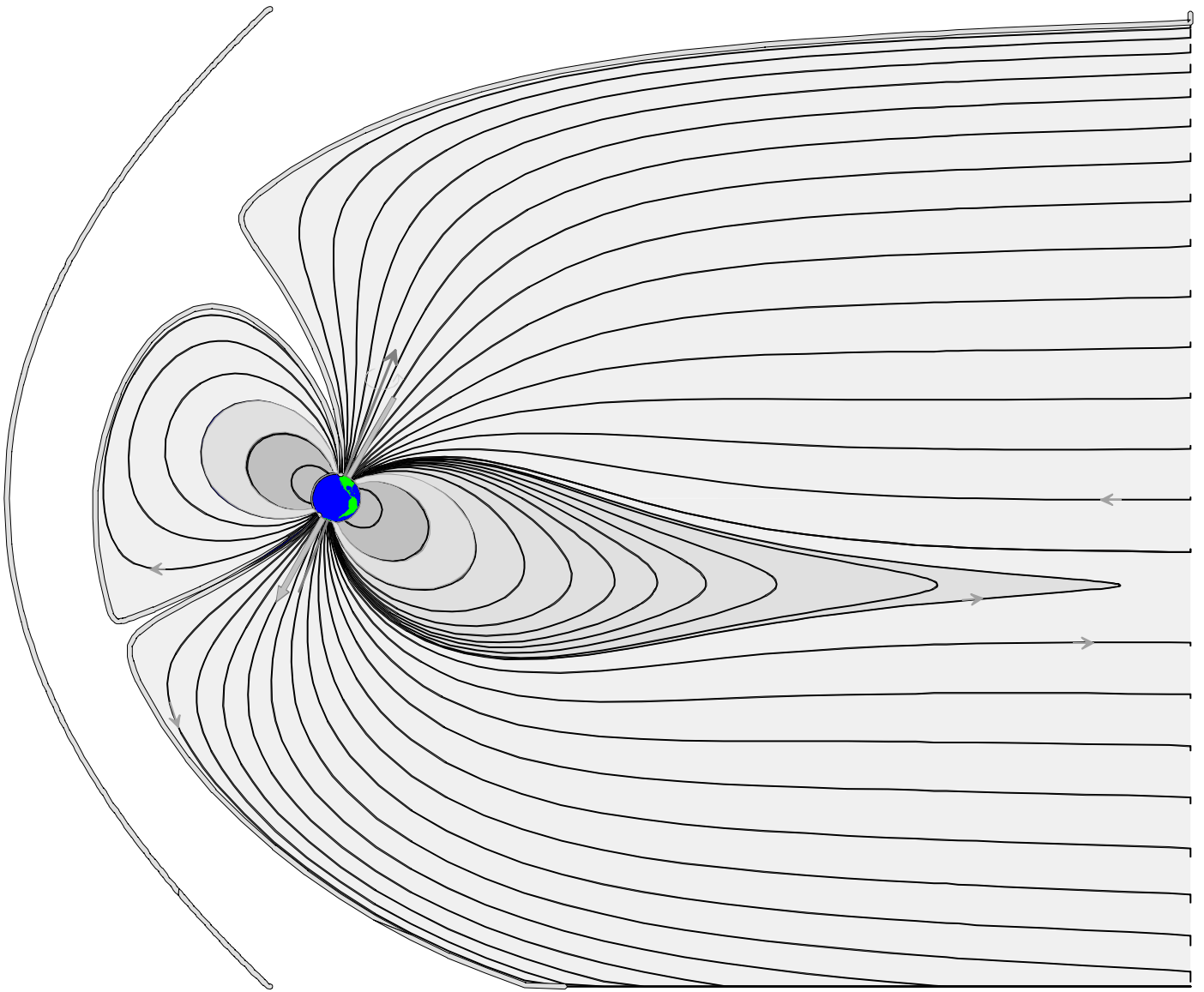
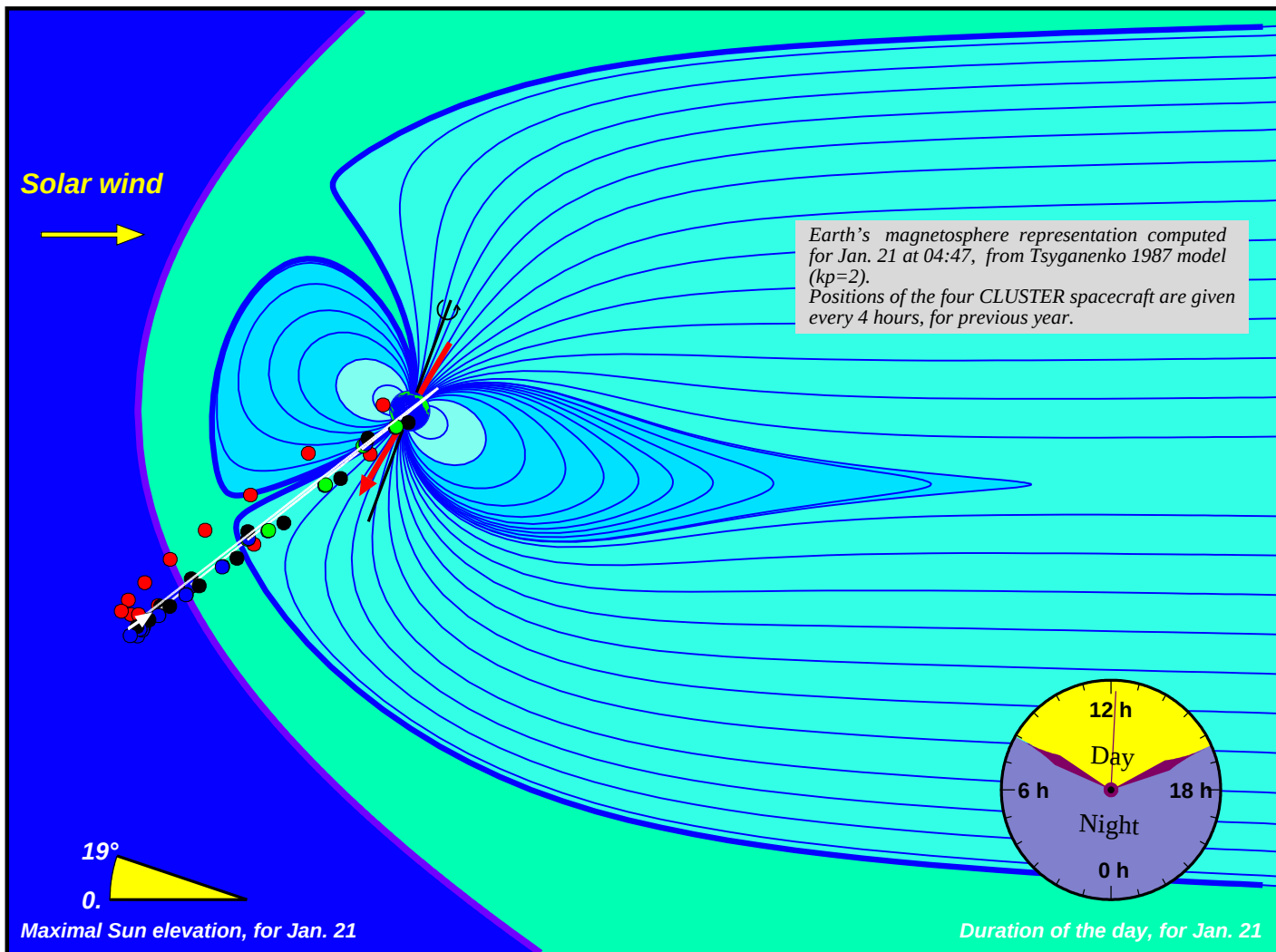




*Here is the classical magnetospheric calendar **2011**,
available for any city across the world,
English or French version*

