

- [14] 1011 Erzinka [Erzincan]**  
 sources 1 Mich. Syr. Arm., pp. 400 f.; M. Ayr. p. 57  
 sources 2 *Chron. min. Arm.* II. 24, p. 502.17; colophon in Hakobyan (1956, p. 503, no. 6)  
 inscriptions Armenian inscription in Ališan (1881, p. 32 f.)  
 literature Hakobyan (1956); Ducellier (1980)  
 catalogues Kostaneanc' (1902); Step'anyan (1964); Ergin *et al.* (1967); Karapetian (1991); Zeyt'unyan (1991); SGA-ING Report (1993); Guidoboni and Traina (1995)

This is the first of a series of earthquakes recorded in the Armenian city of Erzinka (now Erzincan, in Turkey), and recorded by part of the seismological bibliography and by the historical and anti-quarian literature.

In the Armenian version of Michael the Syrian, prepared by the priest Išox (13th century), the earthquake is mentioned after a flood disaster caused by the inundation of the Euphrates: «When Ablabas [Abū'l Abbas] reigned over the Tačikk' [Arabs, Turks], Eznkay was engulfed by the waters during his reign, and only one house remained, of an upright and merciful man, whose name was Kirakos. And in the same year there was a dreadful earthquake, at the moment of the vigil [of the fast]».

Իսկ զթագաւորութիւնն Տաճկաց ունէր Ապլապաս՝ յորում աւուր ընկղմեցաւ ջրոց եզնկայն, և մնաց տուն մի. Ուղղափառի և ողորմածի առն, որում անուն էր Կիրակոս: Եւ ՚ի նոյն ամի եղել շարժ ահագին ՚ի պահք առաջաւորաց:

Mxit'ar Ayrivanec'i (13th century) reports: «Violent earthquake, at the moment of the vigil [of the fast]. Eznkay was swallowed up whole, and only the house of Kirakos the Merciful was left standing. Many churches and fortresses were destroyed».

Շարժ սաստիկ յառաջաւորին. ընկղմեցաւ եզնկայ ողջոյն, և մնաց միայն տունն Կիրակոսի ողորմածին: Բազում եկեղեցիք և բերդք տապալեցան:

Mxit'ar derives his account in part from Michael the Syrian, but his text is so heavily epitomized that it is ambiguous, and, in the absence of the original, it may be assumed that it was not by the floodwater, but by the earthquake, that the city was engulfed. Step'anyan (1964, p. 50) only cites this author, and proposes a date of 1011/1012.

An anonymous minor chronicle (*Chron. min. Arm.* II. 24, p. 502.17) reports the date of 565 [1016 A.D.], but the event in question would seem to be the Erzincan quake of 1011, as proposed by Hakobyan (1956, p. 503, no. 6), who also cites a colophon (Ms. Erevan 8481, 198r; published in Hakobyan 1956, p. 503, no. 6) with the same date of 565. Zeyt'unyan (1991, p. 54) thinks this event was datable to 1016. The city of Erzinka, now Erzincan, was repeatedly devastated by a long series of earthquakes both in medieval and modern times; the most recent destructive earthquake dates to 12 May 1992. The successive seismic damage of the past has left no evident traces on the city's medieval monuments.

- [15] 18 March 1013 – 17 March 1014 K'etargom [Hořomosvank' or Xořavank', in the environs of Ani], Širakawan**  
 inscriptions Armenian incipitions in Khatchatrian (1974, p. 47) and Ališan (1881, p. 32 f.)  
 literature Cuneo (1988)  
 catalogues Zeyt'unyan (1991)

The event is recorded by an inscription from the church of the Holy Cross (Surb Xaç') at Širakawan, reported only in French translation by Khatchatrian (1974, p. 47): «In 465 [17 March 1016 – 16 March 1017] I, Honovar, son of Mukan, by grace of God have reconstructed the holy cathedral which was ruined by a violent earthquake [...]».

It is also possible to consider, as does Zeyt'unyan (1991, p. 53), an inscription transcribed by Ališan (1881, p. 32 ff.) as alluding to this earthquake. Set up by bishop Ananias in the little church of Surb Minas, in the monastery of Hořomosvank' («monastery of the Romans», near Ani) in the year 462 [18 March 1013 – 17 March 1014 A.D.], the inscription reads: «Seeking refuge in divine forgiveness, I released [the people] from their taxes with great effort, and I took the territory and the whole of K'ēfargom was in the holy pact, so that the place should become a refuge in the time of flight and many others took advantage of the wood and the forage».

...ի ներելն Ա.ստուծոյ ապաւինելով ազատեցի մեծաւ ջանիւ զհարկ եւ զթաստակ առի եւ զՔեղարագոմն իւր գոյիլ ի սուրբ ուխտս վասն ապաւինի տեղի լինելոյ ի փախստեան ժամանակի եւ այլ բազում ինչ աւգտի փայտի եւ խոտի...

This document may perhaps be related to the earthquake in question, in that tax exemption may have been granted as a result of the earthquake damage.

