# ON THE DECRYPTION OF LARGE NUMBERS IN ASIAN CHRONOLOGIES AND LENGTHS

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**Abstract**

In ancient texts or traditions we meet sometimes extremely large numbers referring to chronologies or lengths. It seems impossible to accept such numbers at face value, so they are usually considered as literary artifacts or as endowed of a symbolic meaning. In this paper we consider such numbers as found in Asia. We propose that they keep the true value, hidden by multiplication by the factor 180. Once corrected using this factor, the very large numbers become acceptable and in agreement with estimates from other approaches. We consider large numbers from Mesopotamia, India, Tibet, Nepal, Sri Lanka, Japan. By BC we mean "before Christ", by AD, "annus Domini", say "after Christ".

## 1. Introduction

In many ancient sources we find chronologies, of persons or of periods, given in hundred thousands or even millions years. Similarly we find unacceptable values for geometric measures. The very high time values lead to epochs before Holocene or even the arrival of homo sapiens, now estimated at about 150.000 years ago, on the basis of analysis of genetic and protein material, see e.g. the Stanford Pavia school of Luigi Cavalli Sforza. Some stated periods cover several ice ages, making it difficult to believe that human memory could reach so back in time. Thus scholars have adopted the following positions about such great numbers:

- They are just imaginary.
- They are not given in years but in other units.

Notice that the problem is not solved by using months instead of years, as some have proposed to reduce the 9000 years before Solon time given by Plato for Atlantis. In this case one would get about 800 years, setting Atlantis to about 1400 BC, a date actually close to the time of the Deucalion Flood. But Plato states that Atlantis event was the oldest one of three catastrophic events, the first one being the Deucalion Flood, which can be dated at about 1500 BC following several classical sources.

In this paper we reduce the great numbers found in Asia via division by a factor, 180, that appears to have been the same in Mesopotamia, Japan, India, Ceylon, Tibet and Nepal, and used both for chronological and geographical numbers. In a previous paper only chronological numbers appeared, those referring to lengths having been found recently. We must think that only a small part of such numbers is given here, since our knowledge of the relevant literature is quite incomplete. As far as we know such decrypting idea was never considered before. Our proposal is given as a working hypothesis, noticing that if it is true it provides novel insight into chronological questions that have been unsolved for even millennia.

For the great chronological numbers, we consider the following sources:

A- the Babylonian history of Berosus, a priest in Babylonia at the time of Alexander the Great. The original book is lost but fragments survive in Latin writer Solinus (also named Alexander Polyhistor) and in Byzantine writer Syncellus. Such numbers were rediscovered in the Nippur library and published in 1906. Two more large numbers referred to Chaldeans are found in Diodorus Siculus and in Ipparchos

B- the Japanese book called *Nihonji,* giving the history of the Japanese emperors from its beginning about 600 BC to the writing time of the book, about 600 AD

C – the Nepalese tradition on their origins, given in Alexandra David Néel

D – the Singhalese annals starting about 500 BC, after the island of Ceylon or Sri Lanka was conquered by Singhalese invaders arriving from NW India

E – ancient Indian texts stating the existence of four ages and giving the dates for their beginning, ages called *Yuga;* we notice that such ages appear in at least two different versions, possibly related by a double encrypting

F – additional numbers from Mesopotamia, Tibet and India relating to geographical measures.

Albeit here we extend the list in Spedicato (2011a), introducing geographical numbers before not available, other similar numbers most probably exist in ancient literature, both written or orally transmitted. As possible sources we quote the

*Manas* epics, numbering some 6 million verses, in Kirghisian and only partly translated. Or the Indian popular historical documents called *Purañas*, amounting to about two million shlokas (verses of two lines), in Sanskrit or Tamil, most of them still available only in oral form.

## 2. The ten antedeluvian kings in Berosus and the first ten biblical patriarchs

In Berosus, see a quotation in Solinus, *Collectanea rerum memorabilium*, in Solinus' Del Rio edition (1645), and in Syncellus, *Chronological Excerpts*, it is stated that before the Flood ten kings lived in Mesopotamia for a total of 432.000 years. This number follows from the statement that they lived for 120 special periods called *saros*, each saros lasting 3600 years. There is little doubt that the referred flood is the one that in *Genesis* has Noah as a survivor.

The Mesopotamian stories of the flood differ in many details, that can be found especially in the epics of Gilgamesh, see Spedicato (2003). The survivor is called Ziusudra in Sumerian, Utnapishtim in Akkadian, and the place of survival has been argued in Spedicato to be the holy Anya Machen Range, in NE Tibet. Other survivors are known from the Iranian book *Avesta*, and Indian *Upanishad*, *Purañas*, not to say of the hundreds of traditions worldwide about a great flood where only special people survived. The often made statement that Noah was the only survivor with his small group conflicts even with *Talmud* statement that many arks were built but not all survived. See Immanuel Velikovsky, *In the beginning*, available in the website created by Jan Sammer, a former secretary of Velikovsky.

