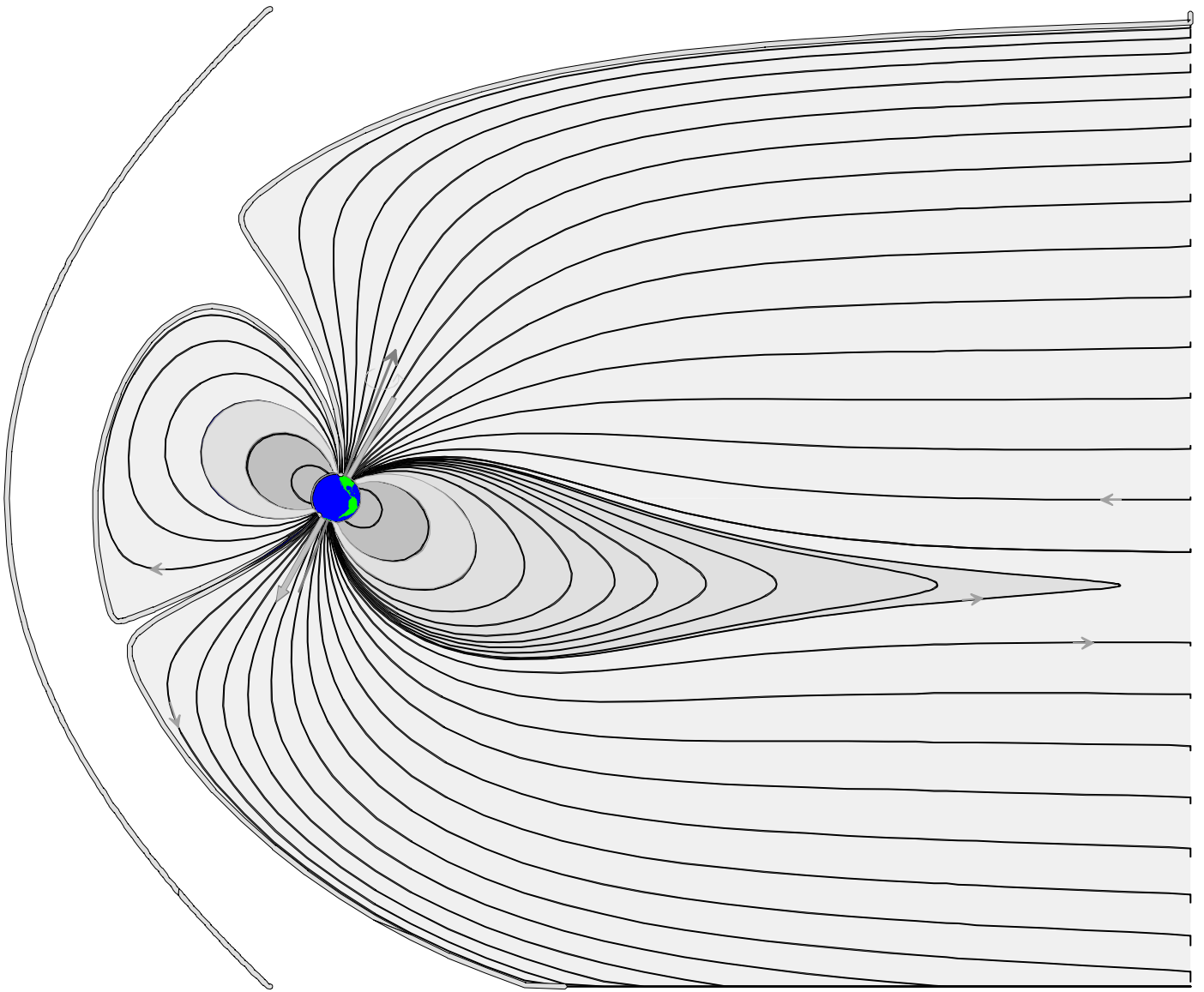
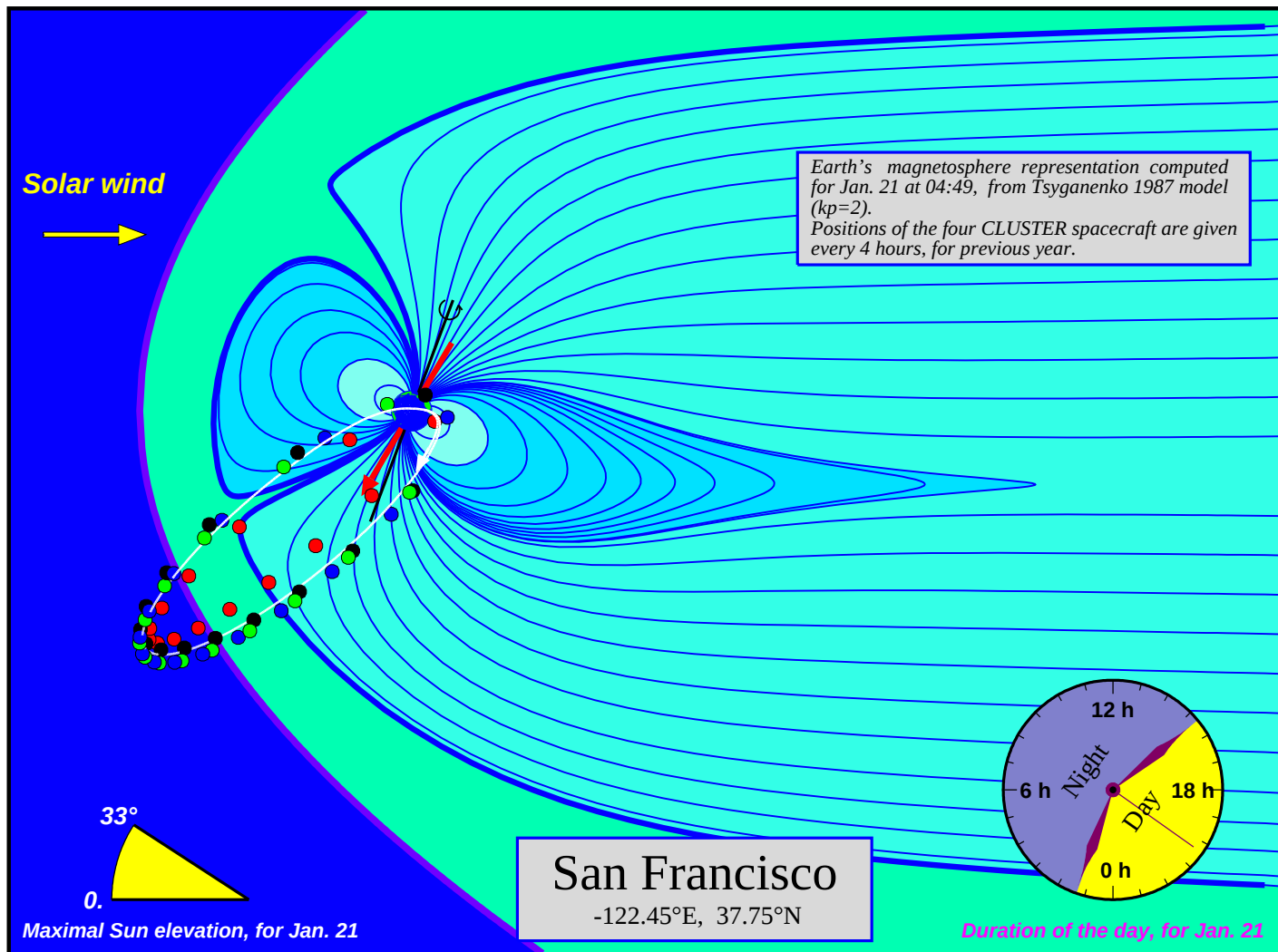




*Here is the classical magnetospheric calendar 2012,
available for any city across the world,
English or French version*