*Happy new year for everybody
Patrick*



January 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

1

3 3 - 362
08:08 - 16:00
7:52 +2 m. 16°

4 4 - 361
08:08 - 16:01
7:53 +1 m. 16°

5 5 - 360
08:07 - 16:02
7:55 +2 m. 16°

6 6 - 359
08:07 - 16:03
7:56 +1 m. 16°

7 7 - 358
08:07 - 16:05
7:58 +2 m. 16°

8 8 - 357
08:06 - 16:06
8:00 +2 m. 16°

9 9 - 356
08:06 - 16:07
8:02 +2 m. 16°

2

10 10 - 355
08:05 - 16:09
8:04 +2 m. 17°

11 11 - 354
08:05 - 16:10
8:06 +2 m. 17°

12 12 - 353
08:04 - 16:12
8:08 +2 m. 17°

13 13 - 352
08:03 - 16:13
8:10 +2 m. 17°

14 14 - 351
08:02 - 16:15
8:12 +2 m. 17°

15 15 - 350
08:02 - 16:16
8:15 +3 m. 17°

16 16 - 349
08:01 - 16:18
8:17 +2 m. 18°

3

17 17 - 348
08:00 - 16:19
8:20 +3 m. 18°

18 18 - 347
07:59 - 16:21
8:22 +2 m. 18°

19 19 - 346
07:58 - 16:23
8:25 +3 m. 18°

20 20 - 345
07:57 - 16:24
8:28 +3 m. 18°

21 21 - 344
07:56 - 16:26
8:30 +2 m. 19°

22 22 - 343
07:54 - 16:28
8:33 +3 m. 19°

23 23 - 342
07:53 - 16:30
8:36 +3 m. 19°

4

24 24 - 341
07:52 - 16:31
8:39 +3 m. 19°

25 25 - 340
07:51 - 16:33
8:42 +3 m. 20°

26 26 - 339
07:49 - 16:35
8:45 +3 m. 20°

27 27 - 338
07:48 - 16:37
8:49 +4 m. 20°

28 28 - 337
07:47 - 16:38
8:52 +3 m. 20°

29 29 - 336
07:45 - 16:40
8:55 +3 m. 21°

30 30 - 335
07:44 - 16:42
8:58 +3 m. 21°

5

31 31 - 334
07:42 - 16:44
9:01 +3 m. 21°

1 32 - 333
07:41 - 16:46
9:05 +4 m. 21°

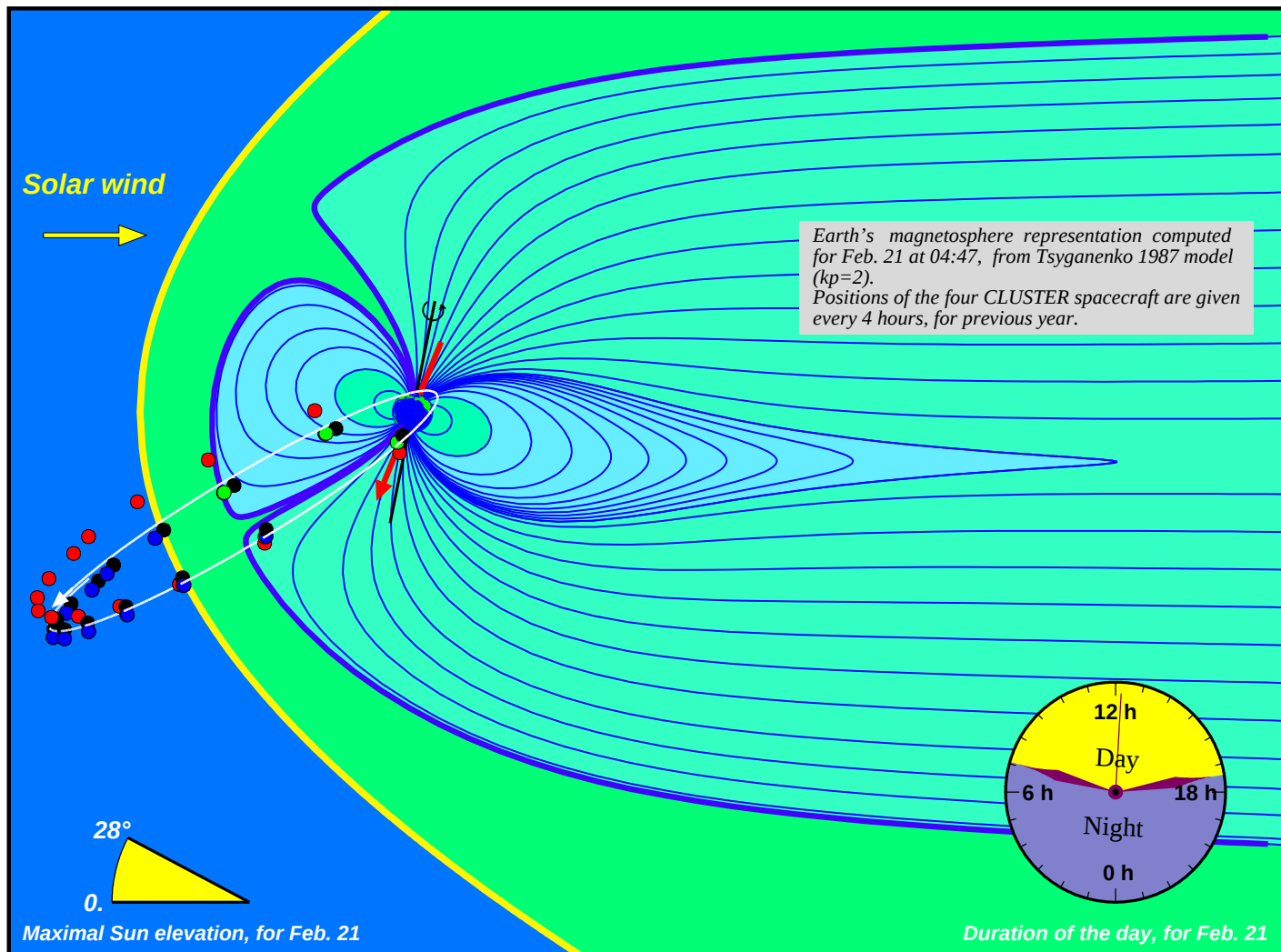
2 33 - 332
07:39 - 16:47
9:08 +3 m. 22°

3 34 - 331
07:38 - 16:49
9:12 +4 m. 22°

4 35 - 330
07:36 - 16:51
9:15 +3 m. 22°

5 36 - 329
07:34 - 16:53
9:19 +4 m. 23°

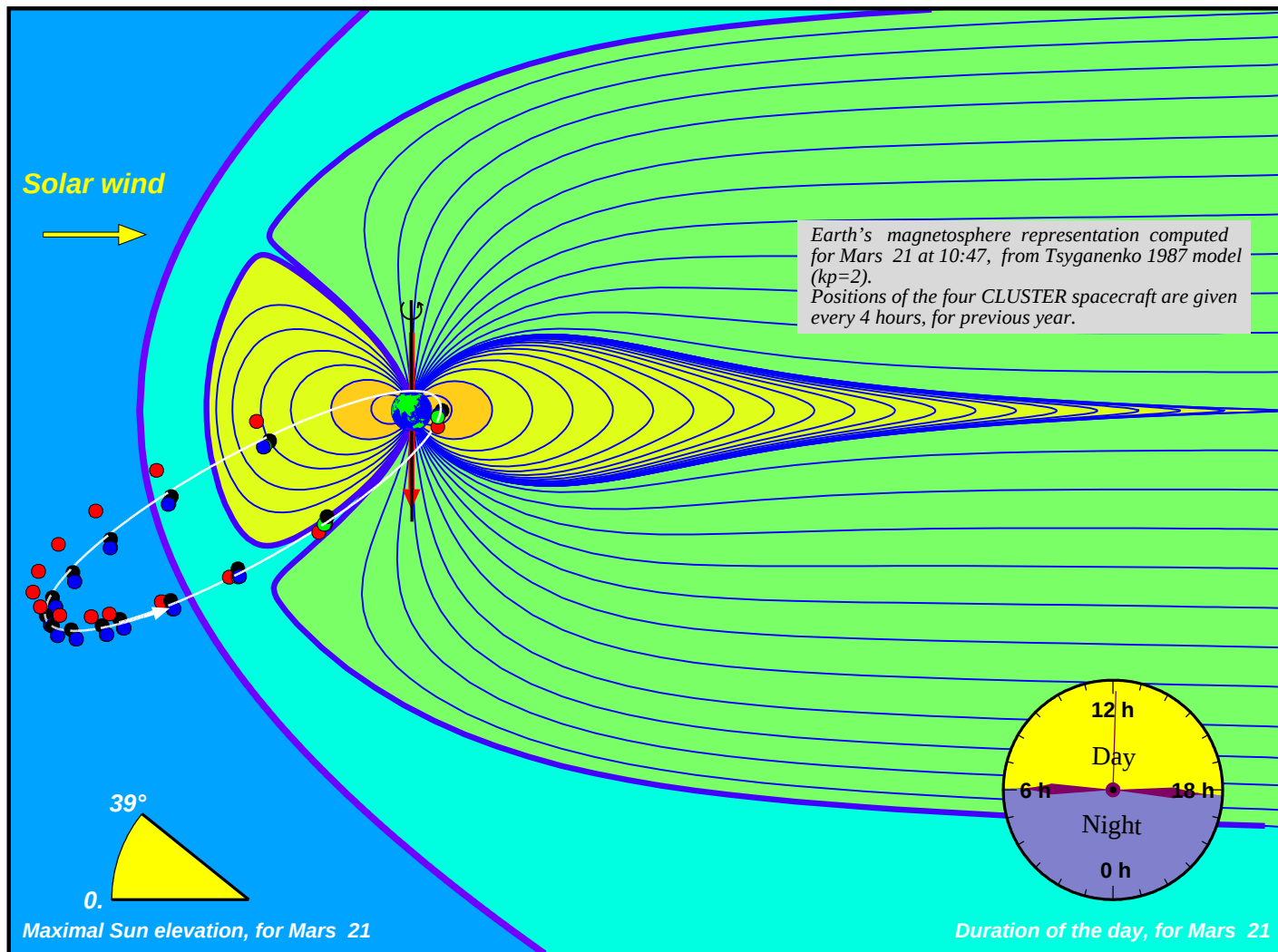
6 37 - 328
07:33 - 16:55
9:22 +3 m. 23°



February 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5	31 31 - 334 07:42 - 16:44 9:01 +3 m. 21°	1 32 - 333 07:41 - 16:46 9:05 +4 m. 21°	2 33 - 332 07:39 - 16:47 9:08 +3 m. 22°	3 34 - 331 07:38 - 16:49 9:12 +4 m. 22°	4 35 - 330 07:36 - 16:51 9:15 +3 m. 22°	5 36 - 329 07:34 - 16:53 9:19 +4 m. 23°	6 37 - 328 07:33 - 16:55 9:22 +3 m. 23°
6	7 38 - 327 07:31 - 16:57 9:26 +4 m. 23°	8 39 - 326 07:29 - 16:59 9:29 +3 m. 23°	9 40 - 325 07:28 - 17:00 9:33 +4 m. 24°	10 41 - 324 07:26 - 17:02 9:37 +4 m. 24°	11 42 - 323 07:24 - 17:04 9:40 +3 m. 24°	12 43 - 322 07:22 - 17:06 9:44 +4 m. 25°	13 44 - 321 07:20 - 17:08 9:48 +4 m. 25°
7	14 45 - 320 07:18 - 17:10 9:52 +4 m. 25°	15 46 - 319 07:16 - 17:12 9:55 +3 m. 26°	16 47 - 318 07:14 - 17:13 9:59 +4 m. 26°	17 48 - 317 07:12 - 17:15 10:03 +4 m. 26°	18 49 - 316 07:10 - 17:17 10:07 +4 m. 27°	19 50 - 315 07:08 - 17:19 10:10 +3 m. 27°	20 51 - 314 07:06 - 17:21 10:14 +4 m. 28°
8	21 52 - 313 07:04 - 17:23 10:18 +4 m. 28°	22 53 - 312 07:02 - 17:24 10:22 +4 m. 28°	23 54 - 311 07:00 - 17:26 10:26 +4 m. 29°	24 55 - 310 06:58 - 17:28 10:30 +4 m. 29°	25 56 - 309 06:56 - 17:30 10:34 +4 m. 29°	26 57 - 308 06:54 - 17:32 10:38 +4 m. 30°	27 58 - 307 06:52 - 17:33 10:41 +3 m. 30°
9	28 59 - 306 06:50 - 17:35 10:45 +4 m. 31°	1 60 - 305 06:48 - 17:37 10:49 +4 m. 31°	2 61 - 304 06:45 - 17:39 10:53 +4 m. 31°	3 62 - 303 06:43 - 17:40 10:57 +4 m. 32°	4 63 - 302 06:41 - 17:42 11:01 +4 m. 32°	5 64 - 301 06:39 - 17:44 11:05 +4 m. 32°	6 65 - 300 06:37 - 17:46 11:09 +4 m. 33°