According to *Genesis*, ten patriarchs lived in the period from the "creation" of man till the Flood. The total lengths of their lives can be calculated from the several versions of the Bible that are extant, which differ in the ages of the patriarchs or the year when the first son was born. For reasons not detailed here, we prefer, following e.g. St Augustin, the *Septuaginta*, Greek translation produced in Alexandria of Egypt by seventy two Hebrew scholars at the time of king Ptolemy Philadelfo, in the third century BC. Counting from their birth, the total span of the patriarchs is 2077 years till arrival of the Flood, or 2427 till the death of Noah, see Appendix. 2427 is a number close to the one implied in *Atrahasis*, see Bottero and Kramer (1992). There we read that the time from creation to Flood was less than 2400 years, being the sum of two numbers both less than 1200. The first number refers to a climatic crisis in Kharsag, the Sumerian Garden of Eden, when an epidemics arrived, killing men and animals, followed by rains and cold; see Spedicato (2003). Then less than 1200 years passed to the arrival of the Flood. About the first event, we should notice the recent discovery of the so called Burkle crater in Indian Ocean, size of more than 30 km, between India and Madagascar, tentatively dated at about 4400 BC, say about 1200 years after "creation", that can be dated, as done in Byzantine and Ethiopian

calendars, at about 5500 BC. The impact leading to the Burkle crater might well explain the events in *Atrahasis*. Recall also that the Berosus data were confirmed in tablets in the Nippur library, translation published in 1906, see Jacobsen (1938) or Walton (1981).

The biblical patriarchs and the Mesopotamian kings are not the same persons. One reason is the different ages given to them. The two lists provide slightly different times from "creation" and Flood, compounded by the use of large units for the Mesopotamian kings. Notice that defining the total time for the ten kings as 432.000 years in terms of multiplying the saros, of 3600 years, by 120, is prone by rounding reasons to an error of up to 180 years. In Spedicato (2004) we have shown the likely existence of a short saros of 20 years, related to several astronomical phenomena; in such a case multiplying 20 by 120 results in 2400 years, close to the expected value from *Septuaginta*. But 2400 would also be obtained by dividing 432.000 by 180, using the division factor that seems to work on all large numbers we found in Asia.

Our proposal that the large numbers in Asia should be divided by the encrypting factor 180 is not the result of a formal proof, nor have we found an ancient text explaining its use. It is an empirical result, based mainly on the fact that it appears to work well. In one case, from Japanese *Nihonji*, the use of 180 seems to be suggested by 180 appearing in related issues. The divisor 180 was probably kept secret, since it was used to hide numbers whose real value was not for the ordinary people, but for initiates.

Why 180 and not another number? The reason may lie in the special value that 180 has in astronomical phenomena, especially in the following facts:

- There is evidence that the year had 360 days before the Flood, hence 180 was the number of days between two successive solstices or two successive equinoxes. Calendars generally start at one of such points of the year. We cannot discuss here the evidence for the year having 360 days before the Flood, but recall the statement in *Isis and Osiris* of Plutarch: *Hermes stole one seventieth of the light of the Moon and gave it to Earth whose year changed from 360 to 365 days.* The explanation of Plutarch statement is complex and not given here. Also we claim, but without a justification here, that the Flood took place exactly in 3161 BC.

- There is also evidence, from statements in Herodotus and Pomponius Mela, who quote Egyptian sources, and from a Koran sura, that Earth underwent a full inversion of the rotation axis, say of 180 degrees, implying exchange of the positions where Sun rises or sets. Such inversion is claimed not to have modified the climatic conditions on Earth. One such possible inversion took place probably during the Flood, since Noah, who embarked on 17$^{th}$ Nissan, say beginning of spring, found that not summer, but winter was then coming.

Another one may have taken place at 1407 BC, corresponding to the Dardanide flood and the Sun standing in the sky, as reported in the book of Joshua. Notice that from the point of view of people leaving on Earth, a full inversion is preferable to a partial variation of the axis, since it does not need relocation of the equatorial bulge. This fact would lead to many and strong earthquakes. In Spedicato (2011b) a mathematical analysis is done of a full inversion, under some model simplifications, showing that if it would happen today, the only significant effect would be the change of the number of days in the year from 365 to 363.

Other large numbers from Mesopotamia are found in Diodorus Siculus and in Ipparchos. Tinazzi (2003) quotes a statement in astronomer Bianchini from 18th century, who was possibly in possession of now lost documents. He had read that Chaldeans claimed their history to date back 470.000 years before Greek astronomer Ipparchos, who lived in the second century AC. Dividing 470.000 by 180 we get about 2610. Thus we get a date for beginning of Chaldeans civilization between 2800 and 2700 AC. This agrees with modern estimates and thus confirms our decryption proposal. In book II of Diodorus we read a statement similar to the above: *concerning the number of years that the Chaldeans derived in their study of celestial bodies, it is difficult to believe; indeed they claim that since the beginning of their exploration of stars till the time Alexander passed to Asia, 463.000 years have passed.* Division here gives 2572 years, so that beginning of astronomic activity of Chaldeans should be set at about 2900 AC. An acceptable date for the beginning of the Sumerian civilization in Mesopotamia, about 250 years after our date for the Flood.

### 3. The Japanese great number in Nihonji

*Kokiji* and *Nihonji* are two Japanese books dealing with the origin of Japanese civilization, of the imperial dynasty, till about 700 AD. *Kokiji* is the oldest of the two books, much of its material being found in the second book. These books are not easily found, I got *Nihonji* by chance in Rome Cultural Japanese Institute and later I found a copy of *Kokiji* in a Milan center for studies of Africa and Asia. At page 110 of *Kokiji*, published by Allen & Unwin, one reads:

*From descent of our celestial ancestors till now* 1.792.440 *years have passed.*

A note in the book claims this number 1.792.440 to be imaginary. Dividing it by 180, it becomes exactly 9958, an acceptable number. Assuming for *now* the year 720 AD, when possibly *Nihonji* was written, then we get for the descent of the celestial ancestors 9238 BC. This year is about two centuries after the sudden demise of the last Ice Age, now estimated to have happened in a short time about 9450 BC. See the papers of Spedicato (2007a,b, 2010, 2014), Muck (1956), Barbiero (1974), Collins

(2000), La Violette (2005). The particular date in *Nihonji* has no special known meaning, but could relate to a restart of a civilization after the end of Ice Age, related to the end of the Atlantis civilization. It is also legitimate to consider if the celestial ancestors might have been people coming from other planets. A possibility this one that is now being considered even by academics or churches. Aliens might have visited our planet in view of the special astronomic events that took place in the last 12.000 years or so, according to Velikovsky (1950), Ackerman (1996a,b) and Spedicato (2009b, 2012, 2013).

