

## Armenian Calendar (Tōmar Hayoc')

If we *grosso modo* accept Xorenac'i's statement about the study of the science of time ("the cycle of weeks, months and years"<sup>1</sup>) in the period of Artaxias/ Artašes the king of Armenia (nearly 188 BC-161 BC), it seems probable that the "old" calendar known to us which is based on the wandering year of 365 days without fraction was re-arranged in Armenia in the same period. This calendar was used till the end of the eleventh century, when Hovhannes Imastaser (John the Deacon) arranged the introduction of the Julian calendar of 365 days with a leap day added every four years.

The Armenian year counted 365 days, i. e. twelve months<sup>2</sup> of 30 days each, plus five additional days<sup>3</sup> which are placed at the end of the 12<sup>th</sup> month. The starting point of an Armenian year moves in succession, through all the seasons, forming a so-called *annus vagus*.<sup>4</sup> The length of an Armenian year is 365 days, and that of a Julian year 365 ¼ on average. One may draw a correlation:

1460 Julian years = 1461 Armenian years.

In every 1461 Armenian years the two different calendars would meet in their starting points.

The year consists of four seasons :

Գարուն /garun/ 'spring'<sup>5</sup>;  
Ամառն /amaṛn/ 'summer'<sup>6</sup> ;  
Աշուն /ašun/ 'fall, autumn'<sup>7</sup>;  
Զմեռն /jmeṛn/ 'winter'<sup>8</sup>.

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<sup>1</sup> . Hayoc' *Patmut'yun*, II, 59.

<sup>2</sup> . ամիս /amis/.

<sup>3</sup> . անելից /aweleac' / 'exceeding, superfluous, redundant'.

<sup>4</sup> . See N. Fréret, "De l'année arménienne, ou suite des observations sur l'année vague des Perses," *Mémoires de l'Académie des Inscriptions et Belles Lettres* 19, 1753 (*Œuvres complètes de Fréret*, t. XII, Paris, 1796, 187-254).

<sup>5</sup> . gar-un. Cf. Av. *vaṅhar-* 'morning; spring', Gr. ἔαρ.

<sup>6</sup> . am-ar-n derives from am 'year'. Cf. Av. *ham-* 'summer', Skt. *sāmā-* 'year, half-year, season'.

<sup>7</sup> . aš-un (*ašnan* gen.).

<sup>8</sup> . jim-er-n. Cf. *zyam-*, *zimō* 'winter, year'; Skt. *himá-* 'cold, frost', *himā* 'winter; year'.

### Month Names<sup>9</sup>:

The Armenian month names of the “vague” year are the result of a combination of two different cultural traditions: An old (lunar?) calendar, and a festival calendar. Two great festival months were the month of the festival of the New Year (first month), and that of the festival of Mithra (seventh month). For example, in the Book of P’ avstos Buzand it is said about the *ztōns nawasardac* ‘“feasts of Nawasard”’: Vrdan tried to convince Gnel, saying that the king was summoning him for some great exaltation: “King Aršak does not want to pass the feast of Nawasard without you...”<sup>10</sup>

Armenian month names are in a genitive form (governed by *amis*): ‘(month) of (the) x’. The following table lists the Armenian months and corresponding Sogdian months:

Armenian		Sogdian
I. նաւասարդ-ի / <i>nawasard-i</i> /	1	Nausarδ(ic)
II. հորի / <i>hor-i</i> /	31	Xorežn(ic)
III. սահմի / <i>sahm-i</i> /	61	Nisan(ic)
IV. տրէ / <i>trē</i> /	91	Pusāk(ic)
V. քաղոց / <i>k’alo-c’</i> /	121	Šnā(k)-Xand(ic)
VI. արաց / <i>ara-c’</i> /	151	Xazānānc
VII. մեհեկան-ի / <i>mehekan-i</i> /	181	Bayakān(ic)
VIII. արեգ / <i>areg</i> /	211	Āpānc
IX. ահեկան-ի / <i>ahekan-i</i> /	241	Bōγ(ic)
X. մարերի / <i>marer-i</i> /	271	Məšβōγ, Taymic
XI. մարգաց / <i>marga-c’</i> /	301	Žimdic
XII. հրոտից / <i>hroti-c’</i> /	331	Xšūm(ic)
աւելեաց / <i>aweleac’</i> /	1 <sup>st</sup>	361 Nayran
	2 <sup>nd</sup>	362 °Xurmazd
	3 <sup>rd</sup>	363 °Xuman
	4 <sup>th</sup>	364 Artxušt
	5 <sup>th</sup>	365 °Xševār