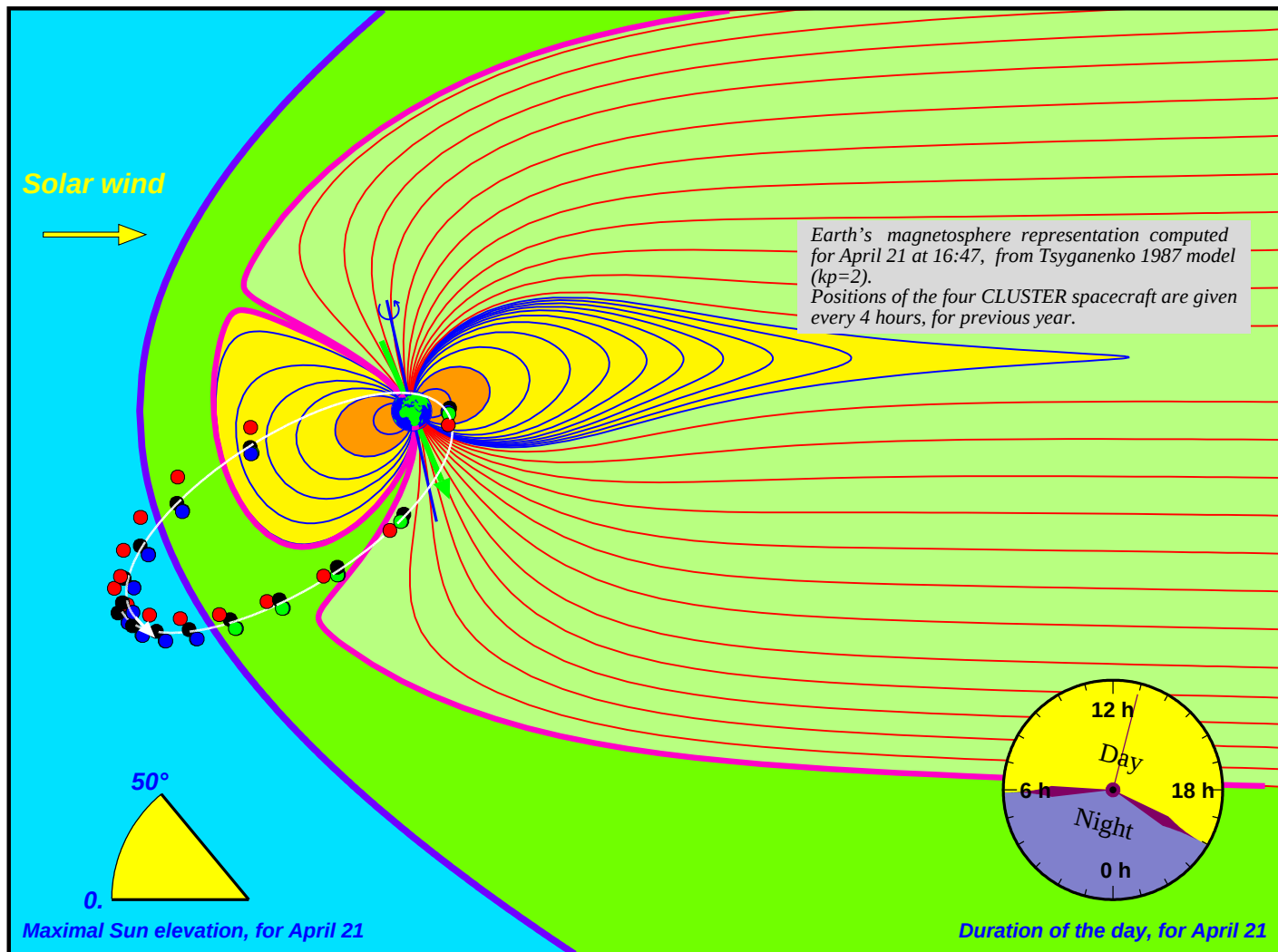


Mars 2011

heure d'été
le 27 à 02:00

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

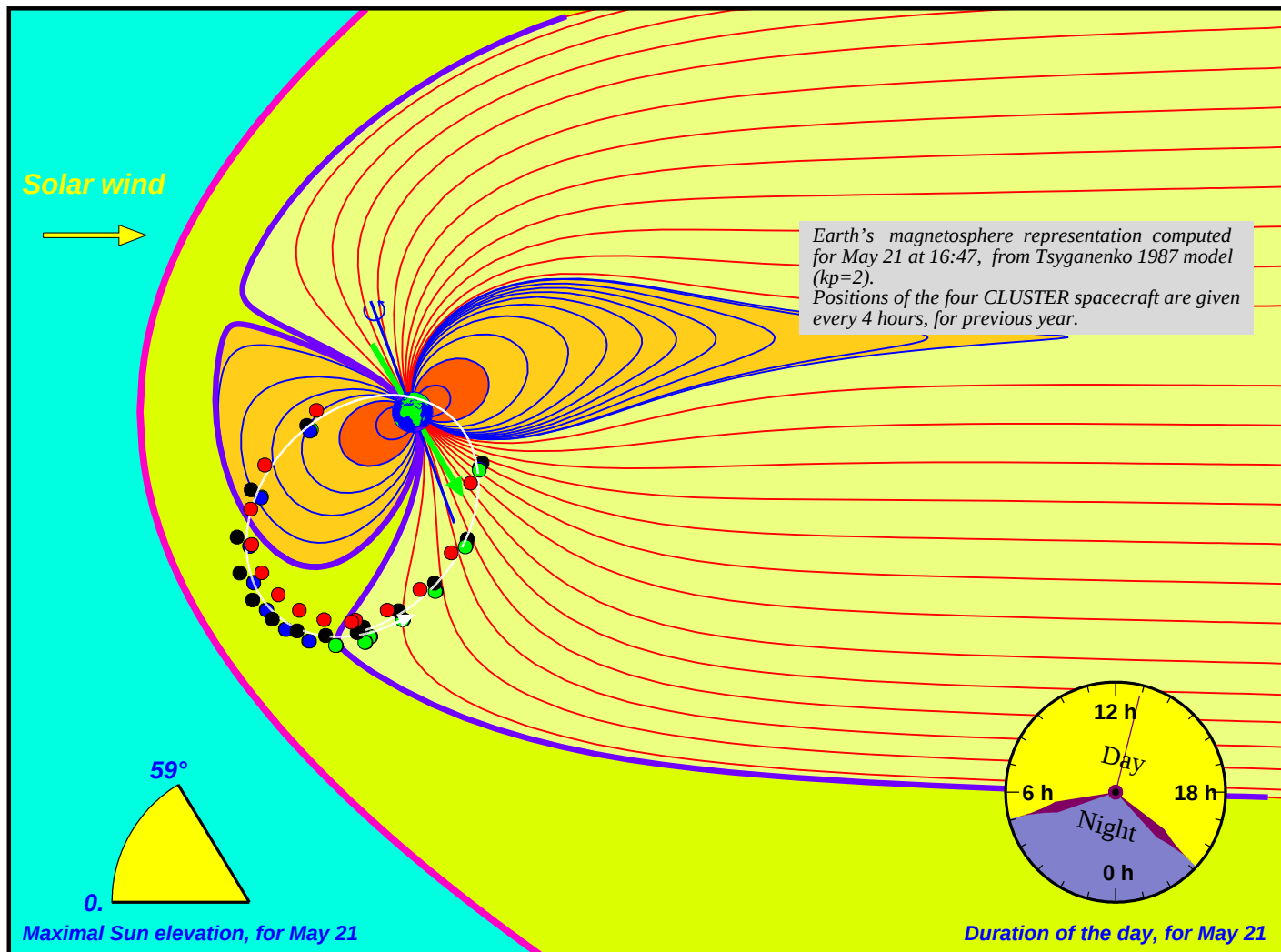
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
9	28 59 - 306 06:50 - 17:35 10:45 +4 m. 31°	1 60 - 305 06:48 - 17:37 10:49 +4 m. 31°	2 61 - 304 06:45 - 17:39 10:53 +4 m. 31°	3 62 - 303 06:43 - 17:40 10:57 +4 m. 32°	4 63 - 302 06:41 - 17:42 11:01 +4 m. 32°	5 64 - 301 06:39 - 17:44 11:05 +4 m. 32°	6 65 - 300 06:37 - 17:46 11:09 +4 m. 33°
10	7 66 - 299 06:34 - 17:48 11:13 +4 m. 33°	8 67 - 298 06:32 - 17:49 11:17 +4 m. 34°	9 68 - 297 06:30 - 17:51 11:21 +4 m. 34°	10 69 - 296 06:28 - 17:53 11:25 +4 m. 34°	11 70 - 295 06:25 - 17:54 11:29 +4 m. 35°	12 71 - 294 06:23 - 17:56 11:33 +4 m. 35°	13 72 - 293 06:21 - 17:58 11:37 +4 m. 36°
11	14 73 - 292 06:19 - 18:00 11:41 +4 m. 36°	15 74 - 291 06:16 - 18:01 11:45 +4 m. 36°	16 75 - 290 06:14 - 18:03 11:49 +4 m. 37°	17 76 - 289 06:12 - 18:05 11:53 +4 m. 37°	18 77 - 288 06:10 - 18:06 11:57 +4 m. 38°	19 78 - 287 06:08 - 18:08 12:01 +4 m. 38°	20 79 - 286 06:05 - 18:10 12:05 +4 m. 38°
12	21 80 - 285 06:03 - 18:11 12:09 +4 m. 39°	22 81 - 284 06:01 - 18:13 12:12 +3 m. 39°	23 82 - 283 05:58 - 18:15 12:16 +4 m. 39°	24 83 - 282 05:56 - 18:17 12:21 +5 m. 40°	25 84 - 281 05:54 - 18:18 12:24 +3 m. 40°	26 85 - 280 05:51 - 18:20 12:28 +4 m. 41°	27 86 - 279 06:49 - 19:22 12:33 +5 m. 41°
13	28 87 - 278 06:47 - 19:23 12:36 +3 m. 41°	29 88 - 277 06:45 - 19:25 12:40 +4 m. 42°	30 89 - 276 06:42 - 19:27 12:44 +4 m. 42°	31 90 - 275 06:40 - 19:28 12:48 +4 m. 43°	1 91 - 274 06:38 - 19:30 12:52 +4 m. 43°	2 92 - 273 06:36 - 19:32 12:56 +4 m. 43°	3 93 - 272 06:33 - 19:33 13:00 +4 m. 44°



