

Hezekia's sign

In this document is explained how the sign of Hezekia's recovery came into being (2Kg.20:8, 11).

From the Scriptures the following can be derived

- The sign occurred at Jerusalem (2Kg.19:31-34; 20:6).
- The sign occurred in the fifteenth regnal year of Hezekiah (663A/'62 B.C.) when the Assyrians besieged Jerusalem (see the document *The chronology of the Bible*).
- The Hebrew word *ma'alot* (pl.) means 'steps' (Ex.20:26; 1Kg.10:19,20). In 2Kg.20:9-11 is this word, because of the context, translated with 'degrees'.
- From 2Kg.20:9-11 it appears that the 'ma'alot of Ahaz' must have been a sort of sundial.
- The sign took place in the afternoon, because Hezekiah said that it was an easy thing for the shadow 'to go down' 10 degrees (2Kg.20:10, lit. 'to stretch'; cf. Jr.6:4, 15:6, Job 26:7, Ps.104:2, 109:23, and Is:44:24, where the same Heb. verb *nāṭāh* is translated with 'to lengthen' and 'to stretch'.
- Hezekiah called the going down of the shadow easy because that's the normal direction for the shadow in the afternoon (2Kg.20:10).
- Hezekiah wanted what's abnormal, and therefore said: "let the shadow go backward 10 steps" (2Kg.20:10).
- At the time that Isaiah put his question to Hezekiah the shadow could still go down 10 steps, but it could also go backward 10 steps. In other words, there were at least 10 steps to go before sunset, and after midday at least 10 steps were passed (2Kin.20:9-10).
- From the former point we can deduce that the number of steps from midday until sunset must have been at least 20 steps. If we assume the length of the afternoon to be 360 minutes then the unit of time per step could have been at the most 18 minutes.
- In Babylon the sign did not take place (2Ch.32:31).

Supplementary information

- The time from sunrise to sunset was divided into 12 hours (Jh.11:9; Herodotus 2, 109). The hours in the winter were therefore shorter than the hours in the summer.
- The hour was divided in 15 time degrees (1 degree is 1/360 of a day). This time degree of c.4 min. the Babylonians called *ush* (see also the document *The chronology of the Bible* at 1011/'10 B.C.).

The sign of the LORD to Hezekiah on 12 January 662 B.C.

- About 135 minutes before sunset a solar eclipse began on 12 January in Jerusalem (alt. sun 22°; see image A).
- About 60 minutes before sunset the shadow was, just as with sunset, no longer visible on the *ma'alot* of Ahaz (alt. sun ±11°; eclipse ±79%; see image B). That's why anciently such an event was called the going down of the sun (see for example at 1011/'10 B.C. in the document *The chronology of the Bible*).
- About 50 minutes before sunset the solar eclipse had increased to the maximum of 88% (alt. sun ±9°; see image C).

- About 35 minutes before sunset Hezekiah saw the sign of the LORD, because on the tenth step, reckoned from the bottom, the shadow had become visible again on the *ma'alot* of Ahaz (alt. sun $\pm 6^\circ$; eclipse $\pm 70\%$; see image D). Ten steps corresponded therefore with 10 time degrees, because the duration of 1 hour on 12 January 662 B.C. was $\pm 51\text{min.}$, and $10/15 \times 51\text{min.} = 34\text{ min.}$
- About 35 min. after the sign the sun went down 'for the second time'.
- Due to the difference in time with Jerusalem this sign did not take place in Babylon.
- When Hezekiah had recovered from his sickness on the third day after the sign he went up to the temple to thank the LORD (2Kg.20:5,8; Is.38:9-20, cf. Lk.17:18 and Ac.3:8).

Place: Jerusalem ($31^\circ 46'N/35^\circ 14'E$)

ΔT_c ca. +4 min. (= $+1^\circ$)

