in their Aperture Zone. Trans. of All-Union Confer. on Metrology in Radioelectronics, p.82, Moscow, 1970 (in Russian)

Founded Radioholography and Near-to-Far Field (NF-FF) New Methods and Facilities for Antenna Parameters Measurement (1964 – 68)

1971 – Methods of Information Processing by Coherent Optic Systems, Trans. of II Intern. Symposium on Information Theory, Armenia – Tsahkadzor, 1971

– Device for Parameters Measurement of Narrow-Beam Emitters (Antennas), SU Patent No 534128, 15.12.1971, Moscow

1971 – 72 – Unity Provision of Antenna Measurements in Country, Trans.of II All-Union Confer. on Metrology and Exact Measurements, 6p., Tbilisi, 1971 (in Russian)

– State Standard Centre on Antenna Measurements, Proc. of XIX All-Union Confer. on Antenna Theory and Technique, 12p., Moscow, 1972 (in Russian)

Founded the "Antenna Metrology" New Direction, 1971

1976 – Radioholography and Modern Methods of Antenna Measurements, Works on "Radio- and Acoustic Holography", Collected Articles, p.85-97, "Science", St.Petersburg, 1976 (in Russian)

1977 – "Antenna Measurements. Terms and Definitions", 44p., RMI, Yerevan, 1977 (in Russian)

1978 – Panoramic Radar. SU Patent 123477, 02.02.1978, Moscow

– The Narrow-Beam Antennas. Method of Parameters Measurement in Near Field (State Standard 8.309-78), 6p., Moscow, 1978 (in Russian)

1979 – Antenna System of 18m in diameter (RT-18). "Antenna Measurements", Proc. of I All-Union Confer. on Antenna Metrology, p.13-23, RMI, Yerevan, 1979 (in Russian)

Founded the New Type Facility for Parameter Measurements of Onboard Antennas under Real Flight Conditions, 1979

1980 – 81 – About one Method of RT-18 Antenna Certification based on expansion of its field in spherical harmonics. Proc. of All-Union Confer. on Radiotechnical Measurements, 2p., Novosibirsk, 1980 (in Russian)

– Facility "Sphere" for Antenna Parameters Measurement on the Spherical Surface in NF. Report, RMI, 52p., Yerevan, 1981 (in Russian)

Founded the New Method of NF Antenna Measurements on Spherical Surface (Spherical NF-FF), 1980

1982 – Facility for Certification of Onboard Antennas in Flight. SU Patent 181719, 11.01.1982, Moscow

– Parallel Aperture Synthesis. Trans. of 14-th All-Union Confer. on Radioastronomical Antennas, p.238-239, Yerevan, 1982 (in Russian)

1984 – Determination of Radar Cross-Section (RCS) of Objects by NF Measurements. Proc. of III All-Union Conf. on Antenna Measurements, p.28-29, RMI, Yerevan, 1984 (in Russian)

– Determination of RCS of Ball by NF Measurements. Ibidem, p.219-221

Founded the New Method of RCS Determination of the Objects by their scattered Near Field Measurements, 1984

1986 – "Herouni Mirror Radiotelescope". SU Patent 1377941, 02.01.1986,

Moscow

1987 – Determination of RCS from NF Measurements. "Report of USSR Acad. of Sci.", v. 292, No 4, p.849-853, Moscow, 1987 (in Russian)

1989 – The First Radio-Optical Telescope. Trans. of the VI Internat. Confer. on Antennas and Propagation ICAP-89, v. 1, p.540-546, IEE-URSI, U.K., 1989

– Radio Flare on Etta Gemini Star. Trans. of the IAU 137-th Internat. Symp. on Flare Stars, p.145-146, Byurakan, 1989

1990 – Near Field Measurements and Standard Antennas. Abstr. of URSI XXIII General Assembly, v. 1, p.266, Prague, 1990

– Construction and Operation of Radio-Optical Telescope ROT-54/2.6. Trans. of URSI Internat. Meeting on Mirror Antennas, p.34-41, Riga, 1990

– "Antenna Measurements. Terms and Definitions", 130p., RMI, Yerevan, 1990 (in Russian, Armenian, English)

– The Optical Telescope of ROT-54/2.6 using. Trans. of V All-Union Confer. on Antenna Measurements, p.57-59, RMI, Yerevan, 1990

1991 – History of NF-FF and Holography in the USSR. Trans. of XIV ESA Symp. on Antenna Measurements, p.5-18, ESTEC, Netherlands, 1991

– Radio-Optical Telescope ROT-54/2.6 and Radioholography. Reports at the Colloquiums in Universities of Manchester (Jodrel Bank), Sheffield, Cambridge (Cavendish Lab.), U.K., 1991

– The New Millimeter Wave Radiotelescope in Armenia. Reports at the Colloquiums in Universities of Cornel, California (Berkeley), Massachusetts and Radio Observatories in New-Mexico (VLA) and Aresibo (Porto Rico), USA, 1991

1992 – Solar Power Station. RF Patent 2034204, 18.08.1992, Moscow

Founded the New Powerful, High Effective and Ecologically Pure Type of Solar Power Plants "AREV" (the Sun), 1992

1993 – The New Millimeter Waverange Radiotelescope in Armenia. Report on URSI XXIV General Assembly, Kyoto, Japan, 1993

– The RMI Achievements in Antennas and Radioholography. Reports at the workshops in Thomson Corp. (Paris), Medon and Nancies Observatories, France, 1993

1994 – "AREV-100" Project. 31p., RMI, Yerevan, 1994 (in Russian and English)

– Solar Powerful Device. U.K. Patent Appl. 9412260.3, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01401, 15.06.1995

– Solar Powerful Rotational Machine. U.K. Patent Appl. 9412243.9, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01412, 15.06.1995

1997 – Determination of Scattering Properties of Radar Objects by Near-Field Measurements. Proc. of III Internat. Confer. on Antennas and Radiocommunication Systems, v. 2, p.85-91, Voronezh, 1997

1997 – 98 – Carahunge – the Oldest Stone Observatory in Armenia. Report on Internat. Confer. on Archaeoastronomy, Moscow, 1997 and "Proc. of IV Congress of Astronomical Society", p.350-362, Moscow, 1998 (in Russian)

1998 – Prehistoric Stone Observatory "Carahunge". "Reports of National Acad. of Sci. of Armenia", No 5, p.307-328, Yerevan, 1998 (in Russian)

Founded the Research Showing that the old stone Monument near town Sisian in Armenia was the large, developed and oldest in the World

Observatory "Carahunge" with the age over 7500 years

1999 – 2000
- About Self Noises of Radio-Optical Telescope ROT-54/2.6 Antenna. "Journal of Applied Electromagnetism", p.51-57, Athens, Greece, 1999
- Parameters of Large Antenna of the First Radio-Optical Telescope ROT-54/2.6. Proc. of LV Sci. Session on Radiotechnique, Electronics and Communication, p.61-62, Moscow, 2000 (in Russian)

Founded the Research Showing that the Evolution of Universe was Without "Big Bang", 1988-98

2001
- Herouni Methods and Facilities for Determination of Objects' RCS and Antenna Parameters. Armenian Patent N. 1138, 26.07.2001

2002 – 04
- Carahunge – the Prehistoric Observatory in Armenia. Proc. of Internat. Confer. on Archaeoastronomy, 9p., Sanremo, Italy, 2002; will be printed in "Giornale di Astronomia", Roma, 2004

8. MAIN VISITS ABROAD

1958 – China, for Sun Eclipse observation in waverange 50cm

1961 – USA, report about Theory of The New Type of the Large Antenna System at General Assembly of Internat. Astronom. Union (University of California, Berkeley)

1962 – U.K., invited for 3 months at Jodrel Bank (Univers. of Manchester) and Cavendish Lab. (Univ. of Cambridge) for joint observations and reports about Theory of the New Type of Large Antenna System

1989 – U.K., report about ROT-54/2.6 at Internat. Conference ICAP-89 of International Union of Radio Science (URSI)

1990 – Czechoslovakia (Prague), invited report on Antenna Measurements in Near Field, at XXIII General Assembly of URSI

– U.K., invited report on Near Field (NF), University of Sheffield

– Latvia (Riga), invited report on ROT-54/2.6 at Internat. Conference of URSI

1991 – USA, invited reports on ROT-54/2.6 and NF-FF in Universities of Massachusetts, Cornell, California (Berkeley) and in Radio Observatories of New-Mexico (VLA), Aresibo (Porto-Rico)

– U.K., invited reports on ROT-54/2.6 in Universities of Manchester, Warwick, Cambridge, York, Sheffield