April 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

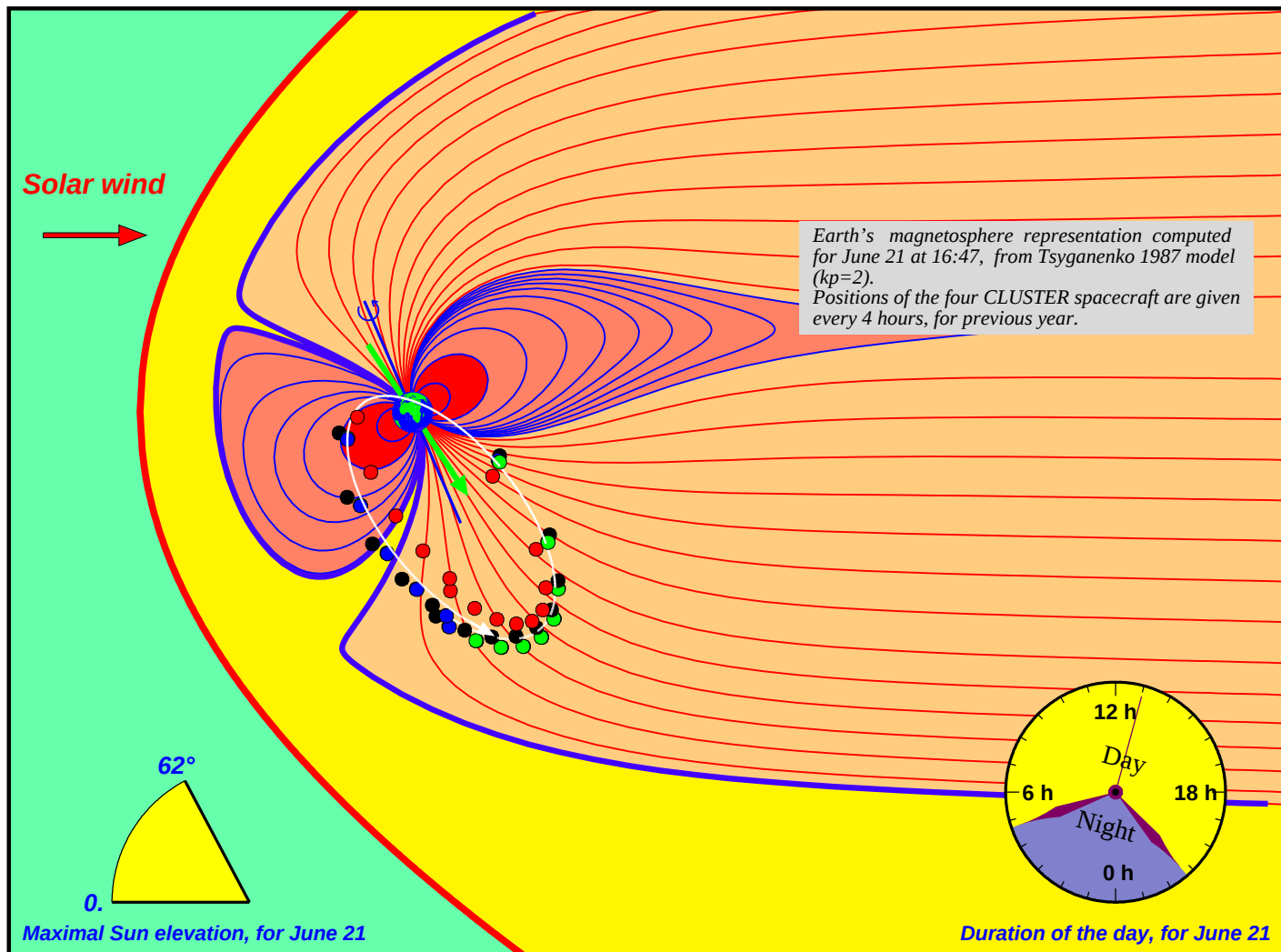
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
13	28 87 - 278 06:47 - 19:23 12:36 +3 m. 41°	29 88 - 277 06:45 - 19:25 12:40 +4 m. 42°	30 89 - 276 06:42 - 19:27 12:44 +4 m. 42°	31 90 - 275 06:40 - 19:28 12:48 +4 m. 43°	1 91 - 274 06:38 - 19:30 12:52 +4 m. 43°	2 92 - 273 06:36 - 19:32 12:56 +4 m. 43°	3 93 - 272 06:33 - 19:33 13:00 +4 m. 44°
14	4 94 - 271 06:31 - 19:35 13:04 +4 m. 44°	5 95 - 270 06:29 - 19:37 13:08 +4 m. 45°	6 96 - 269 06:27 - 19:38 13:12 +4 m. 45°	7 97 - 268 06:24 - 19:40 13:16 +4 m. 45°	8 98 - 267 06:22 - 19:42 13:19 +3 m. 46°	9 99 - 266 06:20 - 19:43 13:23 +4 m. 46°	10 100 - 265 06:18 - 19:45 13:27 +4 m. 46°
15	11 101 - 264 06:16 - 19:47 13:31 +4 m. 47°	12 102 - 263 06:13 - 19:48 13:35 +4 m. 47°	13 103 - 262 06:11 - 19:50 13:39 +4 m. 48°	14 104 - 261 06:09 - 19:52 13:42 +3 m. 48°	15 105 - 260 06:07 - 19:53 13:46 +4 m. 48°	16 106 - 259 06:05 - 19:55 13:50 +4 m. 49°	17 107 - 258 06:03 - 19:57 13:54 +4 m. 49°
16	18 108 - 257 06:01 - 19:58 13:58 +4 m. 49°	19 109 - 256 05:58 - 20:00 14:01 +3 m. 50°	20 110 - 255 05:56 - 20:02 14:05 +4 m. 50°	21 111 - 254 05:54 - 20:03 14:09 +4 m. 50°	22 112 - 253 05:52 - 20:05 14:12 +3 m. 51°	23 113 - 252 05:50 - 20:06 14:16 +4 m. 51°	24 114 - 251 05:48 - 20:08 14:20 +4 m. 51°
17	25 115 - 250 05:46 - 20:10 14:24 +4 m. 52°	26 116 - 249 05:44 - 20:11 14:27 +3 m. 52°	27 117 - 248 05:42 - 20:13 14:31 +4 m. 52°	28 118 - 247 05:40 - 20:15 14:34 +3 m. 53°	29 119 - 246 05:38 - 20:16 14:38 +4 m. 53°	30 120 - 245 05:37 - 20:18 14:41 +3 m. 53°	1 121 - 244 05:35 - 20:20 14:45 +4 m. 54°



May 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
 Location : Longitude 0.17° East, Latitude 51.5° North
 Duration of the day - Variation - Sun maximal elevation (°)

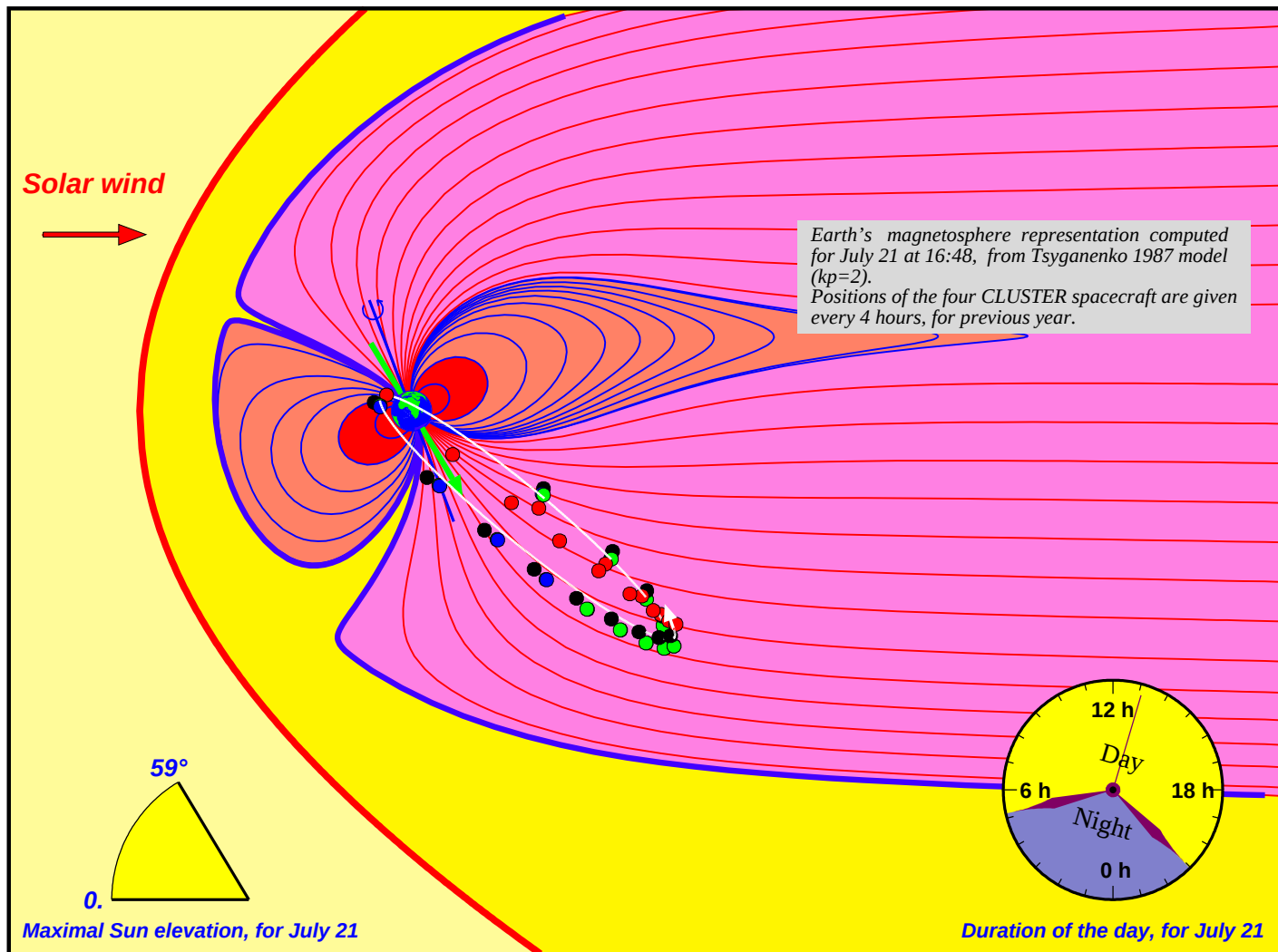
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
17	25 115 - 250 05:46 - 20:10 14:24 +4 m. 52°	26 116 - 249 05:44 - 20:11 14:27 +3 m. 52°	27 117 - 248 05:42 - 20:13 14:31 +4 m. 52°	28 118 - 247 05:40 - 20:15 14:34 +3 m. 53°	29 119 - 246 05:38 - 20:16 14:38 +4 m. 53°	30 120 - 245 05:37 - 20:18 14:41 +3 m. 53°	1 121 - 244 05:35 - 20:20 14:45 +4 m. 54°
18	2 122 - 243 05:33 - 20:21 14:48 +3 m. 54°	3 123 - 242 05:31 - 20:23 14:52 +4 m. 54°	4 124 - 241 05:29 - 20:24 14:55 +3 m. 54°	5 125 - 240 05:27 - 20:26 14:59 +4 m. 55°	6 126 - 239 05:26 - 20:27 15:02 +3 m. 55°	7 127 - 238 05:24 - 20:29 15:05 +3 m. 55°	8 128 - 237 05:22 - 20:31 15:08 +3 m. 56°
19	9 129 - 236 05:21 - 20:32 15:12 +4 m. 56°	10 130 - 235 05:19 - 20:34 15:15 +3 m. 56°	11 131 - 234 05:17 - 20:35 15:18 +3 m. 56°	12 132 - 233 05:16 - 20:37 15:21 +3 m. 57°	13 133 - 232 05:14 - 20:38 15:24 +3 m. 57°	14 134 - 231 05:12 - 20:40 15:27 +3 m. 57°	15 135 - 230 05:11 - 20:41 15:30 +3 m. 57°
20	16 136 - 229 05:10 - 20:43 15:33 +3 m. 58°	17 137 - 228 05:08 - 20:44 15:36 +3 m. 58°	18 138 - 227 05:07 - 20:46 15:39 +3 m. 58°	19 139 - 226 05:05 - 20:47 15:42 +3 m. 58°	20 140 - 225 05:04 - 20:49 15:44 +2 m. 58°	21 141 - 224 05:03 - 20:50 15:47 +3 m. 59°	22 142 - 223 05:02 - 20:51 15:50 +3 m. 59°
21	23 143 - 222 05:00 - 20:53 15:52 +2 m. 59°	24 144 - 221 04:59 - 20:54 15:55 +3 m. 59°	25 145 - 220 04:58 - 20:55 15:57 +2 m. 59°	26 146 - 219 04:57 - 20:57 15:59 +2 m. 60°	27 147 - 218 04:56 - 20:58 16:02 +3 m. 60°	28 148 - 217 04:55 - 20:59 16:04 +2 m. 60°	29 149 - 216 04:54 - 21:00 16:06 +2 m. 60°
22	30 150 - 215 04:53 - 21:01 16:08 +2 m. 60°	31 151 - 214 04:52 - 21:02 16:10 +2 m. 60°	1 152 - 213 04:51 - 21:04 16:12 +2 m. 61°	2 153 - 212 04:51 - 21:05 16:14 +2 m. 61°	3 154 - 211 04:50 - 21:06 16:16 +2 m. 61°	4 155 - 210 04:49 - 21:07 16:17 +1 m. 61°	5 156 - 209 04:49 - 21:08 16:19 +2 m. 61°



