

OBSERVATÓRIO ASTRONÓMICO DE LISBOA

Tapada da Ajuda, 1349-018 LISBOA

TEMPO UNIVERSAL AO MEIO-DIA SOLAR VERDADEIRO

PORTO

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

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PORTO

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