– Netherlands, invited report on Radioholography and NF-FF at ESTEC, European Space Agency (ESA)

1993 – France (VIP), invited reports on ROT and NF-FF in Paris (Thomson Corporation) and Observatories in Medon and Nancies

1994 – U.K., invited reports on AREV Project in London and Cambridge

– Russia, for AREV Project, St.Petersburg, N.Novgorod, Bor

1995 – U.K., invited reports on AREV and NF-FF in London, Cambridge, Manchester, Malvern, (+Stonehenge)

– Russia, Moscow, St.Petersburg (Sci. Confer. and AREV)

– France, Paris (Corpor. Thomson, SOFRATEV)

1997 – Russia, Moscow, St.Petersburg and Voronezh (invited reports about RCS and AREV at Internat. Sci. Conference)

1998 – Russia, Moscow, invited report about National Standards for Antenna Parameters at Sci. Conference of Commonwealth of Independent States

9. SCIENTIFIC – PUBLIC ACTIVITY

1965 - still now	– Member of Scientific Council on Radioastronomy of Russian Acad. of Sci.; from 1997 is the member of this Council Board, Moscow
1965 -1992	– Member of a line of USSR Acad. of Sci. Scientific Councils and Inter-Department Coordinational Councils (on Holography, Antennas, Metrology and oth. problems), Moscow
1979 - still now	– Chairman of Specialized Scientific Council in RRI on graduation of Ph.D. and Dr. of Sci. Scientific Degrees, Yerevan
1980 - still now	– Member of Editorial Board of Scientific journal "Measurement Engineering", Moscow
1985 - 1992	– Chairman of Armenian Acad. of Sci. Council on Radioelectronics
1985 - still now	– Member of Euro-Asian Astronomical Society, Moscow
1990 -1996	– Member of Internation. Union of Radio Science (URSI), G.B., two times: as the Representative of USSR (1990 – 93), then - of Russia (1993 – 96)
1998 - still now	– Member of IEEE, USA
2000 - still now	– Member of the Group "People-to-People Ambassador" (USA) including 30 the top scientists of the World, the Honorary president of which is the President of USA
2001 - still now	– Member of Editorial Board of the journal "Herald of IAELPS", St.Petersburg
2002 - still now	– Member of Scientific –Consulting Board of the journal "Armenian Army", Yerevan

10. SCIENTIFIC – PEDAGOGICAL ACTIVITY

1960 - 1963	– Lectures on Radiophysics (at first in Armenia) in Yerevan State University
1963 -1990	– Lectures on Antenna Systems (at first in Armenia) in State Engineering University of Armenia, Yerevan
1970 - still now	– Prepared 24 Ph.D. and 5 Dr. of Sci., Yerevan
1983 - still now	– Head of Graduate School of RRI, Yerevan

11. SCIENTIFIC – ORGANIZATIONAL ACTIVITY. HE FOUNDED

1958 - 1960	– Radiophysical Constructional Bureau in Byurakan Astrophysical Observatory
1960 - 1968	– Armenian Acad. of Sci. Institute of Radiophysics and Electronics in town Ashtarak
1968 - 1971	– Armenian Department in Yerevan of All-Union Physics-Technical and Radiotechnical Research Institute (Moscow)
1971 - still now	– All-Union Radiophysics Measurement Research Institute (RMI) in Yerevan, the name of which from 2000 is Radiophysics Research Institute (RRI)

1972 - still now – Experimental Plant "Wave" of RRI, in Yerevan

1975 - still now – National Standard Centre on Antennas of RMI, which now is Mount Aragats Scientific Centre of RRI, Mount Aragats, near villages Orgov and Tegher, on altitude 1720m., Armenia

1978 - 1990 – Periodical (once per 3 years) All-Union Conferences on Antenna Measurements in RRI (VKAI – 1, 2, 3, 4, 5), Yerevan

1979 - still now – Specialized Scientific Council in RRI on graduation of Scientific Degrees of Ph.D. and Dr. of Sci., Yerevan

1983 - still now – Graduate School in RRI, Yerevan

1983 - still now – "Antenna Systems" Chair of RRI in State Engineering University of Armenia, Yerevan

10. AWARDS

1970 – Medal "For Prowess Labour", Moscow

1980 – Gold Medal of USSR All-Union Industrial Exhibition in Moscow

1983 – Order "Red Banner of Labour", Moscow

1984 – Silver Medal of Catholicos of all Armenians Vazgen I, St. Echmiatsin

1985 – State Prize of Armenia (in the field of Science), Yerevan

1986 – State Prize of USSR (in the field of Radar), Moscow

1988 – Medal of Labour Veteran, Moscow

1991 – International Prize of IEE-URSI for the work "The First Radio-Optical Telescope", Great Britain

1997 – Bronze Medal of France Foreign Ministry, France Emb., Yerevan

2002 – Lomonosov's Gold Medal, IAELPS, St.Petersburg

2003 – Gold Medal of National Acad. of Sci. of Armenia

2003 – Gold Medal of Ministry of Education and Science of Armenia

2003 – Gold Medal of State Engineering University of Armenia

2003 – Gold Medal of National Council of Trade-Unions of Armenia

2003 – Order "The Star of Scientist", IAELPS, St. Petersburg

May 2004

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ՏԵՂԵԿՈՒԹՅՈՒՆ

Ակադեմիկոս Պարիս Միսակի ՀԵՐՈՒՆԻ

Հայրը՝ Միսակ Մաքնոսի Հերունի, ծնվել է 1906թ. Հաճն քաղ. (Կիլիկիա), մահացել է Երևանում 1986թ.
Մայրը՝ Սեդա Նիկողոսի Հերունի (Ազատյան), ծնվել է 1908թ. Իգդիր քաղ.,մահացել է Երևանում 1982թ.

Նա ամուսնացած է, ունի երկու որդի և մեկ դուստր:

1. Ծնվել է 1933թ. դեկտեմբերի 17-ին Երևանում, ուսուցիչների ընտանիքում:
Ավարտել է Երևանի № 30 Վ.Չկալովի անվան դպրոցը 1951թ.:

2. Աշխատանքային գործունեությունը

1951-1957 - Մոսկվայի Էներգետիկական ինստիտուտի Ռադիոտեխնիկական ֆակուլտետ
1957-1960 - Ռադիոհնձեներ, գիտաշխատող, Ռադիոֆիզիկական կոնստրուկտո-բային բյուրոյի պետ Բյուրականի աստրոֆիզիկական աստղադիտարանում, Հայաստան
1960-1968 - Հայաստանի Գիտությունների ակադեմիայի Ռադիոֆիզիկայի և էլեկտրոնիկայի ինստիտուտի տնօրենի տեղակալ գիտության գծով և ԳԲՀ բաժնի վարիչ, ք. Աշտարակ
1968-1971 - Ֆիզիկատեխնիկական և ռադիոտեխնիկական չափումների համամիութենական ԳՀԻ (Մոսկվա), Ռադիոֆիզիկական չափումների հայկական բաժանմունքի տնօրեն, Երևան
1971-մինչ այժմ - Ռադիոֆիզիկական չափումների համամիութենական ԳՀԻ (ՌՉՀԳՀԻ, Երևան) տնօրեն, իսկ 1983թ.-ից՝ Գլխավոր տնօրեն, որը 2000թ.-ից կոչվում է Ռադիոֆիզիկայի ԳՀԻ (ՌԳՀԻ), Երևան
1983-մինչ այժմ - Հայաստանի Պետական ճարտարագիտական համալսարանում «Անտենային համակարգեր» ՌԳՀԻ-ի բազային ամբիոնի վարիչ, Երևան

3. Գիտական աստիճանները և կոչումները

1965 – Տեխնիկական գիտությունների թեկնածու (Ռադիոտեխնիկա, պաշտպ. Մոսկվայում)
1968 – Դոցենտ, Երևանի Պոլիտեխնիկական ինստիտուտ
1972 – Տեխնիկական գիտությունների դոկտոր (Ռադիոֆիզիկա, պաշտպ. Մոսկվայում)
1982 – Հայաստանի Գիտությունների ակադեմիայի թղթակից-անդամ, Երևան
1983 – Պրոֆեսոր (Ռադիոֆիզիկա, ՌՉՀԳՀԻ)
1996 – Հայաստանի Գիտությունների ազգային ակադեմիայի ակադեմիկոս, Երևան
1999 – Հայաստանի Ճարտարագիտական ակադեմիայի ակադեմիկոս, Երևան
2001 – Էկոլոգիական և կենսագործունեության անվտանգության գիտությունների Միջազգային ակադեմիայի ակադեմիկոս (IAELPS), Ս.– Պետերբուրգ
2001 – Հայաստանի Տեխնոլոգիական ակադեմիայի ակադեմիկոս, Երևան

4. Պատվավոր կոչումները

1985 – Հայաստանի Տեղեր գյուղի պատվավոր բնակիչ
1998 – Հայաստանի Նկարիչների միության պատվավոր անդամ
2003 – Գիտության վաստակավոր գործիչ, IAELPS, Ս.-Պետերբուրգ

5. Գիտական (տեսական և էքսպերիմենտալ) գործունեությունը

Նա հիմնել է մի շարք աշխարհում նոր գիտական ուղղություններ, որոնք այժմ ճանաչված են և կիրառվում են զարգացած երկրներում:

Տեսության ասպարեզում նա ստեղծել է.