June 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

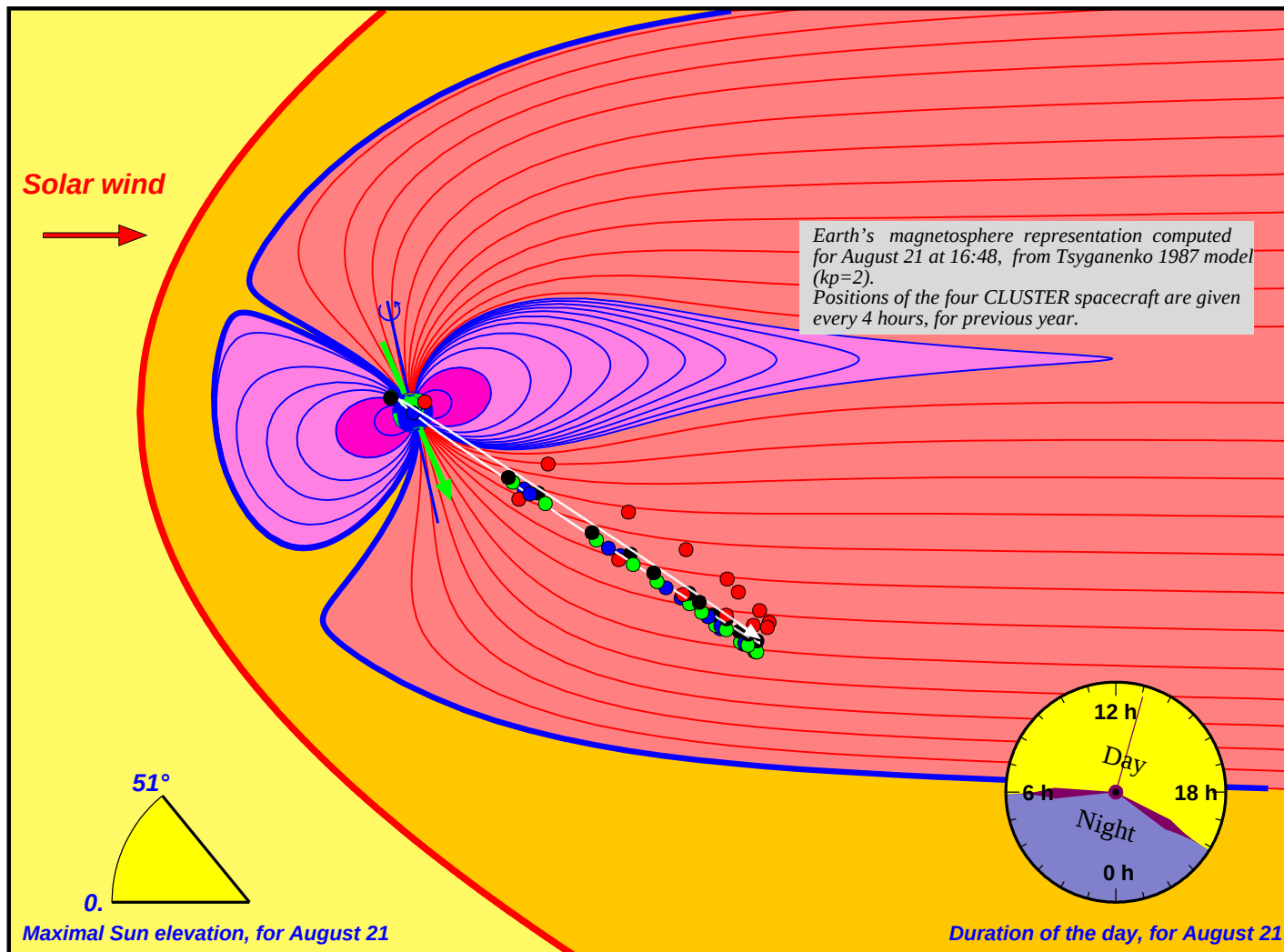
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
22	30 150 - 215 04:53 - 21:01 16:08 +2 m. 60°	31 151 - 214 04:52 - 21:02 16:10 +2 m. 60°	1 152 - 213 04:51 - 21:04 16:12 +2 m. 61°	2 153 - 212 04:51 - 21:05 16:14 +2 m. 61°	3 154 - 211 04:50 - 21:06 16:16 +2 m. 61°	4 155 - 210 04:49 - 21:07 16:17 +1 m. 61°	5 156 - 209 04:49 - 21:08 16:19 +2 m. 61°
23	6 157 - 208 04:48 - 21:08 16:20 +1 m. 61°	7 158 - 207 04:48 - 21:09 16:22 +2 m. 61°	8 159 - 206 04:47 - 21:10 16:23 +1 m. 61°	9 160 - 205 04:47 - 21:11 16:24 +1 m. 61°	10 161 - 204 04:46 - 21:12 16:25 +1 m. 62°	11 162 - 203 04:46 - 21:12 16:27 +2 m. 62°	12 163 - 202 04:46 - 21:13 16:28 +1 m. 62°
24	13 164 - 201 04:45 - 21:14 16:28 +0 m. 62°	14 165 - 200 04:45 - 21:14 16:29 +1 m. 62°	15 166 - 199 04:45 - 21:15 16:30 +1 m. 62°	16 167 - 198 04:45 - 21:15 16:30 +0 m. 62°	17 168 - 197 04:45 - 21:16 16:31 +1 m. 62°	18 169 - 196 04:45 - 21:16 16:31 +0 m. 62°	19 170 - 195 04:45 - 21:16 16:31 +0 m. 62°
25	20 171 - 194 04:45 - 21:17 16:31 +0 m. 62°	21 172 - 193 04:45 - 21:17 16:32 +1 m. 62°	22 173 - 192 04:46 - 21:17 16:32 +0 m. 62°	23 174 - 191 04:46 - 21:17 16:31 -1 m. 62°	24 175 - 190 04:46 - 21:17 16:31 +0 m. 62°	25 176 - 189 04:47 - 21:17 16:31 +0 m. 62°	26 177 - 188 04:47 - 21:17 16:30 -1 m. 62°
26	27 178 - 187 04:47 - 21:17 16:30 +0 m. 62°	28 179 - 186 04:48 - 21:17 16:29 -1 m. 62°	29 180 - 185 04:48 - 21:17 16:29 +0 m. 62°	30 181 - 184 04:49 - 21:17 16:28 -1 m. 62°	1 182 - 183 04:50 - 21:16 16:27 -1 m. 62°	2 183 - 182 04:50 - 21:16 16:26 -1 m. 62°	3 184 - 181 04:51 - 21:16 16:25 -1 m. 61°



July 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

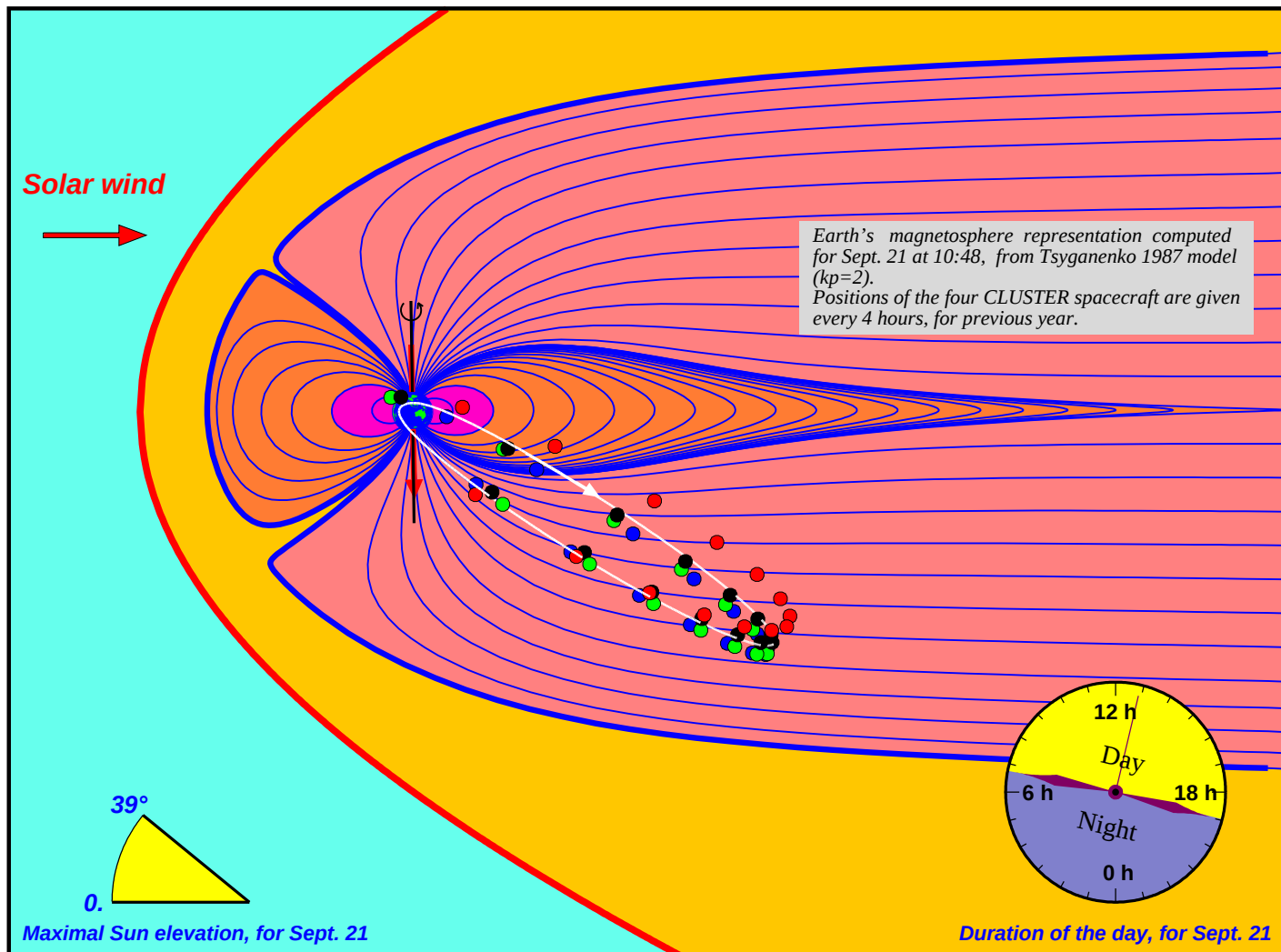
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26	27 178 - 187 04:47 - 21:17 16:30 +0 m. 62°	28 179 - 186 04:48 - 21:17 16:29 -1 m. 62°	29 180 - 185 04:48 - 21:17 16:29 +0 m. 62°	30 181 - 184 04:49 - 21:17 16:28 -1 m. 62°	1 182 - 183 04:50 - 21:16 16:27 -1 m. 62°	2 183 - 182 04:50 - 21:16 16:26 -1 m. 62°	3 184 - 181 04:51 - 21:16 16:25 -1 m. 61°
27	4 185 - 180 04:52 - 21:15 16:24 -1 m. 61°	5 186 - 179 04:53 - 21:15 16:22 -2 m. 61°	6 187 - 178 04:53 - 21:14 16:21 -1 m. 61°	7 188 - 177 04:54 - 21:14 16:20 -1 m. 61°	8 189 - 176 04:55 - 21:13 16:18 -2 m. 61°	9 190 - 175 04:56 - 21:13 16:17 -1 m. 61°	10 191 - 174 04:57 - 21:12 16:15 -2 m. 61°
28	11 192 - 173 04:58 - 21:11 16:13 -2 m. 61°	12 193 - 172 04:59 - 21:10 16:11 -2 m. 60°	13 194 - 171 05:00 - 21:09 16:09 -2 m. 60°	14 195 - 170 05:01 - 21:09 16:07 -2 m. 60°	15 196 - 169 05:02 - 21:08 16:05 -2 m. 60°	16 197 - 168 05:04 - 21:07 16:03 -2 m. 60°	17 198 - 167 05:05 - 21:06 16:01 -2 m. 60°
29	18 199 - 166 05:06 - 21:04 15:58 -3 m. 60°	19 200 - 165 05:07 - 21:03 15:56 -2 m. 59°	20 201 - 164 05:09 - 21:02 15:54 -2 m. 59°	21 202 - 163 05:10 - 21:01 15:51 -3 m. 59°	22 203 - 162 05:11 - 21:00 15:49 -2 m. 59°	23 204 - 161 05:12 - 20:59 15:46 -3 m. 59°	24 205 - 160 05:14 - 20:57 15:43 -3 m. 58°
30	25 206 - 159 05:15 - 20:56 15:41 -2 m. 58°	26 207 - 158 05:17 - 20:54 15:38 -3 m. 58°	27 208 - 157 05:18 - 20:53 15:35 -3 m. 58°	28 209 - 156 05:19 - 20:52 15:32 -3 m. 57°	29 210 - 155 05:21 - 20:50 15:29 -3 m. 57°	30 211 - 154 05:22 - 20:49 15:26 -3 m. 57°	31 212 - 153 05:24 - 20:47 15:23 -3 m. 57°



