

Bijlage E. Zonopkomst en zonsondergang in 2010

Hieronder wordt op drie manieren weergegeven de tijden van zonopkomst en zonsondergang op 52° NB. Het Wad ligt op 53°.

Voor het Wad vallen de opkomsttijden tussen 21 september en 21 maart enige minuten later en tussen 21 maart en 21 september enige minuten vroeger dan in de tabellen aangegeven.

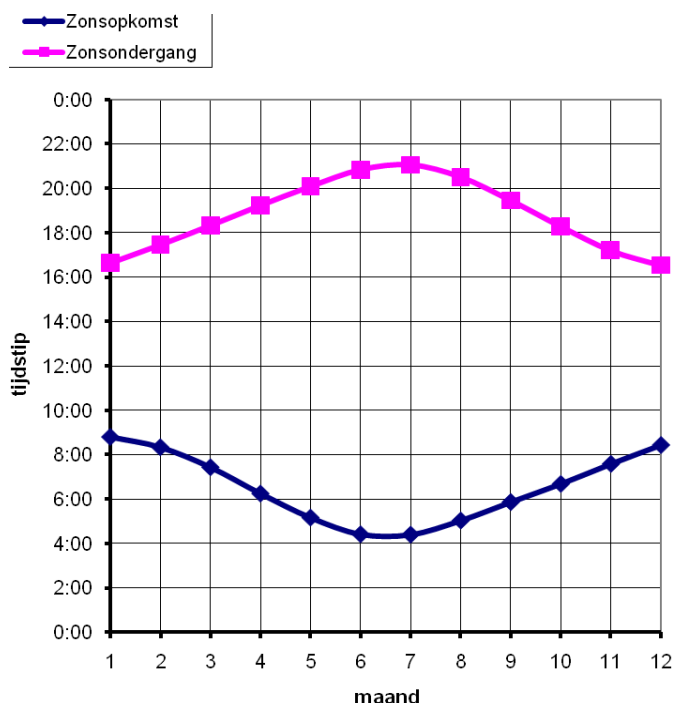
Voor het Wad vallen de tijden van zonsondergang tussen 21 september en 21 maart enige minuten eerder en tussen 21 maart en 21 september enige minuten later dan in de tabellen aangegeven.

Voor de andere jaren gelden vergelijkbare tijden.

Zonopkomst en zonsondergang in Nederland op de eerste dag van de maand

Alle tijden zijn in M.E.T. (geen zomertijd dus)

| maand | opkomst | ondergang |
|-------|---------|-----------|
| 1 | 8:48 | 16:39 |
| 2 | 8:20 | 17:28 |
| 3 | 7:26 | 18:20 |
| 4 | 6:15 | 19:14 |
| 5 | 5:10 | 20:05 |
| 6 | 4:25 | 20:50 |
| 7 | 4:24 | 21:03 |
| 8 | 5:02 | 20:30 |
| 9 | 5:52 | 19:27 |
| 10 | 6:41 | 18:17 |
| 11 | 7:35 | 17:12 |
| 12 | 8:26 | 16:32 |