It is interesting that number 180 appears several times in *Nihonji*, in the pages both before and after the point where the great number appears. This fact suggests that the number was put as a remainder of its being a decrypting factor. At page 80 of the quoted edition we read

*A rope of mulberry tree bark with 180 knots and a white shield with 180 layers*

Moreover when the emperor visited villages and towns he was given as gift usually 180 pieces of gold or 180 porcelain cups. His escort consisted of 180 men.

## 4. A great number in Nepal

Another great number appears in a Nepalese tradition. We find it in one of the travel books of Alexandra David Néel (2004), where at page 48 one reads:

*First inhabitants of Nepal were the Kiratis, who arrived 819.000 year before present*

Dividing 819.000 by 180, we get exactly 4550 years, an acceptable number. It is unclear what is the exact meaning of *before present,* but Alexandra, who died in 1969 aged over 100, traveled mainly in the first half of the twentieth century. Taking by default year 1950, and subtracting 4550, we get 2600 BC ! This is an interesting date, in agreement with the beginning of civilizations in Egypt, Mesopotamia, Bactriana-Margiana, Indus-Sarasvati.... Again, we are unable to say what exactly was the initial event associated with year 2600 BC, that corresponds to about 550 years after Noah's Flood, dated by us at 3162 BC. Thus we surmise that some people who survived the Flood, after increasing in number, reached present Nepal, then wholly forested and rich of wild animals, starting agriculture and building villages and towns...

We may also recall the Nepalese tradition stating that their civilization was founded by a man named *Mandjoushri*, famous for his knowledge and wisdom. Now *man* is a word acceptably related to other words as Manas, Minos, Menes, Manu, Latin *mens,* that define a man with special knowledge and wisdom (*Manasarovar* is the Sanskrit name of a lake in Tibet near mount Kailash or Meru, and meaning *Lake of the wise*

*man*. *Shri* characterizes a holy man. Such a man might have been Solomon, see our scenario, Spedicato (2009a), claiming that Solomon traveled in Asia in his last 40 years of life (from age 54 to 94), especially in India. According to a local tradition referred in Tucci (2005), Solomon's tomb is found in the Nepalese Terai jungle. Notice that *Terai* could be a hybrid name from Semitic and Chinese, meaning *great king* (TE=TA= great in Chinese, RAI=RA=king in several languages) Such a tomb is located in a very special place, near Lumbini, where Gautama Siddharta Buddha was born, and Kapilavastu, where the palace was located of Gautama's father.

## 5. A great number of Singalese people

The island of Ceylon, or Sri Lanka, lies south of India and was known in antiquity by several names (Taprobane, Pankaia...). The island appears in the great epics *Ramayana* as the kingdom of demon god Ravana. Ravana abducted goddess Sita, wife of god Rama, an incarnation of Vishnu, whose kingdom comprised the region of Dehli, and was killed after a difficult war. Recent dating of *Ramayana* is due to Kak et al (1995), who consider the epics older than *Mahabharata*, dating it to about 3500 BC, against 3200 BC of *Mahabharata*. Until about 500 BC, Ceylon was inhabited by very primitive people known as Yukkas. Such a people till a century ago survived as small groups in the forest, called Veddas. In the year 543 AC, Ceylon was invaded by Singhalese, a people coming from Panjab in NW India, speaking a form of Sanskrit, professing the Hinduist religion. Later more people arrived from southern India, speaking Tamil. The history of the Singhalese conquest of Ceylon and the later developments till 1758 AD, is given in the national epics called *Maha Wansa*, written in Pali, the popular version of Singhalese, a language used also used in the oldest canon of Buddhism. The original version numbered one hundred books and counted 54 kings, 54 a special number, see Spedicato (2014b). A partial translation of thirty books was provided by George Tumour, a cultured man of the colonial office in Ceylon, see Tumour (1837). See also the book written by major Forbes, around 1850, some time after the British conquered Ceylon, at that time an island almost entirely covered by forests and very rich of elephants.

*Maha Wansa* starts by a reference to some even older people of Ceylon, called Bambas. There was a time of crisis, after which the Bambas elected a king, this fact happening 1.300.000 years before king Suraya Kumara, also called Maha-Sammata-Raja. Dividing 1.300.000 by 180 we get 7200 years for the election of the king after the crisis. It is unclear to this writer who Maha Sammata might have been, since in the tradition there are at least 11 of them, some pertaining to an extremely old time. We propose to identify him with the king Noah –Manas, who survived the Biblical Flood, also noticing that another text called *Urulewatte Sannasa* states that king Kirti Sri Rajasimla descended from king Manu, who can be identified with Noah, as a member of the family of Maha Sammata. Then we would get for the election of the first Bambas king about 10.800 AC, since as said before Noah's Flood can be dated

at 3161 AC. 10.800 is a date quite close to the a giant explosion of a comet-asteroid over the American Great Lakes. An event that made the Ice Age colder and more windy, started the final period called Younger Dryas, ended the Clovis era, probably formed Carolina Bays and burned vegetation in north and central America south of the ices, leading to the first catastrophe of the Aztec, due to fire and wind. See Spedicato (2012).