5.1. Անշարժ սֆերիկ գլխավոր հայելով մեծ երկհայելի անտենաների տեսությունը և հաշվարկի մեթոդները (1958-64),
5.2. Տարբեր կոնֆիգուրացիա ունեցող անցքերի (բացվացքների) վրա էլէկտրամագնիսական ալիքների դիֆրակցիայի տեսությունը և հավասարումները, ինչպես նաև գրգռված անցքերի դաշտից դեպի հեռավոր զոնայի դաշտ անցման մեթոդները (1963-65),
5.3. Ռադիոհոլոգրաֆիա; տարածության մեջ դաշտերի որոշման նոր մեթոդներ ճառագայթող և ցրող օբյեկտների մոտիկ դաշտում (բացվածքի զոնայում) կոմպլեքս դաշտերի չափման եղանակով (1964-68),
5.4. Անտենաների հեռավոր զոնայում բնութագրերի որոշման մեթոդները նրանց մոտիկ զոնայի դաշտի չափման եղանակով (1967-70),
5.5. Ցրող օբյեկտների բնութագրերի որոշման տեսությունը և մեթոդները նրանց մոտիկ դաշտի չափման եղանակով (1984-87),
5.6. Անտենայի եզրերում դաշտի դիֆրակցիայի տեսությունը, երբ լուսավորված է նրա բացվածքի մի մասը (1963-64),
5.7. Անտենաների մետրոլոգիա (չափագիտություն); տեսությունը և անտենաների բնութագրերի էտալոնները (1970-75),
5.8. Բազմաճառագայթային անտենաների վիճակագրական տեսությունը և նրանց բնութագրերի չափման մեթոդները (1970-72),
5.9. Անտենաների բնութագրերի որոշման եղանակը (տեսություն և մեթոդներ) նրանց մոտիկ դաշտը սֆերիկ մակերեսի վրա չափման միջոցով (1980-84),
5.10. Մեկ անշարժ սֆերիկ կոլիմատոր ունեցող նոր տեսակի Արեգակնային հզոր Էլեկտրակայանի տեսությունը և հաշվարկների մեթոդները (1991-95):

Էքսպերիմենտում նա.

5.11. Նախագծել, կառուցել, և օգտագործել է Երկհայելի Անտենա անշարժ սֆերիկ գլխավոր հայելով՝ 5մ. տրամագծով, այն ժամանակ աշխարհում խոշորագույնը մմ կարճ ալիքների տիրույթում (1959-62),
5.12. Նախագծել, կառուցել, համալրել և օգտագործել է աշխարհում առաջին Ռադիո-օպտիկական աստղադիտակը (ՌՕԴ-54/2.6)՝ «Հերունու հայելային ռադիոդիտակը» (պատենտի անվանումը), որի Մեծ Անտենայի (տրամագիծը՝ 54մ) բնութագրերը գերազանցում են աշխարհի բոլոր մեծ անտենաների բնութագրերը (1960-88),
5.13. Ժխտում է (ՌՕԴ-54/2.6-ի սեփական աղմուկների բացառիկ ցածր մակարդակի շնորհիվ) այսպես կոչված «ռելիկտային ֆոնի» առկայությունը և Տիեզերքի ծագման «Մեծ Պայթյունի» կոսմոգոնիական տեսությունը (1988-92),

5.14. Հայտնաբերել է հզոր ռադիոբռնկում Երկվորյակների Էտտա աստղի վրա, որը կարմիր հսկա է, որոնց վրա հզոր բռնկումները նախկինում հայտնի չէին (1985),
5.15. Ստացել է (չափումների միջոցով) աշխարհում առաջին Ռադիոհոլոգրամմաև (0.5 մ անտենայի բացվածքում 8 մմ ալիքի վրա):
5.16. Նախագծել և կառուցել է աշխարհում առաջինը՝ մի շարք բարձր էֆեկտիվ Ավտոմատիկ սարքավորման համալիրներ տարբեր տեսակի անտենային համակարքերի բնութագրերի չափման համար նրանց մոտիկ զոնայում, տարբեր ալիքների վրա (1968-93),
5.17. Նախագծել և կառուցել է ԳԲՀ ու միկրոալիքների անտենաների բնութագրերի և փուլերի շեղման անկյան աշխարհում առաջին Ազգային Սկզբնային տասնմեկ էտալոնները (1971-91),
5.18. Թռչող ապարատների վրա տեղադրված անտենաների բնութագրերի չափման համար (նրանց ռեալ թռիչքի պայմաններում) ստեղծել է սարքավորումների առաջին համալիրը, որն ընդգրկում է 18մ տրամագծով հատուկ անտենա (1976-79),
5.19. Նախագծել և կառուցել է 3200մ բարձրության վրա սուբմիլիմետրային տիրույթի (0,1մմ-3սմ) եզակի երկհայելի անտենա՝ 3,2մ տրամագծով (1987-91),
5.20. Առաջարկել է նոր տիպի բարձր արդյունավետությամբ և էկոլոգիապես մաքուր Արեգակնային հզոր էլեկտրակայան («Արև» նախագիծ) և կառուցում է նրա առաջին էքսպերիմենտալ օրինակը ՝ 350 կՎտ հզորությամբ, ՌԳՀԻ-ի Արագածի գիտական կենտրոնում 1750մ բարձրության վրա (1992-2004),
5.21. Աստղագիտական մեթոդներով ապացուցել է, որ Սիսիան քաղաքի մոտ գտնվող նախապատմական քարե հուշարձանն իրենից ներկայացրել է աշխարհում առաջին, հզոր և բարձր զարգացած Աստղադիտարան, «Քարահունջ» անունով, որն ակտիվորեն գործել է ավելի քան 7500 տարի առաջ (1994-2002),
5.22. Նախագծել և կառուցել է Հայաստանում առաջին անտենաներն ու ռադիոընդունիչները՝ 50 սմ և 8 մմ ալիքների տիրույթներում (1957-62):

6. Ակադեմիկոս Պ. Հերունին ունի 350 հրապարակված գիտական աշխատություններ, այդ թվում՝ 243 տպագիր, 3 մենագրություն և 23 արտոնագիր:

Նա բազմիցս ելույթ է ունեցել նաև թերթերում և ամսագրերում, ռադիոյով և հեռուստատեսությամբ, պրոպագանդելով գիտական նորությունները:

Նրա մասին եղել են շատ հրապարակումներ ԽՍՀՄ-ի, Ռուսաստանի, Հայաստանի, ԱՄՆ-ի, Ֆրանսիայի, Իտալիայի և այլ երկրների զանգվածային լրատվական միջոցներով:

7. Որոշ հիմնական գիտական հրապարակությունները: Նոր հիմնադրված գիտական ուղղությունները:

1957 - Առաջին գյուտի հայտը
1958 - Առաջին հրապարակությունը
1959-62 - 5 - մետրանի սֆերիկ երկհայելի անտենայի (ալիքային մմ - տիրույթի համար) նախագծումը և ստեղծումը
1960-64 - **Проект и расчет сферических двухзеркальных антенн. «Радиотехника и Электроника» (РЭ), т. 9, №1, с. 3-12, Москва, 1964**
- **Диффракция волн и диаграмма направленности сферической двухзеркальной антенны. "Известия АН Арм. ССР, Физика", Ереван, 1964**

Հիմնադրել է Մեծ Անտենաների ստեղծման նոր ուղղություն, 1962

1964-65 - **Поле круглого и прямоугольного отверстий в дальней зоне. РЭ, т.10, №9, с. 1594-1599, Москва, 1965**

Հիմնադրել է Մոտիկ դաշտը – Հեռու դաշտ (ՄԴ – ՀԴ) ձևափոխման տեսական նոր ուղղությունը, 1964