| zonsopkomst en zonsondergang in 2010 op 52° NB. | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------|--------|----------|----------|--------|--------|-----------|-----|--------|---------|----------|-----|----------|--------|----------|----------|--------|--------|----------|------|------|-------|-------|
| | januari | | | februari | | | maart | | | april | | | mei | | | juni | | | | | | | |
| dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | | | | |
| 1 | 8:48 | 16:38 | 7:50 | 1 | 8:20 | 17:26 | 9:06 | 1 | 7:26 | 18:18 | 10:52 | 1 | 7:15 | 20:13 | 12:58 | 1 | 6:08 | 21:05 | 14:57 | 1 | 5:25 | 21:50 | 16:25 |
| 2 | 8:48 | 16:39 | 7:51 | 2 | 8:19 | 17:28 | 9:09 | 2 | 7:24 | 18:20 | 10:56 | 2 | 7:13 | 20:14 | 13:01 | 2 | 6:06 | 21:07 | 15:01 | 2 | 5:24 | 21:51 | 16:27 |
| 3 | 8:48 | 16:40 | 7:52 | 3 | 8:17 | 17:30 | 9:13 | 3 | 7:22 | 18:22 | 11:00 | 3 | 7:10 | 20:16 | 13:06 | 3 | 6:04 | 21:09 | 15:05 | 3 | 5:23 | 21:52 | 16:29 |
| 4 | 8:48 | 16:41 | 7:53 | 4 | 8:16 | 17:32 | 9:16 | 4 | 7:20 | 18:24 | 11:04 | 4 | 7:08 | 20:18 | 13:10 | 4 | 6:03 | 21:10 | 15:07 | 4 | 5:23 | 21:53 | 16:30 |
| 5 | 8:47 | 16:42 | 7:55 | 5 | 8:14 | 17:34 | 9:20 | 5 | 7:17 | 18:25 | 11:08 | 5 | 7:06 | 20:19 | 13:13 | 5 | 6:01 | 21:12 | 15:11 | 5 | 5:22 | 21:54 | 16:32 |
| 6 | 8:47 | 16:44 | 7:57 | 6 | 8:12 | 17:36 | 9:24 | 6 | 7:15 | 18:27 | 11:12 | 6 | 7:04 | 20:21 | 13:17 | 6 | 5:59 | 21:14 | 15:15 | 6 | 5:21 | 21:55 | 16:34 |
| 7 | 8:47 | 16:45 | 7:58 | 7 | 8:10 | 17:37 | 9:27 | 7 | 7:13 | 18:29 | 11:16 | 7 | 7:01 | 20:23 | 13:22 | 7 | 5:57 | 21:15 | 15:18 | 7 | 5:21 | 21:56 | 16:35 |
| 8 | 8:46 | 16:46 | 8:00 | 8 | 8:09 | 17:39 | 9:30 | 8 | 7:11 | 18:31 | 11:20 | 8 | 6:59 | 20:25 | 13:26 | 8 | 5:55 | 21:17 | 15:22 | 8 | 5:20 | 21:57 | 16:37 |
| 9 | 8:46 | 16:48 | 8:02 | 9 | 8:07 | 17:41 | 9:34 | 9 | 7:08 | 18:33 | 11:25 | 9 | 6:57 | 20:26 | 13:29 | 9 | 5:54 | 21:19 | 15:25 | 9 | 5:20 | 21:57 | 16:37 |
| 10 | 8:45 | 16:49 | 8:04 | 10 | 8:05 | 17:43 | 9:38 | 10 | 7:06 | 18:34 | 11:28 | 10 | 6:55 | 20:28 | 13:33 | 10 | 5:52 | 21:20 | 15:28 | 10 | 5:19 | 21:58 | 16:39 |
| 11 | 8:44 | 16:51 | 8:07 | 11 | 8:03 | 17:45 | 9:42 | 11 | 7:04 | 18:36 | 11:32 | 11 | 6:52 | 20:30 | 13:38 | 11 | 5:50 | 21:22 | 15:32 | 11 | 5:19 | 21:59 | 16:40 |
| 12 | 8:44 | 16:52 | 8:08 | 12 | 8:01 | 17:47 | 9:46 | 12 | 7:02 | 18:38 | 11:36 | 12 | 6:50 | 20:31 | 13:41 | 12 | 5:49 | 21:23 | 15:34 | 12 | 5:19 | 22:00 | 16:41 |
