

OBSERVATÓRIO ASTRONÓMICO DE LISBOA

Tapada da Ajuda, 1349-018 LISBOA

TEMPO UNIVERSAL AO MEIO-DIA SOLAR VERDADEIRO

BRAGA

2013

| DIA | JANEIRO | FEVEREIRO | MARÇO | ABRIL | MAIO | JUNHO |
|-----|----------|-----------|----------|----------|----------|----------|
| | h m s | h m s | h m s | h m s | h m s | h m s |
| 1 | 12:22:49 | 12:47:19 | 12:46:00 | 12:37:30 | 12:30:46 | 12:31:33 |
| 2 | 12:23:12 | 12:47:26 | 12:45:47 | 12:37:12 | 12:30:39 | 12:31:43 |
| 3 | 12:23:36 | 12:47:33 | 12:45:35 | 12:36:55 | 12:30:33 | 12:31:53 |
| 4 | 12:24:00 | 12:47:38 | 12:45:22 | 12:36:37 | 12:30:27 | 12:32:03 |
| 5 | 12:24:25 | 12:47:43 | 12:45:08 | 12:36:20 | 12:30:22 | 12:32:13 |
| 6 | 12:24:50 | 12:47:47 | 12:44:54 | 12:36:03 | 12:30:17 | 12:32:24 |
| 7 | 12:25:16 | 12:47:51 | 12:44:40 | 12:35:46 | 12:30:14 | 12:32:36 |
| 8 | 12:25:42 | 12:47:53 | 12:44:25 | 12:35:30 | 12:30:10 | 12:32:47 |
| 9 | 12:26:09 | 12:47:55 | 12:44:11 | 12:35:13 | 12:30:08 | 12:32:59 |
| 10 | 12:26:36 | 12:47:56 | 12:43:55 | 12:34:57 | 12:30:05 | 12:33:11 |
| 11 | 12:27:03 | 12:47:56 | 12:43:40 | 12:34:42 | 12:30:04 | 12:33:23 |
| 12 | 12:27:31 | 12:47:56 | 12:43:24 | 12:34:26 | 12:30:03 | 12:33:36 |
| 13 | 12:27:59 | 12:47:54 | 12:43:07 | 12:34:11 | 12:30:02 | 12:33:48 |
| 14 | 12:28:28 | 12:47:52 | 12:42:51 | 12:33:56 | 12:30:02 | 12:34:01 |
| 15 | 12:28:57 | 12:47:49 | 12:42:34 | 12:33:42 | 12:30:03 | 12:34:14 |
| 16 | 12:29:26 | 12:47:46 | 12:42:17 | 12:33:27 | 12:30:04 | 12:34:27 |
| 17 | 12:29:55 | 12:47:41 | 12:42:00 | 12:33:14 | 12:30:06 | 12:34:40 |
| 18 | 12:30:24 | 12:47:36 | 12:41:43 | 12:33:00 | 12:30:08 | 12:34:53 |
| 19 | 12:30:54 | 12:47:31 | 12:41:25 | 12:32:47 | 12:30:11 | 12:35:06 |
| 20 | 12:31:23 | 12:47:24 | 12:41:07 | 12:32:34 | 12:30:14 | 12:35:19 |
| 21 | 12:31:53 | 12:47:17 | 12:40:49 | 12:32:22 | 12:30:18 | 12:35:32 |
| 22 | 12:32:23 | 12:47:10 | 12:40:31 | 12:32:10 | 12:30:23 | 12:35:45 |
| 23 | 12:32:53 | 12:47:01 | 12:40:13 | 12:31:59 | 12:30:27 | 12:35:58 |
| 24 | 12:33:23 | 12:46:53 | 12:39:55 | 12:31:48 | 12:30:33 | 12:36:10 |
| 25 | 12:33:52 | 12:46:43 | 12:39:37 | 12:31:38 | 12:30:39 | 12:36:23 |
| 26 | 12:34:22 | 12:46:33 | 12:39:19 | 12:31:28 | 12:30:45 | 12:36:36 |
| 27 | 12:34:52 | 12:46:22 | 12:39:01 | 12:31:18 | 12:30:52 | 12:36:48 |
| 28 | 12:35:21 | 12:46:11 | 12:38:42 | 12:31:09 | 12:30:59 | 12:37:00 |
| 29 | 12:35:50 | - | 12:38:24 | 12:31:01 | 12:31:07 | 12:37:12 |
| 30 | 12:36:19 | - | 12:38:06 | 12:30:53 | 12:31:15 | 12:37:24 |
| 31 | 12:36:48 | - | 12:37:48 | - | 12:31:24 | - |