1968 - **Пятиметровая сферическая антенна мм диапазона. Сборник «Антенны», т. 4, с. 3-15, Москва, 1968**

Ստացել է (չափել) աշխարհում առաջին Ռադիոհոլոգրամը (0.5 մետրանոց անտենայի բացվածքում, ալիքների 8 մմ - տիրույթում, 1968

1968-70 - **Измерение параметров антенн в зоне их раскрыва. Труды Всесоюзной Конференции по метрологии в радиоэлетронике, с. 82, Москва, 1970**

Հիմնադրել է Ռադիոհոլոգրաֆիան և Անտենաների բնութագրերի իրենց մոտիկ գոնայում չափման (ՄԴ – ՀԴ) նոր մեթոդներն ու սարքերը, 1964-68

1971 - **Methods of Information Processing by Coherent Optic Systems. Trans. of II Internat. Symposium on Information Theory, Tsahkadzor, 1971**

- **Устройство для измерения параметров остронаправленных излучателей. SU Авторск. свидет. 534128, 15.12.1971, Москва**

1971-72 - **Обеспечение единства антенных измерений в стране. Тр. II Всесоюзн. конфер. по метрологии и точным измерениям, 6 стр., Тбилиси, 1971**

- **Гос. Эталонный центр по антенным измерениям. Тр. XIX Всес. конфер. по Теории и Технике Антенн, 12 стр., Москва, 1972**

Հիմնադրել է «Անտենաների չափագիտություն» նոր ուղղությունը, 1971

1976 - **Радиоголография и современные методы антенных измерений. Сборник «Радио – и акустическая голография», с. 85-97, «Наука», С.–Петербург, 1976**

1977 - **Антенные измерения. Термины и определения, 44 стр., ВНИИРИ, Ереван, 1977**

1978 - **Панорамный радиолокатор. SU Авторск. свидет., 123477, 02.02.1978, Москва**

- **Антенны остронаправленные. Метод измерения параметров в ближней зоне (ГОСТ 8,309 – 78), 6 стр., Москва, 1978**

1979 - **Антенная система диаметром 18 м (РТ-18). «Антенные измерения», Тр. I Всесоюзн. конфер. по метрологии антенн, с. 13-23 ВНИИРИ, Ереван, 1979**

Հիմնադրել է սարքավորումների համալիրի նոր տեսակ՝ թռչող ապարատների վրա տեղադրված անտենաների բնութագրերի չափման համար, իրական թռիչքի պայմաններում, 1979

- **Об одном методе аттестации антенны ОСА –18, основанном на разложении ее поля по сферич. гармоникам. Тр. Всесоюзн. конфер. «Радиотехнич. Измерения», 2с., Новосибирск, 1980**

1980-81 - **Комплекс «Сфера» для измерения параметров антенн на сферической поверхности в зоне раскрыва, Отчет ВНИИРИ, 52 стр., Ереван, 1981**

Հիմնադրել է անտենաների բնութագրերի չափման նոր մեթոդ՝ նրանց մոտիկ գոնայում գտնվող սֆերիկ մակերեսի վրա (Սֆերիկ ՄԴ – ՀԴ), 1980

1982 - **Устройство для аттестации бортовых антенн в полете. SU Авторск. свидет. 181719, 11.01.1982, Москва**

- **Параллельный апертурный синтез. Тр. XIV Всесоюзн. конфер. «Радиоастрономические антенны», с. 238-239, Ереван, 1982**

1984 - **Определение эффективной поверхности рассеяния (ЭПР) объектов по измерениям в ближней зоне. Тр. III Всесоюзн. конфер. по антенным измерениям, с. 28-29, ВНИИРИ, Ереван, 1984**

- **Определение ЭПР шара по измерениям в ближней зоне. Там же, стр.219-221**

Հիմնադրել է օբյեկտների գրման էֆեկտիվ մակերեսի որոշման նոր մեթոդը՝ նրանց մոտակա դաշտի չափման եղանակով, 1984

1986 - **«Зеркальный радиотелескоп Геруни». SU Авторск. свидет. 1377941, 02.01.1986, Москва**

1987 - Определение ЭПР по измерениям в ближней зоне. «Доклады АН СССР», т. 292, №4, с. 849-853, Москва, 1987

1989 - The First Radio – Optical Telescope. Trans. of the VI Internat. Confer. on Antenna and Propogation, ICAP – 89, v.1, p. 540-546, IEE – URSI, U.K., 1989

- Radio Flare on Etta Gemini Star. Trans. of the IAU 137-th Internat Sump. on Flare Stars, p. 145-146, Byurakan, 1989

1990 - Near Field Measurements and Standard Antennas. Abstr. of URSI XXIII General Assembly, v.1, p. 266, Praha, 1990

- Construction and Operation of Radio – Optical Telescope ROT–54/2,6. Trans. of URSI Internat. Meeting on Mirror Antennas, p. 34-41, Riga, 1990

- Антенные измерения. Термины и определения, 130 стр., ВНИИРИ, Ереван, 1990, (на русском, армянск. и английск. яз.)

- Измерения на Оптическом Телескопе РОТ–54/2,6. Труды V Всес. конфер. по Антенным измерениям, стр. 57-59, ВНИИРИ, Ереван, 1990

1991 - History of NF –FF and Holograpy in the USSR. Trans. of XIV ESA Sump. on Antenna Measurements, p. 5-18, ESTEC, Netherlands, 1991

- Radio – Optical Telescope ROT–54/2,6 and Radioholograpy. Reports at the Colloquiums in Universities of Manchester (Jodrel Bank), Sheffield, Cambridge (Cavendish Lab.), U.K., 1991

- The New Millimeter Waverange Radiotelescope in Armenia. Reports at the Colloquiums in Universities of Cornel, California (Berkly), Massachusetts and Radio Observatories in New–Mexico (VLA) and Aresibo (Porto Rico), USA,1991

1992 - Солнечная электростанция. Патент РФ 203204, 18.08.1992, Москва

Հիմնադրել է նոր տեսակի, բարձր էֆեկտիվ, էկոլոգիապես մաքուր, հզոր Արեգակնային էլեկտրակայան (ԱՐԵՎ), 1992

1993 - The New Millimeter Waverange Radiotelescope in Armenia. Report on URSI XXIV General Assembly, Kyoto, Japan, 1993

- The RMI Achivements in Antennas and Radioholography. Reports at the workshops in Thomson Corp. (Paris), Medon and Nansies Observatotories, France, 1993

1994 - «АРЕВ – 100» Проект, 31 с., ВНИИРИ, Ереван, 1994

- Solar Powerful Device. U.K. Patent Appl. 9412260.3, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01401, 15.06.1995

- Solar Powerful Rotational Machine. U.K. Patent Appl. 9412243.9, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01412, 15.06.1995

1997 - Determination of Scattering Properties of Radar Objects by Near – Field Measurements. Proc. of III Internat. Confer. on Antennas and Radiocommunication Systems, v.2, p. 85-91, Voronezh, 1997

1997-98 - Карахундж – древнейшая каменная обсерватория в Армении. Доклад на Междунар. конфер. по археастрономии, Москва,1997 и «Труды IV Съезда Астрономического Союза», с. 350-362, Москва, 1998

1998 - Доисторическая каменная обсерватория «Карахундж». «Доклады Национ. Акад. наук Армении», № 5, с. 307-328, Ереван, 1998

Հիմնադրել է հետազոտություններ, որոնք ապացուցել են, որ Հայաստանում, Սիսիան քաղ. մոտ գտնվող հնագույն քարե հուշարձանը եղել է աշխարհում ամենա հին, մեծ և զարգացած «Քարահուհունջ» անունով Աստղադիտարանը, որն ակտիվ գործել է մեզանից ավելի քան 7500 տարի առաջ, 1994

1999-2000 - About Self Noises of Radio – Optical Telescope ROT–54/2,6 Antenna. « Journal of Applied Eletromagnetism», p. 51-57, Athens, Greece, 1999

- Параметры большой Антенны Первого Радио –Оптического Телескопа

РОТ–54/2,6. Труды LV научн. сессии по радиотехнике, электронике и связи, с. 61-62, Москва, 2000

Հիմնադրել է հետազոտություն, որը ցույց է տվել, որ Տիեզերքի զարգացումը տեղի է ունեցել առանց «Մեծ Պայթյունի», 1988-98

2001 - Էլեկտրամագնիսական ալիքներ ցրող օբեկտների և անտենաների բնութագրերի որոշման եղանակ (տարբերակներ) ըստ Հերունու և այն իրականացնելու սարք (տարբերակներ): ՀՀ պատենտ 1138, 26.07.01