նաւասարդ-ի /*nawasard-i*/ ‘(month) of the New Year’, *amseann nawasardi* ‘month of Nawasard’ borrowed from Perso-Aryan \**nau-sard-a-* ‘New Year’/ Av. \**nava-sarəda-*.<sup>11</sup> Sogd. n’wsrδyc, Albanian

<sup>9</sup>. See L. Gray, « On Certain Persian and Armenian Month-Names as Influenced by the Avesta Calendar », JAOS, 1907, 331-44; V. Bănăţeanu, “Le calendrier arménien et les anciens noms des mois”, *Studia et Acta Orientalia* 10, 1980, pp. 33–46; R. Schmitt, “Zu den alten armenischen Monatsnamen”, *Annual of Armenian Linguistics* 6, 1985, 91-100; S. Wikander, *Feuerpriester in Kleinasien und Iran*, Lund, 1946, 232.

<sup>10</sup>. Փալստոս Բուզանդ, պատմութիւն Հայոց, IV. 15. The institution of the feast at the start of Nawasard is attributed to Valarš, by Movsēs Xorenac’i, II.66.

<sup>11</sup>. See H. Hübschmann, *Armenische Grammatik*, I. Armenische Etymologie, Leipzig, 1897,

*nawasard-un*<sup>12</sup>. It corresponds to the Av. month *fravašinəm*/ Pers. *fravardīn*. According to Movsēs Xorenac'i the last Tigran erected an altar over the tomb of his brother Majan, the high priest (of Aramazd Vanatur 'the hospitable Ahura Mazdā') at Bagavan; at this altar travellers could participate in the sacrifices and spend the night as guest. Then (king) Vałarš (Parth. Valaxš) instituted there a festival for the entire land (of Armenia) at the start of the New Year, at the beginning of Nawasard.<sup>13</sup> The deity of New Year, Amanor<sup>14</sup>, was celebrated during six first days of the month Nawasard –the Persian New Year feast was celebrated for six days. Gregory changed the nature of the Festival: "He fixed the date for celebrating the commemoration of the martyrs that he had brought as a major festival, at the time of the worship of the former vain (gods): the god Amanor the bringer of new fruits (and) the god hiwrēnk'al ('hospitable') Vanatur ('giving asylum'), which they previously used to celebrate in that same place on the festival of the New Year's Day. (He commanded) that gathering for the commemoration of the great and blessed John and the holy martyr of God, Athenogenes, they should celebrate their festival on that day in the same town."<sup>15</sup> Georgian *Axalc' l-isay* '(month) of Axalc'el' (*axal-c'el-* 'New Year').<sup>16</sup>

*hnnḥ /hor-i/*. It corresponds to the Av. month *Aṣahe vahištahe*, Pers. *ardvahišt/ urdvahišt*. Georg. *stul-isay*.

*uuḥuḥ /sahm-i/*. It corresponds to the Av. month *Haurvatātō*, Pers. *hardād/ hurdād*. In Georgian *ori* and *sami* mean 'two' and 'three'; it has been suggested that Armen. *hoṛi* and *sahmi* could indicate the second and third months of the year.<sup>17</sup> Georgian *t'irisk'n-isay* ?

*unḥ /trē/ (treay)* '(Month) of Tira'. It seems that the Armenian form reflects both Av. *tīra-\** and Av. *tištrya-*, corresponding to Av. *Tištryehe* and Pers. *tīr*. Georgian *t'irisdin-isay*.<sup>18</sup>

*puḥng /k'alo-c' /* '(month of) crops'. As A. Meillet said: "It is true that, at the period of the origin of the Armenian era, it corresponded to

<sup>12</sup> . For the Albanian month names, see Jost Gippert, "Old Armenian and Caucasian Calendar Systems. III: The Albanian Month Names", *Annual of Armenian Linguistics* 9, 1988, 35-46.

<sup>13</sup> . *History of the Armenians*, II, 66

<sup>14</sup> . *amanor* 'new year' from *am-a-* 'year ; age', *nor* 'new'.

<sup>15</sup> . Agathangelos, *History of the Armenians*, 836

<sup>16</sup> . About the Old Georgian month names, see J. Gippert, "Die altgeorgischen Monatsnamen", *Studia Caucasologica I: Proceedings of the Third Caucasian Colloquium Oslo, July 1986*, Oslo, 1988, 87-154.

<sup>17</sup> . But see J. Gippert, "Old Armenian and Caucasian Calendar Systems: 2. Armenian *hoṛi* and *sahmi*", *The Annual of The Society for The Study of Caucasia*, 1, 1989, 3-12

<sup>18</sup> . See R. Schmitt, "Zu den alten armenischen Monatsnamen", *Annual of Armenian Linguistics* 6, 1985, (91-100), 94; J. Gippert, "Old Armenian and Caucasian Calendar Systems", I, *Annual of Armenian Linguistics* 8, 1987, 67-72.

the month of November.”<sup>19</sup> It corresponds to the Avesta month *Amərətātō*, Pers. *amurdād*. According to Dulaurier (11) k‘aloc‘ would be the month of harvest<sup>20</sup>. Georgian *ap`n-isay*.