Here we can consider among the large numbers, see Childress (2004), that Rama was king for 11.000 years, thus from before the end of last Ice age and Atlantis. Assuming that this number was also obtained by multiplication by 180, the duration of his kingdom would shorten to a value of about 60, known for many kings even in historical times.

## 6. A great number in Tibet

It is likely that a full search of the Tibetan literature, which has partly survived despite the almost complete destruction of monasteries and their libraries during Cultural Revolution, would give other very large numbers that would become meaningful after division by 180. One such number, see Sarat Chandra Das (2001), is found in the statement that at the time of king Kriki men live 120.000 years. Dividing by 180 we get about 650, a large number for a span of life, but that some genetic scholars have declared possible to reach in a future. This number is comparable with the life span of biblical patriarchs, and of the ten antediluvian kings in the Sumerian-Akkadian traditions. King Kriki is considered a mythical being, albeit it is stated by the Japanese Sokka Gakkai Dictionary of Buddhism that he lived some 22.000 years before Siddharta, and was a follower of Kashyapa, the seventh Buddha of the past. In Indian tradition, Kriki is associated to king Kanishka, a Kushana king of the time of Jesus, who discusses ten dreams that Kriki presented to Kashyapa.

Number 22.000 is not apt to division by 180, but taken to face value it would set Kriki in the time between the first two most ancient Yugas, see below. If this could be accepted, Kriki would be the oldest king, or man, whose name has survived from paleolithic times.

To more recent times, possibly at the Roman emperor period, one can date a vast epic, which survived especially in the eastern Tibetan region of Kham, noted for its giant warriors. There are several versions of the epic, since singers were allowed to modify not essential parts. One is given in Alessandra David Néel (1999), who listened to it, taking notes, from a singer who took many days to complete the story. The epic deals with the hero Gesar de Ling, who had magical properties and fought against many enemies. In one episode, see Gruschke (1999), Gesar is pursued by his enemy, the Khan Shiraigol, whose army numbered 1.300.000 soldiers. Such a

number is hardly acceptable in view of the small population of western Tibet, whose growth was limited by the harsh climate and the frequent tribal fighting. If we divide that large number by 180 we get about 7200, an acceptable number, where we also see the presence of number 72, which has many ritual characterizations.

## 7. The great numbers in the Vedic Yugas

The four *Vedas* are considered as the oldest documents in written form. It is believed by some that they already existed some 6000 years ago, the oldest one being the *Rg Veda*. Such antiquity was always claimed by Brahmins, the caste of the sacred men in India, see a statement by 17th century British traveler Foster (1985). In the 19th century, British scholars claimed their composition to the first millennium BC, possibly by political reasons. Kak et al (1995) have reclaimed their antiquity.

In *Vedas* and related texts, as their comments *Upanishads* or the partially historical texts called *Purañas*, most of which are available only orally, four ages are introduced, called Yugas. Such ages last for times much greater than those seen above. And of such times there are at least two versions.

Below we give the Yugas with two sets of their values. We notice that the second set may be the result of a double transformation, since the two sets differ by 20 %, 20 being also a special number, the possible period of the body Metis-Marduk-Nibiru that we believe impacted on Jupiter about 7000 AC.

It is stated that the most recent Yuga, the *Kali Yuga*, ends, or possibly begins, with year 3103 AC. This is considered as the year when Krishna died, the god with human features who fought in the *Mahabharata* war. His dialogue with Arjuna is included in the well known *Bhagavagita* section. Year 3103 is about 60 years after the Noah's Flood, 3161 BC in our chronology. It is also close, see Spedicato (2010a), to year 3114 BC that is considered as the starting year of the Mayan long computation. But in *Mahabharata* Krishna's death appears to take place before the Flood (which will result in Krishna's city Dwarka to sink in the sea, possibly a few dozen meters). So we suspect that year 3103 may not be correct, the correct date being possibly 3203. Here we will use anyway the traditional date 3103, the effect being marginal on subsequent calculations.

The first two Yugas, dated according to our decryption, are related to discontinuities present in other traditions, say Plato, Aztec, Mayas... The two oldest Yugas appear related to much older events, ignored by other traditions, at least as far as this writer can say. We may however see a hint to such extremely old events in Africanus, who wrote that the Phoenicians claimed their civilization to be three myriad years old, say 30.000 years (a round figure, possibly to be modified by a few thousand years).

Since Phoenicians are related to the Indian navigators, originating from the Red Sea, namely the Indian Ocean, see first page of Herodotus histories, it is possible that the referred great antiquity should actually apply to Indian civilization. We see later on that the three myriads of Africanus can be associated with the most ancient Yuga.

The four Yugas appear in *Vedas* and other texts, as *Mahabarata* and *Ramayana.* Their names and duration are the following, beginning from the oldest ones:

SATYA or KRTA Yuga 1.728.000 years

The above Yuga is associated to a time of happiness, called the golden age

TRETA Yuga 1.296.000 years

The above Yuga corresponds to the silver age, a time of less happiness

DVAPARA Yuga 864.000 years

The above Yuga corresponds to the bronze age, when gods began to be venerated in temples

KALI Yuga 432.000 years

The last Yuga is a time of violence and hypocrisy.

Dividing the above numbers by 180, we get the following values for the length of the four ages, note the difference of 2400 years between two successive age lengths.