2002-04 - **Carahunge – the Prehistoric Observatory in Armenia. Proc. of Internat. Confer. on Archaeoastronomy, 9p, Sunremo, Italy, 2002; will be printed in «Giornal di Astronomia», Roma, 2004**

8. Հիմնական ուղերցներն արտասահման

1958 - Չինաստան, Արևի խավարման դիտումներ՝ 50 սմ ալիքային տիրույթում

1961 - ԱՄՆ, նոր տեսակի Մեծ Երկհայելի Անտենաների տեսության մասին՝ Միջազգ. Աստղագիտ. Միության Գլխավոր Ասամբլեայում (Կալիֆորնիայի համալսարան, Բերկլի)

1962 - Մեծ Բրիտանիա, հրավիրվել է 3 ամսով Ջոդրել Բենկ (Մանչեստերի համալսարան) և Կավենդիշի Լաբոր. (Կեմբրիջի համալս.) համատեղ դիտումների և նոր տեսակի Մեծ Անտենայի մասին զեկուցումների համար

1989 - Մեծ Բրիտանիա, զեկուցում ՌՕԴ – 54/2.6 -ի մասին Միջազգ. Գիտական Ռադիո Միության (URSI) ICAP – 89 Միջազգ. կոնֆերանսում

1990 - Չեխոսլովակիա, (Պրահա), պատվիրած զեկուցում՝ մոտիկ զոնայում անտենային չափումների մասին ՝ Միջազգ. Գիտական Ռադիո Միություն (URSI) XXIII Գլխ. Ասամբլեայում

- Մեծ Բրիտանիա, պատվերով զեկուցում մոտիկ զոնայի մասին Շեֆիլդի համալսարանում

- Լատվիա (Րիգա), պատվ. զեկուց. ՌՕԴ – 54/2.6 -ի մասին URSI Միջազգ. կոնֆերանսում

1991 - ԱՄՆ, պատվիրած զեկուցումներ՝ ՌՕԴ – 54/2.6 և մոտիկ զոնայի մասին Մասաչուսետսի, Կորնելի, Կալիֆորնիայի համալսարաններում և Նյու–Մեկսիկո (VLA), Արեսիբո (Պորտո – Րիկո) Ռադիո աստղադիտարաններում

- Մեծ Բրիտանիա, պատվ. զեկուցումներ ՌՕԴ – 54/2.6 -ի մասին Մանչեստերի, Վորվիկի, Կեմբրիջի, Յորքի, Շեֆիլդի համալսարաններում

- Նիդերլանդներ, պատվ. զեկուցում Ռադիոհոլոգրաֆիայի և մոտիկ զոնայի մասին՝ ESTEC-ում, ESA (Եվրոպակ. Տիեզերակ. Գործակալ.)

1993 - Ֆրանսիա (VIP), պատվ. զեկուցումներ ՌՕԴ – 54/2.6 և մոտիկ զոնայի մասին՝ Փարիզում (Թոմսոն կորպորացիա) և Մեդոնի ու Նանսիի աստղադիտարաններում

1994 - Մեծ Բրիտանիա, պատվ. զեկուցումներ ԱՐԵՎ ծրագրի մասին Լոնդոնում և Կեմբրիջում

- Ռուսաստան, ԱՐԵՎ ծրագրի հարցերով՝ Ս.– Պետերբուրգ, Ն.Նովգորոդ, Բոռ

1995 - Մեծ Բրիտանիա, պատվ. զեկուցումներ ԱՌԵՎ -ի և մոտիկ զոնայի մասին՝ Լոնդոնում, Կեմբրիջում, Մանչեստերում, Մալվերնում, (+Ստոունհենջ)

- Ռուսաստան, Մոսկվա, Ս.– Պետերբուրգ

- Ֆրանսիա, Փարիզ (Թոմսոն կորպորացիա, SOFRATEV)

1997 - Ռուսաստան, Մոսկվա, Ս.– Պետերբուրգ և Վորոնեժ (պատվ. զեկուցում ցրող օբյեկտների դաշտի և ԱՐԵՎ -ի մասին՝ Միջազգ. գիտական կոնֆերանսում)

1998 - Ռուսաստան, Մոսկվա, պատվ. զեկուցում Անտենային Բնութագրերի Էտալոնների մասին ԱՊՀ երկրների գիտական կոնֆերանսում

9. Գիտա-հասարակական գործունեությունը

1965-մինչ այժմ - Ռուսաստանի Գիտությունների ակադեմիայի «Ռադիոաստղագիտություն» պրոբլեմների Գիտական խորհրդի անդամ: 1997թ.-ից – այդ Խորհրդի բյուրոի անդամ, Մոսկվա, Ս.– Պետերբուրգ

1965-1992 - ԽՍՀՄ Գիտությունների ակադեմիայի և Միջգերատեսչական կոորդինացիոն մի շարք Գիտական խորհուրդների անդամ (Հոլոգրաֆիայի, Անտենաների, Չափագիտության և այլ հարցերով), Մոսկվա

1979-մինչ այժմ - Գիտությունների թեկնածուի և դոկտորի գիտական աստիճաններ շնորհող ՌԳՀԻ-ի Մասնագիտացված խորհրդի նախագահ, Երևան

1980-մինչ այժմ - «Измерительная техника» գիտական ամսագրի խմբագրական կոլեգիայի անդամ, Մոսկվա

1985-1992 - Հայաստանի ԳԱ Ռադիոէլեկտրոնիկայի խորհրդի նախագահ, Երևան

1985-մինչ այժմ - Ռուսաստանի Աստղագիտական միության անդամ, Մոսկվա

1990-1996 - Միջազգային Գիտական Ռադիո Միության (URSI, Մեծ Բրիտանիա) անդամ, երկու ժամկետով՝ որպես ԽՍՀՄ-ի ներկայացուցիչ (1990-1993թթ.) և ապա որպես Ռուսաստանի (1993-1996թթ.)

1998-մինչ այժմ - Էլեկտրատեխնիկայի և էլեկտրոնիկայի ինժեներների Միջազգային Ինստիտուտի (IEEE) անդամ, ԱՄՆ

2000-մինչ այժմ - «People-to-people Ambassador» խմբի (ԱՄՆ) անդամ, կազմված աշխարհի 30 խոշորագույն գիտնականներից, որի Պատվավոր պրեզիդենտն է ԱՄՆ Պրեզիդենտը

2001-մինչ այժմ - «Вестник МАНЭБ» գիտա-տեխնիկական ամսագրի խմբագրական կոլեգիայի անդամ, Ս.– Պետերբուրգ

2002-մինչ այժմ - «Հայկական բանակ» ամսագրի Գիտական Խորհրդի անդամ, Երևան

10. Գիտա-մանկավարժական գործունեությունը

1960-1963 - Ռադիոֆիզիկայի դասախոսական դասընթաց (առաջին անգամ Հայաստանում) Երևանի Պետական համալսարանում

1963-1990 - Անտենային համակարգեր դասախոսական դասընթաց (առաջին անգամ Հայաստանում) Երևանի Պոլիտեխնիկական ինստիտուտում

1970-մինչ այժմ - Պատրաստել է գիտությունների 24 թեկնածու և 5 դոկտոր, Երևան

1983-մինչ այժմ - ՌԳՀԻ-ի ասպիրանտուրայի ղեկավար, Երևան

11. Գիտա-կազմակերպչական գործունեությունը
Նա հիմնել է

1958-1960 - Ռադիոֆիզիկական ԱԿԲ Բյուրականի աստրոֆիզիկական աստղադիտարանում

1960-1968 - Հայաստանի ԳԱ Ռադիոֆիզիկայի և էլեկտրոնիկայի ինստիտուտը ք. Աշտարակում

1968-1971 - ՖՏՈՉՀԳՀԻ (Մոսկվա) Ռադիոֆիզիկական չափումների հայկական բաժանմունքը Երևանում

1971-մինչ այժմ - Ռադիոֆիզիկական չափումների համամիութենական ԳՀԻ (ՌՉՀԳՀԻ) Երևանում, որը 2000թ.-ից կոչվում է Ռադիոֆիզիկայի ԳՀԻ (ՌԳՀԻ)

1972- մինչ այժմ - ՌԳՀԻ-ի «Ալիք» փորձարարական գործարանը Երևանում

1975- մինչ այժմ - ՌՃՀԳՀԻ-ին կից Անտենաների պետական էտալոնային կենտրոն: Այժմ՝ ՌԳՀԻ-ի Արագածի գիտական կենտրոն (Օրգով և Տեղեր գյուղերի մոտ)