The place-name «K'ēfargom» has not been identified on the ground, but would seem to refer to a village or to a small district situated in the vicinity of the monastery. Built between the 10th and 11th century, the monastery «of the Romans» (*Hořomosvank'*), was a huge monastic complex, situated on the outskirts of the Armenian capital of Ani: cf. Cuneo (1988, pp. 673-679). Of the small town of Širakawan, situated in Turkey close to the Armenian frontier, the large church dating to the 9th-10th century remains; it was not destroyed but only seriously damaged by the quake, as indeed is suggested by our inscription: cf. Cuneo (1988, pp. 682-683).

- [16] summer 1045, with shocks continuing perhaps till 9 March 1046**  
**Erzinka [Erzincan], district of Ekefeac' [territory of Erzincan], Halbat**
- sources 1 Matth. Edess. 1.67; Mich. Syr. 4.572; Ms. Erevan 3854, 4231;  
*Chron. min. Arm.* 1.27.4, p. 391
- sources 2 Smbat p. 42; unpublished *notula* in Zeyt'unian (1991, p. 59 f.);  
 Ar. Tabr. p. 468.9-14
- literature Inčičean (1822); Dulaurier (1858); Taher (1979); Cuneo (1988)
- catalogues Abich (1882); Kostaneanc' (1902); Grumel (1958); Step'anyan (1964);  
 Ergin *et al.* (1967); Poirier and Taher (1980); al-Hakeem (1987);  
 Zeyt'unyan (1991); Karapetian (1991); SGA-ING Report (1993);  
 Guidoboni and Traina (1995)

This is an earthquake already known both in the seismological bibliography and in the historical and antiquarian literature. In roughly the same period Step'anyan (1964, p. 51 ff.) attests earthquakes at Ani and Erzincan in the Armenian area, though basing himself on secondhand sources (cf. Karapetian, 1991, no. 25).

Matt'ēos Urhayec'i (Matthew of Edessa, 12th century) reports: «In the year 494 of the Armenian era [10 March 1045 – 9 March 1046 A.D.], the violent wrath of God fell upon all creatures. For the Lord God looked upon his creatures with anger, and a fearful and horrible earthquake took place. The whole universe trembled *in toto* according to the words of the prophet who said: 'Who looks at the earth and causes it to tremble?' [*Psalms*. 114:7]. At this time all of the creation shook in this same manner. In the district of Ekefeac' many churches were shaken and collapsed to their very

foundations. The town of Erznga was completely demolished. The earth was torn open, and men and women sank into deep abysses, and for many days the sounds of their screams issued forth from these places. It was summertime, and day after day during that period the earth [the texts read «heaven», but four readings have «earth», which seems to make more sense] shook. We are incapable of describing the wrath and turmoil which God brought upon all of us living creatures because of our sins».

Դարձեալ ՚ի թուականութեանն չայոց յամի նՂԴ, եղել մեծասաստ բարկութիւն Աստուծոյ ՚ի վերայ արարածոցս: Քանզի հայեցաւ տէր Աստուած բարկութեամբ յարարածս իւր, և եղել շարժ ահաւոր և սաստիկ, և դողացաւ հասարակ ամենայն տիեզերք ըստ բանի մարգարէին որ ասէ «Ո՞ հայի յերկիր, և տայ դողալ սմա»: Այսպիսի նմանութեամբ շարժեցաւ ամենայն արարածք, և բազում եկեղեցիք խախտեալ փլաւ ՚ի հիմանց ՚ի յեկեղեց գաւառին. և պատառեցաւ երկիրն և արք և կանայք ընկղմեցան ՚ի խորս անդնդոց, և զաւուրս բազումս գայր ծայն աղաղակի նոցա ՚ի խորաց անդնդոց. և էր յամառնային ժամանակին և աւուր աւուր շարժէր երկին յամին յայնմիկ, որ ոչ բաւեմք պատմել վասն բարկութեանն և խռովութեանն զոր էաք Աստուած ՚ի վերայ արարածոցն վասն մեղաց մերոց. և յամառնային ժամանակին խաւար եւ մութն լինէր ՚ի վերայ երկրի, մինչեւ արեգակն և լուսին ՚ի կերպս արեան երեւէին, և յորժամ ելանէր ՚ի կամարն՝ յիստակ էր:

Matthew of Edessa's chapter ends with the mention of an eclipse, which also occurred during the summer of 1045. The earthquake is recorded by Taher (1979, p. 38, 128), Poirier and Taher (1980) and al-Hakeem (1987, p. 21 no. 122), by contrast, date the quake to 1046. It may be excluded, however, that it occurred at the beginning of the year: the vague expression

Դարձեալ ՚ի թուականութեանն չայոց յամի նՂԴ

(literally «Passing from the year 494 of the Armenians»), can hardly be interpreted in this sense, as did Dulaurier (1858, p. 79).

To this testimony it is perhaps possible to add that of Michael the Syrian (12th century, IV, p. 572), who affirms: «In the year 1356 (of the Greeks = 1045 A.D.)... and in that year there was a great and very terrible earthquake on the Friday of the week of the Ninevites [between Epiphany and Lent]. And many places fell».

ճօժ ԹՅՈ ... ՈՒՔ ԺԱՅ ԼՈՒ ՅՈԺԼՈՄ ԹՅԱՅ ԹՅՈՅՈՅ .ԼՈՍՏ  
ԹՅԱՏ ԹՅՈՅՆ ՔՈՆ ԼՆՏ ԻԺՈ ԼՅԻ ... ԻՍԼ ԹՅԻՆԹ

Smbat (13th century, p. 42) bases himself on these sources. There is also an unpublished notula in Ms. Erevan 2890, 61r-63v, mentioned by Zeyt'unian (1991, p. 59 ff.), which apparently attests an earthquake in Armenia in 1049.