SATYA or KRTA Yuga 9600 years

TRETA Yuga 7200 years

DVAPARA Yuga 4800 years

KALI Yuga 2400 years

Summing the years of the four Yugas gives 4.320.000 years, or, after decryption, 24.000 years. The number 4.320.000 is called a *divya-Yuga.* It is said that a day of Brahma counts a *divya-Yuga* (notice that for Talmud scholars, and in Psalms, one day of the Lord is 1000 years, which has remarkable applications to analysis of the seven days of creation in Genesis). We also observe that 24.000 years is a number close to the precession period of Earth as now calculated. In the past it could have been different if our planet interacted with some sufficiently large external body.

In *Brahmanda Purana,* the Yugas values are different, say:

| | |
|---|---|
| SATYA-KRTA | 1.440.000 years |
| TRETA | 1.080.000 years |
| DVAPARA | 720.000 years |
| KALI | 360.000 years |

We observe that the previous values are obtained by increasing the previous values by 20%. We guess that a double transformation was used, in terms of the numbers 180 and 20, the last one possibly associated with the period of Metis-Marduk-Nibiru.

Let us now try to interpret the chronology of the Yuga numbers. As said above, in several texts it is stated that Dvapara Yuga ended and Kali Yuga began with Krishna's death. Such event is dated at 3103 AC, or at 18th February 3102, death attributed to a hunting accident (same reason why the Iranian hero Rostam died in Sistan, eastern Iran; reason also proposed by Bacchi (2014) for Tutankhamen death). In *Mahabharata* Krishna appears to die before the Flood, dated at 3161 AC, so perhaps we should read not 3103 but 3203 AC.

If the above is correct, then the end of Kali Yuga, whose duration we estimate in 2400 years, would be about 600 BC, or about 700 BC if we can move Krishna's death back one century. Notice that around 700 BC there are many calendrical variations, in Rome the one by Numa Pompilius, while from 600 BC we see the beginning of great changes in human civilization. Indeed from this time we notice worldwide changes in institutions, thinking and religions, due, in the scenario developed by Velikovsky (1950), De Grazia (1981), Ackerman (1996a,b) et al., to the fact that solar planetary system reached the present configuration after dramatic events in the previous millennia. We notice the birth of Buddhism and Jainism in India, of Confucianism and Taoism in China, of Shinto in Japan...in the kingdom of Judah king Manasseh abandons for many year monotheism, trying to kill all great priests. In Greece Thales starts rationalism.

If we consider Krishna's death as the end of Kali Yuga, then the related chronology becomes even more significant, for the following reasons:

- Kali Yuga would begin around 5500 AC, the time of creation of Adam and Eve (possibly better of Lilith) in *Genesis* (plus *Talmud*) or of seven couples in Sumerian texts, according to the chronology of both *Septuaginta* for patriarchs and Sumerian texts for antediluvian kings. An event taking place in Gan, the Garden of Eden in *Genesis*, or in Kharsag, in Sumerian texts. In Spedicato (2003) the Garden of Eden is identified with Hunza valley, in north of present Pakistan, where four great rivers have very close sources in the Pasu range and can be identified with the four rivers in *Genesis*. The date of the event is 5500

AC in the Byzantine calendar, 5492 AC in the Ethiopian calendar. The difference of 8 years is due to an error of 8 years made in 5th century AD by the Scythian monk Dionysius Exiguus in dating the birth of Jesus. The Ethiopians got the more correct chronology. What a pity that, in the Italian conquest of Ethiopia, general Badoglio ordered many monasteries to be bombed with loss of their libraries.

- Dvapara Yuga would begin about 10.300 AC, say a few centuries after the date of the recently discovered explosion over the ices in the Great Lakes region of north America. An explosion that generated a fire over several million square km, ended the Clovis era, started Younger Dryas, the final and coldest period of last Ice Age. It is a date possibly to be associated with the first of the four catastrophes in Aztec and Maya memory, and with the beginning of the Atlantis civilization, that ended about 9450 BC with the catastrophe that terminated the last Ice Age, see Spedicato (2010b, 2014a).

- Treta Yuga begins about 17.500 AC, a time of full Ice Age. At this time one , notices a jump in technological knowledge, for instance in the working of bones, and the start of the great cavern paintings, especially in France and Spain, but also in Africa and India, defining the Magdalenian age. For a recent intriguing interpretation of the meaning of the cavern paintings see Cottles and Lewis-Williams (2001).

- Satya Yuga begins about 27.100 AC, a date that can be associated with the demise of Neanderthal man, followed by the domination of *homo sapiens*, see Chiarelli (2012). Notice that this number is also close to the three myriads of antiquity of their civilization claimed by Phoenicians, according to Africanus, who rejects their claim as impossible. It is also close to the 30.000 years that according to Iginus were spent by Prometheus being chained to a Caucasus rock, an eagle eating his liver. Notice that the rock was identified by local people at end of 19th century as mount Khomlin in Imerezia, see Pizzagalli (2006). In the myth Prometheus teaches man how to keep fire, a fact that might explain a technological superiority of *homo sapiens* versus Neanderthal, with effects on survival rate. Neanderthal lived as far as it is presently known between Iberia and Afghanistan. Chiarelli (2012) provides several arguments to date Neanderthal demise to the period 27.000-28.000 AC. If this date defines the beginning of *homo sapiens* domination then it would be a natural date for the beginning of the first Yuga age.

