

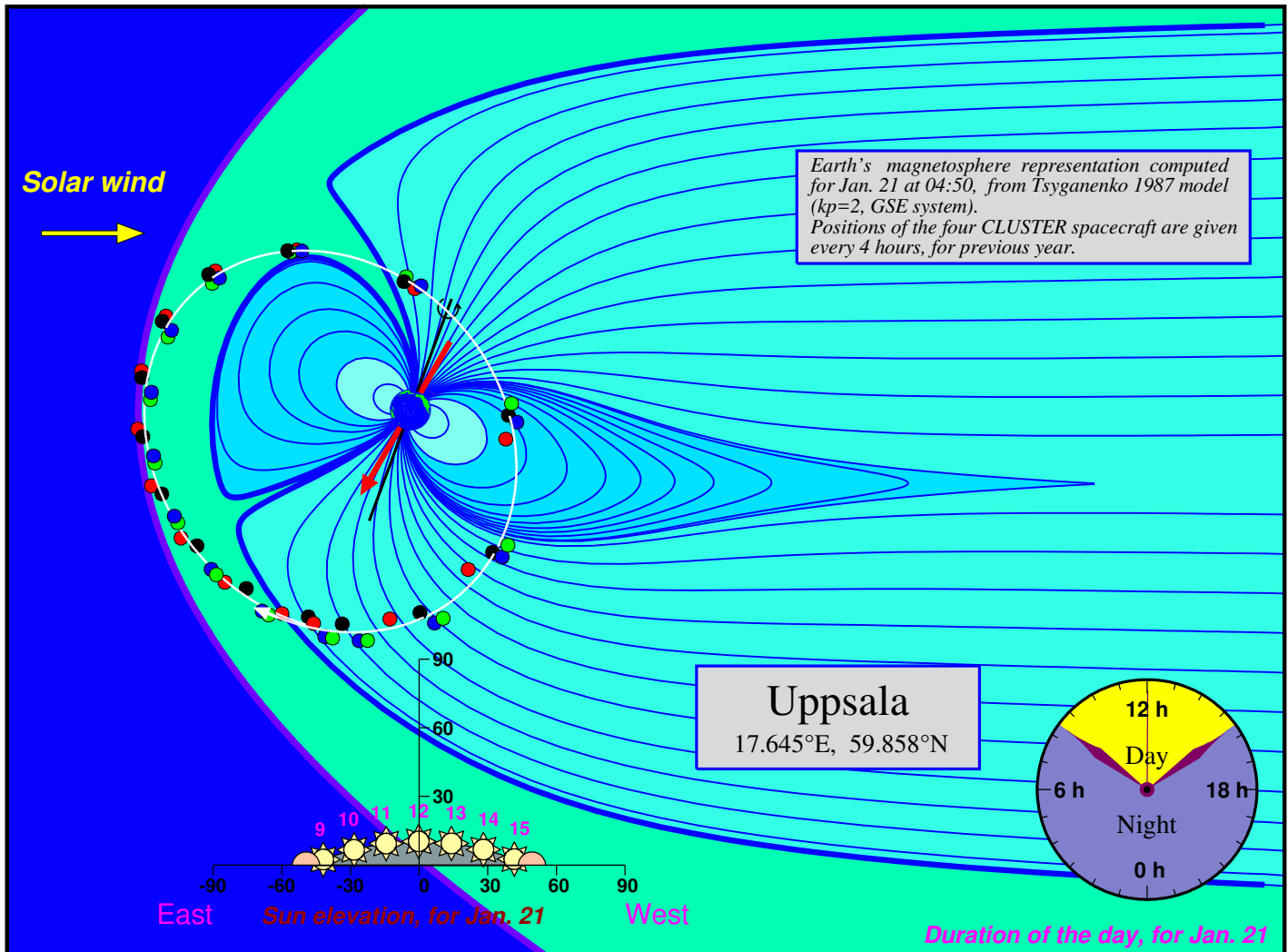


*Here is the classical magnetospheric calendar **2018**,
available for any city across the world,*