August 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
 Location : Longitude 0.17° East, Latitude 51.5° North
 Duration of the day - Variation - Sun maximal elevation (°)

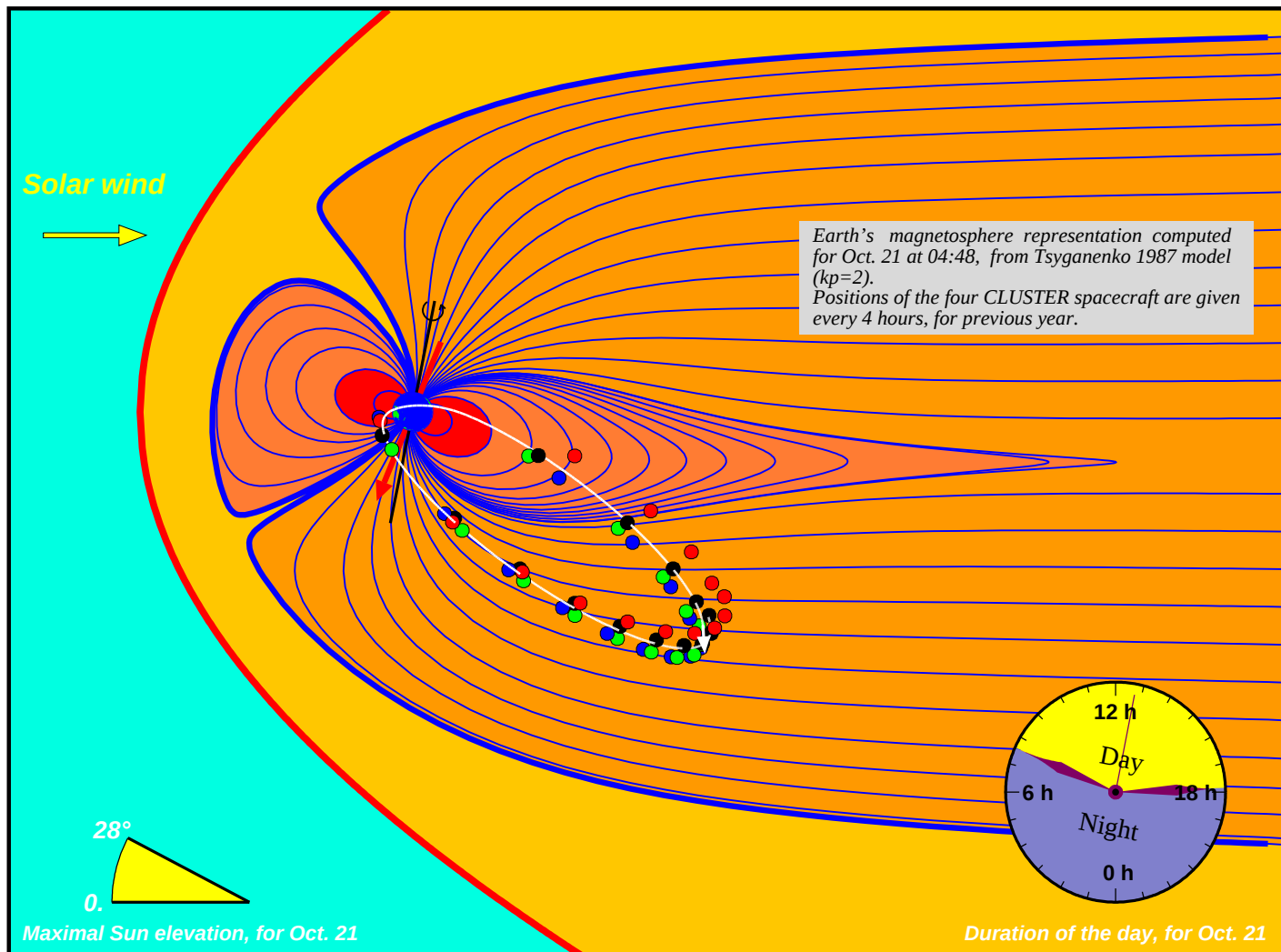
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
31	1 213 - 152 05:25 - 20:45 15:20 -3 m. 57°	2 214 - 151 05:27 - 20:44 15:17 -3 m. 56°	3 215 - 150 05:28 - 20:42 15:14 -3 m. 56°	4 216 - 149 05:30 - 20:40 15:11 -3 m. 56°	5 217 - 148 05:31 - 20:39 15:07 -4 m. 55°	6 218 - 147 05:33 - 20:37 15:04 -3 m. 55°	7 219 - 146 05:34 - 20:35 15:01 -3 m. 55°
32	8 220 - 145 05:36 - 20:33 14:58 -3 m. 55°	9 221 - 144 05:37 - 20:32 14:54 -4 m. 54°	10 222 - 143 05:39 - 20:30 14:51 -3 m. 54°	11 223 - 142 05:40 - 20:28 14:48 -3 m. 54°	12 224 - 141 05:42 - 20:26 14:44 -4 m. 53°	13 225 - 140 05:43 - 20:24 14:41 -3 m. 53°	14 226 - 139 05:45 - 20:22 14:37 -4 m. 53°
33	15 227 - 138 05:47 - 20:20 14:34 -3 m. 53°	16 228 - 137 05:48 - 20:18 14:30 -4 m. 52°	17 229 - 136 05:50 - 20:16 14:27 -3 m. 52°	18 230 - 135 05:51 - 20:14 14:23 -4 m. 52°	19 231 - 134 05:53 - 20:12 14:19 -4 m. 51°	20 232 - 133 05:54 - 20:10 14:16 -3 m. 51°	21 233 - 132 05:56 - 20:08 14:12 -4 m. 51°
34	22 234 - 131 05:58 - 20:06 14:08 -4 m. 50°	23 235 - 130 05:59 - 20:04 14:05 -3 m. 50°	24 236 - 129 06:01 - 20:02 14:01 -4 m. 50°	25 237 - 128 06:02 - 20:00 13:57 -4 m. 49°	26 238 - 127 06:04 - 19:58 13:54 -3 m. 49°	27 239 - 126 06:05 - 19:56 13:50 -4 m. 49°	28 240 - 125 06:07 - 19:53 13:46 -4 m. 48°
35	29 241 - 124 06:09 - 19:51 13:43 -3 m. 48°	30 242 - 123 06:10 - 19:49 13:39 -4 m. 48°	31 243 - 122 06:12 - 19:47 13:35 -4 m. 47°	1 244 - 121 06:13 - 19:45 13:31 -4 m. 47°	2 245 - 120 06:15 - 19:42 13:27 -4 m. 46°	3 246 - 119 06:17 - 19:40 13:23 -4 m. 46°	4 247 - 118 06:18 - 19:38 13:20 -3 m. 46°



September 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
35	29 241 - 124 06:09 - 19:51 13:43 -3 m. 48°	30 242 - 123 06:10 - 19:49 13:39 -4 m. 48°	31 243 - 122 06:12 - 19:47 13:35 -4 m. 47°	1 244 - 121 06:13 - 19:45 13:31 -4 m. 47°	2 245 - 120 06:15 - 19:42 13:27 -4 m. 46°	3 246 - 119 06:17 - 19:40 13:23 -4 m. 46°	4 247 - 118 06:18 - 19:38 13:20 -3 m. 46°
36	5 248 - 117 06:20 - 19:36 13:16 -4 m. 45°	6 249 - 116 06:21 - 19:33 13:12 -4 m. 45°	7 250 - 115 06:23 - 19:31 13:08 -4 m. 45°	8 251 - 114 06:24 - 19:29 13:04 -4 m. 44°	9 252 - 113 06:26 - 19:27 13:00 -4 m. 44°	10 253 - 112 06:28 - 19:24 12:57 -3 m. 43°	11 254 - 111 06:29 - 19:22 12:53 -4 m. 43°
37	12 255 - 110 06:31 - 19:20 12:49 -4 m. 43°	13 256 - 109 06:32 - 19:18 12:45 -4 m. 42°	14 257 - 108 06:34 - 19:15 12:41 -4 m. 42°	15 258 - 107 06:36 - 19:13 12:37 -4 m. 42°	16 259 - 106 06:37 - 19:11 12:33 -4 m. 41°	17 260 - 105 06:39 - 19:08 12:29 -4 m. 41°	18 261 - 104 06:40 - 19:06 12:26 -3 m. 40°
38	19 262 - 103 06:42 - 19:04 12:22 -4 m. 40°	20 263 - 102 06:43 - 19:01 12:18 -4 m. 40°	21 264 - 101 06:45 - 18:59 12:14 -4 m. 39°	22 265 - 100 06:47 - 18:57 12:10 -4 m. 39°	23 266 - 99 06:48 - 18:54 12:06 -4 m. 38°	24 267 - 98 06:50 - 18:52 12:02 -4 m. 38°	25 268 - 97 06:52 - 18:50 11:58 -4 m. 38°
39	26 269 - 96 06:53 - 18:47 11:54 -4 m. 37°	27 270 - 95 06:55 - 18:45 11:50 -4 m. 37°	28 271 - 94 06:56 - 18:43 11:47 -3 m. 37°	29 272 - 93 06:58 - 18:41 11:43 -4 m. 36°	30 273 - 92 07:00 - 18:38 11:39 -4 m. 36°	1 274 - 91 07:01 - 18:36 11:35 -4 m. 35°	2 275 - 90 07:03 - 18:34 11:31 -4 m. 35°