| 13 | 8:43 | 16:54 | 8:11 | 13 | 7:59 | 17:49 | 9:50 | 13 | 6:59 | 18:40 | 11:41 | 13 | 6:48 | 20:33 | 13:45 | 13 | 5:47 | 21:25 | 15:38 | 13 | 5:18 | 22:00 | 16:42 |
| 14 | 8:42 | 16:55 | 8:13 | 14 | 7:57 | 17:51 | 9:54 | 14 | 6:57 | 18:41 | 11:44 | 14 | 6:46 | 20:35 | 13:49 | 14 | 5:46 | 21:26 | 15:40 | 14 | 5:18 | 22:01 | 16:43 |
| 15 | 8:41 | 16:57 | 8:16 | 15 | 7:55 | 17:52 | 9:57 | 15 | 6:55 | 18:43 | 11:48 | 15 | 6:43 | 20:37 | 13:54 | 15 | 5:44 | 21:28 | 15:44 | 15 | 5:18 | 22:01 | 16:43 |
| 16 | 8:40 | 16:58 | 8:18 | 16 | 7:54 | 17:54 | 10:00 | 16 | 6:52 | 18:45 | 11:53 | 16 | 6:41 | 20:38 | 13:57 | 16 | 5:43 | 21:30 | 15:47 | 16 | 5:18 | 22:02 | 16:44 |
| 17 | 8:40 | 17:00 | 8:20 | 17 | 7:52 | 17:56 | 10:04 | 17 | 6:50 | 18:47 | 11:57 | 17 | 6:39 | 20:40 | 14:01 | 17 | 5:41 | 21:31 | 15:50 | 17 | 5:18 | 22:02 | 16:44 |
| 18 | 8:39 | 17:02 | 8:23 | 18 | 7:50 | 17:58 | 10:08 | 18 | 6:48 | 18:48 | 12:00 | 18 | 6:37 | 20:42 | 14:05 | 18 | 5:40 | 21:33 | 15:53 | 18 | 5:18 | 22:03 | 16:45 |
| 19 | 8:38 | 17:03 | 8:25 | 19 | 7:47 | 18:00 | 10:13 | 19 | 6:45 | 18:50 | 12:05 | 19 | 6:35 | 20:43 | 14:08 | 19 | 5:38 | 21:34 | 15:56 | 19 | 5:18 | 22:03 | 16:45 |
| 20 | 8:36 | 17:05 | 8:29 | 20 | 7:45 | 18:02 | 10:17 | 20 | 6:43 | 18:52 | 12:09 | 20 | 6:33 | 20:45 | 14:12 | 20 | 5:37 | 21:35 | 15:58 | 20 | 5:18 | 22:03 | 16:45 |
| 21 | 8:35 | 17:07 | 8:32 | 21 | 7:43 | 18:04 | 10:21 | 21 | 6:41 | 18:54 | 12:13 | 21 | 6:30 | 20:47 | 14:17 | 21 | 5:36 | 21:37 | 16:01 | 21 | 5:18 | 22:04 | 16:46 |
| 22 | 8:34 | 17:08 | 8:34 | 22 | 7:41 | 18:05 | 10:24 | 22 | 6:38 | 18:55 | 12:17 | 22 | 6:28 | 20:48 | 14:20 | 22 | 5:34 | 21:38 | 16:04 | 22 | 5:19 | 22:04 | 16:45 |
| 23 | 8:33 | 17:10 | 8:37 | 23 | 7:39 | 18:07 | 10:28 | 23 | 6:36 | 18:57 | 12:21 | 23 | 6:26 | 20:50 | 14:24 | 23 | 5:33 | 21:40 | 16:07 | 23 | 5:19 | 22:04 | 16:45 |
| 24 | 8:32 | 17:12 | 8:40 | 24 | 7:37 | 18:09 | 10:32 | 24 | 6:34 | 18:59 | 12:25 | 24 | 6:24 | 20:52 | 14:28 | 24 | 5:32 | 21:41 | 16:09 | 24 | 5:19 | 22:04 | 16:45 |
| 25 | 8:30 | 17:14 | 8:44 | 25 | 7:35 | 18:11 | 10:36 | 25 | 6:31 | 19:00 | 12:29 | 25 | 6:22 | 20:54 | 14:32 | 25 | 5:31 | 21:42 | 16:11 | 25 | 5:20 | 22:04 | 16:44 |
| 26 | 8:29 | 17:15 | 8:46 | 26 | 7:33 | 18:13 | 10:40 | 26 | 6:29 | 19:02 | 12:33 | 26 | 6:20 | 20:55 | 14:35 | 26 | 5:30 | 21:44 | 16:14 | 26 | 5:20 | 22:04 | 16:44 |