Literature about Yugas is very large, dating from over two thousand years ago. Among recent scholars I quote Indian guru Sri Yukteswar Giri, born 1855, died 1936. He was the teacher of Yogananda Paramahansa, the first Indian to teach yoga in America. Another of his students was met about 1960 by the great Italian sufi Gabriele Mandel and his wife. The man had body transparent to light, so no shade

was produced, an ability that is considered as the most difficult to obtain. I have pictures of Mandel and his wife producing a shade, while no shade is made by the guru standing near them. The man used to meditate while sitting on the waters of Ganges, an accomplishment that is considered within reach of many. In the book *The holy science*, Sri Yukteswar Giri gives a total duration of the four Yugas as 24.000 years, same given by us. However he splits such a period in two sub-periods of 12.000 years each, the first one ending and the second one beginning about 500 AD, the duration of each Yuga being correspondingly divided by two. Thus Kali Yuga of first sub-period would start around 700 BC circa, a period meaningful as discussed before; Dvapara Yuga about 3100 BC, a date close to death of Krishna and the Flood; Treta about 6700 BC, a date close to the proposed impact of Metis on Jupiter, with many dramatic effects, see Spedicato (2012a); Satya would start at 11.500 AC, a date close to the explosion on Great Lakes, quoted above, and corresponding to the first of the four Aztec and Mayan catastrophes, see Spedicato (2012).

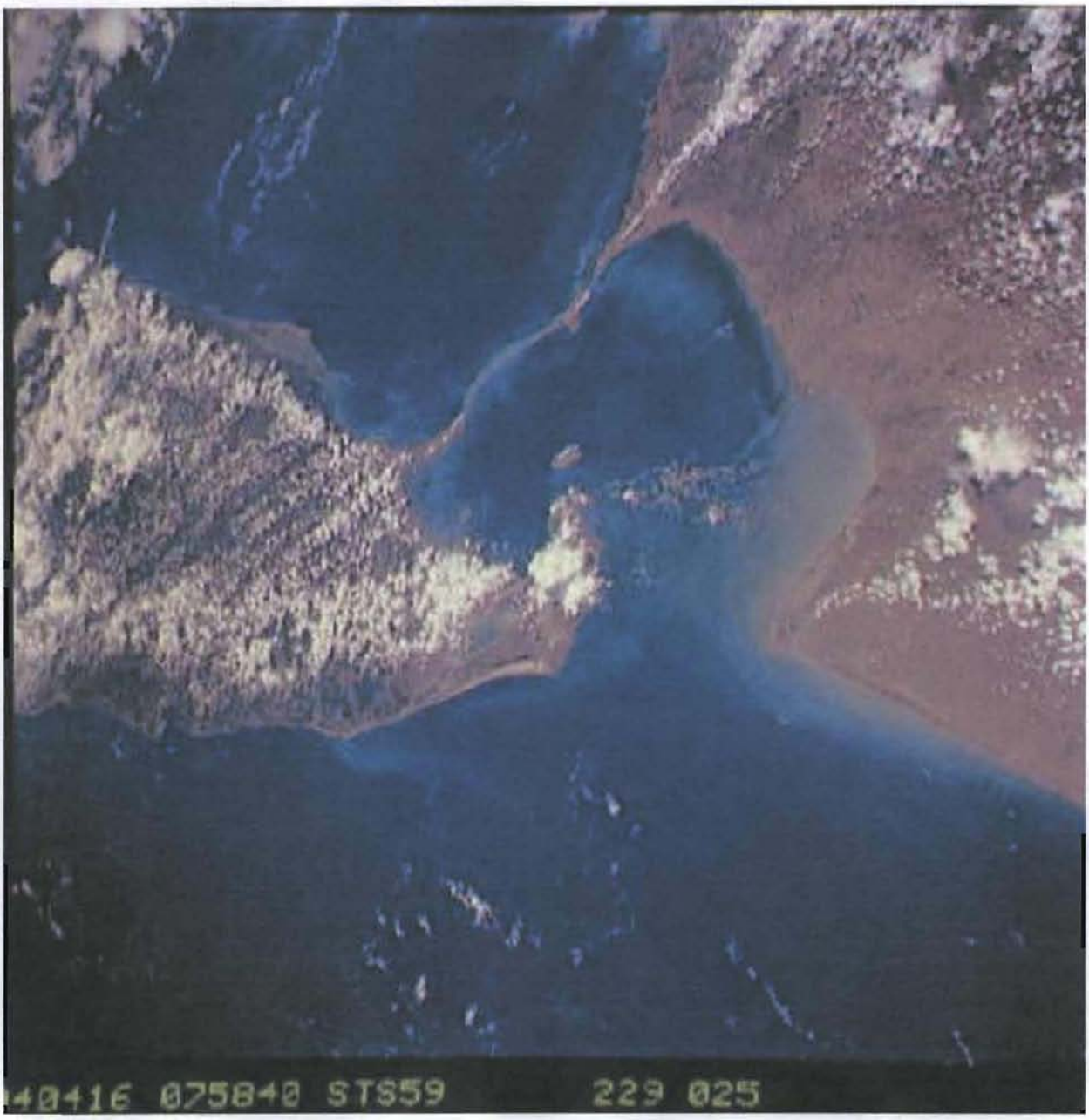
Starting now from 500 AD, we observe that this date is not far from the years 536-540 AD when the Mediterranean region was devastated by so called Justinian plague, killing perhaps over two third of the people, while China was affected by a cold weather that killed crops and led the Emperor to suicide. For the end of Kali Yuga we would have 1700 AD, a time where no great catastrophes are known, but India lost independence and prosperity passing under the British control. We should now be in Dvapara Yuga, to end in the far away 4100 AD..... the above assuming that the standard chronology per the period after Christ is correct, what has been rejected by historians like Anatolij Fomenko in Russia, and Gunnar Heinsohn in Germany. They claim that the standard chronology is wrong by some 600 year. This is due to an error by Justus Scaliger, the 16th century historian, who defined the basic chronology after Christ, that became the standard chronology.