*Happy new year for everybody
Patrick*



January 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

Monday

Tuesday

Wednesday

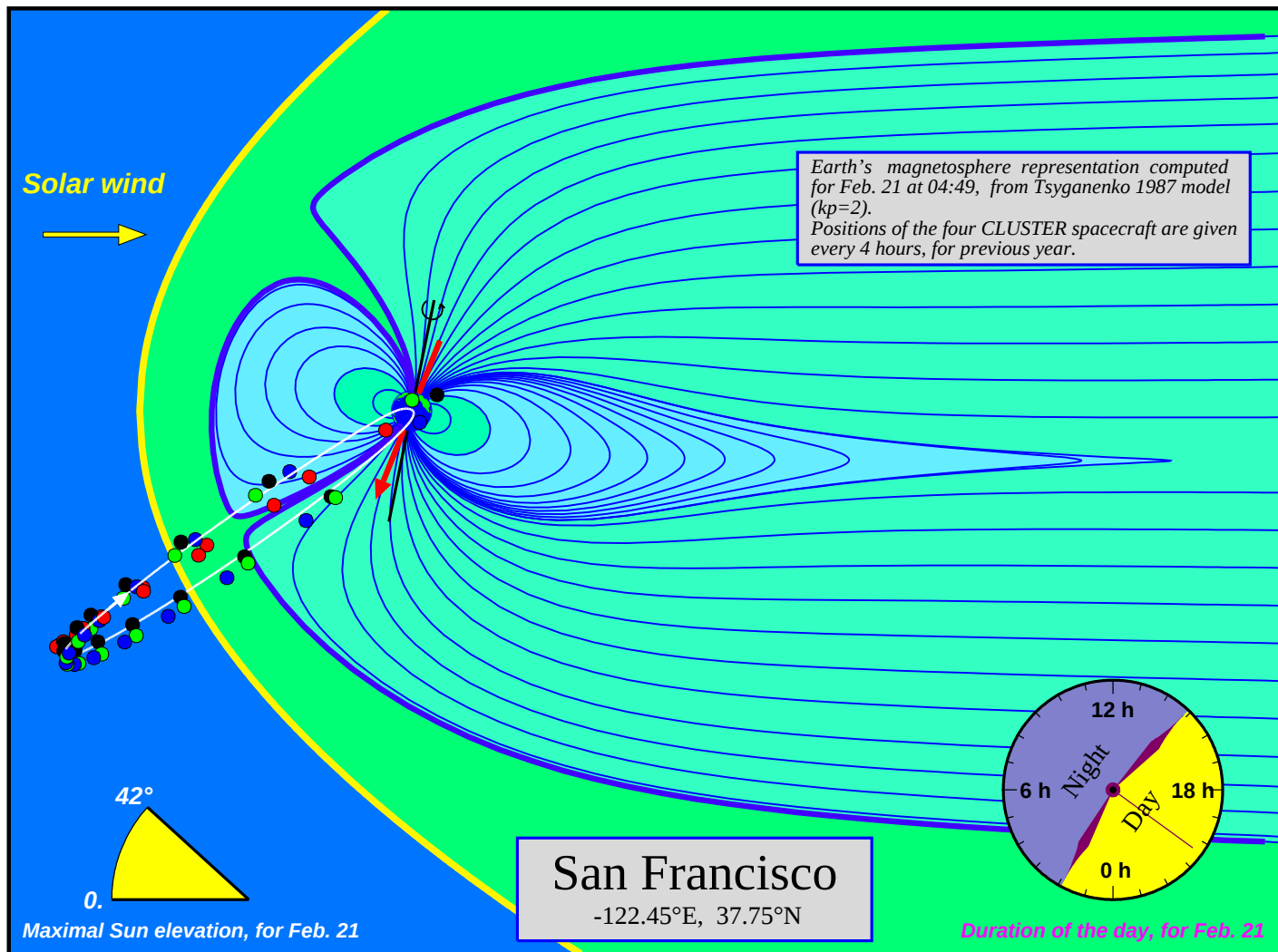
Thursday

Friday

Saturday

Sunday

							1 1 - 364 15:25 - 01:01 9:35 +0 m. 30°
1	2 2 - 364 15:25 - 01:02 9:36 +1 m. 30°	3 3 - 363 15:26 - 01:02 9:36 +0 m. 30°	4 4 - 362 15:26 - 01:03 9:37 +1 m. 30°	5 5 - 361 15:26 - 01:04 9:38 +1 m. 30°	6 6 - 360 15:26 - 01:05 9:39 +1 m. 30°	7 7 - 359 15:26 - 01:06 9:40 +1 m. 30°	8 8 - 358 15:26 - 01:07 9:41 +1 m. 31°
2	9 9 - 357 15:26 - 01:08 9:42 +1 m. 31°	10 10 - 356 15:25 - 01:09 9:43 +1 m. 31°	11 11 - 355 15:25 - 01:10 9:44 +1 m. 31°	12 12 - 354 15:25 - 01:11 9:45 +1 m. 31°	13 13 - 353 15:25 - 01:12 9:46 +1 m. 31°	14 14 - 352 15:25 - 01:13 9:48 +2 m. 32°	15 15 - 351 15:24 - 01:14 9:49 +1 m. 32°
3	16 16 - 350 15:24 - 01:15 9:50 +1 m. 32°	17 17 - 349 15:24 - 01:16 9:52 +2 m. 32°	18 18 - 348 15:23 - 01:17 9:53 +1 m. 32°	19 19 - 347 15:23 - 01:18 9:55 +2 m. 32°	20 20 - 346 15:22 - 01:19 9:56 +1 m. 33°	21 21 - 345 15:22 - 01:20 9:58 +2 m. 33°	22 22 - 344 15:21 - 01:21 9:59 +1 m. 33°
4	23 23 - 343 15:21 - 01:22 10:02 +3 m. 33°	24 24 - 342 15:20 - 01:23 10:03 +1 m. 34°	25 25 - 341 15:19 - 01:24 10:05 +2 m. 34°	26 26 - 340 15:19 - 01:25 10:07 +2 m. 34°	27 27 - 339 15:18 - 01:27 10:09 +2 m. 34°	28 28 - 338 15:17 - 01:28 10:10 +1 m. 35°	29 29 - 337 15:17 - 01:29 10:12 +2 m. 35°
5	30 30 - 336 15:16 - 01:30 10:14 +2 m. 35°	31 31 - 335 15:15 - 01:31 10:16 +2 m. 35°	1 32 - 334 15:14 - 01:32 10:18 +2 m. 36°	2 33 - 333 15:13 - 01:33 10:20 +2 m. 36°	3 34 - 332 15:13 - 01:34 10:22 +2 m. 36°	4 35 - 331 15:12 - 01:35 10:24 +2 m. 37°	5 36 - 330 15:11 - 01:37 10:26 +2 m. 37°

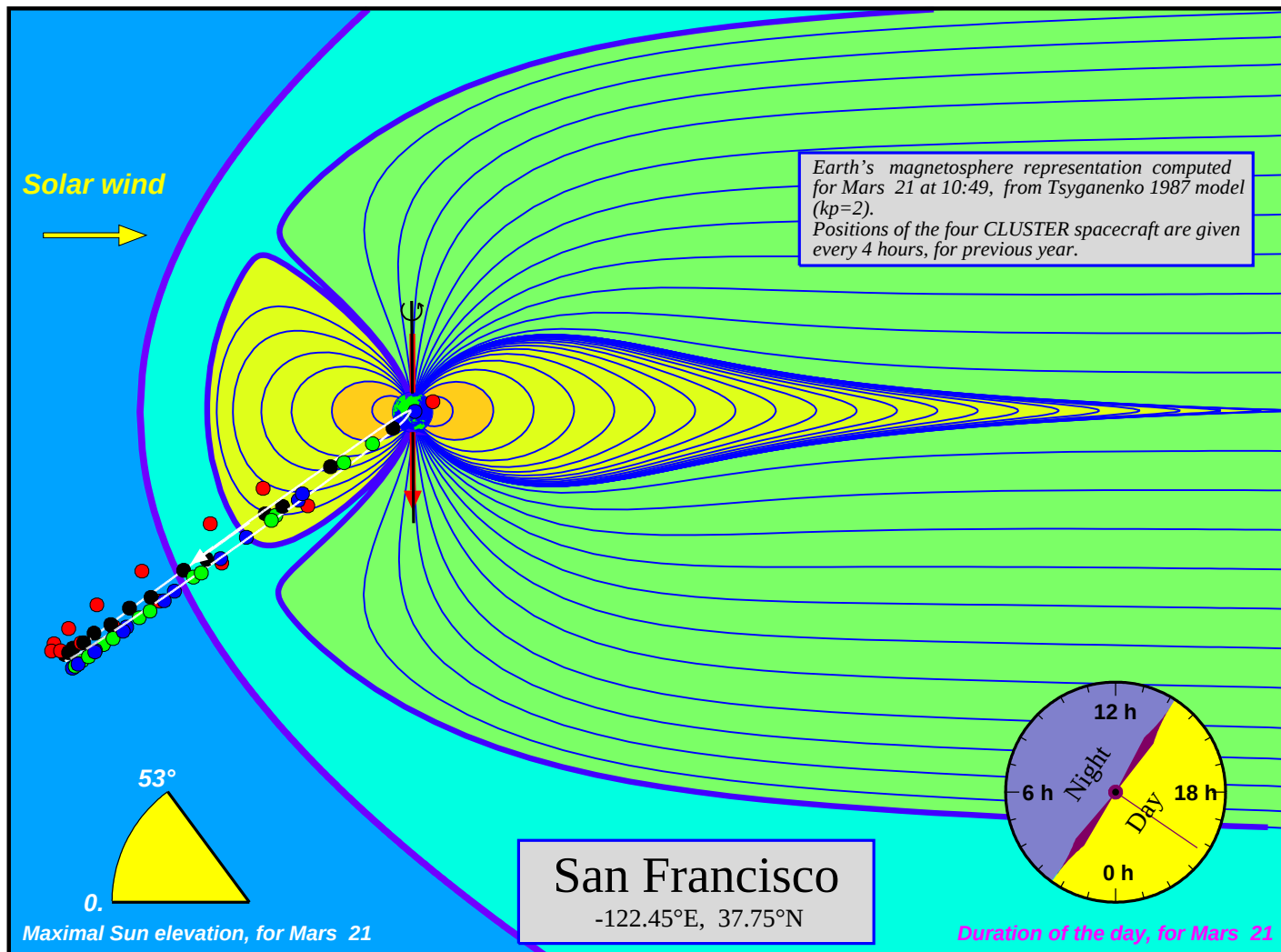


February 2012

Sunrise and Sunset at San Francisco (TU ± 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5	30 30 - 336 15:16 - 01:30 10:14 +2 m. 35°	31 31 - 335 15:15 - 01:31 10:16 +2 m. 35°	1 32 - 334 15:14 - 01:32 10:18 +2 m. 36°	2 33 - 333 15:13 - 01:33 10:20 +2 m. 36°	3 34 - 332 15:13 - 01:34 10:22 +2 m. 36°	4 35 - 331 15:12 - 01:35 10:24 +2 m. 37°	5 36 - 330 15:11 - 01:37 10:26 +2 m. 37°
6	6 37 - 329 15:10 - 01:38 10:28 +2 m. 37°	7 38 - 328 15:09 - 01:39 10:30 +2 m. 38°	8 39 - 327 15:08 - 01:40 10:32 +2 m. 38°	9 40 - 326 15:07 - 01:41 10:34 +2 m. 38°	10 41 - 325 15:06 - 01:42 10:37 +3 m. 38°	11 42 - 324 15:05 - 01:43 10:39 +2 m. 39°	12 43 - 323 15:03 - 01:44 10:41 +2 m. 39°
7	13 44 - 322 15:02 - 01:45 10:43 +2 m. 39°	14 45 - 321 15:01 - 01:46 10:45 +2 m. 40°	15 46 - 320 15:00 - 01:48 10:48 +3 m. 40°	16 47 - 319 14:59 - 01:49 10:50 +2 m. 41°	17 48 - 318 14:58 - 01:50 10:52 +2 m. 41°	18 49 - 317 14:56 - 01:51 10:54 +2 m. 41°	19 50 - 316 14:55 - 01:52 10:57 +3 m. 42°
8	20 51 - 315 14:54 - 01:53 10:59 +2 m. 42°	21 52 - 314 14:53 - 01:54 11:01 +2 m. 42°	22 53 - 313 14:51 - 01:55 11:04 +3 m. 43°	23 54 - 312 14:50 - 01:56 11:06 +2 m. 43°	24 55 - 311 14:49 - 01:57 11:08 +2 m. 43°	25 56 - 310 14:47 - 01:58 11:11 +3 m. 44°	26 57 - 309 14:46 - 01:59 11:13 +2 m. 44°
9	27 58 - 308 14:45 - 02:00 11:16 +3 m. 44°	28 59 - 307 14:43 - 02:01 11:18 +2 m. 45°	29 60 - 306 14:42 - 02:02 11:20 +2 m. 45°	1 61 - 305 14:41 - 02:03 11:23 +3 m. 46°	2 62 - 304 14:39 - 02:04 11:25 +2 m. 46°	3 63 - 303 14:38 - 02:05 11:28 +3 m. 46°	4 64 - 302 14:36 - 02:06 11:30 +2 m. 47°