արաց /*ara-c`*/. It corresponds to the Av. month *Xšaθrahe vairyehe*, Pers. *šahrever*. Georgian *surc`q`n-isay*.

մեհեկան-ի /*mehekan-i*/ ‘(month) of Mehekan’ (*amseann mehekani*) or մեհեկի /*meheki*/ (*i meheki amsean* ‘in the month Meheak’), \**m,hakan* descended from OPerso-Aryan *miθrakāna-/* Μιθράκωνα (Pers. *mihragān*) ‘festival of Mithra’.<sup>21</sup> It corresponds to the Av. month *Miθrahe*, Pers. *mih*. Mehekani bears the name of the festival rather than of the deity Contract. On the 16<sup>th</sup> day (*mih rōz*) of the Persian month Mihr, there is a feast called (lessser) Mihragān. On the 21<sup>st</sup> day (*rām rōz*) of the same month, is the (greater) Mihragān in commemoration of Өarētaona’s subduing and binding Dahāka. In the Armenian Church, the 21<sup>st</sup> of Mehekan became the date of the feast of Gēorg the Soldier. Georgian *mihrak`n-isay*.

արեգ /*areg*/ ‘of the sun’. It corresponds to the Avesta month *Apqm*, Pers. *ābān*. Georg. *igrik`isay*.

ահեկան-ի /*ahekan-i*/ (*y amseann ahekani* ‘in the month Ahekan’), \**a,hakan* descended from OPerso-Aryan *āθrakāna-* ‘fire festival’ (cf. OPers. *Āçiyādiya-* month of the festival of the fire-offering’).<sup>22</sup> The form *ahēki*/<sup>23</sup> is also found.<sup>24</sup> It corresponds to the Avesta month *Āθrō*, Pers. *ādur*. Ahekani bears the name of the festival of fire rather than of the deity Fire. Ahekan corresponds to Greek Xanthikos in the Armenian translation of II Maccabees XI. 30, 33. Georg. *vardob-isay* (*vard-oba-* ‘rose feast’).

մարերի /*marer-i*/ (gen./ 1 of *marear*). Marquart derived it from Av. *maiḍyāiryā* ‘mid-year (feast)’, O. Parth. \**maḍyār*, the “season” feast (Gāhānbār) which is celebrated in the month Day<sup>25</sup>. Indeed, Mareri corresponds to the Avesta month *Daθušō*, Pers. *day*. Georgian *marial-isay*.

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<sup>19</sup> . See Gray, 337.

<sup>20</sup> . From *k`al* ‘harvest’

<sup>21</sup> . See Hübschmann, 194.

<sup>22</sup> . See Hübschmann, 95.

<sup>23</sup> . Armenian *ahēk* or *ahēak* means ‘left’.

<sup>24</sup> . See F. Macler, “Armenian Calendar”, *Encyclopedia of Religion and Ethics* (Hasting), New York, 1911, 70.

<sup>25</sup> . J. Marquart, *Untersuchungen zur Geschichte von Eran* (I, Göttingen, 1896), II, Göttingen, 1905, 198-215, 205.

մարգաց /*marga-c*/. It seems that the word means ‘(month) of the meadows’<sup>26</sup>. It corresponds to the Avesta month *Vaṇhāuš Mananḥō*, Pers. *vahman*. Georgian *tib-isay*.

հրոտից /*hroti-c*/. ‘(Month) of the Fravarti’, gen./3 of *\*hro.ti* < Perso-Ar. *fravarti-* ‘soul (of a deceased)’, Av. *fravši-*.<sup>27</sup> It corresponds to the Avesta month *Spəntayā Ārmatōiš*, Pers. *spendārmed*. This month ends with the Fravarti days (Pers. *rōzān fravardīgān*). Georg. *kueltob-isay*.

The five epagomenal days, called աւելուց /*aweleac*/. ‘exceeding, superfluous, redundant’ are placed after the month Hrotic’. After the Persian calendar reform these five days were placed, in the Persian calendar, after the month Ābān.