1978-1990 - Պարբերական (3 տարին մեկ) «Անտենային չափումներ» ԽՍՀՄ համամիութենական գիտական կոնֆերանսներ (ԱՃՀԿ–1,2,3,4,5), ՌՃՀԳՀԻ –ում, Երևան

1979- մինչ այժմ - Գիտությունների թեկնածուի և դոկտորի գիտական աստիճաններ շնորհող մասնագիտացված խորհուրդ ՌԳՀԻ-ում, Երևան

1983- մինչ այժմ - Ասպիրանտուրա ՌԳՀԻ-ում, Երևան

1983- մինչ այժմ - ՌԳՀԻ «Անտենային համակարգեր» բազային ամբիոնը Հայաստանի Պետական ճարտարագիտական համալսարանում, Երևան

12. Պարգևները

1970 – «Սխրագործ աշխատանքի համար» մեդալ, Մոսկվա
1980 – ԽՍՀՄ ԺՏՀՑ -ի Ոսկե մեդալ, Մոսկվա
1983 – Աշխատանքային Կարմիր դրոշի Շքանշան, Մոսկվա
1984 – Ամենայն Հայոց Կաթողիկոս Վազգեն Ա-ի Արծաթե մեդալ, Ս. Էջմիածին
1985 – Հայաստանի Պետական մրցանակ (գիտության ասպարեզում), Երևան
1986 – ԽՍՀՄ Պետական մրցանակ (ռադիոլոկացիայի ասպարեզում), Մոսկվա
1988 – «Աշխատանքի վետերան» մեդալ, Մոսկվա
1991 – IEE-URSI Միջազգային մրցանակ «Առաջին Ռադիո-Օպտիկական Աստղադիտակ» աշխատանքի համար, Մեծ Բրիտանիա
1997 – Ֆրանսիայի Արտաքին գործոց նախարարության Բրոնզե մեդալ, Ֆրանսիայի դեսպանություն, Երևան
2002 – Լոմոնոսովի անվան Ոսկե մեդալ, IAELPS, Ս.– Պետերբուրգ
2003 – ՀՀ Գիտութ. Ազգային ակադեմիայի Ոսկե մեդալ
2003 – ՀՀ Կրթության և գիտության Նախարարության Ոսկե մեդալ
2003 – ՀՀ Պետական Ճարտարագիտական համալսարանի Ոսկե մեդալ
2003 – ՀՀ Արտմիությունների Ազգային Խորհրդի Ոսկե մեդալ
2003 – «Գիտնականի աստղ» Շքանշան, IAELPS, Ս.– Պետերբուրգ

Մայիս 2004թ.

ՌԳՀԻ հասցեն	Հեռախոս	E-փաստ
Երևան 51, Կոմիտասի պողոտա,49/4	(3741) 234 990	Herouni@sci.am

ИНФОРМАЦИЯ

Академик Парис Мисакович ГЕРУНИ

Отец: Мисак Матевосович Геруни, род. в г. Ачн (Киликия) в 1906г, сконч. в Ереване в 1986г.
Мать: Седа Никогосовна Геруни (Азатян), род. в г. Игдир в 1908г, сконч. в Ереване в 1982г.

Он женат, имеет двух сыновей и дочь.

1. Родился 17декабря 1933г. в Ереване, в семье преподавателей. Армянин. В 1951 г. окончил школу №30 имени В. П. Чкалова в Ереване.

2. Трудовая деятельность

1951 - 1957	-	Радиотехнический факультет Московского Энергетического Института (МЭИ)
1957 - 1960	-	Радиоинженер, научн. сотрудник, начальник Радиофизического конструкторского бюро Бюраканской Астрофизической Обсерватории, Армения
1960 - 1968	-	Зам. директора по науке и зав. СВЧ отделом Института радиофизики и электроники АН Арм. ССР, г. Аштарак
1968 - 1971	-	Директор Армянского отдела Радиофизических измерений (АОРИ), Ереван, Всесоюзного НИИ физико-технических и радиотехнических измерений (ВНИИФТРИ, Москва)
1971 - по наст. время	-	Директор, с 1983 г. – Генеральный директор Всесоюзного НИИ Радиофизических Измерений (ВНИИРИ) в Ереване (с 2000 г. – НИИ Радиофизики – НИИР)
1983 - по наст. время	-	Заведующий базовой кафедрой НИИР "Антенные системы" в Государственном инженерном университете Армении, Ереван

3. Ученые степени и звания

1965	-	Кандидат технических наук (Радиотехника, защитил в Москве)
1968	-	Доцент, Ереванский политехнический институт
1972	-	Доктор технических наук (Радиофизика, защитил в Москве)
1982	-	Член-корреспондент Академии наук Армении, Ереван
1983	-	Профессор (Радиофизика, ВНИИРИ)
1996	-	Академик Национальной Академии наук Армении, Ереван
1999	-	Академик Инженерной Академии Армении, Ереван
2001	-	Академик Международной Академии наук экологии и безопасности жизнедеятельности (IAELPS – МАНЭБ), С.-Петербург
2001	-	Академик Технологической Академии Армении, Ереван

4. Почетные звания

1985 – Почетный житель села Тегер, Армения
1998 – Почетный член Союза художников Армении, Ереван
2003 – Заслуженный деятель науки, МАНЭБ, С.–Петербург

5. Научная (теоретическая и экспериментальная) деятельность

Он основал ряд новых научных направлений, которые сейчас признаны и используются в развитых странах.

В теории были созданы:

5.1. Теория и Методы расчета Больших двухзеркальных антенн с неподвижным сферическим главным зеркалом (1958-64),
5.2. Теория и уравнения дифракции электромагнитного поля на отверстиях (раскрывах) различной конфигурации; методы перехода от возбужденного отверстия в дальнюю зону (1963-65),
5.3. Радиоголография; новые методы определения полей в пространстве путем измерения комплексных полей в ближней зоне (в зоне раскрыва) излучающих и рассеивающих объектов (1964-68),
5.4. Методы определения параметров антенн в дальней зоне по измерениям полей вблизи от них (1967-70),
5.5. Теория и Методы определения параметров рассеивающих объектов (ЭПР) по измерениям поля вблизи от них (1984-87),
5.6. Теория дифракции волн на краях антенны при частичном освещении ее полной апертуры (1963-64),
5.7. Метрология антенн, Теория и Эталоны параметров антенн (1970-75),
5.8. Статистическая Теория и Методы измерений параметров многолучевых антенн (1970-72),
5.9. Теория и Методы определения параметров антенн по измерениям поля на сферической поверхности в ближней зоне (1980-84),
5.10.Теория и Методы расчета нового типа мощной Солнечной электростанции с одним неподвижным сферическим коллиматором (1991-95).

В эксперименте он:

5.11. Спроектировал, построил и использовал Двухзеркальную Антенну со Сферическим неподвижным главным зеркалом (ДАС-5) с диаметром главного зеркала 5 м, в то время крупнейшую в мире на коротких мм. волнах (1959-62),
5.12. Спроектировал, построил, наладил и использовал Первый в мире Радио-Оптический Телескоп (РОТ-54/2.6) – "Зеркальный радиотелескоп Геруни" (название патента), Большая Антенна которой с неподвижным сферическим зеркалом диаметром 54 м, имеет наилучшие параметры среди всех больших антенн мира (1960-88),
5.13. Отрицает, благодаря исключительно низкому уровню собственных шумов РОТ-54/2.6, наличие так называемого "реликтового фона" и космогоническую теорию происхождения Вселенной в результате "Большого взрыва" (1988-92),

5.14. Обнаружил мощную радиовспышку на звезде Этта Близнецов, красном гиганте, мощные вспышки на которых были ранее неизвестны (1985),
5.15. Получил (измерил) первую в мире Радиоголограмму (комплексного поля в раскрыве антенны диаметром 0,5м на волне 8мм),
5.16. Спроектировал и построил впервые в мире целый ряд высокоэффективных Автоматических комплексов аппаратуры для измерений параметров Антенных систем различного типа в их ближней зоне на различных длинах волн (1968-93),
5.17. Спроектировал и построил первые в мире одиннадцать Национальных Первичных Эталонов Параметров Антенн и Угла Сдвига Фаз на СВЧ и микроволнах (1971-91),
5.18. Создал первый комплекс аппаратуры с антенной диаметром 18 м для измерения параметров бортовых антенн летательных аппаратов в условиях их реального полета (1976-79),
5.19. Спроектировал и построил на высоте 3200 м уникальную двухзеркальную антенну субмиллиметрового диапазона (0,1 мм – 3 см), диаметром 3,2 м, (1987-91),
5.20. Предложил новый высокоэффективный и экологически чистый тип мощной Солнечной электростанции (проект "Арев") и строит первый экспериментальный образец мощностью 350 кВт (1992-2004),
5.21. Показал астрономическими методами, что Доисторический каменный памятник у г. Сисиан в Армении был первой в мире, большой и высокоразвитой Обсерваторией "Карахундж", который активно действовал более чем 7500 лет тому назад (1994-2002),
5.22. Впервые в Армении спроектировал и построил антенны и радиоприемники в диапазонах 50 см. и 8 мм. (1957-1962).