English or French version

Happy new year for everybody

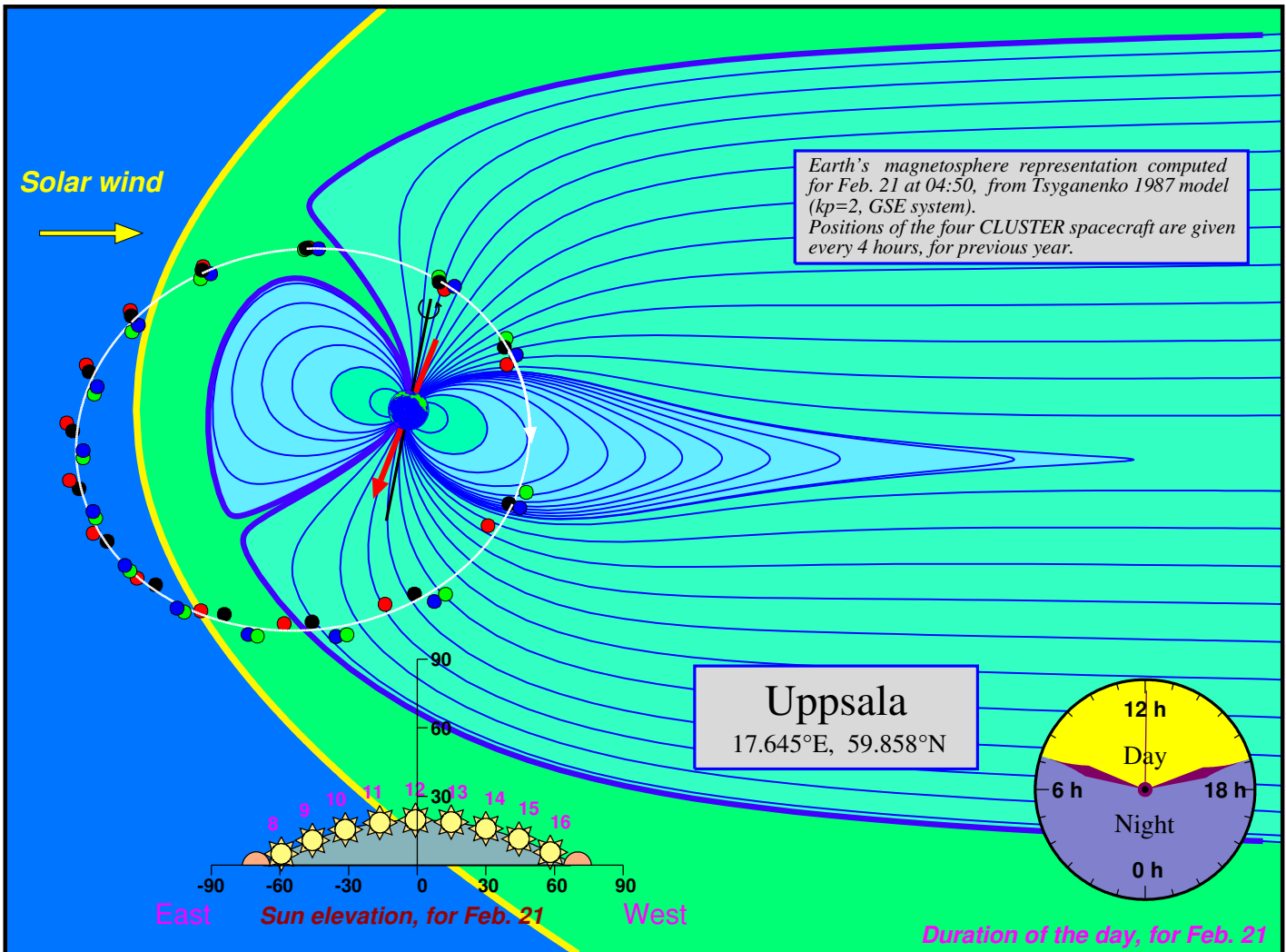
Patrick



January 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

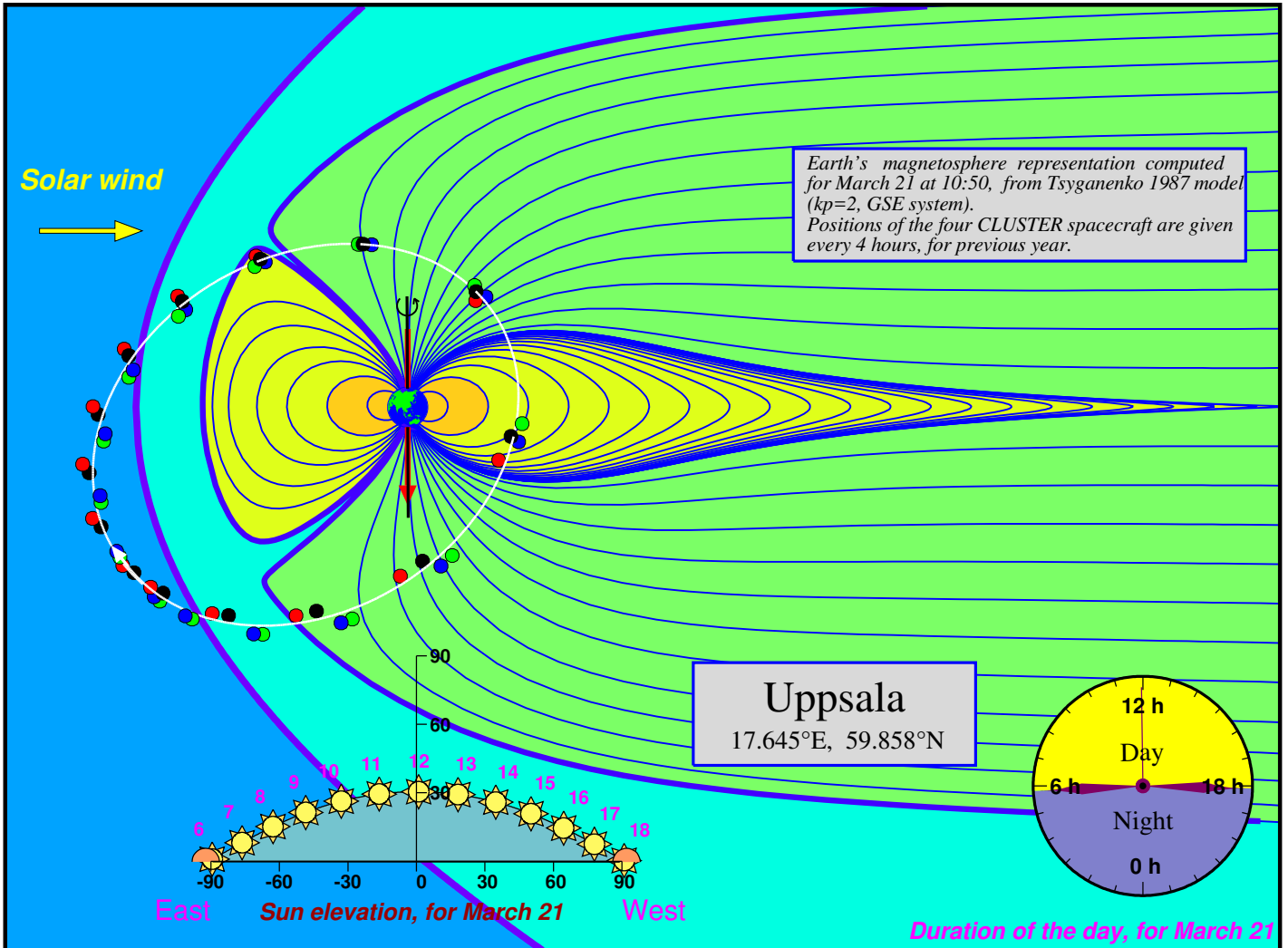
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	1 1 - 364 08:51 - 14:56 6:05 +2 m. 7°	2 2 - 363 08:50 - 14:57 6:07 +2 m. 7°	3 3 - 362 08:49 - 14:59 6:09 +2 m. 7°	4 4 - 361 08:49 - 15:01 6:11 +2 m. 8°	5 5 - 360 08:48 - 15:02 6:14 +3 m. 8°	6 6 - 359 08:47 - 15:04 6:16 +2 m. 8°	7 7 - 358 08:46 - 15:06 6:19 +3 m. 8°
	8 8 - 357 08:45 - 15:08 6:22 +3 m. 8°	9 9 - 356 08:44 - 15:10 6:25 +3 m. 8°	10 10 - 355 08:43 - 15:12 6:28 +3 m. 8°	11 11 - 354 08:42 - 15:14 6:31 +3 m. 8°	12 12 - 353 08:41 - 15:16 6:35 +4 m. 9°	13 13 - 352 08:39 - 15:18 6:38 +3 m. 9°	14 14 - 351 08:38 - 15:20 6:42 +4 m. 9°