#### Day names:

Like the Perso-Aryan system of day-names, the Armenians named the days<sup>28</sup> of their month; each month has 30 days. Here is the list of the day names as given by L. Ališan in his *Ancient faith or the Pagan Religion of the Armenians*<sup>29</sup>:

1. Արեգ /*areg*/. ‘of the sun’.<sup>30</sup> Sogdian *ᶜXurmazda* (/ Pers. *Ohrmazd*) is the first day of the month (in the meaning ‘sun’ Khotanese *urmaysde*, Sanglēcī *ōrmōzd*).
2. Հրանդ /*hrand*/.<sup>31</sup>
3. Արամ /*aram*/. name of a legendary hero.
4. Մարգար /*margar*/.<sup>32</sup> It was identified with St. Sylvannus (Acts, xv, 32).
5. Ահրանք /*ahrank*/.<sup>33</sup>
6. Մազդեղ /*mazdel*/. or Մազթեղ /*mazt’el*/.<sup>34</sup>

<sup>26</sup> . Armen. *marg*/ Parth. *mary* ‘meadow’. See L. Gray, 341. Marquart dissented this etymology, considering it a loan-word from the Old Persian month-name *Markašanaš* (Elam. form), I, 64. But this Elamite form corresponds to OPers. *Vṛkazana-*.

<sup>27</sup> . See Hübschmann, 184-85; R. Schmitt, 95.

<sup>28</sup> . op /ōt/.

<sup>29</sup> . Ղ. Ալիշան, Հին հայաստանի կամ հեթանոսական կրոնից հայոց, Վնս., 1895, 143-44. See also L. Gray, op. cit., 344; J. Karst, *Mythologie arméno-caucasienne et hérito-asianique*, Strasbourg, 1948, 87-9.

<sup>30</sup> . *areg* ‘sun; the first day of the month; the eighth month’; *arew* ‘sun ; light ; day’. Cf. Skt. *ravi-* ‘sun’.

<sup>31</sup> . *hrand* from *hur* ‘fire’ (hroy gen.)? Gray: ‘earth mixed with fire’ (344) ; Karst: « ‘Feu et Terre’ est fausse et arbitraire. » (88)

<sup>32</sup> . Armen. *margarē* ‘prophet, seer’ comes from Parth. *mārgar* < *\*maqθra-kara-*. Sogd. *mārkarē*, Pers. *mahregar* ‘magician; soothsayer; seer’.

<sup>33</sup> . *ahrank*’ from *ah* ‘fear, dread’ (*ahrnkēc* ‘frightful’)? Cf. Pers. *āhr* ‘fright, fear’. Gray: ‘half-burned’ ; Karst: « *āθare + agni* ».

<sup>34</sup> . *mazdel* from *mazd* ‘firm, compact’? Or, does it derive from *\*Mazd-ēl* (cf. Syr. nwrđ-’yl)?

7. Աստղիկ / *astlik* / name of a Goddess (there was a temple in Armenia, called the House of Aramazd and Astlik, AHH 53), and also one of the names of the planet Venus/ the morning star.<sup>35</sup>
8. Միհր / *mihr*/ ‘Mithra’. Pers. *mihr* (Av. *miθrahe*) is the sixteenth day of the Pārsīg month.
9. Չոպաբեր / *jopaber*/ or Խոնվաբեր / *xrovaber*/.<sup>36</sup>
10. Մուրց / *murc* ‘/’<sup>37</sup>.
11. Երեզկան / *erezkan*/ or Երեզհան / *erezhan*/<sup>38</sup>.
12. Անի / *ani*/ name of the Armenian Arsacid necropolis.
13. Պարխար / *parxar*/<sup>39</sup>.
14. Վանատ / *vanat*/<sup>40</sup>.
15. Արամազդ / *aramazd*/<sup>41</sup>. The fifteenth day of the Avesta calendar is called *daθušō ahurahe mazdā* (Pers. *day-ped-mihr*).
16. Մանի / *mani*/<sup>42</sup>.
17. Ասակ / *asak*/<sup>43</sup>.
18. Մասիս / *masis*/<sup>44</sup>.
19. Անահիտ / *anahit*/<sup>45</sup>. In the Persian calendar, Anāhīd is neither the name of a month nor that of a day.
20. Արագած / *aragac*/ name of a mountain in Armenia.
21. Գրգոռ / *grgor*/ or Գորգոր / *gorgor*/ name of a mountain in Armenia.
22. Կորդուկ / *korduik* ‘/’ or Կորդի / *kordi*/ name of a district in Armenia.<sup>46</sup>
23. Ծմակ / *cmak*/<sup>47</sup> a plac-name in Armenia.
24. Լուսնակ / *lusnak*/<sup>48</sup>.

<sup>35</sup> . *Astlik* ‘Little star, Venus’ (*astl* ‘star’, Gr. ἀστήρ).

<sup>36</sup> . *xrovaber* from *xrov* ‘confusion, tumult’? Gray: ‘tumultuous’.