The account of Arak'el Dawrižec'i (Arakel of Tabriz, 17th century, p. 468.9-14), freely epitomizing what we already know from Matthew of Edessa, does not report any further details, except for the observation: «The light changed in colour to red and the earth appeared enveloped in darkness».

և փոխեցաւ գոյն լուսաւորաց ի կարմրութիւն, և մառախուղն պատեալ էր զերեսս երկրի.

In our view, this cannot be a mere literary reference, especially in view of the extremely terse character of the context of the source. We may thus assume that Arak'el reported the observation of

the red colour of the sky, probably resulting from a phenomenon of ionization, as frequently observed during powerful seismic events.

An Armenian chronographic *notula* (Ms. Erevan 3854, f. 206v; 4231, f. 71r: *Chron. min. Arm.* I.27.4, p. 391), reports: «In 494 [10 March 1045 – 9 March 1046 A.D.] Hałbat was built and an earthquake occurred».

### Նդէ շինեցաւ Հաղբատ և շարժն եկն

On the site of Hałbat cf. Cuneo (1988, pp. 302-310). This monastery was probably one of the oldest, and also one of the most extensive, monastic centres in Armenia.

Grumel (1958) reported erroneous chronological data on the basis of Ařak'el, dating the event to the Armenian year 495, which he then calculates to 1043-1044 of the Christian era.

<b>[17]</b>	<b>19 June – 18 July 1064 Ani</b>
sources	Ĝaffārī, in Brosset (1849, p.147 ff.)
literature	Canard (1965); Akopjan (1985); Cuneo (1988)
catalogues	Ambraseys and Melville (1982); Guidoboni and Traina (1995)

The source for this earthquake, unknown to the Armenian seismological tradition (but not to Ambraseys and Melville, 1982, p. 40), is Ĝaffārī (16th century, in Brosset 1849, p. 147 ff.) who claims he was drawing on the provisions of the last will and testament of the Seljuk vizir Nizām al-Mulk, a source contemporary with the event. This is one of the sources on the capture of Ani by Alp Arslan in the year 456 of the Hegira [25 December 1063 – 12 December 1064]; the city probably fell in the month of raġab [19 June - 18 July] according to Ibn al-Ařīr (12th-13th century, ed. Cairo, 1303 h., X, pp. 13-14). As pointed out by Canard (1965, pp. 249 ff.), this is the only source that mentions the earthquake as one of the causes of the city's fall. According to Nizām al-Mulk himself, the besiegers were on the point of gaining the upper hand, when «all of a sudden a wind-storm arose accompanied by a violent downpour of rain; the shadows gathered and the universe was enveloped in darkness, and in this situation a violent earthquake (*zalzalah*) occurred, as if it were a premonitory sign of the Last Judgment. After this manifestation of nature was stilled, and the sky had cleared, I saw the eastern side (of the walls) of the city collapse into the moat, and saw that all the walls had fallen and that in the very instant that the moat was filled up, the Army entered the fortress without any difficulty. All their monasteries and all their churches were consigned to the flames, and the majority of the Christians were converted to Islam».

Two further Islamic authors, reporting on the capture of Ani, mention the collapse of its walls, though without specifying its cause. Ibn al-Ařīr simply remarks: «but by the grace of God to them was given (a form of succour) on which they had not counted. A large section of the walls collapsed without (apparent) cause. They entered the city».

Ibn al-Ĝawzī (12th century, Ms. Paris, 1506, 98v and ff) gives a similar account (later followed by Barhebraeus). According to Canard, the three texts would seem to be all dependent on a single source. Canard (1965, p. 251) does not a *priori* exclude the possibility of an earthquake. Yet the testimony of Ĝaffārī remains suspect, bearing in mind the fact that no explicit mention of an earthquake is made by Ibn al-Ĝawzī, who was reporting the account of an actual eye-witness, Ṭarrād b. Muḥammad al-Zaynabī Abū 'l-Fawāris (1008-1098), a high-ranking official of the 'Abbasids.

The Armenian historians, besides, show no interest in these phenomena; only Matthew of Edessa (12th century, 2.78) mentions some rolls of thunder which were allegedly heard when the Seljuks, during the sack of the city, broke off the silver cross from the dome of the cathedral. The same author, however, says that a breach was opened in the walls thanks to a military engine. The

damage to the walls is also mentioned by the Byzantine historian Michael Attaleiates (11th century, pp. 79.14-82.22), who was writing shortly after the siege of Ani. Canard (1965, p. 259) concludes his study by admitting that the capture of Ani was perhaps due to a complex concurrence of circumstances: «as for the ‘providential’ fall of the walls mentioned by the Moslem sources, this might simply have been a collapse which had already been prepared by the bombardments». But this excludes neither the possibility that a minor earth tremor did take place, nor that the collapse might have been caused by a landslide, irrespective of the effects of the military engines, given the steepness of the hill-slopes below the plateau on which the city stood. On the site of Ani *cf.* Akopjan (1985); Cuneo (1988, pp. 650-671).