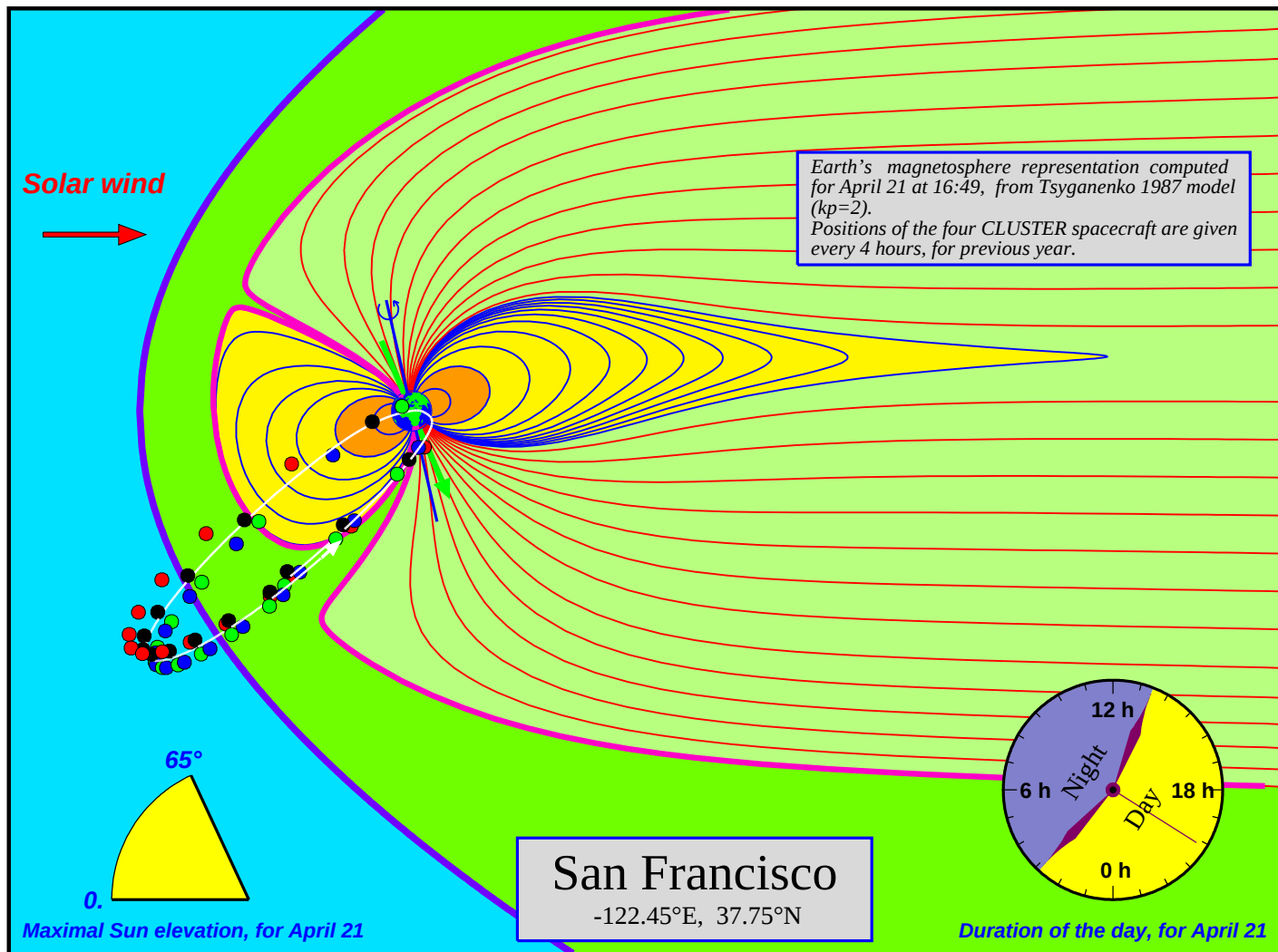


Mars 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

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

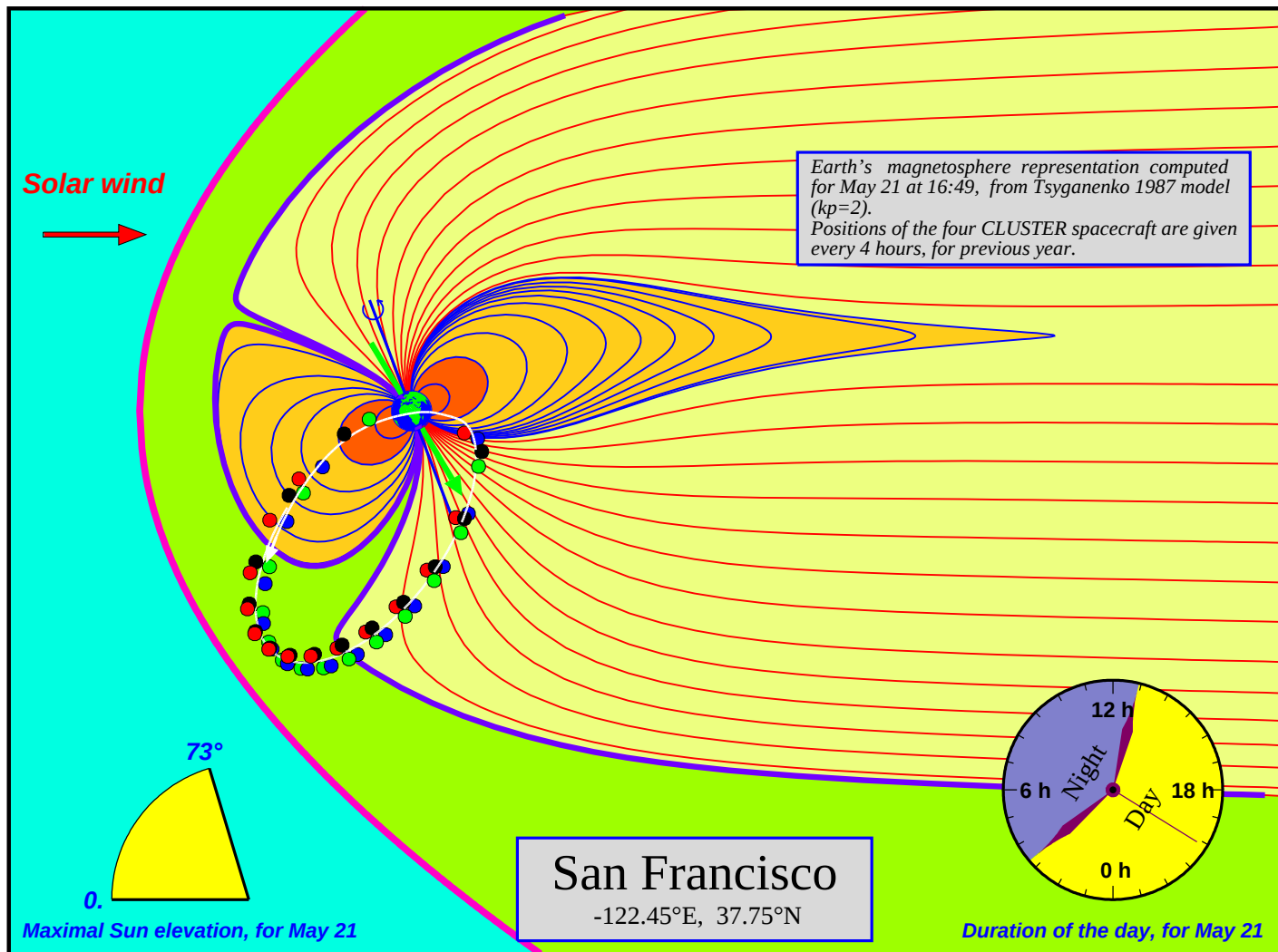


April 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
13	26 86 - 280 14:03 - 02:27 12:24 +3 m. 55°	27 87 - 279 14:02 - 02:28 12:26 +2 m. 56°	28 88 - 278 14:00 - 02:29 12:29 +3 m. 56°	29 89 - 277 13:59 - 02:30 12:31 +2 m. 57°	30 90 - 276 13:57 - 02:31 12:33 +2 m. 57°	31 91 - 275 13:56 - 02:32 12:36 +3 m. 57°	1 92 - 274 13:54 - 02:33 12:38 +2 m. 58°
14	2 93 - 273 13:53 - 02:33 12:41 +3 m. 58°	3 94 - 272 13:51 - 02:34 12:43 +2 m. 59°	4 95 - 271 13:50 - 02:35 12:45 +2 m. 59°	5 96 - 270 13:48 - 02:36 12:48 +3 m. 59°	6 97 - 269 13:47 - 02:37 12:50 +2 m. 60°	7 98 - 268 13:46 - 02:38 12:52 +2 m. 60°	8 99 - 267 13:44 - 02:39 12:55 +3 m. 60°
15	9 100 - 266 13:43 - 02:40 12:57 +2 m. 61°	10 101 - 265 13:41 - 02:41 13:00 +3 m. 61°	11 102 - 264 13:40 - 02:42 13:02 +2 m. 62°	12 103 - 263 13:38 - 02:43 13:04 +2 m. 62°	13 104 - 262 13:37 - 02:43 13:07 +3 m. 62°	14 105 - 261 13:35 - 02:44 13:09 +2 m. 63°	15 106 - 260 13:34 - 02:45 13:11 +2 m. 63°
16	16 107 - 259 13:33 - 02:46 13:14 +3 m. 63°	17 108 - 258 13:31 - 02:47 13:16 +2 m. 64°	18 109 - 257 13:30 - 02:48 13:18 +2 m. 64°	19 110 - 256 13:29 - 02:49 13:20 +2 m. 64°	20 111 - 255 13:27 - 02:50 13:23 +3 m. 65°	21 112 - 254 13:26 - 02:51 13:25 +2 m. 65°	22 113 - 253 13:25 - 02:52 13:27 +2 m. 65°
17	23 114 - 252 13:23 - 02:53 13:29 +2 m. 66°	24 115 - 251 13:22 - 02:54 13:32 +3 m. 66°	25 116 - 250 13:21 - 02:54 13:34 +2 m. 66°	26 117 - 249 13:20 - 02:55 13:36 +2 m. 67°	27 118 - 248 13:18 - 02:56 13:38 +2 m. 67°	28 119 - 247 13:17 - 02:57 13:40 +2 m. 67°	29 120 - 246 13:16 - 02:58 13:42 +2 m. 68°
18	30 121 - 245 13:15 - 02:59 13:44 +2 m. 68°	1 122 - 244 13:14 - 03:00 13:47 +3 m. 68°	2 123 - 243 13:12 - 03:01 13:49 +2 m. 69°	3 124 - 242 13:11 - 03:02 13:51 +2 m. 69°	4 125 - 241 13:10 - 03:03 13:53 +2 m. 69°	5 126 - 240 13:09 - 03:04 13:55 +2 m. 69°	6 127 - 239 13:08 - 03:05 13:57 +2 m. 70°