<sup>37</sup> . *murc* ‘fist’? Gray: ‘triumph’; Karst: ‘le poing, la lutte’.

<sup>38</sup> . Possibly related to the religious site Erēz. Gray: ‘hermit’.

<sup>39</sup> . Hübschmann (66-67) relates it to Av. *pouru.x<sup>v</sup>āθra-* ‘providing much well-being’ (Gr. Παραχοάθρας).

<sup>40</sup> . Gray: ‘host, refectory of a monastery’. Karst relates it to the Avesta star Vanant. In the Persian Rivāyāt we find the form Vanat.

<sup>41</sup> . Av. ahura mazdā.

<sup>42</sup> . From *man* ‘spinning; turn’? Gray: ‘beginning’.

<sup>43</sup> . Gray ‘beginningless’. If we accept this meaning, then Armen. *asak* comes from Parth. *asāk* ‘innumerable, countless’; Pers. *asāg*. Karst thinks that this etymology is arbitrary.

<sup>44</sup> . *masi-s* acc. of *masi-k* ‘, the Armenian name of Mount Ararat. The Greater Ararat, that is the highest mountain on the plateau, is called Azat Masik ‘.

<sup>45</sup> . Av. *anāhitā-*, Pers. *anāhīd*.

<sup>46</sup> . Gray: ‘a district in ancient Armenia regarded as the original home of the Kurd’. See J. Marquart, *Ērānšahr nach der Geographie des Ps. Moses Xorenac* ‘i, Berlin, 1901, 169-171 (about Kordik ‘ and Korduk ‘).

<sup>47</sup> . 23. Ծմակ ‘east-wind; shady place between mountains, cool and moist valley’, see M. Bedrossian’s *New Dictionary Armenian-English*, 312. For the meaning ‘north’, see J.R. Russel, *Zoroastrianism in Armenia*, Harvard University Press, 1987, 455.

<sup>48</sup> . *lusnak* ‘moon-light (night)’ (*lusin* ‘moon’, *loys* ‘light’). Gray: ‘half-moon’.

25. Յրօն /c 'rōn/ or Սփիռուր /sp 'iur/<sup>49</sup>.
26. Նպատ /npat/<sup>50</sup> name of a mountain in Armenia.
27. Վահագն /vahagn/ name of a hero-god<sup>51</sup>. The day Varhrām (Av. *vərəθraγnahe*) was the twentieth day of the Pārsīg calendar.
28. Սէին /sēin/<sup>52</sup>.
29. Վարագ /varag/ name of a mountain and also a monastery in Armenia.
30. Գիշերավար /gišeravar/<sup>53</sup>.

The epagomenal days are sometimes named after the five “wandering stars”:

1. Փայլածու /p 'aylažu/ ‘Mercury’
2. Արուսյակ /arusyak/ ‘Venus’
3. Հրատ /hrat/ ‘Mars’
4. Լուսնթագ /lusnt 'ag/ ‘Jupiter’
5. Երևակ /erewak/ ‘Saturn’

The names of **weekdays**<sup>54</sup>:

The “ancient” Armenians associated the “planets” with a cycle of seven days<sup>55</sup>:

արեգակ /aregak/ ‘Sun’ for Sunday;  
 լուսին /lusin/ ‘Moon’ for Monday;  
 հրատ /hrat/ ‘Mars’ for Tuesday;  
 փայլածու /p 'aylažu/ ‘Mercury’ for Wednesday;  
 լուսնթագ /lusnt 'ag/ ‘Jupiter’ for Thursday;  
 լուսաբեր /lusaber/ ‘Morning-star’ for Friday;  
 երևակ /erewak/ ‘Saturn’ for Saturday.

The Christian Armenians took over the seven-day week from the early Christians or their masters the Jews. Armenian *šabat* ‘, like Hebrew šbt, means ‘week’ and ‘Sabbath, Saturday’.

Կիրակի օր /kiraki ōr/ ‘Sunday’<sup>56</sup>, միաշաբաթի /miašabat 'i/ ‘first after Sabbath’;

երկուշաբթի /erkušabat 'i/ ‘second after Sabbath, Monday’;

<sup>49</sup> . c 'rōn ‘dispersion’; sp 'irk ‘dispersion, spreading out’

<sup>50</sup> . Related to *npatak* ‘aim, target’? Gray: Apām Napāt. Cf. Av. *apam napāt*.

<sup>51</sup> . Av. *vərəθraγna-*, Pers. *Va,hrām*.

<sup>52</sup> . Gray: ‘mountain’. Cf. Av. *saēni-* ‘pointed’, *saēni.kaofa-*.

<sup>53</sup> . *gišeravar* ‘the evening star, Venus’ (*gišer* ‘night’).