## 8. On very large length values

We notice that division by 180 makes acceptable some lengths that otherwise appear impossible. We consider three cases:

- Kailash mountain in Tibet is accepted to be to holy Meru mountain by Hindus, Bon and Jain religions. Its elevation is 6600 m. In Hindu texts its elevation is given as 84.000 yoyanas, corresponding to about 1082 km. This value cannot be accepted, noting that no mountain on Earth can be higher than about 10 km, for reasons of stability of the rocks at its basis. Dividing 1082 by 180 we get in meters 6.011, a value close by 10% to the present value. The error can come from a wrong estimate made in past, or by a change of the elevation of Kailash, due to tectonic movements in the India-Tibetan region, that tends to get more elevated from the pressure from the African continent.

- in *Ramayana* we find the description of a bridge to connect India and Sri Lanka. In a French version of the epics, see Éditions Michel, 2006, the bridge length is given as 300 leagues, the width 3 leagues. The value of the league changes in time and places, being generally between 4 and 6 km, the space that can be covered in one hour by foot. Assuming 5 km, the bridge length would be 1500 km, not acceptable. Dividing by 180 we get for length 8.3 km, for width 83 m, acceptable values. Notice that Sri Lanka is separated from India by Palk straight, along which a number of small and low lying islands define the so called *Adam bridge*. Distance between India and Sri Lanka here is now about 15 km. At *Ramayana*, time, about 400 years before Flood, lengths might have been less, due to a likely lower level of the sea. Sea level might indeed have increased of possibly more than ten meter after the Flood, due to arrival of "waters from the fountain of the high", as *Genesis* states "male waters" in *Talmud*, explanation we give elsewhere), or from the Mars oceans, see Spedicato (2013). Existence of a bridge just below the water level was obtained recently by NASA satellite pictures, see below




- In Bible and extra-biblical sources as *Enoch book*, there is a reference to giants, the *Nephilim*, who lived before the Flood, which destroyed them. It is claimed that their height reached 2000 cubits, say, for a royal cubit of about 52 cm, over 1000 meters. This is an unacceptable value, bones, inter alia, being unable to sustain an excessive weight. Dividing 2000 by 180, we get about 5.5 m, a high value but not impossible. We notice indeed that skeletons of length between 3 and 5 m have been found in Sardinia, after second world war, in the region of Pauli Arbarei. They were found when ploughs were used, able to reach 80 cm depth, against the 40 cm of older models. See Muscas (2011). Moreover on internet the news has appeared that the Smithsonian institute has been charged of destroying thousands of giant human skeletons found especially in the eastern Mississippi basin at the beginning of the 20th century. A few huge bones were kept by some Smithsonian officers and were shown.

**Appendix . Biblical ages of patriarchs**

From Genesis, *Septuaginta* translation, French edition of Harl (1994), we write the ages of the first nine patriarchs when they had their first son. This ages are given in first column, the second one giving them as in mainly Masoretic edition CEI (2007). We accept as more correct the *Septuaginta*. Notice that the common idea that patriarch ages are not in years but in months, does not work with when the first son was born, which would be too low say for Adam 19 years, for Lamech 14... this assuming a year of 12 month, while there is some evidence from Val Camonica petroglyphs that before the Flood the year had 13 months.

| | | |
|---|---|---|
| Adam | 230 | 130 |
| Seth | 205 | 105 |
| Enos | 190 | 90 |
| Cainan | 170 | 70 |
| Malaleel | 165 | 65 |
| Yared | 162 | 162 |
| Enoch | 165 | 165 |
| Methuselah | 167 | 187 |
| Lamech | 188 | 182 |
| (Noah son of Lamech) | | |

From *Septuaginta* we obtain that Noah was born from Lamech (one of the three main gods of Kafirs in eastern Afghanistan in the 16th century, see Scarcia (1976)), 1642 years after Adam's "creation". Since he was aged 600 years when Flood arrived, we get for Flood a date of 2242 years since Adam's creation. As Noah lived 950 years, the total age of patriarchs would be 2592 years. This value is comparable to the one given in Berosus for the ten antediluvian kings, say 2400, obtained by dividing 432.000 by 180. The number in the CEI Bible reduce the total by 500 years, so giving a value more different from the Berosus value. The CEI Bible uses the so called Jerusalem Bible of the famous scholar Père de Vaux. We notice a flat difference of 100 years in many patriarch ages, which suggests artificial changes.

Now an interesting question. Year one of the Byzantine and Ethiopian calendars, whose slight difference is certainly due to the mistake by Dionysius Exiguus, must be defined by some special event in the Garden of Eden or Kharsag. Two such events may be the following, considering *Genesis* or the Sumerian-Akkadian texts *Atrahasis* and *Enuma Elish:*

- Arrival of Yahvè-Elohim or Enlil-Enki-Ninlil with others
- "creation" of Adam and Eve, or the seven couples

The present writer does not believe that Bible describes the creation of universe, this being probably an infinite structure if created by an infinite God, but just the events

in a span of 7 God's days equivalent to 7 millennia, from about 10500 to 3500 BC. The Adam and Eve event should be related to the beginning of the Byzantine and Ethiopian calendars. Based on arguments to be presented elsewhere, the Flood took place in year 3161 AC. *Septuaginta* gives 2077 years till the Flood, implying, if the numbers are correct, that Adam's "creation" took place at 5403 BC, hence about 100 years after the beginning of the considered calendars. We should conclude that the calendars do not start from the year of man's "creation", but from the arrival in the Garden of Eden or Kharsag of Elohim or Annunaki. Conclusion supported by the fact that the Sumerian-Akkadian texts state that the arrived beings worked alone for a certain time, then decided to create an intelligent help for them. A fact not present in the Bible, who deals only with one couple. For more insight into the creation in the Garden of Eden, see Biglino (2011, 2012).