- [18] 16 April 1088 T'mogvi**  
 sources *Chron. Georg.* I, p. 323  
 literature Vivian (1991)  
 catalogues Step'anyan (1964); Kondorskaya and Shebalin (1982); Karapetian (1991)

The *Georgian Chronicle* reports the memory of an earthquake which occurred at the fortress of T'mogvi on Easter Day, 1088 [16 April: *cf.* Vivian, 1991, pp. 7, no. 17 and 150 f.]: «Thus on Easter Day, the very day of the Resurrection of Our Lord Jesus Christ, a day which should have been one of rejoicing and peace, the Lord looked down in anger and caused the earth to tremble to its foundations, with such violence that lofty mountains and solid rocks were ground into the semblance of dust, towns and villages were destroyed, churches tumbled to the ground and houses, engulfed and shattered, turned into tombs for those who dwelt in them. In the course of these events T'mogvi collapsed in ruins, with Niania's son Kaxaber and his wife. And there were terrible earthquakes like this one until the end of the year, in which numberless people perished».

ამიხთვხცა დღეხა აღვხედახა, თვთ მახ აღღგომახა უფლიხა ჩუენიხა იეხა ქრიიტეხხა, რომელხა შინა ჩიჩარუმი და განხუენედა ჯერ იყო, მოჩედხა უფალმან რიჩივითა და შეძრა ქუეყანა ხაფუძველითურთ, ეხედენ ხახტიკად, ვიდრემდის მთანი ძალალნი და კლდენი მყარნი ხახელ ხახელ მტუერიხა დაიგალნენ, ქალაქნი და ხოფელნი დაირღუენ, ეკლესიანი, დაეცნენ, და ხახლნი დაინთქქნენ და დახულენ, და იქმნენ ხაფლავ მახ შინა მკვდრთა. რომელთა თამა თმოგვცა და დაიპყტნა და განგრძელდა ეხევითარი ძრვა ქუეყანიხა ხაშიმერი ვიდრე წელიწადმდის, რომელხა შინა მოხწყდა ხიმრავლე ურიცხვ.

The fortress of T'mogvi was situated in South-Western Georgia, not far from the Armenian frontier.

- [19] 28 November 1131 Ani**  
 sources Sam. An. pp. 129 f.  
 literature Dulaurier (1859); Cuneo (1988)  
 catalogues Abich (1882); Step'anyan (1964); Ergin *et al.* (1967); Karapetian (1991); Zeyt'unyan (1991); Guidoboni and Traina (1995)

This is an earthquake already known to the seismological tradition.

Samuēl Anec‘i (12th century) reports as part of a rubric relating to the year 1131 of the Christian era: «In 580 [of the Armenian era] The Saviour of all things collapsed at Ani, on Thursday, 15 mareri [28 November 1131]».

Ի ՇՁ. ԹՎԻՆ ՎԼԱԼ ԱՄԵՆԱՓԻՐԿԻՃՆ յԱՆԻ. Ի մարերի ի ժե. յաւուր ե. շաբաթոց.

The church, which was originally built in 1036, was subject to various enlargements thereafter. On the church *cf.* Cuneo (1988, p. 655, no. 422).

Step‘anyan (1964, p. 56) records two dates for the same earthquake: 1131 and 1132. This may depend on the manuscript tradition of Samuēl Anec‘i, referring to other variant dates. Dulaurier (1859) records the date of 579 of the Armenian era, and mentions that another ms. reports the day of the quake as 17 *mareri* [= 30 November]. This latter uncertainty about the date depends on the fact that, in Armenian, the fig. 5 is written with the letter ե (e) and the fig. 7 with the letter է (ē): the two are easily confused.

<b>[20]</b>	<b>23 September 1135 Tolotap‘ [Tolatap]</b>
sources	Mich. Syr. IV.7.617; Barhebr. p. 293
literature	TAVO (1988b)
catalogues	Hoff (1840); Perrey (1850); Mallet (1853); Step‘anyan (1964); Karapetian (1991); Guidoboni and Traina (1995)

This earthquake is not very well known to the Armenian tradition, since it is reported by the Syriac tradition. For this reason it entered the 19th century catalogues of the Mediterranean. Step‘anyan (1964, p. 56) and Karapetian (1991, no. 32), however, do record a seismic event reported for Armenia as a whole in 1134. It is very probable that this is in fact the same event.

Michael the Syrian (12th century, IV.7.617) reports: In the year 1446 [of the Greeks = 1135 A.D.], there was a violent tremor at the beginning of Tamūz [July]»

. Կարծիք զայն ըստ ընդհանուր արձագանքի ժամանակ

The description of other prodigies follows: «besides, there was seen at full moon at midnight, a star wandering forward quickly, which reached the moon and splitting it, it passed through the middle. In the month of ‘Āb [August], there appeared two stars in the same way which were afterwards seen to fall. On twenty-third of Elūl there was a violent rainstorm [...]».

Lastly, the earthquake in question is reported: «And in that year there was a great tremor in Armenia, and in it fell a city called Doghodaph. The same year there was a hard winter».