<sup>54</sup> . *ōr-goy*.

<sup>55</sup> . S. M. Gregory, *The Land of Ararat. Twelve discourse on Armenia, her history and her Church*, London, 1920, 179-80.

<sup>56</sup> . Cf. Gr. κυριακή from κύριος ‘lord’.

երեքշաբթի /*erek šabat* 'i/ 'Tuesday'  
 չորեքշաբթի /*č'orek šabat* 'i/ 'Wednesday'  
 հինգշաբթի /*hingšabat* 'i/ 'Thursday'  
 ուրբաթ /*urbat* ' / 'Friday'<sup>57</sup>  
 շաբաթ /*šabat* 'i/ 'Saturday'

#### The reckoning of days

The morning epoch is the Armenian calendric norm, that is, the days are reckoned from the sunrise. The days and nights are divided in four parts of three hours, respectively. The night consists of four watches<sup>58</sup>, each of three equal intervals or hours, and of unequal length, depending on the season. The first watches of the night commences at 6 p. m. The daytime is divided into 12 hours, from sunrise to sunset. It is marked into four Hours<sup>59</sup>, and is designated as the First Hour of day commencing at 6 a. m., the Third Hour of day at 9 a. m., the Sixth Hour of day at midday, and the Ninth Hour of day at 3 p. m. Only at the equinoxes are these hours of day and night equal.

The four Hours of the daytime are:

1. աքշալոյս /*aršaloy*s/ 'aurora', or այգ /*ayg*/ 'daybreak', or լուսադեմ /*lusadēm*/ 'dawn';
2. առաւօտ /*a'rawōt*/ 'morning';
3. միջօրեայ /*mijōreay*/ 'midday, noon' (միջօրէ /*mijōrē*/ 'at noon'), or հասարակ-օր /*hasarak-ōr*/<sup>60</sup>;
4. երեկ(ոյ) /*erek(oy)*/ 'evening', or արեւմուտք /*arewmutk* ' / 'sun set'.

The four Watches of the night are:

1. աքաջին պահ /*arajin pah*/ 'first watch';
2. գիշեր /*gišer*/ 'night';
3. հասարակ-գիշեր /*hasarak-gišer*/ 'midnight';
4. հաւախօս /*hawaxōs*/ 'cock-crowing; day-break'.

The twelve hours of the day have appropriate names indicating varying degrees of light from the hour of daybreak to sunset<sup>61</sup>:

- |                          |              |         |
|--------------------------|--------------|---------|
| 1. այգ / <i>ayg</i> /    | commences at | 6 a. m. |
| 2. ծայգ / <i>tsayg</i> / |              | 7 a. m. |

<sup>57</sup> . From Syriac ܠܘܒܐ 'eve, day of preparation; the eve of the Sabbath, Friday' (Hebrew 'rb). See Dulaurier, 14. "The Greeks, who also distinguished the days of the week with numerical denominations in place of their ancient originals, in course of time substituted Παρασκευή, meaning 'preparation' for their Sixth Day (Friday)." Gregory, op. cit. 181-82.

<sup>58</sup> . պահ /*pah*/. Armen. *pah* ≈ Pers. *pās*.

<sup>59</sup> . ժամ /*žam*/. Cf. Pers. *zamān* < \**jamāna-*.

<sup>60</sup> . Armen. *hasarak-ōr* ≈ Pers. *nēm-rōz*.

<sup>61</sup> . See Ališan, 146-47.



3. զայրացեալ /zayrac 'eal/	8 a. m.
4. ճառագայթեալ /čaragayt 'eal/	9 a. m.
5. շառաւիղեալ /šarawileal/	10 a. m. (Շառավիղյալ)
6. երկրասես /erkrates/	11 a. m.
7. շանթակող /šant 'akol/	midday
8. հրակաթ /hrakat ' /	1 p. m.
9. հուր փայլեալ /hur p 'ayleal/	2 p. m.
10. թաղանթեալ /t 'alant 'eal/	3 p. m.
11. արագոտ /aragot/	4 p. m.
12. արփող /arp 'ot/	5 p. m.

The names of the hours of the night, indicating degrees of darkness, from sunset to sunrise, are thus:

1. իսաւարակ /xawarak/ commences at	6 p. m.
2. աղջամուղջ /alžamulj/	7 p. m.
3. մթացեալ /mt 'ac 'eal/	8 p. m.
4. շաղաւօտ /šalawot/	9 p. m.
5. կամաւօտ /kamawōt/	10 p. m.
6. բաւական /bawakan/	11 p. m.
7. իօթափեալ /xōt 'ap 'eal/	midnight
(Հավաթափյալ)	
8. գիզակ /gizak/	1 a. m.
9. լուսածեմ /lusatsem/	2 a. m.
10. առաւօտ /arawōt/	3 a. m.
11. լուսփայլ /lusap 'ayl/	4 a. m.
12. փայլածու /p 'aylatsul/	5 a. m.