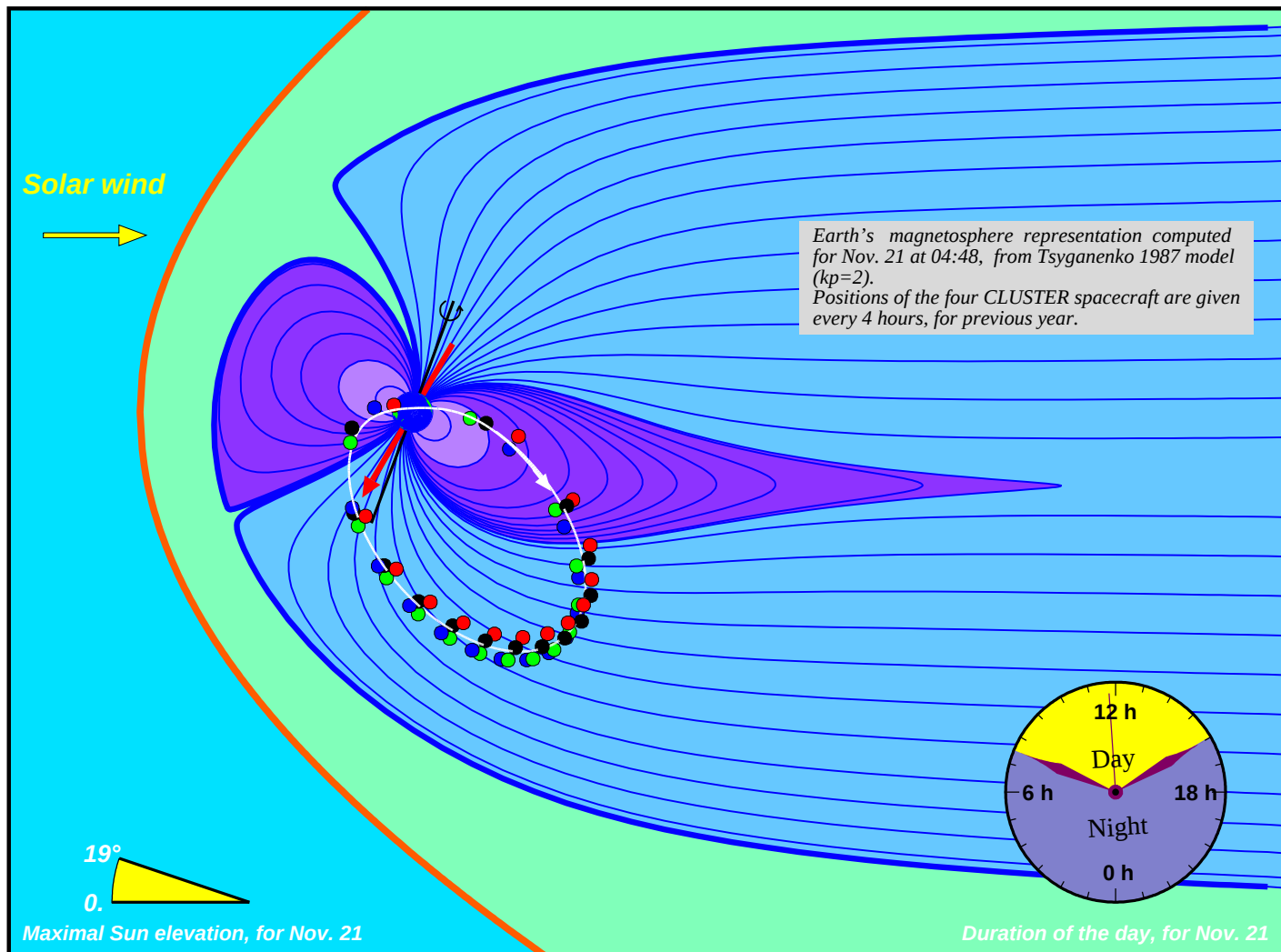


October 2011

heure d'hivers
le 30 à 03:00

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

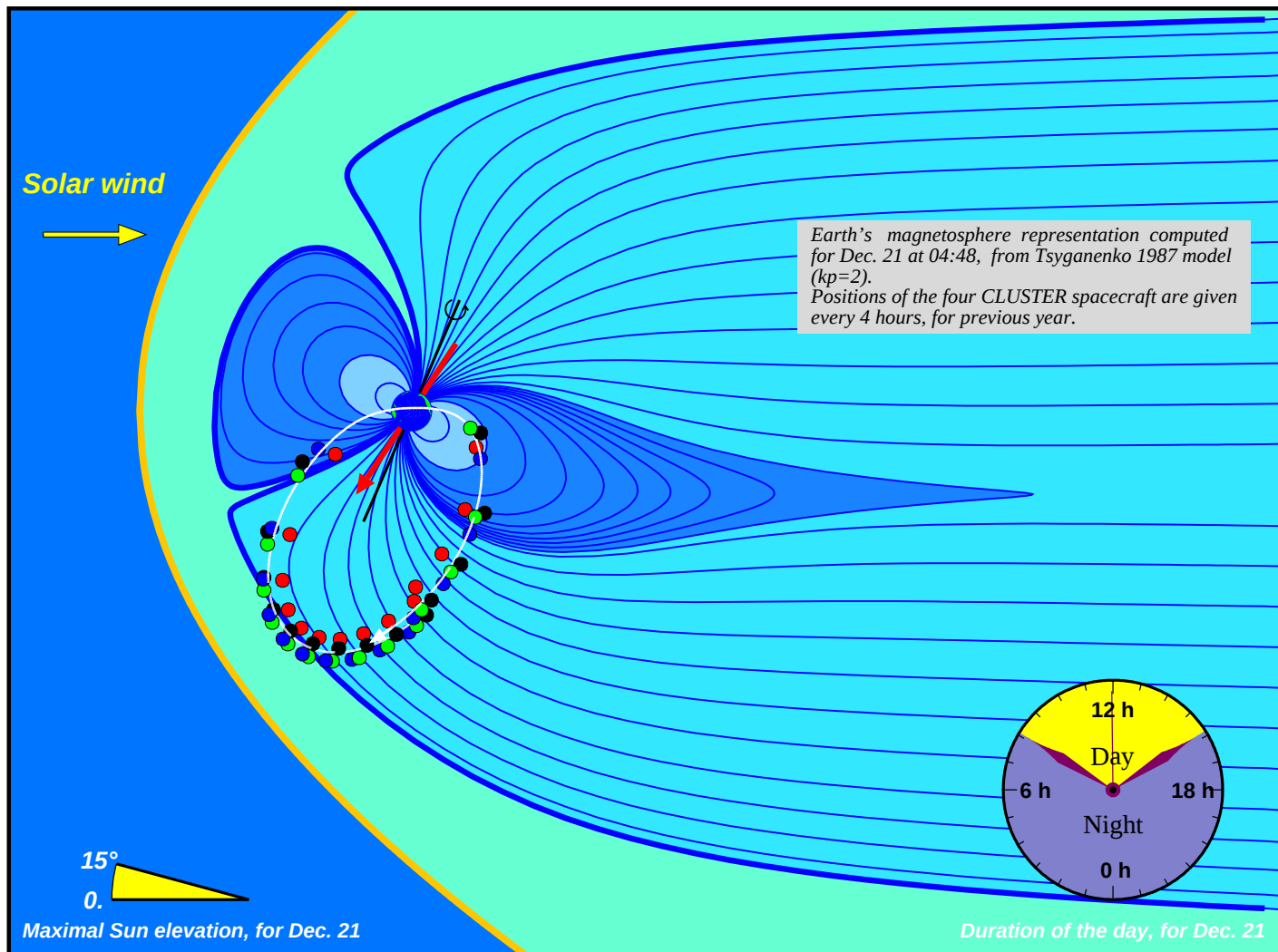
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
39	26 269 - 96 06:53 - 18:47 11:54 -4 m. 37°	27 270 - 95 06:55 - 18:45 11:50 -4 m. 37°	28 271 - 94 06:56 - 18:43 11:47 -3 m. 37°	29 272 - 93 06:58 - 18:41 11:43 -4 m. 36°	30 273 - 92 07:00 - 18:38 11:39 -4 m. 36°	1 274 - 91 07:01 - 18:36 11:35 -4 m. 35°	2 275 - 90 07:03 - 18:34 11:31 -4 m. 35°
40	3 276 - 89 07:05 - 18:32 11:27 -4 m. 35°	4 277 - 88 07:06 - 18:29 11:23 -4 m. 34°	5 278 - 87 07:08 - 18:27 11:19 -4 m. 34°	6 279 - 86 07:10 - 18:25 11:15 -4 m. 33°	7 280 - 85 07:11 - 18:23 11:11 -4 m. 33°	8 281 - 84 07:13 - 18:20 11:07 -4 m. 33°	9 282 - 83 07:15 - 18:18 11:03 -4 m. 32°
41	10 283 - 82 07:16 - 18:16 11:00 -3 m. 32°	11 284 - 81 07:18 - 18:14 10:56 -4 m. 32°	12 285 - 80 07:20 - 18:11 10:52 -4 m. 31°	13 286 - 79 07:21 - 18:09 10:48 -4 m. 31°	14 287 - 78 07:23 - 18:07 10:44 -4 m. 30°	15 288 - 77 07:25 - 18:05 10:40 -4 m. 30°	16 289 - 76 07:26 - 18:03 10:36 -4 m. 30°
42	17 290 - 75 07:28 - 18:01 10:33 -3 m. 29°	18 291 - 74 07:30 - 17:59 10:29 -4 m. 29°	19 292 - 73 07:32 - 17:56 10:25 -4 m. 29°	20 293 - 72 07:33 - 17:54 10:21 -4 m. 28°	21 294 - 71 07:35 - 17:52 10:17 -4 m. 28°	22 295 - 70 07:37 - 17:50 10:13 -4 m. 27°	23 296 - 69 07:39 - 17:48 10:10 -3 m. 27°
43	24 297 - 68 07:40 - 17:46 10:06 -4 m. 27°	25 298 - 67 07:42 - 17:44 10:02 -4 m. 26°	26 299 - 66 07:44 - 17:42 9:58 -4 m. 26°	27 300 - 65 07:46 - 17:40 9:55 -3 m. 26°	28 301 - 64 07:47 - 17:38 9:51 -4 m. 25°	29 302 - 63 07:49 - 17:36 9:47 -4 m. 25°	30 303 - 62 06:51 - 16:34 9:44 -3 m. 25°
44	31 304 - 61 06:53 - 16:33 9:40 -4 m. 24°	1 305 - 60 06:55 - 16:31 9:36 -4 m. 24°	2 306 - 59 06:56 - 16:29 9:33 -3 m. 24°	3 307 - 58 06:58 - 16:27 9:29 -4 m. 23°	4 308 - 57 07:00 - 16:25 9:26 -3 m. 23°	5 309 - 56 07:02 - 16:24 9:22 -4 m. 23°	6 310 - 55 07:04 - 16:22 9:18 -4 m. 23°