Որ ժամանակ ընդհանուր արձագանքի ժամանակ  
 Կարծիք զայն ըստ ընդհանուր արձագանքի ժամանակ

Barhebraeus (13th century, 293) reports, for the same year: «And on the twenty-third day of the month of Īlūl [23 September ...] a severe earthquake took place in Armenia and the city of Dogodap fell. And there was a hard winter in Melitene and red snow fell».

From the context of the sources we can consider the date proposed by Barhebraeus as reliable. The site of Tolotap‘ has not been securely identified. We cite here the hypothetical location proposed by Hewsen and Bandomer (TAVO, 1988b).

- [21] **30 September 1139 Ganjak, Halbat, Tat'ew, Mount Alharak, districts of P'arisos, Xaç'ēn**
- sources 1 Step'annos, in Ališan (1893, p. 232); colophon in Yovsēp'ean (1951, no. 166, cols. 351-354); Sam. An. p. 132; Nezāmī of Ganža, *Iskandar-nāma*, p.33; Barhebr. pp. 302 f.; M. Goš p. 361; Ķir. Ganj. pp. 108 f.; Orb. II, p. 87
- sources 2 M. Ayr. p. 63; Vard. Ar. ch. 72, p. 123; Yovhannēs Imastaser p. 133; Ibn al-Aṭīr, *al Kāmīl* 11/77; al-Isfahānī II, 190; al-Suyūṭī, *Kašf* 24
- literature Inčičean (1822); Brosset (1870-1871); Minorsky (1951); Dowsett (1958); Taher (1979); Nikonov and Nikonova (1986); Nikonov (1987); Cuneo (1988); Nikonov (1991)
- catalogues Hoff (1840); Perrey (1850); Abich (1882); Kostaneanc' (1902); Sieberg (1932); Step'anyan (1964); Kondorskaya and Shebalin (1982); al-Hakeem (1987); Bektur and Alpay (1987); Ambraseys and Adams (1989); Karapetian (1991); Zeyt'unyan 1991); Guidoboni and Traina (1995)

This earthquake, which occurred in the area between the city of Ganjak (Ganža/ Elizavetpol'/Kirovabad), in present-day Azerbaijan, Nagorno-Karabakh and Armenia, is reported by the tradition relating not only to Armenia, but also to Iran and to the Mediterranean, both in the seismological context and in the historical and antiquarian literature (fig. 7).

The contemporary testimonies include that of bishop Step'annos (12th century), who left an account of the event, cited by Ališan (1893, p. 232): «Earthquake at Ganjak in the year 587 [15 February 1138 – 14 February 1139]: the earth trembled from its foundations, and the earth flew up over San Grigor and over the *gavit'* [structure opposite the church] which was situated there, and it then collapsed».

Հարժն Գանձակայ ի ՇՁԷ Թուականին, և դողաց երկիր ի հիմանց. և շրջեկան թռեալ ի անկաւ ի վերայ Ս. Գրիգորոյն և գաւթին որ ի դեանն գայր, և փլոյց առ հասարակ.

Another account of the event, unfortunately fragmentary, is found in the colophon of a 12th century Armenian religious manuscript, perhaps contemporary with the event, and now preserved in Venice (Ms. San Lazzaro 352, in Yovsēp'ean 1951, no. 166, cols. 351-354): «Many bodies of the saints and non-saints were buried by this earthquake; they entered into the entrails of the earth, which you can contemplate with bitterness and fear. Famine... sword.... enemy attacks and enslavement of the countryside».

Վասն որոյ շարժումնք երկրի... սրբոց եւ անսրբոց յոլովից Թաղեցան մարմինք ի սիրտ մտանելով երկրի խորոց, զի հայիս սաստիւ եւ դողայ: Սովբ... սուր... յարձակումն թշնամեաց և գերումն աշխարհաց.

Yet the most accurate description of the event was left by historians, for the most part posterior to the quake. Samuēl Anec'i (12th century, p. 132) reports: «1121 [*sic*]. In the year 588 [15 February 1139 – 14 February 1140], on the 17 areg [29 September], the city of Ganjak was destroyed by an earthquake. And the [churches of the] master saints Grigor and Sargis were engulfed. And the church of Halbat collapsed».

ոճիա: ի շճը Թւին՝ ի ժէ արեգ ամսոյ շարժմամբ կործանեցաւ Գանձակ քաղաք. և սուրբ վարդապետոն՝ Գրիգոր և Սարգիս՝ ընկղմեցան. եւ եկեղեցին Հաղպատայ փլուզանի





of the earthquake: «In the month of areg, on the 18th day of the month [1 October], during the night from Friday to Saturday, on the day of the Feast of St. George [30 September], the fury of the wrath of God fell upon the world; the violence of the earth and powerful destruction stirred with terrible tremors which reached this land of Albania, in accordance with which is written: ‘Who moves this our nether [world] from its foundations, and the pillars there of tremble’ [Job. 9:6]; and in accordance with another [passage]: ‘Who looks at the earth and makes it tremble’ [Ps. 103:32]. By this earthquake much was ruined in many places [towns] in the cantons of P’arisos and Xaç’ēn, as in the fields and in the mountains; thereby was the capital Ganjak also dashed into Hell, swallowing up its inhabitants; for on all sides of its surface it hugged them to its bosom, and in the mountain regions many fortresses and villages were demolished together with monasteries and churches, which crumbled upon the heads of their inhabitants, and innumerable persons were killed by the destruction of the buildings and towers. And that came to pass in the year 588 of the Armenian era [15 February 1139 – 14 February 1140]».