Example. From Łazar P' arpec' i, *Patmut 'iwn Hayoc' ...* ('History of the Armenians'), 56<sup>62</sup>:

“[Sahak] lived for many years and having reached deep old age, he died peacefully in the village named Blur in the district of Bagrewand, at the beginning of the second year of the reign of Yazdegird son of Vahrām, king of the Aryan (land), on the 30<sup>th</sup> day of the month of Nawasard on the second hour of the day.”

As the first year of Yazdegird was the year 751 of the era of the Greeks (also called the era “Alexander”)<sup>63</sup>, then

Yazd. 2 = Alex. 752 = 440/ 441 A.D.

Yazd 2 Frav. 1 = A.D. 440, August 8, Thursday.<sup>64</sup>

Then Sahak died in the morning, between 7 and 8 o'clock, on September 6, a Friday, A.D. 440.

<sup>62</sup> . Ղազար Փարպեցի, Պատմութիւն Հայոց ...

<sup>63</sup> . See “From the Story of Yazdīn”.

<sup>64</sup> . The first day of Nawasard and that of Fravardīn coincided before the calendar reform.

## The great Armenian era

The Armenians established an era<sup>65</sup> in the middle of the sixth century A.D. This Armenian era is called “great” (*mec*) or “new” (*noə*).<sup>66</sup> The starting point of this era was fixed at 552, July 11, Thursday (“style vulgaire”), or 553, July 11, Friday (“style technique”)<sup>67</sup>:

Armenian month		Common Style	Technical Style
Nawasardi	1 <sup>st</sup> day	July 11	Th. 552
Hori		Aug. 10	Sat. 553
Sahmi		Sep. 9	Mon. 553
Trē		Oct. 9	Wed. 553
K‘aloc‘		Nov. 8	Fr. 553
Arac‘		Dec. 8	Sun. 553
	25 <sup>th</sup> d.	Jan. 1	Wed. 553
Mehekani	1 <sup>st</sup> d.	Jan. 7	Tu. 554
Areg		Feb. 6	Th. 554
Ahekani		Mar. 8	Sat. 554
Mareri		Apr. 7	Mon. 554
Margac‘		May 7	Th. 554
Hrotic‘		June 6	Sat. 554
Aweleac‘	1 <sup>st</sup> d.	Jul. 6	Sun. 554
	2 <sup>nd</sup> d.	Jul. 7	Mon. 554
	3 <sup>rd</sup> d.	Jul. 8	Tu. 554
	4 <sup>th</sup> d.	Jul. 9	Wed. 554
	5 <sup>th</sup> d.	Jul. 10	Th. 554

The reckoning was by “wandering” year. Neither the Armenians nor the Sogdians and X<sup>v</sup>arazmians did follow the calendar reform of the Sasanians.<sup>68</sup> The five extra days remained at the end of the last month, and the first day of the year began on the 6th of the Pārsīg New Year; then the first day of Persian Fravardīn (Nōg-rōz) fell on the first Aweleac‘.

However, the Armenian era was established for a canonical purpose, the Easter computes. The 19-year cycle in the lunar calendar, the 7 days of the week, and the 4-year “Julian” intercalations provide the interval of 532 years ( $19 \cdot 7 \cdot 4$ ) for the periodicity of Easter dates. The Armenians preserved the “vague” system; but, for the Easter computes, they resorted to a luni-solar calendar.

Example. From Movsēs Dasxuranc‘i, *Patmut‘iwn Ałuanic‘* (‘History of the country of Albania’), II.9<sup>69</sup>:

<sup>65</sup>. թուական /t‘uakan/ (‘numeral ; date ; epoch ; era’), or թիւ /t‘ēw/ (‘number’).

<sup>66</sup>. For different names given to this era, see Dulaurier, II.

<sup>67</sup>. See Dulaurier, 104-5. According to L. Semenov « the first year of the Armenian era was, in reality, 554 A. D. », “Astronomy in Armenia from the 5<sup>th</sup> Century B.C. to the 19<sup>th</sup> Century A.D.”, *Popular Astronomy*, 55, 1947, (364-66) 365.

<sup>68</sup>. See “The year of the Maga”.

<sup>69</sup>. Մովսէս Դասխուրանցի, Պատմութիւն Աղուանից. See also Dulaurier, 9;

“I shall begin in the first [year] of the 18<sup>th</sup> *nahanj* of the Epiphany of our Lord Jesus Christ in the month of Mehekan, which was in the 35<sup>th</sup> year of Xosrov, son of Ohrmazd, king of kings of the Persians.”