6. Академик П. Геруни имеет 350 опубликованных научных работ, включая 243 печатных, 3 монографии и 23 патента.

Он неоднократно выступал также в газетах и журналах, по радио и телевидению с пропагандой научных знаний.

О нем самом и о его работах было много публикаций в СМИ СССР, России, Армении, США, Франции, Великобритании, Италии и других стран.

7. Некоторые основные научные публикации. Основанные новые научные направления

1957 - **Первая заявка на изобретение**
1958 - **Первые публикации**
1959-62 - **Проект и создание 5-метровой сферической двухзеркальной антенны ДАС-5 мм диапазона**
1960-64 - **Проект и расчет сферических двухзеркальных антенн. «Радиотехника и Электроника» (РЭ), т. 9, №1, с. 3-12, Москва, 1964**
- **Диффракция волн и диаграмма направленности сферической двухзеркальной антенны. "Известия АН Арм. ССР, Физика", Ереван, 1964**

Основал новое направление в создании Больших Антенн, 1962

1964-65 - **Поле круглого и прямоугольного отверстий в дальней зоне. РЭ, т.10, №9, с. 1594-1599, Москва, 1965**

Основал новое направление преобразования Ближнего поля в Дальнее поле (БП-ДП), 1964

1968 - Пятиметровая сферическая антенна мм диапазона. Сборник «Антенны», т. 4, с. 3-15, Москва, 1968

Получил первую в мире Радиоголограму (поля в зоне раскрыва 0,5-метровой антенны, в 8 мм диапазоне длин волн), 1968

1968-70 - Измерение параметров антенн в зоне их раскрыва. Труды Всесоюзной Конференции по метрологии в радиоэлетронике, с. 82, Москва, 1970

Основал Радиоголографию и новые методы и устройства для измерения параметров антенн в зоне их раскрыва (БП-ДП), 1964-68

1971 - Methods of Information Processing by Coherent Optic Systems. Trans. of II Internat. Symposium on Information Theory, Tsahkadzor, 1971

- Устройство для измерения параметров остронаправленных излучателей. SU Авторск. свидет. 534128, 15.12.1971, Москва

1971-72 - Обеспечение единства антенных измерений в стране. Тр. II Всесоюзн. конфер. по метрологии и точным измерениям, 6 стр., Тбилиси, 1971

- Гос. Эталонный центр по антенным измерениям. Тр. XIX Всес. конфер. по Теории и Технике Антенн, 12 стр., Москва, 1972

Основал новое направление «Метрология Антенн», 1971

1976 - Радиоголография и современные методы антенных измерений. Сборник «Радио – и акустическая голография», с. 85-97, «Наука», С.–Петербург, 1976

1977 - Антенные измерения. Термины и определения, 44 стр., ВНИИРИ, Ереван, 1977

1978 - Панорамный радиолокатор. SU Авторск. свидет., 123477, 02.02.1978, Москва

- Антенны остронаправленные. Метод измерения параметров в ближней зоне (ГОСТ 8,309 – 78), 6 стр., Москва, 1978

1979 - Антенная система диаметром 18 м (РТ-18). «Антенные измерения», Тр. I Всесоюзн. конфер. по метрологии антенн, с. 13-23 ВНИИРИ, Ереван, 1979

Основал комплекс аппаратуры нового типа для измерения параметров бортовых антенн в условиях реального полета, 1979

- Об одном методе аттестации антенны ОСА –18, основанном на разложении ее поля по сферич. гармоникам. Тр. Всесоюзн. конфер. «Радиотехнич. Измерения», 2с., Новосибирск, 1980

1980-81 - Комплекс «Сфера» для измерения параметров антенн на сферической поверхности в зоне раскрыва, Отчет ВНИИРИ, 52 стр., Ереван, 1981

Основал новый метод измерения параметров антенн на сферической поверхности в их ближней зоне (Сферич. БП-ДП), 1980

1982 - Устройство для аттестации бортовых антенн в полете. SU Авторск. свидет. 181719, 11.01.1982, Москва

- Параллельный апертурный синтез. Тр. XIV Всесоюзн. конфер. «Радиоастрономические антенны», с. 238-239, Ереван, 1982

1984 - Определение эффективной поверхности рассеяния (ЭПР) объектов по измерениям в ближней зоне. Тр. III Всесоюзн. конфер. по антенным измерениям, с. 28-29, ВНИИРИ, Ереван, 1984

- Определение ЭПР шара по измерениям в ближней зоне. Там же, стр.219-221

Основал новый метод определения ЭПР объектов по измерениям рассеянного поля вблизи от них, 1984

1986 - «Зеркальный радиотелескоп Геруни». SU Авторск. свидет. 1377941, 02.01.1986, Москва

1987 - Определение ЭПР по измерениям в ближней зоне. «Доклады АН СССР», т. 292, №4, с. 849-853, Москва, 1987

1989 - The First Radio – Optical Telescope. Trans. of the VI Internat. Confer. on Antenna and Propogation, ICAP – 89, v.1, p. 540-546, IEE – URSI, U.K., 1989
- Radio Flare on Etta Gemini Star. Trans. of the IAU 137-th Internat Sump. on Flare Stars, p. 145-146, Byurakan, 1989

1990 - Near Field Measurements and Standard Antennas. Abstr. of URSI XXIII General Assembly, v.1, p. 266, Praha, 1990
- Construction and Operation of Radio – Optical Telescope ROT–54/2,6. Trans. of URSI Internat. Meeting on Mirror Antennas, p. 34-41, Riga, 1990
- Антенные измерения. Термины и определения, 130 стр., ВНИИРИ, Ереван, 1990, (на русском, армянск. и английск. яз.)
- Измерения на Оптическом Телескопе РОТ–54/2,6. Труды V Всес. конфер. по Антенным измерениям, стр. 57-59, ВНИИРИ, Ереван, 1990

1991 - History of NF –FF and Holograpy in the USSR. Trans. of XIV ESA Sump. on Antenna Measurements, p. 5-18, ESTEC, Netherlands, 1991
- Radio – Optical Telescope ROT–54/2,6 and Radioholograpy. Reports at the Colloquiums in Universities of Manchester (Jodrel Bank), Sheffield, Cambridge (Cavendish Lab.), U.K., 1991
- The New Millimeter Waverange Radiotelescope in Armenia. Reports at the Colloquiums in Universities of Cornel, California (Berkly), Massachusetts and Radio Observatories in New–Mexico (VLA) and Aresibo (Porto Rico), USA,1991

1992 - Солнечная электростанция. Патент РФ 203204, 18.08.1992, Москва
Основал новый высокоэффективный и экологически чистый тип мощной Солнечной электростанции «Арев» (Солнце), 1992

1993 - The New Millimeter Waverange Radiotelescope in Armenia. Report on URSI XXIV General Assembly, Kyoto, Japan, 1993
- The RMI Achivements in Antennas and Radiohologrаphy. Reports at the workshops in Thomson Corp. (Paris), Medon and Nansies Observatotories, France, 1993

1994 - «АРЕВ – 100» Проект, 31 с., ВНИИРИ, Ереван, 1994
- Solar Powerful Device. U.K. Patent Appl. 9412260.3, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01401, 15.06.1995
- Solar Powerful Rotational Machine. U.K. Patent Appl. 9412243.9, 18.06.1994 and PCT Patent Appl. PCT/GB 95/01412, 15.06.1995

1997 - Determination of Scattering Properties of Radar Objects by Near – Field Measurements. Proc. of III Internat. Confer. on Antennas and Radiocommunication Systems, v.2, p. 85-91, Voronezh, 1997

1997-98 - Карахундж – древнейшая каменная обсерватория в Армении. Доклад на Междунар. конфер. по археоастрономии, Москва,1997 и «Труды IV Съезда Астрономического Союза», с. 350-362, Москва, 1998