| 27 | 8:28 | 17:17 | 8:49 | 27 | 7:31 | 18:15 | 10:44 | 27 | 6:27 | 19:04 | 12:37 | 27 | 6:18 | 20:57 | 14:39 | 27 | 5:29 | 21:45 | 16:16 | 27 | 5:20 | 22:04 | 16:44 |
| 28 | 8:26 | 17:19 | 8:53 | 28 | 7:28 | 18:16 | 10:48 | 28 | 7:24 | 20:06 | 12:42 | 28 | 6:16 | 20:59 | 14:43 | 28 | 5:28 | 21:46 | 16:18 | 28 | 5:21 | 22:04 | 16:43 |
| 29 | 8:25 | 17:21 | 8:56 | | | | | 29 | 7:22 | 20:07 | 12:45 | 29 | 6:14 | 21:00 | 14:46 | 29 | 5:27 | 21:47 | 16:20 | 29 | 5:21 | 22:04 | 16:43 |
| 30 | 8:23 | 17:23 | 9:00 | | | | | 30 | 7:20 | 20:09 | 12:49 | 30 | 6:12 | 21:02 | 14:50 | 30 | 5:26 | 21:48 | 16:22 | 30 | 5:22 | 22:03 | 16:41 |
| 31 | 8:22 | 17:24 | 9:02 | | | | | 31 | 7:17 | 20:11 | 12:54 | | | | | 31 | 5:25 | 21:49 | 16:24 | | | | |
| | juli | | | augustus | | | september | | | oktober | | | november | | | december | | | | | | | |
| dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | dag | Zon op | zon af | dag leng | | | | |
| 1 | 5:23 | 22:03 | 16:40 | 1 | 6:00 | 21:30 | 15:30 | 1 | 6:50 | 20:28 | 13:38 | 1 | 7:39 | 19:18 | 11:39 | 1 | 7:34 | 17:11 | 9:37 | 1 | 8:25 | 16:31 | 8:06 |
| 2 | 5:23 | 22:03 | 16:40 | 2 | 6:02 | 21:29 | 15:27 | 2 | 6:52 | 20:25 | 13:33 | 2 | 7:41 | 19:15 | 11:34 | 2 | 7:35 | 17:09 | 9:34 | 2 | 8:26 | 16:31 | 8:05 |
| 3 | 5:24 | 22:02 | 16:38 | 3 | 6:03 | 21:27 | 15:24 | 3 | 6:53 | 20:23 | 13:30 | 3 | 7:43 | 19:13 | 11:30 | 3 | 7:37 | 17:08 | 9:31 | 3 | 8:28 | 16:30 | 8:02 |
| 4 | 5:25 | 22:02 | 16:37 | 4 | 6:05 | 21:25 | 15:20 | 4 | 6:55 | 20:21 | 13:26 | 4 | 7:45 | 19:11 | 11:26 | 4 | 7:39 | 17:06 | 9:27 | 4 | 8:29 | 16:29 | 8:00 |
| 5 | 5:26 | 22:01 | 16:35 | 5 | 6:06 | 21:23 | 15:17 | 5 | 6:57 | 20:18 | 13:21 | 5 | 7:46 | 19:08 | 11:22 | 5 | 7:41 | 17:04 | 9:23 | 5 | 8:30 | 16:29 | 7:59 |
| 6 | 5:27 | 22:01 | 16:34 | 6 | 6:08 | 21:22 | 15:14 | 6 | 6:58 | 20:16 | 13:18 | 6 | 7:48 | 19:06 | 11:18 | 6 | 7:43 | 17:02 | 9:19 | 6 | 8:32 | 16:28 | 7:56 |
| 7 | 5:28 | 22:00 | 16:32 | 7 | 6:09 | 21:20 | 15:11 | 7 | 7:00 | 20:14 | 13:14 | 7 | 7:50 | 19:04 | 11:14 | 7 | 7:45 | 17:01 | 9:16 | 7 | 8:33 | 16:28 | 7:55 |
| 8 | 5:29 | 22:00 | 16:31 | 8 | 6:11 | 21:18 | 15:07 | 8 | 7:02 | 20:12 | 13:10 | 8 | 7:51 | 19:02 | 11:11 | 8 | 7:46 | 16:59 | 9:13 | 8 | 8:34 | 16:28 | 7:54 |
| 9 | 5:30 | 21:59 | 16:29 | 9 | 6:13 | 21:16 | 15:03 | 9 | 7:03 | 20:09 | 13:06 | 9 | 7:53 | 18:59 | 11:06 | 9 | 7:48 | 16:57 | 9:09 | 9 | 8:35 | 16:28 | 7:53 |