Յամսեանն արեգի որ օր ութեւտասան էր ամսոյն, ի գիշերի ուրբաթու ի լուսանալ շաբաթուն, յորում աւուր տօն էր Արբոյն Գէորգայ, զարթեալ ցասումն բարկութեան Աստուծոյ ի վերայ աշխարհի՝ ի բռնութենէ հողմոց, և շարժեալ անհնարին դողմամբ սաստիկ կործանումն հասուցանելով աշխարհին Աղուանից, ըստ գրելումն, թէ, «Ո շարժէ զառ ներքոյն երկրի ի հիմանց, և սիւնք նորա դողան. և ըստ միւսումն, Ո հայի յերկիր և տայ դողալ սմա»: Որով շարժմամբ բազում աւերուած լինէր ընդ բազում տեղիս ի գաւառիս Փառխոսոյ և Խաչինոյ, առ հասարակ ի դաշտս և ի լեռինս. յորում և մայրաքաղաք Գանձակ առ հասարակ յանդունդս կործանիցի, խորասոյգ առնելով զբնակիչս իւր. քանզի չորս կողմ երեսաց նորա ամփոփեաց զնոսա ի ճոց իւր. և ի լեռնակողմանս բազում դղեակք և գիւղք տապալեցան հանդերձ վանորայիւք և եկեղեցեօք, որք փլան ի վերայ գլխոյ բնակչաց իւրեանց. յորում և անթիւք սատակեցան ի կործանմանէ շինուածոց և աշտարակաց. և լինէր այս ի ՇՁՂ թուականին Հայոց.

The place-names P’arisos and Xaç’ēn refer to ancient names of cantons in the province of Arjax, which coincides in large part with the present Autonomous Region of Nagorno-Karabakh in Southern Azerbaijan (*Lrnavin Ęarabat*, cf. Dowsett, 1958, p. 482, no. 3 and 4).

Kirakos Ganjakec’i (13th century, p. 108 f) reports: «In the year 588 [15 February 1139 – 14 February 1140 A.D.] there was a strong earthquake: the city of Ganjak was destroyed by an earthquake, and its buildings collapsed over its inhabitants. Demetre, king of Iberia, father of Davit’ and Geworg, came and took away the gates of the city to his country. The mountain of Alharak collapsed due to the quake, and having blocked a stream which traversed it, turned it into a lake which still exists to this day. Excellent fish are to be found in it».

Ի ՇՁԸ թուականին եղել շարժ սաստիկ և կործանեցաւ քաղաք Գանձակ, և տապալեցան շինուածք որ ի նմա, ի վերայ բնակչաց իւրոց. և եկն թագաւոր Վրաց Դեմետրէ հայրն Դաւթի և Գէորգեայ, և տարաւ զդրունս քաղաքին յաշխարհն իւր. փլաւ և լեառն Ալհարակ ի շարժմանէն և արգել զճորակն որ անցանէր ընդ մէջ նորա. և եղել ճովակ, որ է մինչեւ ցայսօր. լինին ի նմա ձկու նք ազնիւք.

He repeats this information a little further on, and also quotes the report on the earthquake given by Samuēl Anec’i.

Step’annos Orbēlean (13th century), recalls the earthquake in the time of the patriarch of Siwnik’ Ter Grigor, in the year 587 [15 February 1138 – 14 February 1139 A.D.], and affirms: «the vault of the large church of Tat’ew disappeared entirely and fell over Surp Grigor, and hence over the *gavit’* which stood over its door, making it collapse».

և Գմբէթն մեծ եկեղեցւոհն ի Տաթեւ բոլորապոյր շրջեկան թռեաւ ի վերայ սուրբ Գրիգորոյն և գաւիթ որ ի դրանն կայր. և փլոյց առ հասարակ:

Further on, Orbēlean mentions the restoration of the dome of the church of the Holy Apostles at Tat'ew, in the second half of the century; but it is not certain whether the ruins in question were due to a seismic phenomenon. Mxit'ar Ayrivanec'i (13th century, p. 63) dates the earthquake to the year 590 [1141-1142 A.D.], whereas Vardan Arewelc'i (13th century, ch. 72, p. 123) reports the date 588. The event is also reported by Yovhannēs Imastaser (13th century, p. 133).

The earthquake was of sufficient magnitude also to be reported by many authors in the Islamic area; this was because the city of Ganjak was then under Seljuk occupation.

The number of the dead cited by al-Isfahānī (12th century, II, 190 = 533 H.) and Ibn al-Aṭīr (12th-13th century, 11/77) would seem to be erroneous: the former reports the date of 8 September and 300 000 dead; the latter, like Barhebraeus, reports 230 000 dead. Information on the sources from Dowsett (1958). Taher (1979, p. 308) redates an earthquake at «Janza» to March 1143 on the basis of al-Suyūṭī (*Kašf* 24). On the site of Tat'ew cf. Cuneo (1988, pp. 416 ff.).