1998 - Доисторическая каменная обсерватория «Карахундж». «Доклады Национ. Акад. наук Армении», № 5, с. 307-328, Ереван, 1998
Основал исследования, показавшие, что древний каменный Монумент у г. Сисиан в Армении был большой и развитой Обсерваторией «Карахундж», наиболее древней в мире, активно действовавшей более 7500 лет тому назад, 1994

1999-2000 - About Self Noises of Radio – Optical Telescope ROT–54/2,6 Antenna. « Journal of Applied Eletromagnetism», p. 51-57, Athens, Greece, 1999
- Параметры большой Антенны Первого Радио –Оптического Телескопа РОТ–54/2,6. Труды LV научн. сессии по радиотехнике, электронике и связи, с. 61-62, Москва, 2000

Основал исследование, показывающее, что в развитии Вселенной не было «Большого Взрыва», 1988-98

2001 - Методы и устройства Геруни для определения ЭПР объектов и параметров антенн. Арм. Патент № 1138, 26.07.2001

2002-04 - Carahunge – the Prehistoric Observatory in Armenia. Proc. of Internat. Confer. on Archaeoastronomy, 9p, Sunremo, Italy, 2002; will be printed in «Giornal di Astronomia», Roma, 2004

8. Основные поездки за рубеж

1958 - Китай, для наблюдения Солнечного затмения в диапазоне волн 50 см

1961 - США, доклад о теории Больших антенных систем нового типа на Генеральн. Ассамблее Междунар. Астроном. Союза (Калифорнийск. университ. Беркли)

1962 - Великобритания, приглашен на 3 месяца в Джодрел Бенк (Манчестерск. ун-т) и Кавендишск. Лаборат. (Кембрижск. ун-т) для совместных наблюдений и докладов о теории Больших антенн нового типа

1989 - Великобритания, доклад о РОТ–54/2,6 на Международн. конфер. ICAP–89 Международного Научного Радио Союза (URSI)

1990 - Чехословакия (Прага), заказной докл. об Антенных измерениях в ближней зоне на XXIII Генеральн. Ассамблее URSI

- Великобритания, заказн. докл. о ближней зоне, Шефилдск. ун-т
- Латвия (Рига), заказн. докл. о РОТ–54/2,6 на Международн. конфер. URSI

1991 - США, заказн. доклады о РОТ–54/2,6 и ближней зоне в Масачусетском, Корнельском, Калифорнийском (Беркли) ун-тах и Радио–обсерваториях в Нью–Мексико (VLA), Аресибо (Порто–Рико)

- Великобритания, заказн. доклады о РОТ–54/2,6 в ун-тах Манчестера, Ворвика, Кембриджа, Йорка, Шефилда
- Нидерланды, заказн. доклад о Радиоголографии и ближней зоне в ESTEC, Европ. Космич. Агенство (ECA)

1993 - Франция (VIP), заказн. доклады о РОТ–54/2,6 и ближней зоне в Париже (корпор. Томсон) и обсерваториях в Медоне и Нанси

1994 - Великобритания, заказн. доклады о Проекте АРЕВ в Лондоне и Кембридже

- Россия, по Проекту АРЕВ, С–Петербург, Н. Новгород, Бор

1995 - Великобритания, заказн. доклады об АРЕВ и ближней зоне, Лондон, Кембридж, Манчестер, Малверн, (+Стоунхендж)

- Россия, Москва, С.–Петербург (научная конференция и АРЕВ)
- Франция, Париж (корпор. Томсон, SOFRATEV)

1997 - Россия, Москва, С.–Петербург и Ворониж (заказн. докл. об ЭПР и АРЕВ на Междунар. научн. конфер.)

1998 - Россия, Москва, заказн. докл. об Эталонах Параметров Антенн на науч. конфер. СНГ

9. Научно-общественная деятельность

1965 - по наст. время - Член Научного Совета АН России по проблеме "Радиоастрономия". С 1997 г. - член бюро этого Совета, Москва, С.–Петербург

1965 - 1992 - Член ряда Научных Советов АН СССР и Межведомственных

координационных советов (по Голографии, Антеннам, Метрологии и др. проблемам), Москва

1979 - по наст. время - Председатель Специализированного научного совета в НИИР по присуждению ученых степеней кандидата и доктора наук, Ереван

1980 - по наст. время - Член редколлегии научного журнала "Измерительная техника", Москва

1985 - 1992 - Председатель совета по радиоэлектронике АН Армении, Ереван

1985 - по наст. время - Член Российского астрономического общества, Москва

1990 - 1996 - Член Международного Научного Радио Союза (URSI), Великобритания, в два срока: как представитель СССР (1990-93) и, затем, России (1993-96)

1998 - по наст. время - Член Международного Института инженеров по электротехнике и электронике (IEEE), США

2000 - по наст. время - Член группы «People-to-people Ambassador» (США), состоящей из 30 крупнейших ученых мира, Почетным президентом которой является Президент США

2001 - по наст. время - Член редколлегии журнала «Вестник МАНЭБ», С.–Петербург

2002 - по наст. время - Член научно – консультационного совета журнала «Айкакан Банак», Ереван

10. Научно-педагогическая деятельность

1960 - 1963 - лекционный курс по Радиофизике (впервые в Армении) в Ереванском Государственном Университете

1963 - 1990 - лекционный курс по Антенным системам (впервые в Армении) в Ереванском политехническом институте

1970 - по наст. время - подготовил 24 кандидата наук и 5 докторов наук, Ереван

1983 - по наст. время - руководитель Аспирантуры ВНИИРИ – НИИР, Ереван

11. Научно-организационная деятельность. Он основал:

1958 - 1960 - Радиофизическое ОКБ в Бюраканской Астрофизич. обсерватории

1960 - 1968 - Институт радиофизики и электроники АН Армении в г. Аштараке

1968 - 1971 - Армянский отдел радиофизических измерений в г. Ереване, Всесоюзного НИИ физ.-техн. и радиотехн. измер. (Москва)

1971 - по наст. время - Всесоюзный НИИ радиофизических измерений (ВНИИРИ) в Ереване, который с 2000 г. называется НИИ Радиофизики (НИИР)

1972 - по наст. время - Опытно-экспериментальный завод НИИР "Волна" в Ереване

1975 - по наст. время - Государственный эталонный центр по антеннам при ВНИИРИ, ныне – Арагацский научный центр НИИР, гора Арагац, у сел Оргов и Тегер, на высоте 1720 м над уровнем моря, Армения

1978 - 1990 - Периодические (раз в 3 года) Всесоюзные конференции по Антенным измерениям в НИИР (ВКАИ –1, 2, 3, 4, 5), Ереван

1979 - по наст. время - Специализированный научный совет в НИИР по присуждению ученых степеней доктора и кандидата наук, Ереван

1983 - по наст. время - Аспирантуру НИИР, Ереван

1983 - по наст. время - Базовую кафедру НИИР "Антенные системы" в Гос. инженерном университете Армении, Ереван.

12. Награды

1970 - Медаль "За доблестный труд", Москва
1980 - Золотая медаль ВДНХ СССР, Москва
1983 - Орден Трудового Красного Знамени, Москва
1984 - Серебряная Медаль Католикоса Всех Армян Вазгена I, Св. Эчмиадзин
1985 - Государственная Премия Армении (в области науки), Ереван
1986 - Государственная Премия СССР (в области радиолокации), Москва
1988 - Медаль "Ветеран Труда" , Москва
1991 - Международная Премия IEE – URSI за работу "Первый Радио-Оптический Телескоп", Великобритания
1997 - Бронзовая Медаль МИД Франции, Посольство Франции, Ереван
2002 - Золотая медаль им. Ломоносова, МАНЭБ, С.–Петербург
2003 - Золотая медаль Национальной Академии наук Армении
2003 - Золотая медаль Мин. образования и науки Армении
2003 - Золотая медаль Государственного Инженерного университета Армении
2003 - Золотая медаль Национального Совета Профсоюзов Армении
2003 - Орден «Звезда ученого», МАНЭБ, С.–Петербург

Май 2004 г.

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CONTENT

ISBN 99941-0-101-3

PARIS M. HERUONI

ARMENIANS AND OLD ARMENIA

2004

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Published and printed by
TIGRAN METS
2, Arshakouniats Avenue
375023, Yerevan, Armenia
tel. (3741) 521 775

ISBN 99941-0-101-3 November 2004

Copies 2000
Pages 272
Black & white Figures 45
Colour Figures 62 (on 36 pages)
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Error Under the Fig. 67a on page 142 it is necessary to read:
Matenadaran, the Repository, Scientific Institute and Museum of Ancient Manuscripts in Yerevan