The word *nahanj* means ‘retreat, retrogression’ and ‘bissextile’<sup>70</sup>. The author reckons the 18<sup>th</sup> *nahanj* (leap year) from the Armenian Era: Arm. E 1 + 18 · 4. As the first year of Xusrav ī Ohrmazdān was the year 902 of the era of the Greeks, then

Xusr. 35 = Alex. 936 = 624/ 625 A. D.

Xusr. 35, Fravardīn 1 = A. D. 624, June 18, Monday.

Xusr. 35, Nawasard 1 = A. D. 624, June 23, Saturday.

Xusr. 35, Mehekan 18 = A. D. 625, January 18, Sunday.

Then the Epiphany was on the day Masis of the month Mehekan (*māh mihr rōz day-ped-dēn*) of the 35<sup>th</sup> year of Xosrov.

Armenian Era = 936 – 72 = Alex. 864 = 552/ 553 A. D.

Example. From John the Deacon’s Treatise on Calendar<sup>71</sup>:

“The year when the computation of the bicentennial cycle was completed the Armenian era began. 304 years had passed since the era of the Romans, that is 16 cycles of 19 years; then the Armenian era began. The Paschal full moon was on April 13. Nine years passed before Æas and his colleagues invented the perfect cycle of 532 years at Alexandria. The Paschal full moon was fixed on April 4, which we call the 10<sup>th</sup> canon, counting from April 13. They made it the starting point of this cycle. The first year of the Armenian era, the spring equinox was on the (day) 13 of the month Ahekan. When the quinentenary cycle was established at the end of nine years, the (spring) equinox fell on the 15<sup>th</sup> (day of Ahekan). This was the second year of the Olympiad which we call the leap (year).”

The Era of the Romans indicates the New Era, *Saeculum Novum*, that comes after the end of Rome’s first millennium, A. D. 248.

754 ab urbe condita = 1 Anno Domini

1001 a. u. c. = 248 A. D.

The Armenian era began when 16 cycles of 19 years (304 years) passed after the New Era of the Romans, that is:

1305 a. u. c. = 552 A. D.

The computation was made at Alexandria by Æas (Αἴας) and his colleagues when the date of the Alexandrian Paschal full moon was 562, April 4 (date of the Alexandrian Paschal Sunday: April 9). But they fixed the starting point of the era at 552, because at this date the 200 (10 cycles of 19 years plus 10) years’ canon of Andrew of Byzantium was completed, and they established the quinentenary canon of Æas of Alexandria the cycle of 532 years (19 · 28). The date of the Alexandrian Paschal full moon of the first year, A. D. 553, was

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ح. تقی‌زاده، گاهشماری در ایران قدیم (۱۳۱۶)، ۱۰، تهران، ۱۳۵۷، ۸.

<sup>70</sup> . Armen. *nahanj-im* ‘to retire, fall back, retreat’, cf. Parth. *nihenj-*, Pers. *nihanz-/ nihenz-* ‘to hold back, refrain; retain’.

<sup>71</sup> . See Dulaurier, 57 : Jean Diacre, Prolégomène de son Traité du calendrier, ms. 114, fol. 56<sup>v</sup>-57<sup>r</sup>.

April 13 (date of the Alexandrian Paschal Sunday: April 20). The spring equinox was established on March 21 following the Council of Nicaea: 13<sup>th</sup> day of the month Ahekan of the first year (A. D. 553, March 21, Friday)<sup>72</sup>; and the 15<sup>th</sup> day of the same month of the tenth year (A. D. 562, March 21, Tuesday)<sup>73</sup>.

We notice that according to John the Deacon the 532-year cycle was established in the year 562, the 10<sup>th</sup> year of the Armenian era (common date). This cycle was completed in the year 1084. Then he proposed a fixed calendar beginning at the first year of the second quincenarian.<sup>74</sup>

#### Example.

The start of the first year of Yazdegird son of Ohrmazd was on the day Ohrmazd of the month Fravardīn corresponding to A. D. 632, June 16, Tuesday; whereas the parallel 81st year of the so-called Great Armenian Era commenced on 21st June of the same Julian date, Sunday.

Raham Asha

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<sup>72</sup> . Spring Equinox : A. D. 553, March 18, 17:43 (Alexandria).

<sup>73</sup> . Spring Equinox : A. D. 562, March 18, 21 :51.

<sup>74</sup> . According to F. Macler (71), John established his 'little era' ten years after its commencement (that is, at 1093); and according to S. M. Gregory (232) John established the fixed calendar in 1118.