November 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
44	31 304 - 61 06:53 - 16:33 9:40 -4 m. 24°	1 305 - 60 06:55 - 16:31 9:36 -4 m. 24°	2 306 - 59 06:56 - 16:29 9:33 -3 m. 24°	3 307 - 58 06:58 - 16:27 9:29 -4 m. 23°	4 308 - 57 07:00 - 16:25 9:26 -3 m. 23°	5 309 - 56 07:02 - 16:24 9:22 -4 m. 23°	6 310 - 55 07:04 - 16:22 9:18 -4 m. 23°
45	7 311 - 54 07:05 - 16:20 9:15 -3 m. 22°	8 312 - 53 07:07 - 16:19 9:12 -3 m. 22°	9 313 - 52 07:09 - 16:17 9:08 -4 m. 22°	10 314 - 51 07:11 - 16:15 9:05 -3 m. 21°	11 315 - 50 07:12 - 16:14 9:01 -4 m. 21°	12 316 - 49 07:14 - 16:12 8:58 -3 m. 21°	13 317 - 48 07:16 - 16:11 8:55 -3 m. 21°
46	14 318 - 47 07:18 - 16:09 8:52 -3 m. 20°	15 319 - 46 07:19 - 16:08 8:49 -3 m. 20°	16 320 - 45 07:21 - 16:07 8:45 -4 m. 20°	17 321 - 44 07:23 - 16:05 8:42 -3 m. 20°	18 322 - 43 07:24 - 16:04 8:40 -2 m. 19°	19 323 - 42 07:26 - 16:03 8:36 -4 m. 19°	20 324 - 41 07:28 - 16:02 8:34 -2 m. 19°
47	21 325 - 40 07:30 - 16:00 8:31 -3 m. 19°	22 326 - 39 07:31 - 15:59 8:28 -3 m. 18°	23 327 - 38 07:33 - 15:58 8:25 -3 m. 18°	24 328 - 37 07:34 - 15:57 8:23 -2 m. 18°	25 329 - 36 07:36 - 15:56 8:20 -3 m. 18°	26 330 - 35 07:38 - 15:55 8:17 -3 m. 18°	27 331 - 34 07:39 - 15:54 8:15 -2 m. 17°
48	28 332 - 33 07:41 - 15:53 8:13 -2 m. 17°	29 333 - 32 07:42 - 15:53 8:10 -3 m. 17°	30 334 - 31 07:44 - 15:52 8:08 -2 m. 17°	1 335 - 30 07:45 - 15:51 8:06 -2 m. 17°	2 336 - 29 07:47 - 15:50 8:04 -2 m. 17°	3 337 - 28 07:48 - 15:50 8:02 -2 m. 16°	4 338 - 27 07:49 - 15:49 8:00 -2 m. 16°



December 2011

Sunrise and Sunset at Londres (TL ± 1 mn)
Location : Longitude 0.17° East, Latitude 51.5° North
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
48	28 332 - 33 07:41 - 15:53 8:13 -2 m. 17°	29 333 - 32 07:42 - 15:53 8:10 -3 m. 17°	30 334 - 31 07:44 - 15:52 8:08 -2 m. 17°	1 335 - 30 07:45 - 15:51 8:06 -2 m. 17°	2 336 - 29 07:47 - 15:50 8:04 -2 m. 17°	3 337 - 28 07:48 - 15:50 8:02 -2 m. 16°	4 338 - 27 07:49 - 15:49 8:00 -2 m. 16°
49	5 339 - 26 07:51 - 15:49 7:58 -2 m. 16°	6 340 - 25 07:52 - 15:48 7:57 -1 m. 16°	7 341 - 24 07:53 - 15:48 7:55 -2 m. 16°	8 342 - 23 07:54 - 15:48 7:54 -1 m. 16°	9 343 - 22 07:55 - 15:47 7:52 -2 m. 16°	10 344 - 21 07:57 - 15:47 7:51 -1 m. 16°	11 345 - 20 07:58 - 15:47 7:49 -2 m. 16°
50	12 346 - 19 07:59 - 15:47 7:48 -1 m. 15°	13 347 - 18 08:00 - 15:47 7:47 -1 m. 15°	14 348 - 17 08:01 - 15:47 7:47 +0 m. 15°	15 349 - 16 08:01 - 15:47 7:46 -1 m. 15°	16 350 - 15 08:02 - 15:47 7:45 -1 m. 15°	17 351 - 14 08:03 - 15:47 7:44 -1 m. 15°	18 352 - 13 08:04 - 15:48 7:44 +0 m. 15°
51	19 353 - 12 08:05 - 15:48 7:44 +0 m. 15°	20 354 - 11 08:05 - 15:48 7:43 -1 m. 15°	21 355 - 10 08:06 - 15:49 7:43 +0 m. 15°	22 356 - 9 08:06 - 15:49 7:43 +0 m. 15°	23 357 - 8 08:07 - 15:50 7:43 +0 m. 15°	24 358 - 7 08:07 - 15:51 7:44 +1 m. 15°	25 359 - 6 08:07 - 15:51 7:44 +0 m. 15°
52	26 360 - 5 08:08 - 15:52 7:44 +0 m. 15°	27 361 - 4 08:08 - 15:53 7:45 +1 m. 15°	28 362 - 3 08:08 - 15:54 7:45 +0 m. 15°	29 363 - 2 08:08 - 15:54 7:46 +1 m. 15°	30 364 - 1 08:08 - 15:55 7:47 +1 m. 15°	31 365 - 0 08:08 - 15:56 7:48 +1 m. 15°	

Visualisation of magnetic field lines of the Earth

Model: Tsyganenko 87 version exshor ikp=4 (kp= 2+) Date/Time: 16 janvier 2001 02:00 Coordinates: GSM

P. Robert, CETP/CNRS, 1996

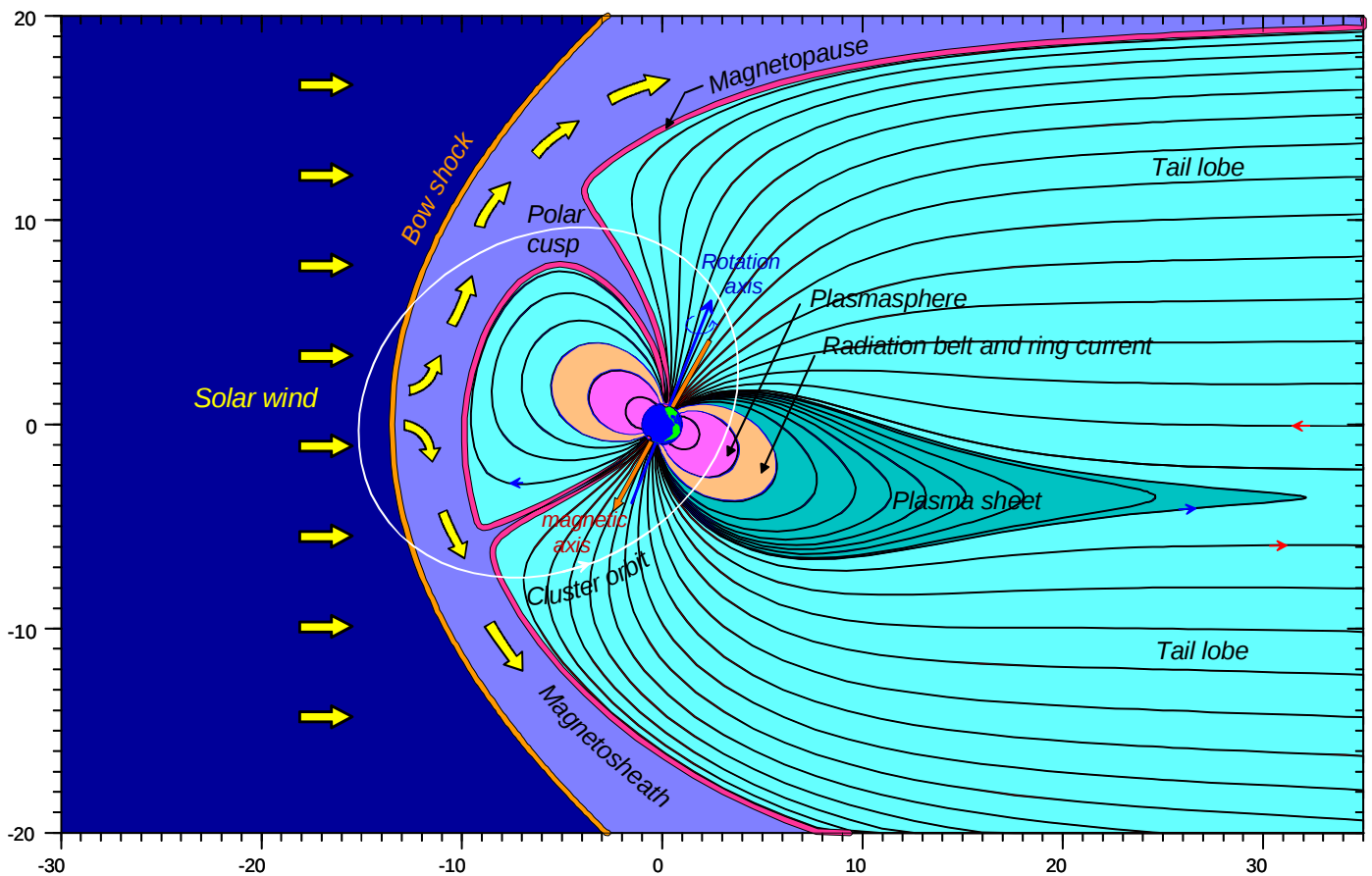


Illustration : Visualization of magnetic field lines of the Earth, showing the magnetosphere.

The magnetic Earth's field lines, due to the internal field, initially dipolar and symmetric around the axis of the magnetic dipole, are deformed by the solar wind, which create a closed cavity, named magnetosphere, and a chock wave upstream of this cavity. The various regions are artificially colored. The color choice, here as well as from one season to another for the calendar, is purely esthetical.

The magnetic field model used is the one of Tsyganenko 1987. The computation of the magnetosphere geometries, from the magnetic field model, is done from a specific library developped at CETP, the "Comagnetolib". All the graphical is produced by an owner library, the "Rogralib".

Calendar:

The sunrise and sunset time, the computation of the maximal elevation of the Sun at the local noon, the duration of the day, are computed thanks to a coordinate system library, developed initially for the CLUSTER mission in 1992, the "Rocotlib", completed by all the routines allowing calendar and time conversions.

The accuracy is around one minute. Computations are done assuming a spherical Earth, and for a constant value of the indices of refraction of the air, at the horizon, as well as a constant apparent diameter of the SUN. Computations have been checked with the ephemerid values delivered by the "Bureau Des Longitudes" in Paris.

This calendar can be automatically produced for any city in the world and for all years between 1901 and 2099.

For anymore information, contact Patrick.Robert@lpp.polytechnique.fr