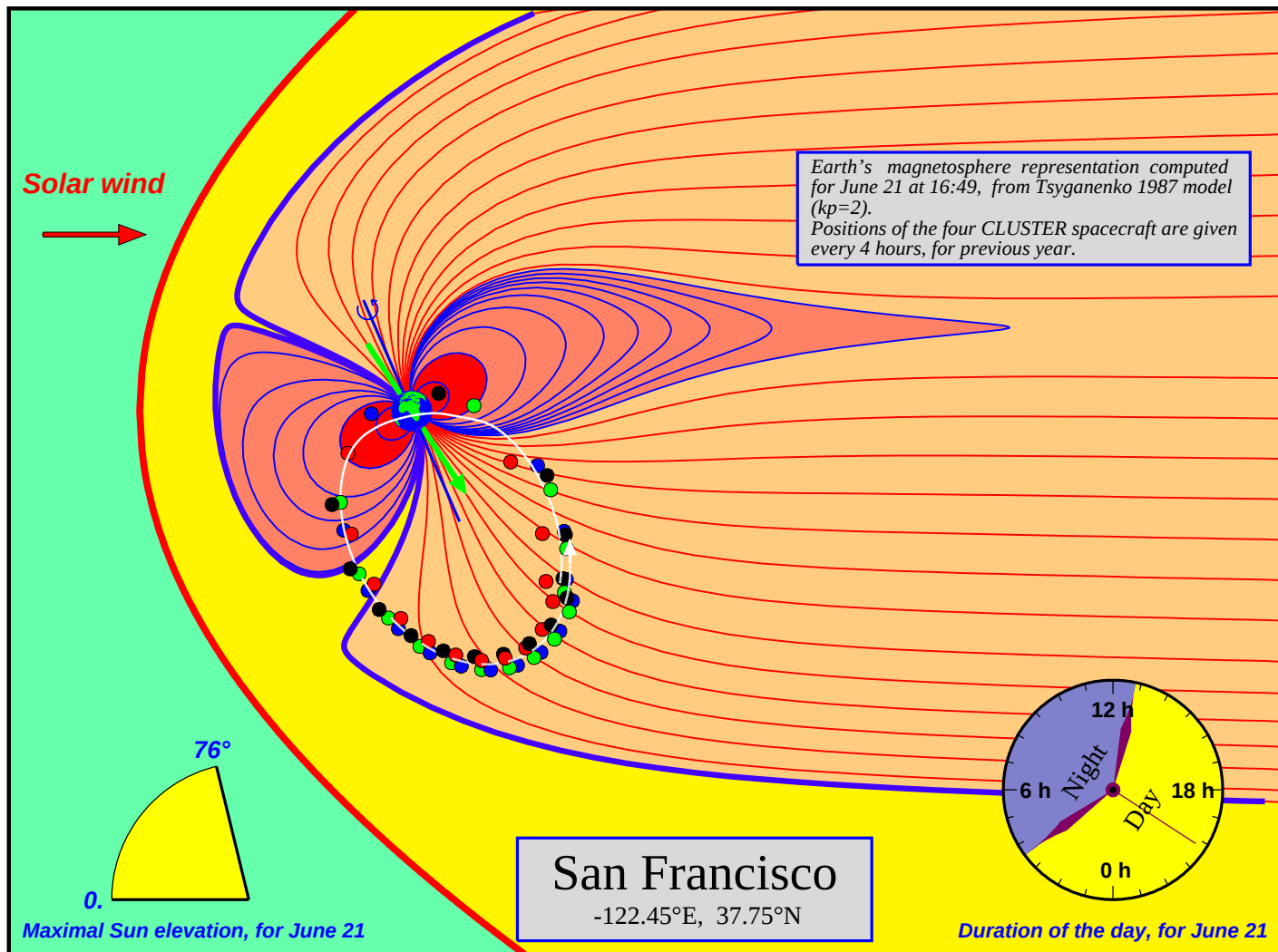


May 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
18	30 121 - 245 13:15 - 02:59 13:44 +2 m. 68°	1 122 - 244 13:14 - 03:00 13:47 +3 m. 68°	2 123 - 243 13:12 - 03:01 13:49 +2 m. 69°	3 124 - 242 13:11 - 03:02 13:51 +2 m. 69°	4 125 - 241 13:10 - 03:03 13:53 +2 m. 69°	5 126 - 240 13:09 - 03:04 13:55 +2 m. 69°	6 127 - 239 13:08 - 03:05 13:57 +2 m. 70°
19	7 128 - 238 13:07 - 03:05 13:58 +1 m. 70°	8 129 - 237 13:06 - 03:06 14:00 +2 m. 70°	9 130 - 236 13:05 - 03:07 14:02 +2 m. 70°	10 131 - 235 13:04 - 03:08 14:04 +2 m. 71°	11 132 - 234 13:03 - 03:09 14:06 +2 m. 71°	12 133 - 233 13:02 - 03:10 14:08 +2 m. 71°	13 134 - 232 13:01 - 03:11 14:10 +2 m. 71°
20	14 135 - 231 13:01 - 03:12 14:11 +1 m. 72°	15 136 - 230 13:00 - 03:13 14:13 +2 m. 72°	16 137 - 229 12:59 - 03:13 14:15 +2 m. 72°	17 138 - 228 12:58 - 03:14 14:16 +1 m. 72°	18 139 - 227 12:57 - 03:15 14:18 +2 m. 73°	19 140 - 226 12:57 - 03:16 14:19 +1 m. 73°	20 141 - 225 12:56 - 03:17 14:21 +2 m. 73°
21	21 142 - 224 12:55 - 03:18 14:22 +1 m. 73°	22 143 - 223 12:55 - 03:18 14:24 +2 m. 73°	23 144 - 222 12:54 - 03:19 14:25 +1 m. 74°	24 145 - 221 12:53 - 03:20 14:27 +2 m. 74°	25 146 - 220 12:53 - 03:21 14:28 +1 m. 74°	26 147 - 219 12:52 - 03:22 14:29 +1 m. 74°	27 148 - 218 12:52 - 03:22 14:31 +2 m. 74°
22	28 149 - 217 12:51 - 03:23 14:32 +1 m. 74°	29 150 - 216 12:51 - 03:24 14:33 +1 m. 75°	30 151 - 215 12:50 - 03:25 14:34 +1 m. 75°	31 152 - 214 12:50 - 03:25 14:35 +1 m. 75°	1 153 - 213 12:50 - 03:26 14:36 +1 m. 75°	2 154 - 212 12:49 - 03:27 14:37 +1 m. 75°	3 155 - 211 12:49 - 03:27 14:38 +1 m. 75°