The earthquake would seem to be attested by the dedication of the Persian poet Neẓāmī of Ganža (12th century) in the second part of his poem *Iskandar-nāma*. The reference to the earthquake is reported in the (non-critical) edition of V. Dastgardī, p. 33, where the poet seems to refer to a prince «Pisxin», who is said to have restored the city of Ganža, struck by an earthquake «on the eve of Saturday». The poem was in fact dedicated to the atabek Abū Bakr, who died in 1210, but the final verses glorify a third prince, who is not easily identifiable. Minorsky (1951) argued that this part of the poem had been rewritten, but that in any case the original version referred to the atabek Abū Bakr and his son Pišxin, who can be identified with «Bešken the courageous» of the *Georgian Chronicle*.

**[22] c. 1165-1167 Erzinka [Erzincan]**

- sources 1 Sam. An. p. 138
- sources 2 M. Ayr. p. 63; Vard. Ar. 75, p. 128; *Chron. min. Arm.* II. 4, 135.1-2; Yovhannēs Imastaser p. 134; *Chron. min. Arm.* II. 11, 263.27-8; Ar. Tabr. p. 469.9-11
- literature Inčičean (1822)
- catalogues Abich (1882); Kostaneanc' (1902); Grumel (1958); Step'anyan (1964); Ergin *et al.* (1967); Karapetian (1991); Zeyt'unyan (1991); SGA-ING Report (1993); Guidoboni and Traina (1995)

This earthquake, known both to the seismological tradition and to the historical and antiquarian literature has been subjected to various duplications due to a number of contradictions in the Armenian chronicle sources.

Samuēl Anec'i (12th century) reports: «In the year 614 [8 February 1165 – 7 February 1166] there was an earthquake at Eznkay».

Ի ոժդ թւին եղև շարժ յերզնկայն.

Similarly, Mxit'ar Ayrivanec'i (13th century, p. 63) reports: «The earthquake took possession of Eznkay».

Շարժ տարաւ զերզնկայ.

Vardan Arewelc'i (13th century, 75, p. 128) also follows Samuēl Anec'i. The so-called Anonymous of Sivas (13th century, *Chron. min. Arm.* II.4, 135.1-2) reports: «In the year 615 [8 February 1166 – 7 February 1167] there was a terrible earthquake and Ernkay was destroyed».

### Ի Թուխն Ռժե ահագին շարժ եղև և կործանեցաւ եզնկայն.

The date of 617 of the Armenian era [8 February 1168 – 7 February 1169] is reported by the *Chronicle* of Yovhannes Imastaser (13th century, p. 134).

Grigor Kamaxec'i (17th century, *Chron.min.Arm.* II.11, 263.27-28) reports a similar date, adding that there were 12 000 dead. The same number of 12 000 recurs for the earthquake of Erzincan in 1457 (*cf.* SGA-ING Report 1993), though Grigor himself puts the death-toll even higher, at 32 000. Since Grigor was a later author, he could have confused the figures.

Aṙak'el Dawrižec'i (Arakel of Tabriz, 17th century, p. 469.9-11) reports: «In the year 615 [8 February 1166 – 7 February 1167] there was an earthquake at Eznkan».

### Թուխն Ռժե շարժ եղև յեզնկան

and, later in his chronicle: «in the year 617 [8 February 1168 – 7 February 1169] there was a terrible earthquake at Eznkan. 12 000 people died».

### Թուխն Ռժե շարժ եղև յեզնկան.

On the basis of this source, Grumel (1958) identified two distinct events. Two dates are usually quoted for this earthquake: 1166 and 1168 (*cf.* Inčičean, 1822, p. 17; Zeyt'unyan, 1991, p. 80). The confusion is due to the different chronological conventions used by the individual authors, and especially to the duplication of the event perpetrated by Aṙak'el of Tabriz, who reported an earthquake at Erzincan both in the year 615 and 617 of the Armenian era (*cf.* Abich, 1882, p. 442; Step'unyan, 1964, p. 59; Ergin *et al.*, 1967, p.17, nos. 143-145 go so far as to record four different earthquakes in the same locality, *i.e.* in 1161, 1165, 1166 and 1168). It is probable that Aṙak'el created the duplication in his inability to opt for one date or the other.

[23]	<b>c. 1190 Šamaxia [Šamahā]</b>
sources	Ibn al-Aṙīr 12.72; <i>Chron. Georg.</i> II, p. 63
literature	Dowsett (1958); Vivian (1991)
catalogues	SGA-ING Report (1993); Guidoboni and Traina (1995)

Ibn al-Aṙīr (12th-13th century, 12.72) affirms that in the month of Rabi' 590 [March 1194] an earthquake struck «al-Jazīra, 'Irāq and many (other) lands».

The *K'artl'is cxovreba or Georgian Chronicle* (from the translation by Vivian 1991, p. 126), attested an earthquake in Šamaxia under the date of c. 1190: «The earth shook with a tremor which brought down the ramparts and strongholds of Šamaxia and engulfed all the inhabitants. The Sharvanshah's wife and children perished there. When the news spread there there was boundless grief and distress».

შერყევით შუარყივნა და ღახცნა კოლუენი და ციხენი შამახიისანი; უჩინო იქმნეს ყოველნი მახ შინა მყოფნი, რომელსა შინა წარწყმდეს შარვანშახ ცოლი და შვილნი. და მხმენზლთა ამიხთა, მტყებელთა თავიხათა, ღამხხმელთა თავთა ნაცრიხათა.