**Bibliography**


J. Ackerman, Firmament, in **www.firmament-chaos.com**, 1996

J. Ackerman, Chaos, in **www.firmament-chaos.com**, 1996

A. Bacchi, *La maledizione del cielo oscurato,* Aracne, to appear

F. Barbiero, *Civiltà sotto ghiaccio*, Nord Editrice, Milano, 1974

M. Biglino, *Il Dio alieno della Bibbia,* Uno Editori, 2011

M. Biglino, *Non c'è creazione nella Bibbia,* Uno Editori, 2011

J. Bottero, S.N. Kramer, *Uomini e Dei della Mesopotamia*, Einaudi, 1992

CEI editor., *La sacra Bibbia, Antico Testamento, prima parte*, La Biblioteca della Repubblica, 2009

A. David Néel, *Vita sovrumana di Gesar di Ling,* Mediterranee, 1990

David Hatcher Childress, *Le citta' perdute di Atlantide, Europa antica e Mediterraneo,* Hera, 2004

J. Clottes, D. Lewis-Williams, *Les chamans de la préhistoire,* La maison des roches, 2001

A. Collins, *Gateway to Atlantis*, Carroll and Graf, 2000

S. C. Das, *Journey to Lhasa and Central Tibet,* Classics India Publications, 2001

A. De Grazia, *Chaos and Creation, an Introduction to Quantavolution in Human and Natural History*, Metron, Princeton, 1981

A. De Grazia, *The iron age of Mars,* Metron, 2009

Major Forbes, *Eleven years in Ceylon,* Asian Educational Services, 1994

W. Foster editor, *Early travels in India, 1583-1619*, Oriental Books Reprint Corporation, 1985

M. Harl editor, *La Bible d' Alexandrie 1, la Génèse*, Editions du Cerf, 1994

Kak S., Frawley D. and Feurnstein G., *In search of the cradle of civilization*, Quest Books, 1995

J. Jacobsen, *The Sumerian king list,* University of Chicago, 1938

P. La Violette, *Earth under fire,* Bear and Company, 2005

O. Muck, *Atlantis, die Welt von der Sinflut*, Olter, 1956

L. Muscas, *I giganti e il culto delle stelle, Author publication*, 2011

A. D. Néel, *Au cœur des Himalayas*, Payot, 2004

D. Pizzagalli, *Il viaggio del destino*, Rizzoli, 2006

G. Scarcia, *Sifat-Nama-Yi Darvis Muhamma. D. Han-I Gazi*, ISMEO, Serie Orientale Roma XXXII, 1976

C. I. Solinus Polihistor, *Collectanea rerum memorabilium*, Martino Antonio Del Rio editor, apud Hyeronimum de Vogel, 1645

Spedicato E., *Eden revisited : geography, numerics and other tales,* Migration and Diffusion 4, 16, 2003

E., Spedicato, *Short saros and long saros*, Migration and Diffusion 5, 18, 42-47, 2004

E. Spedicato, *Solomon revisited*, preprint, 2009 a

E. Spedicato, *On the recent origin of the Moon: a four-five body scenario for a capture event and its mathematical modelling via nonlinear optimization*, invited

paper in SIS Special Volume devoted to Alfred De Grazia on Occasion of his 90th Birthday, 2009 b

E. Spedicato, *Atlantide e l' Esodo, Platone e Mosè avevano ragione,* Aracne, 2010

E. Spedicato, *Grandi numeri nelle cronologie asiatiche, una chiave di lettura,* Quaderni Asiatici 93, 93-112, 2011a

E. Spedicato, *On the reversal of the rotational momentum of Earth: a derivation and analysis of the Herodotus equation*, in Astronomia culturale in Italia, SIA, Elio Antonello editor, 89-98, 2011b

E. Spedicato, *The first of the four Mayan catastrophes,* Migration and Diffusion website, 2012

E. Spedicato, *From Nibiru to Tiamat, an astronomic scenario for earliest Sumerian cosmology,* Actual problems of aviation and aereospace systems: processes, models, experiment, 2, 37,18, 25-35, 2013

E. Spedicato, *Atlantide e l'Esodo, astronomia e archeologia confermano Platone e la Bibbia,* Aracne, 2014a

E. Spedicato, *Dictionary of ritual numbers,* Aracne, to appear, 2014b

M. Tinazzi, in *Proceedings III Archaeoastronomy conference*, Naples, 2000

Tollman A. and E., *Unt die Sintflut gab es doch. Vom Mythos zur historisches Wahreit,* Dröner Knaur, 1993

G. Tucci, *Il paese delle donne dai molti mariti*, Neri Pozza, 2005

G. Tumour, *The Mahawanso in Roman characters with the translation subjoined, and an introductory essay on Pali Buddhistical literature,* Cotto, 1837

I. Velikovsky, *Worlds in Collision*, Doubleday, 1950

J. Walton, *The antediluvian section of the Sumerian king list and Genesis 5*, Biblical Archaeologist, 44, 207.-08, 1981