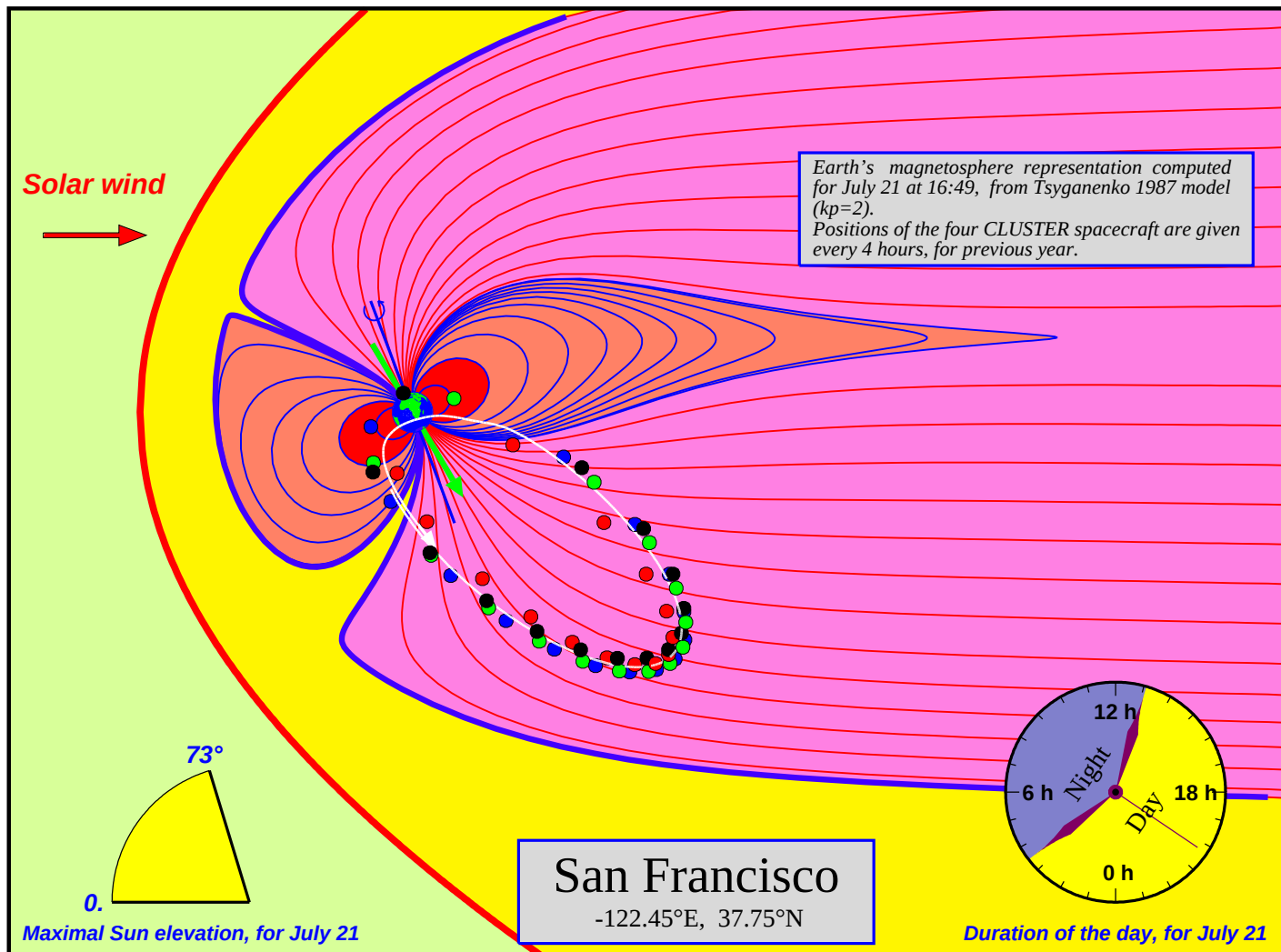


June 2012

Sunrise and Sunset at San Francisco (TU ± 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
22	28 149 - 217 12:51 - 03:23 14:32 +1 m. 74°	29 150 - 216 12:51 - 03:24 14:33 +1 m. 75°	30 151 - 215 12:50 - 03:25 14:34 +1 m. 75°	31 152 - 214 12:50 - 03:25 14:35 +1 m. 75°	1 153 - 213 12:50 - 03:26 14:36 +1 m. 75°	2 154 - 212 12:49 - 03:27 14:37 +1 m. 75°	3 155 - 211 12:49 - 03:27 14:38 +1 m. 75°
23	4 156 - 210 12:49 - 03:28 14:39 +1 m. 75°	5 157 - 209 12:48 - 03:28 14:40 +1 m. 75°	6 158 - 208 12:48 - 03:29 14:41 +1 m. 76°	7 159 - 207 12:48 - 03:30 14:42 +1 m. 76°	8 160 - 206 12:48 - 03:30 14:42 +0 m. 76°	9 161 - 205 12:48 - 03:31 14:43 +1 m. 76°	10 162 - 204 12:48 - 03:31 14:44 +1 m. 76°
24	11 163 - 203 12:48 - 03:32 14:44 +0 m. 76°	12 164 - 202 12:48 - 03:32 14:45 +1 m. 76°	13 165 - 201 12:48 - 03:33 14:45 +0 m. 76°	14 166 - 200 12:48 - 03:33 14:45 +0 m. 76°	15 167 - 199 12:48 - 03:33 14:46 +1 m. 76°	16 168 - 198 12:48 - 03:34 14:46 +0 m. 76°	17 169 - 197 12:48 - 03:34 14:46 +0 m. 76°
25	18 170 - 196 12:48 - 03:34 14:47 +1 m. 76°	19 171 - 195 12:48 - 03:35 14:47 +0 m. 76°	20 172 - 194 12:48 - 03:35 14:47 +0 m. 76°	21 173 - 193 12:49 - 03:35 14:47 +0 m. 76°	22 174 - 192 12:49 - 03:35 14:47 +0 m. 76°	23 175 - 191 12:49 - 03:35 14:46 -1 m. 76°	24 176 - 190 12:49 - 03:36 14:46 +0 m. 76°
26	25 177 - 189 12:50 - 03:36 14:46 +0 m. 76°	26 178 - 188 12:50 - 03:36 14:46 +0 m. 76°	27 179 - 187 12:50 - 03:36 14:46 +0 m. 76°	28 180 - 186 12:51 - 03:36 14:45 -1 m. 76°	29 181 - 185 12:51 - 03:36 14:45 +0 m. 76°	30 182 - 184 12:52 - 03:36 14:44 -1 m. 76°	1 183 - 183 12:52 - 03:36 14:44 +0 m. 76°

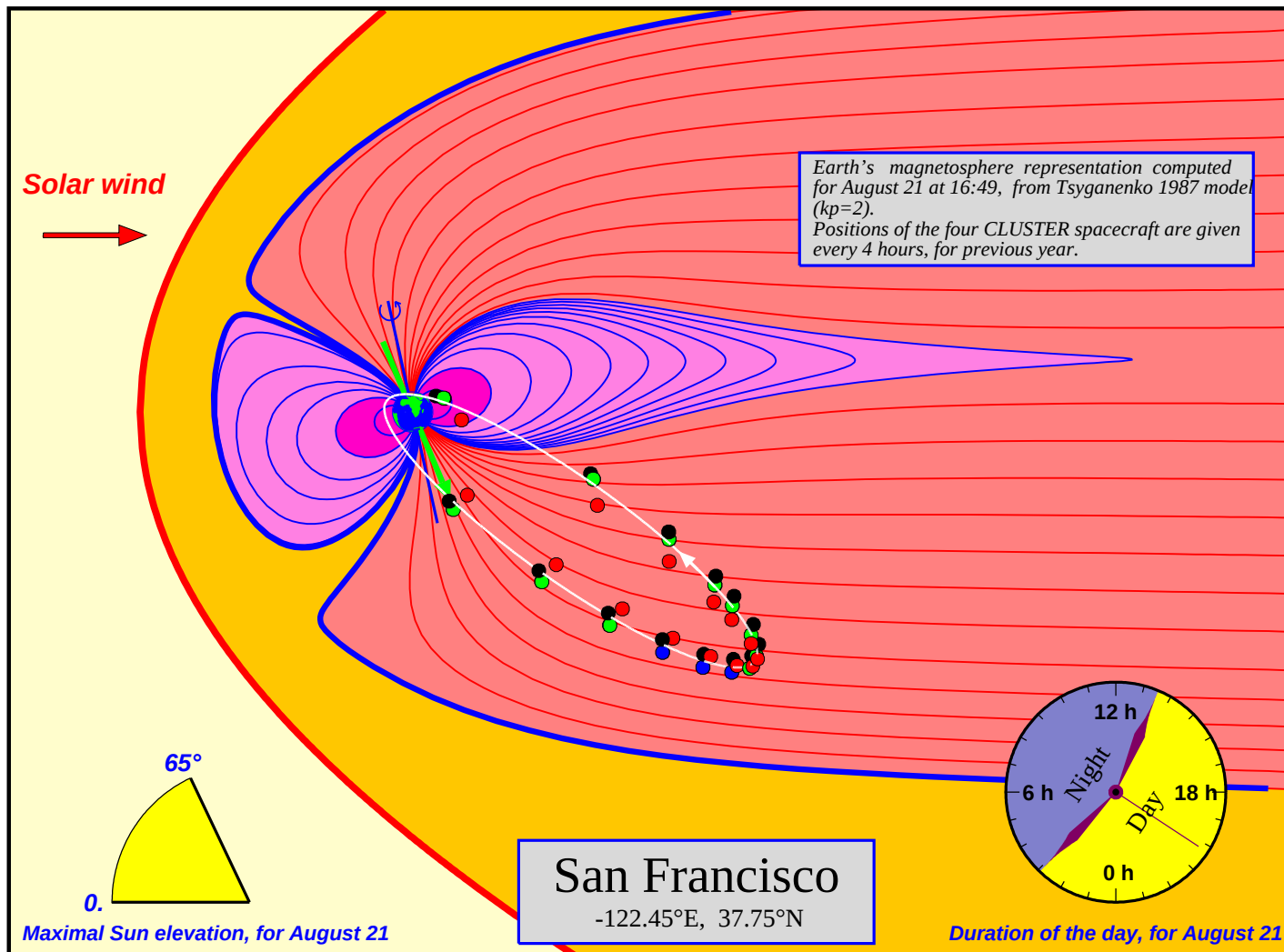


July 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26	25 177 - 189 12:50 - 03:36 14:46 +0 m. 76°	26 178 - 188 12:50 - 03:36 14:46 +0 m. 76°	27 179 - 187 12:50 - 03:36 14:46 +0 m. 76°	28 180 - 186 12:51 - 03:36 14:45 -1 m. 76°	29 181 - 185 12:51 - 03:36 14:45 +0 m. 76°	30 182 - 184 12:52 - 03:36 14:44 -1 m. 76°	1 183 - 183 12:52 - 03:36 14:44 +0 m. 76°
27	2 184 - 182 12:53 - 03:36 14:43 -1 m. 76°	3 185 - 181 12:53 - 03:36 14:43 +0 m. 76°	4 186 - 180 12:54 - 03:35 14:42 -1 m. 76°	5 187 - 179 12:54 - 03:35 14:41 -1 m. 76°	6 188 - 178 12:55 - 03:35 14:40 -1 m. 75°	7 189 - 177 12:55 - 03:35 14:40 +0 m. 75°	8 190 - 176 12:56 - 03:34 14:39 -1 m. 75°
28	9 191 - 175 12:57 - 03:34 14:38 -1 m. 75°	10 192 - 174 12:57 - 03:34 14:37 -1 m. 75°	11 193 - 173 12:58 - 03:33 14:36 -1 m. 75°	12 194 - 172 12:58 - 03:33 14:35 -1 m. 75°	13 195 - 171 12:59 - 03:33 14:34 -1 m. 74°	14 196 - 170 13:00 - 03:32 14:32 -2 m. 74°	15 197 - 169 13:01 - 03:32 14:31 -1 m. 74°
29	16 198 - 168 13:01 - 03:31 14:30 -1 m. 74°	17 199 - 167 13:02 - 03:31 14:29 -1 m. 74°	18 200 - 166 13:03 - 03:30 14:27 -2 m. 74°	19 201 - 165 13:04 - 03:29 14:26 -1 m. 73°	20 202 - 164 13:04 - 03:29 14:25 -1 m. 73°	21 203 - 163 13:05 - 03:28 14:23 -2 m. 73°	22 204 - 162 13:06 - 03:27 14:22 -1 m. 73°
30	23 205 - 161 13:07 - 03:27 14:20 -2 m. 73°	24 206 - 160 13:07 - 03:26 14:19 -1 m. 72°	25 207 - 159 13:08 - 03:25 14:17 -2 m. 72°	26 208 - 158 13:09 - 03:24 14:15 -2 m. 72°	27 209 - 157 13:10 - 03:23 14:14 -1 m. 72°	28 210 - 156 13:11 - 03:23 14:12 -2 m. 72°	29 211 - 155 13:12 - 03:22 14:10 -2 m. 71°
31	30 212 - 154 13:12 - 03:21 14:08 -2 m. 71°	31 213 - 153 13:13 - 03:20 14:07 -1 m. 71°	1 214 - 152 13:14 - 03:19 14:05 -2 m. 71°	2 215 - 151 13:15 - 03:18 14:03 -2 m. 70°	3 216 - 150 13:16 - 03:17 14:01 -2 m. 70°	4 217 - 149 13:17 - 03:16 13:59 -2 m. 70°	5 218 - 148 13:17 - 03:15 13:58 -1 m. 70°