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BRAGA

2013

| JULHO | AGOSTO | SETEMBRO | OUTUBRO | NOVEMBRO | DEZEMBRO | DIA |
|----------|----------|----------|----------|----------|----------|-----|
| h m s | h m s | h m s | h m s | h m s | h m s | |
| 12:37:36 | 12:40:01 | 12:33:38 | 12:23:18 | 12:17:18 | 12:22:49 | 1 |
| 12:37:47 | 12:39:57 | 12:33:19 | 12:22:59 | 12:17:17 | 12:23:12 | 2 |
| 12:37:58 | 12:39:52 | 12:33:00 | 12:22:40 | 12:17:17 | 12:23:36 | 3 |
| 12:38:09 | 12:39:47 | 12:32:40 | 12:22:22 | 12:17:18 | 12:24:00 | 4 |
| 12:38:20 | 12:39:41 | 12:32:20 | 12:22:04 | 12:17:19 | 12:24:25 | 5 |
| 12:38:30 | 12:39:34 | 12:32:00 | 12:21:46 | 12:17:22 | 12:24:50 | 6 |
| 12:38:40 | 12:39:27 | 12:31:39 | 12:21:29 | 12:17:25 | 12:25:16 | 7 |
| 12:38:49 | 12:39:20 | 12:31:19 | 12:21:12 | 12:17:29 | 12:25:42 | 8 |
| 12:38:58 | 12:39:11 | 12:30:58 | 12:20:56 | 12:17:34 | 12:26:09 | 9 |
| 12:39:07 | 12:39:02 | 12:30:37 | 12:20:40 | 12:17:40 | 12:26:36 | 10 |
| 12:39:15 | 12:38:53 | 12:30:16 | 12:20:24 | 12:17:46 | 12:27:03 | 11 |
| 12:39:23 | 12:38:43 | 12:29:55 | 12:20:09 | 12:17:54 | 12:27:31 | 12 |
| 12:39:30 | 12:38:32 | 12:29:34 | 12:19:55 | 12:18:02 | 12:27:59 | 13 |
| 12:39:36 | 12:38:21 | 12:29:12 | 12:19:41 | 12:18:11 | 12:28:28 | 14 |
| 12:39:43 | 12:38:09 | 12:28:51 | 12:19:27 | 12:18:21 | 12:28:57 | 15 |
| 12:39:48 | 12:37:57 | 12:28:29 | 12:19:14 | 12:18:32 | 12:29:26 | 16 |
| 12:39:53 | 12:37:44 | 12:28:08 | 12:19:02 | 12:18:43 | 12:29:55 | 17 |
| 12:39:58 | 12:37:31 | 12:27:46 | 12:18:50 | 12:18:56 | 12:30:24 | 18 |
| 12:40:02 | 12:37:17 | 12:27:25 | 12:18:39 | 12:19:09 | 12:30:54 | 19 |
| 12:40:05 | 12:37:02 | 12:27:04 | 12:18:28 | 12:19:23 | 12:31:23 | 20 |
| 12:40:08 | 12:36:48 | 12:26:42 | 12:18:19 | 12:19:38 | 12:31:53 | 21 |
| 12:40:10 | 12:36:32 | 12:26:21 | 12:18:09 | 12:19:53 | 12:32:23 | 22 |
| 12:40:12 | 12:36:17 | 12:26:00 | 12:18:01 | 12:20:10 | 12:32:53 | 23 |
| 12:40:13 | 12:36:00 | 12:25:39 | 12:17:53 | 12:20:27 | 12:33:23 | 24 |
| 12:40:14 | 12:35:44 | 12:25:18 | 12:17:46 | 12:20:45 | 12:33:52 | 25 |
| 12:40:14 | 12:35:27 | 12:24:58 | 12:17:40 | 12:21:04 | 12:34:22 | 26 |
| 12:40:13 | 12:35:10 | 12:24:37 | 12:17:34 | 12:21:23 | 12:34:52 | 27 |
| 12:40:12 | 12:34:52 | 12:24:17 | 12:17:29 | 12:21:44 | 12:35:21 | 28 |
| 12:40:10 | 12:34:34 | 12:23:57 | 12:17:25 | 12:22:05 | 12:35:50 | 29 |
| 12:40:08 | 12:34:16 | 12:23:37 | 12:17:22 | 12:22:26 | 12:36:19 | 30 |
| 12:40:05 | 12:33:57 | - | 12:17:19 | - | 12:36:48 | 31 |