Vivian (1991, p. 148) identifies this earthquake with the one in 1139, probably due to the confusion of data in the Arab authors (*cf.* Dowsett, 1958, p. 481, no. 11).

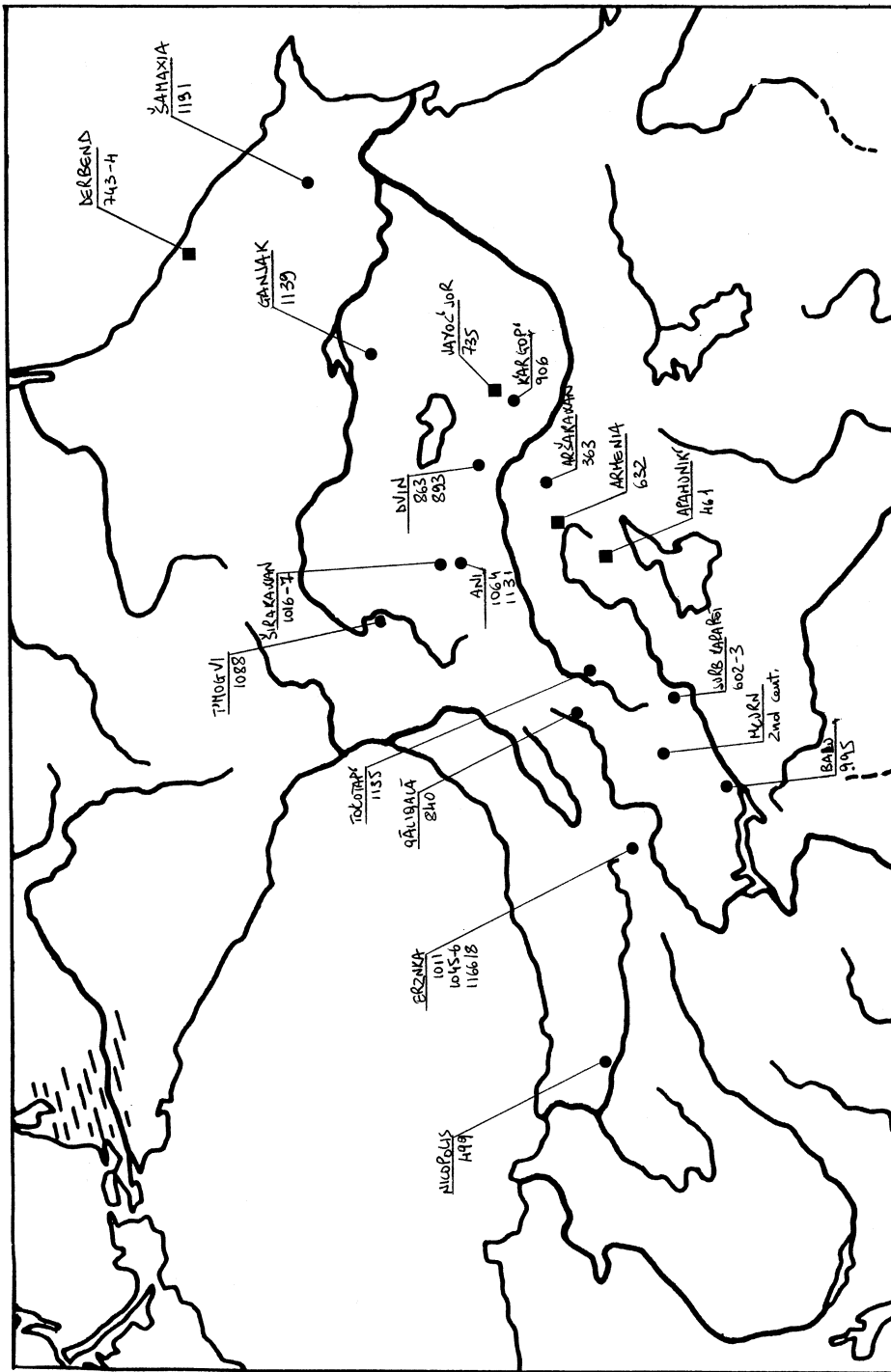


Fig. 8. Summary map of the historical earthquakes in this catalogue.

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Transliteration of the Armenian alphabet  
(according to the criteria of the *Revue des Etudes Arméniennes*).

ա Բ գ դ ե զ է Ը Թ Ժ Ի Լ Խ Տ Կ Կ Ի Դ Ն Ը Թ  
a b g d e z ē օ Թ Ժ Ի Լ Խ Տ Կ Կ Ի Դ Ն Ը Թ  
յ ն շ ո օ Է Թ Ժ Ի Վ Տ Վ Տ Վ Տ Վ Տ Վ Տ Վ Տ  
y n š o օ Է Թ Ժ Ի Վ Տ Վ Տ Վ Տ Վ Տ Վ Տ Վ Տ

Transliteration of the Georgian alphabet

ა ბ გ დ ე ვ ზ თ ი კ ლ მ ნ ო პ ჟ  
a b g d e v z ē t i ž k' l m n j o p' ž  
რ ს თ უ ვ პ კ' გ ლ მ ნ ო პ ჟ  
r s t' u v p k' g q š č c z c' č' x q ž h օ

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