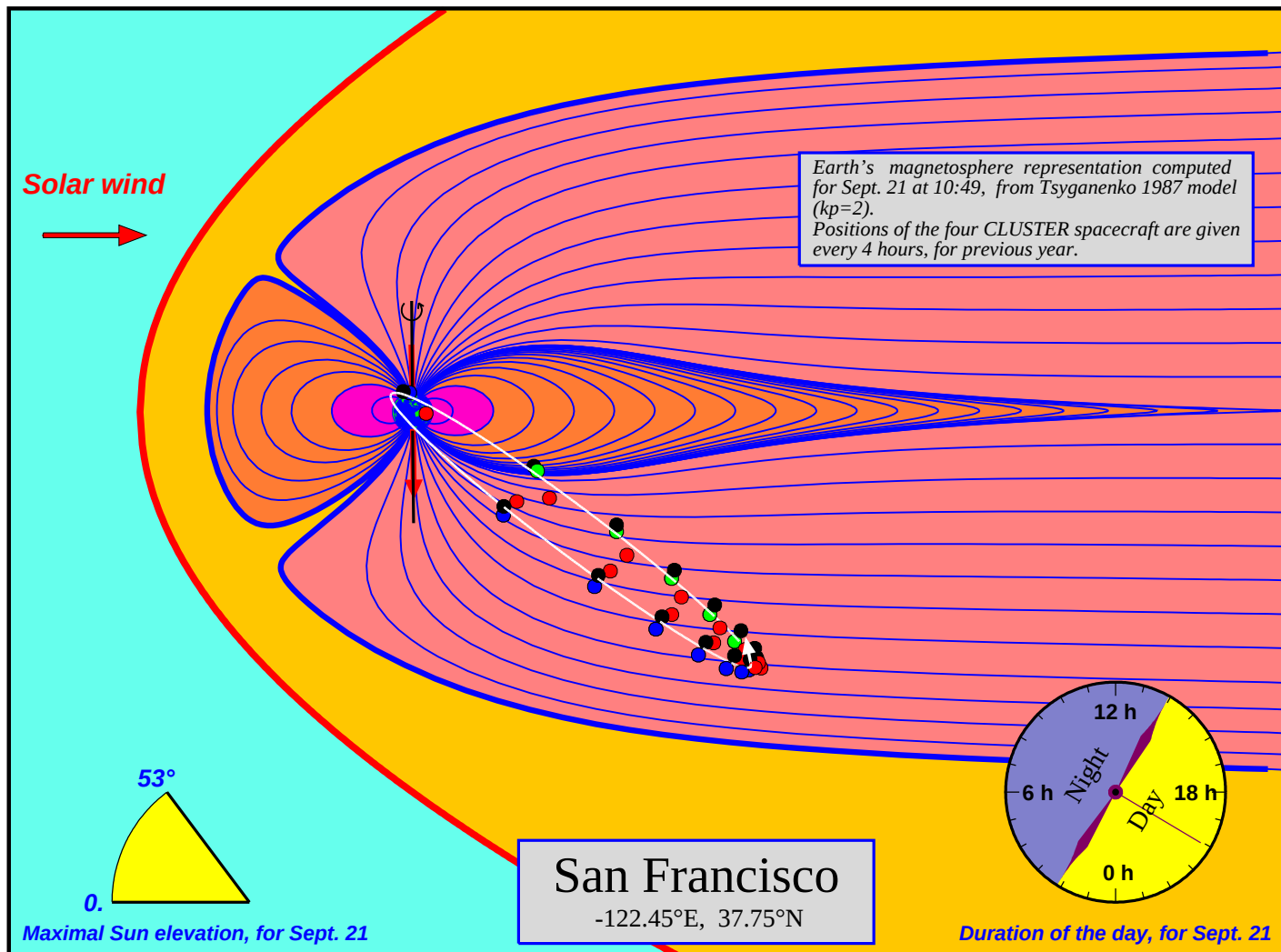


August 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
31	30 212 - 154 13:12 - 03:21 14:08 -2 m. 71°	31 213 - 153 13:13 - 03:20 14:07 -1 m. 71°	1 214 - 152 13:14 - 03:19 14:05 -2 m. 71°	2 215 - 151 13:15 - 03:18 14:03 -2 m. 70°	3 216 - 150 13:16 - 03:17 14:01 -2 m. 70°	4 217 - 149 13:17 - 03:16 13:59 -2 m. 70°	5 218 - 148 13:17 - 03:15 13:58 -1 m. 70°
32	6 219 - 147 13:18 - 03:14 13:56 -2 m. 69°	7 220 - 146 13:19 - 03:13 13:54 -2 m. 69°	8 221 - 145 13:20 - 03:12 13:52 -2 m. 69°	9 222 - 144 13:21 - 03:10 13:50 -2 m. 68°	10 223 - 143 13:22 - 03:09 13:48 -2 m. 68°	11 224 - 142 13:23 - 03:08 13:46 -2 m. 68°	12 225 - 141 13:23 - 03:07 13:44 -2 m. 67°
33	13 226 - 140 13:24 - 03:06 13:42 -2 m. 67°	14 227 - 139 13:25 - 03:04 13:39 -3 m. 67°	15 228 - 138 13:26 - 03:03 13:37 -2 m. 67°	16 229 - 137 13:27 - 03:02 13:35 -2 m. 66°	17 230 - 136 13:28 - 03:01 13:33 -2 m. 66°	18 231 - 135 13:29 - 02:59 13:31 -2 m. 66°	19 232 - 134 13:29 - 02:58 13:29 -2 m. 65°
34	20 233 - 133 13:30 - 02:57 13:27 -2 m. 65°	21 234 - 132 13:31 - 02:55 13:24 -3 m. 65°	22 235 - 131 13:32 - 02:54 13:22 -2 m. 64°	23 236 - 130 13:33 - 02:53 13:20 -2 m. 64°	24 237 - 129 13:34 - 02:51 13:18 -2 m. 64°	25 238 - 128 13:35 - 02:50 13:15 -3 m. 63°	26 239 - 127 13:35 - 02:48 13:13 -2 m. 63°
35	27 240 - 126 13:36 - 02:47 13:11 -2 m. 63°	28 241 - 125 13:37 - 02:46 13:09 -2 m. 62°	29 242 - 124 13:38 - 02:44 13:06 -3 m. 62°	30 243 - 123 13:39 - 02:43 13:04 -2 m. 61°	31 244 - 122 13:40 - 02:41 13:02 -2 m. 61°	1 245 - 121 13:41 - 02:40 12:59 -3 m. 61°	2 246 - 120 13:41 - 02:38 12:57 -2 m. 60°