| 10 | 5:31 | 21:58 | 16:27 | 10 | 6:14 | 21:14 | 15:00 | 10 | 7:05 | 20:07 | 13:02 | 10 | 7:55 | 18:57 | 11:02 | 10 | 7:50 | 16:56 | 9:06 | 10 | 8:36 | 16:27 | 7:51 |
| 11 | 5:32 | 21:57 | 16:25 | 11 | 6:16 | 21:12 | 14:56 | 11 | 7:06 | 20:05 | 12:59 | 11 | 7:56 | 18:55 | 10:59 | 11 | 7:52 | 16:54 | 9:02 | 11 | 8:37 | 16:27 | 7:50 |
| 12 | 5:33 | 21:56 | 16:23 | 12 | 6:17 | 21:10 | 14:53 | 12 | 7:08 | 20:02 | 12:54 | 12 | 7:58 | 18:53 | 10:55 | 12 | 7:53 | 16:53 | 9:00 | 12 | 8:38 | 16:27 | 7:49 |
| 13 | 5:34 | 21:56 | 16:22 | 13 | 6:19 | 21:08 | 14:49 | 13 | 7:10 | 20:00 | 12:50 | 13 | 8:00 | 18:50 | 10:50 | 13 | 7:55 | 16:51 | 8:56 | 13 | 8:39 | 16:27 | 7:48 |
| 14 | 5:35 | 21:55 | 16:20 | 14 | 6:21 | 21:06 | 14:45 | 14 | 7:11 | 19:57 | 12:46 | 14 | 8:02 | 18:48 | 10:46 | 14 | 7:57 | 16:50 | 8:53 | 14 | 8:40 | 16:27 | 7:47 |
| 15 | 5:36 | 21:54 | 16:18 | 15 | 6:22 | 21:04 | 14:42 | 15 | 7:13 | 19:55 | 12:42 | 15 | 8:03 | 18:46 | 10:43 | 15 | 7:59 | 16:48 | 8:49 | 15 | 8:41 | 16:27 | 7:46 |
| 16 | 5:37 | 21:53 | 16:16 | 16 | 6:24 | 21:02 | 14:38 | 16 | 7:15 | 19:53 | 12:38 | 16 | 8:05 | 18:44 | 10:39 | 16 | 8:01 | 16:47 | 8:46 | 16 | 8:42 | 16:27 | 7:45 |
| 17 | 5:39 | 21:51 | 16:12 | 17 | 6:26 | 21:00 | 14:34 | 17 | 7:16 | 19:50 | 12:34 | 17 | 8:07 | 18:42 | 10:35 | 17 | 8:02 | 16:45 | 8:43 | 17 | 8:43 | 16:28 | 7:45 |
| 18 | 5:40 | 21:50 | 16:10 | 18 | 6:27 | 20:58 | 14:31 | 18 | 7:18 | 19:48 | 12:30 | 18 | 8:09 | 18:39 | 10:30 | 18 | 8:04 | 16:44 | 8:40 | 18 | 8:44 | 16:28 | 7:44 |
| 19 | 5:41 | 21:49 | 16:08 | 19 | 6:29 | 20:56 | 14:27 | 19 | 7:20 | 19:46 | 12:26 | 19 | 8:10 | 18:37 | 10:27 | 19 | 8:06 | 16:43 | 8:37 | 19 | 8:44 | 16:28 | 7:44 |
| 20 | 5:43 | 21:48 | 16:05 | 20 | 6:30 | 20:54 | 14:24 | 20 | 7:21 | 19:43 | 12:22 | 20 | 8:12 | 18:35 | 10:23 | 20 | 8:07 | 16:42 | 8:35 | 20 | 8:45 | 16:29 | 7:44 |
| 21 | 5:44 | 21:47 | 16:03 | 21 | 6:32 | 20:52 | 14:20 | 21 | 7:23 | 19:41 | 12:18 | 21 | 8:14 | 18:33 | 10:19 | 21 | 8:09 | 16:40 | 8:31 | 21 | 8:45 | 16:29 | 7:44 |
| 22 | 5:45 | 21:45 | 16:00 | 22 | 6:34 | 20:50 | 14:16 | 22 | 7:25 | 19:39 | 12:14 | 22 | 8:16 | 18:31 | 10:15 | 22 | 8:11 | 16:39 | 8:28 | 22 | 8:46 | 16:30 | 7:44 |
| 23 | 5:47 | 21:44 | 15:57 | 23 | 6:35 | 20:48 | 14:13 | 23 | 7:26 | 19:36 | 12:10 | 23 | 8:17 | 18:29 | 10:12 | 23 | 8:12 | 16:38 | 8:26 | 23 | 8:46 | 16:30 | 7:44 |
| 24 | 5:48 | 21:43 | 15:55 | 24 | 6:37 | 20:45 | 14:08 | 24 | 7:28 | 19:34 | 12:06 | 24 | 8:19 | 18:27 | 10:8 | 24 | 8:14 | 16:37 | 8:23 | 24</ | | | |