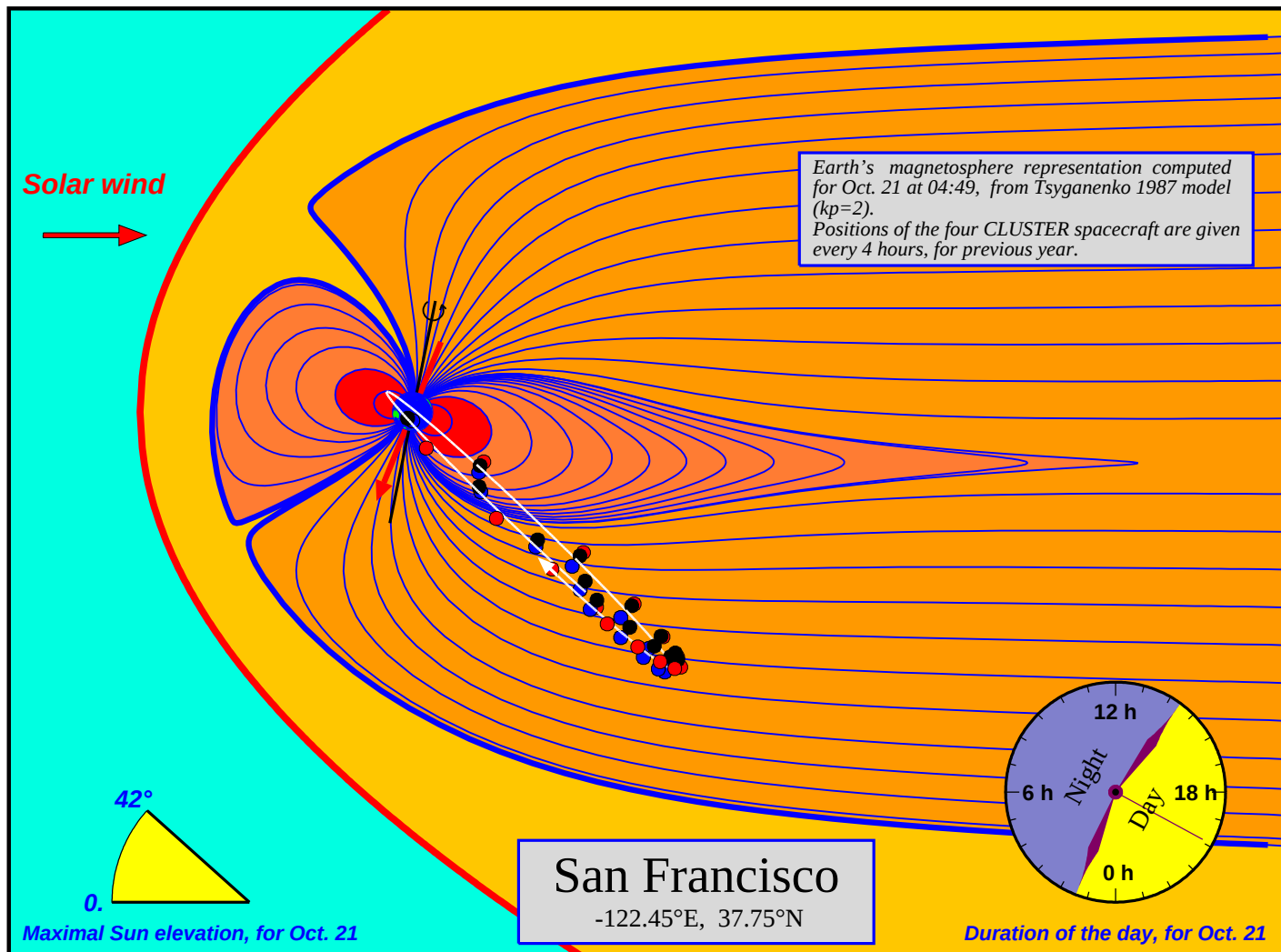


September 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
35	27 240 - 126 13:36 - 02:47 13:11 -2 m. 63°	28 241 - 125 13:37 - 02:46 13:09 -2 m. 62°	29 242 - 124 13:38 - 02:44 13:06 -3 m. 62°	30 243 - 123 13:39 - 02:43 13:04 -2 m. 61°	31 244 - 122 13:40 - 02:41 13:02 -2 m. 61°	1 245 - 121 13:41 - 02:40 12:59 -3 m. 61°	2 246 - 120 13:41 - 02:38 12:57 -2 m. 60°
36	3 247 - 119 13:42 - 02:37 12:55 -2 m. 60°	4 248 - 118 13:43 - 02:35 12:52 -3 m. 60°	5 249 - 117 13:44 - 02:34 12:50 -2 m. 59°	6 250 - 116 13:45 - 02:32 12:48 -2 m. 59°	7 251 - 115 13:46 - 02:31 12:45 -3 m. 59°	8 252 - 114 13:46 - 02:29 12:43 -2 m. 58°	9 253 - 113 13:47 - 02:28 12:41 -2 m. 58°
37	10 254 - 112 13:48 - 02:26 12:38 -3 m. 57°	11 255 - 111 13:49 - 02:25 12:36 -2 m. 57°	12 256 - 110 13:50 - 02:23 12:33 -3 m. 57°	13 257 - 109 13:51 - 02:22 12:31 -2 m. 56°	14 258 - 108 13:51 - 02:20 12:29 -2 m. 56°	15 259 - 107 13:52 - 02:18 12:26 -3 m. 55°	16 260 - 106 13:53 - 02:17 12:24 -2 m. 55°
38	17 261 - 105 13:54 - 02:15 12:21 -3 m. 55°	18 262 - 104 13:55 - 02:14 12:19 -2 m. 54°	19 263 - 103 13:56 - 02:12 12:17 -2 m. 54°	20 264 - 102 13:57 - 02:11 12:14 -3 m. 54°	21 265 - 101 13:57 - 02:09 12:12 -2 m. 53°	22 266 - 100 13:58 - 02:08 12:09 -3 m. 53°	23 267 - 99 13:59 - 02:06 12:07 -2 m. 52°
39	24 268 - 98 14:00 - 02:04 12:05 -2 m. 52°	25 269 - 97 14:01 - 02:03 12:02 -3 m. 52°	26 270 - 96 14:02 - 02:01 12:00 -2 m. 51°	27 271 - 95 14:03 - 02:00 11:57 -3 m. 51°	28 272 - 94 14:03 - 01:58 11:55 -2 m. 50°	29 273 - 93 14:04 - 01:57 11:53 -2 m. 50°	30 274 - 92 14:05 - 01:55 11:50 -3 m. 50°

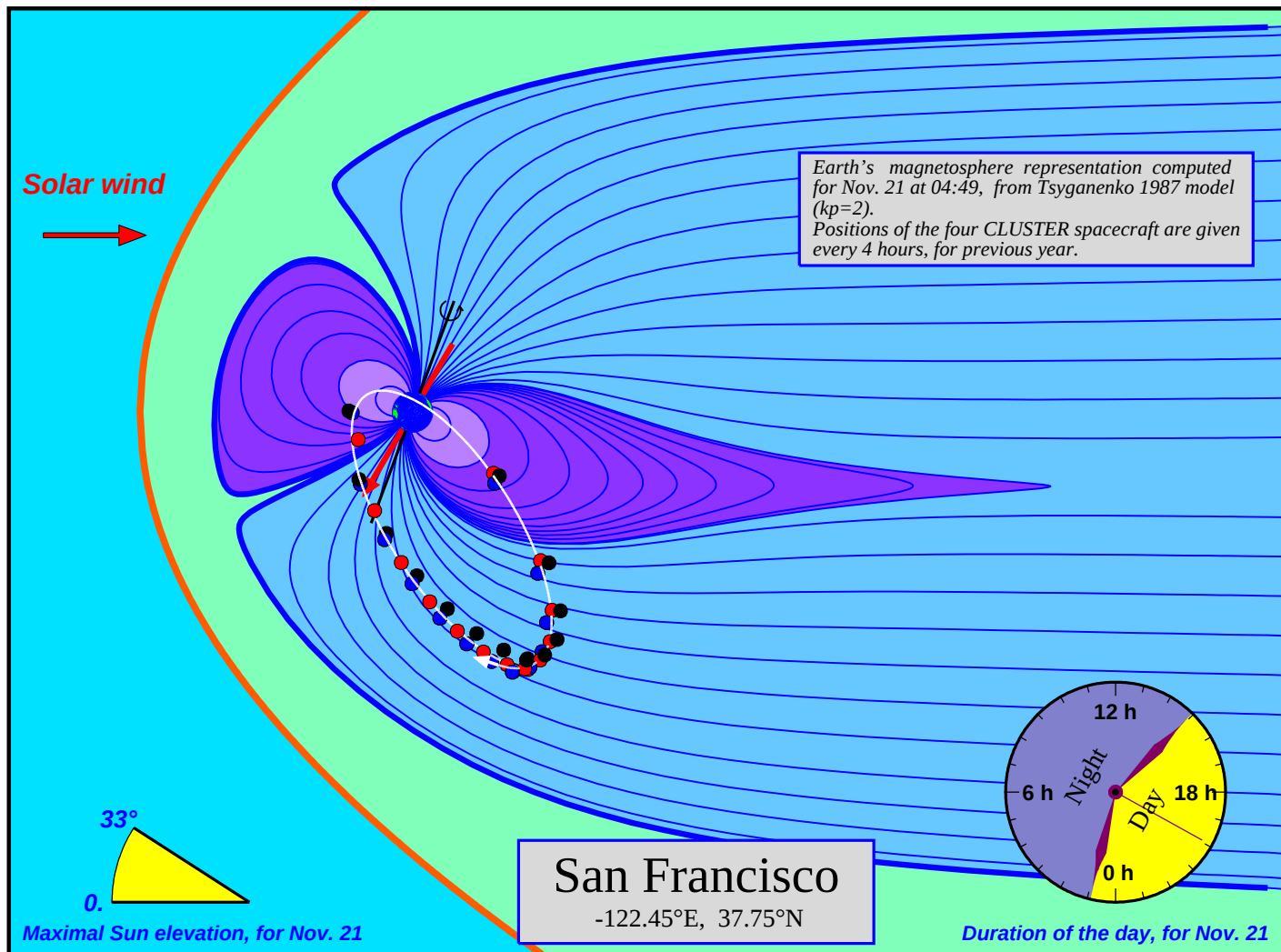


October 2012

Sunrise and Sunset at San Francisco (TU $\pm$ 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

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

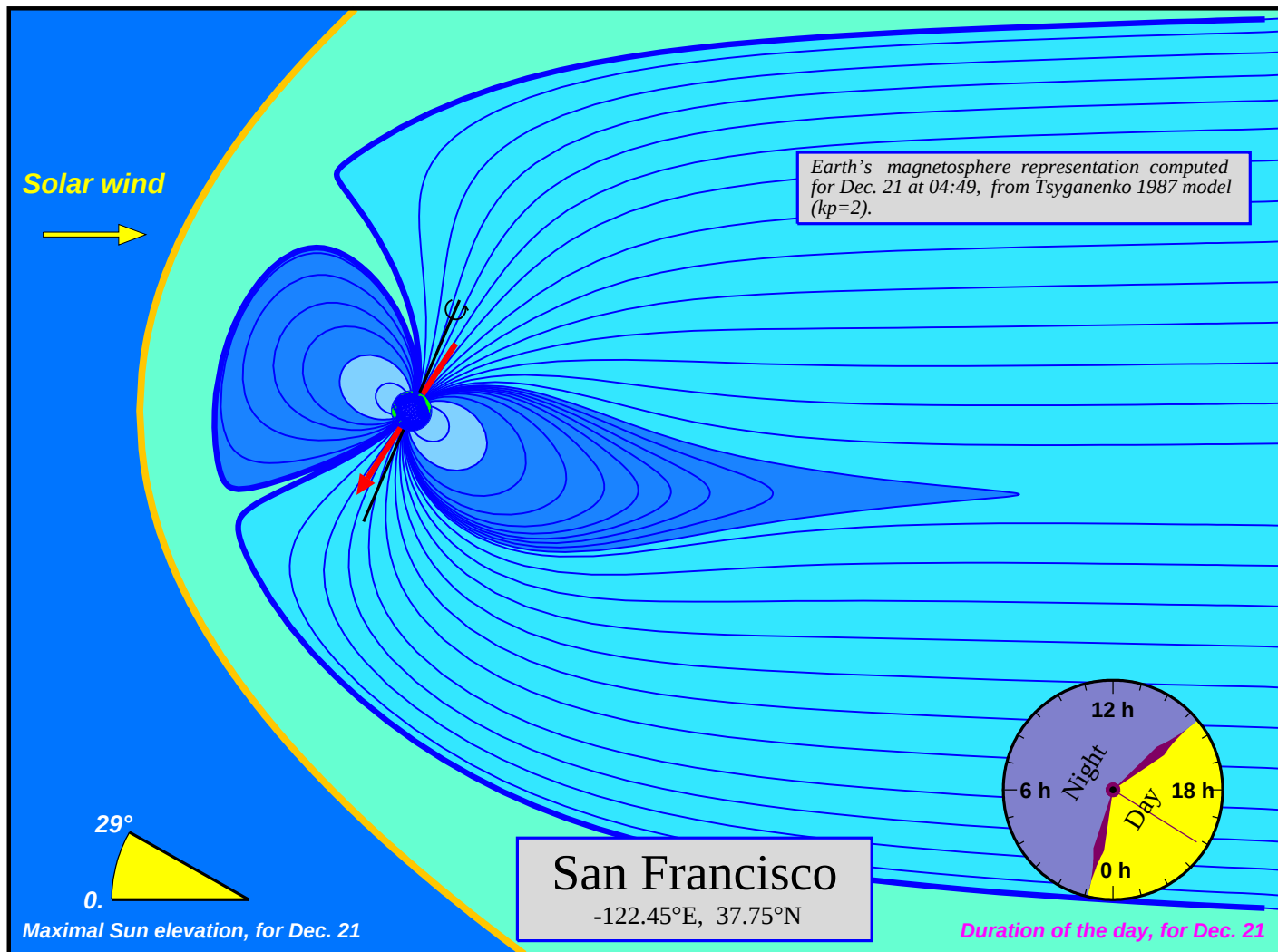


November 2012

Sunrise and Sunset at San Francisco (TU ± 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
44	29 303 - 63 14:33 - 01:15 10:42 -3 m. 39°	30 304 - 62 14:34 - 01:14 10:40 -2 m. 39°	31 305 - 61 14:35 - 01:13 10:38 -2 m. 38°	1 306 - 60 14:36 - 01:12 10:36 -2 m. 38°	2 307 - 59 14:37 - 01:11 10:34 -2 m. 38°	3 308 - 58 14:38 - 01:10 10:32 -2 m. 37°	4 309 - 57 14:39 - 01:09 10:30 -2 m. 37°
45	5 310 - 56 14:40 - 01:08 10:28 -2 m. 37°	6 311 - 55 14:41 - 01:07 10:25 -3 m. 37°	7 312 - 54 14:42 - 01:06 10:23 -2 m. 36°	8 313 - 53 14:43 - 01:05 10:22 -1 m. 36°	9 314 - 52 14:44 - 01:04 10:19 -3 m. 36°	10 315 - 51 14:45 - 01:03 10:18 -1 m. 35°	11 316 - 50 14:47 - 01:02 10:16 -2 m. 35°
46	12 317 - 49 14:48 - 01:01 10:14 -2 m. 35°	13 318 - 48 14:49 - 01:00 10:12 -2 m. 35°	14 319 - 47 14:50 - 01:00 10:10 -2 m. 34°	15 320 - 46 14:51 - 00:59 10:08 -2 m. 34°	16 321 - 45 14:52 - 00:58 10:06 -2 m. 34°	17 322 - 44 14:53 - 00:58 10:05 -1 m. 34°	18 323 - 43 14:54 - 00:57 10:03 -2 m. 33°
47	19 324 - 42 14:55 - 00:56 10:01 -2 m. 33°	20 325 - 41 14:56 - 00:56 9:59 -2 m. 33°	21 326 - 40 14:57 - 00:55 9:58 -1 m. 33°	22 327 - 39 14:58 - 00:55 9:56 -2 m. 32°	23 328 - 38 14:59 - 00:54 9:54 -2 m. 32°	24 329 - 37 15:00 - 00:54 9:53 -1 m. 32°	25 330 - 36 15:01 - 00:53 9:52 -1 m. 32°
48	26 331 - 35 15:02 - 00:53 9:50 -2 m. 32°	27 332 - 34 15:03 - 00:53 9:49 -1 m. 32°	28 333 - 33 15:04 - 00:52 9:48 -1 m. 31°	29 334 - 32 15:05 - 00:52 9:46 -2 m. 31°	30 335 - 31 15:06 - 00:52 9:45 -1 m. 31°	1 336 - 30 15:07 - 00:51 9:44 -1 m. 31°	2 337 - 29 15:08 - 00:51 9:43 -1 m. 31°



December 2012

Sunrise and Sunset at San Francisco (TU ± 1 mn)

Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
48	26 331 - 35 15:02 - 00:53 9:50 -2 m. 32°	27 332 - 34 15:03 - 00:53 9:49 -1 m. 32°	28 333 - 33 15:04 - 00:52 9:48 -1 m. 31°	29 334 - 32 15:05 - 00:52 9:46 -2 m. 31°	30 335 - 31 15:06 - 00:52 9:45 -1 m. 31°	1 336 - 30 15:07 - 00:51 9:44 -1 m. 31°	2 337 - 29 15:08 - 00:51 9:43 -1 m. 31°
49	3 338 - 28 15:09 - 00:51 9:42 -1 m. 31°	4 339 - 27 15:10 - 00:51 9:41 -1 m. 30°	5 340 - 26 15:11 - 00:51 9:40 -1 m. 30°	6 341 - 25 15:12 - 00:51 9:39 -1 m. 30°	7 342 - 24 15:12 - 00:51 9:38 -1 m. 30°	8 343 - 23 15:13 - 00:51 9:37 -1 m. 30°	9 344 - 22 15:14 - 00:51 9:36 -1 m. 30°
50	10 345 - 21 15:15 - 00:51 9:36 +0 m. 30°	11 346 - 20 15:16 - 00:51 9:35 -1 m. 30°	12 347 - 19 15:16 - 00:51 9:35 +0 m. 30°	13 348 - 18 15:17 - 00:52 9:34 -1 m. 30°	14 349 - 17 15:18 - 00:52 9:34 +0 m. 30°	15 350 - 16 15:18 - 00:52 9:33 -1 m. 30°	16 351 - 15 15:19 - 00:52 9:33 +0 m. 29°
51	17 352 - 14 15:20 - 00:53 9:33 +0 m. 29°	18 353 - 13 15:20 - 00:53 9:32 -1 m. 29°	19 354 - 12 15:21 - 00:54 9:32 +0 m. 29°	20 355 - 11 15:21 - 00:54 9:32 +0 m. 29°	21 356 - 10 15:22 - 00:54 9:32 +0 m. 29°	22 357 - 9 15:22 - 00:55 9:32 +0 m. 29°	23 358 - 8 15:23 - 00:55 9:32 +0 m. 29°
52	24 359 - 7 15:23 - 00:56 9:32 +0 m. 29°	25 360 - 6 15:24 - 00:57 9:33 +1 m. 29°	26 361 - 5 15:24 - 00:57 9:33 +0 m. 30°	27 362 - 4 15:24 - 00:58 9:33 +0 m. 30°	28 363 - 3 15:25 - 00:59 9:34 +1 m. 30°	29 364 - 2 15:25 - 00:59 9:34 +0 m. 30°	30 365 - 1 15:25 - 01:00 9:34 +0 m. 30°
53	31 366 - 0 15:25 - 01:01 9:35 +1 m. 30°						

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

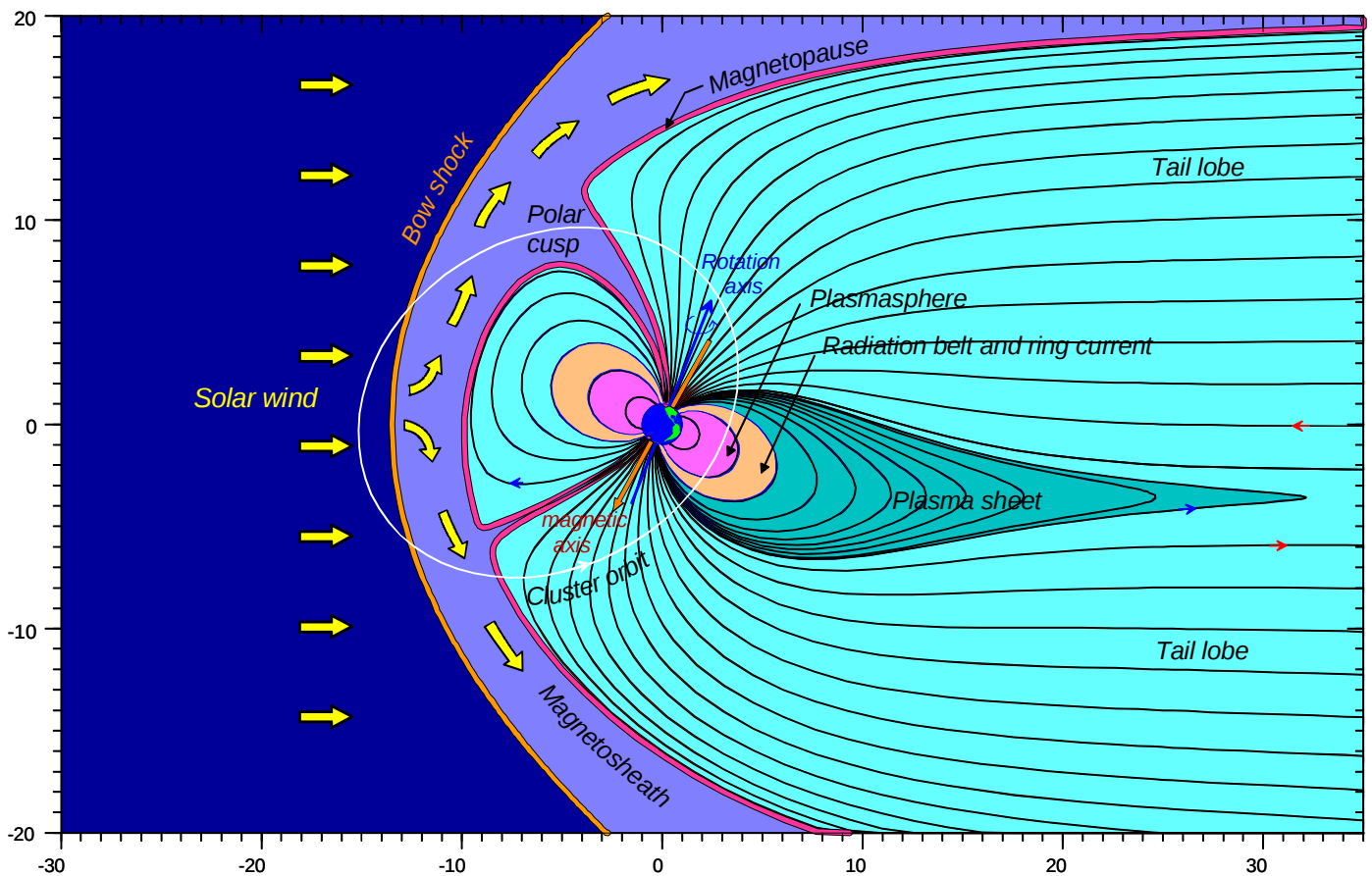


Illustration : Visualization of magnetic field lines of the Earth, showing the magnetosphere.

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 shock 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 developed 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. Sunrise, sunset and local noon time are now available for polar zones in the December 2011 version of this library.

Computations are done assuming a spherical Earth, and for a constant value of the indices of refraction of the air at the horizon. Computations have been checked with the ephemerid values delivered by the "Bureau Des Longitudes" in Paris. The accuracy is around one minute in time and a few minutes in angles. Sunrise and sunset are defined when the apparent upper edge of the sun reach the local horizon.

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

For any more information, contact Patrick.Robert@lpp.polytechnique.fr

Many calendar examples computed for various places in the world are available here : <http://www.lpp.fr/?Patrick-Robert>