	15 15 - 350 08:36 - 15:22 6:46 +4 m. 9°	16 16 - 349 08:35 - 15:24 6:49 +3 m. 9°	17 17 - 348 08:33 - 15:27 6:53 +4 m. 10°	18 18 - 347 08:31 - 15:29 6:57 +4 m. 10°	19 19 - 346 08:30 - 15:31 7:01 +4 m. 10°	20 20 - 345 08:28 - 15:34 7:06 +5 m. 10°	21 21 - 344 08:26 - 15:36 7:10 +4 m. 10°
4	22 22 - 343 08:24 - 15:39 7:14 +4 m. 11°	23 23 - 342 08:22 - 15:41 7:19 +5 m. 11°	24 24 - 341 08:20 - 15:44 7:23 +4 m. 11°	25 25 - 340 08:18 - 15:46 7:28 +5 m. 11°	26 26 - 339 08:16 - 15:49 7:32 +4 m. 12°	27 27 - 338 08:14 - 15:51 7:37 +5 m. 12°	28 28 - 337 08:12 - 15:54 7:42 +5 m. 12°
	29 29 - 336 08:10 - 15:56 7:46 +4 m. 12°	30 30 - 335 08:07 - 15:59 7:51 +5 m. 13°	31 31 - 334 08:05 - 16:02 7:56 +5 m. 13°	1 32 - 333 08:03 - 16:04 8:01 +5 m. 13°	2 33 - 332 08:01 - 16:07 8:06 +5 m. 13°	3 34 - 331 07:58 - 16:09 8:11 +5 m. 14°	4 35 - 330 07:56 - 16:12 8:16 +5 m. 14°



February 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

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

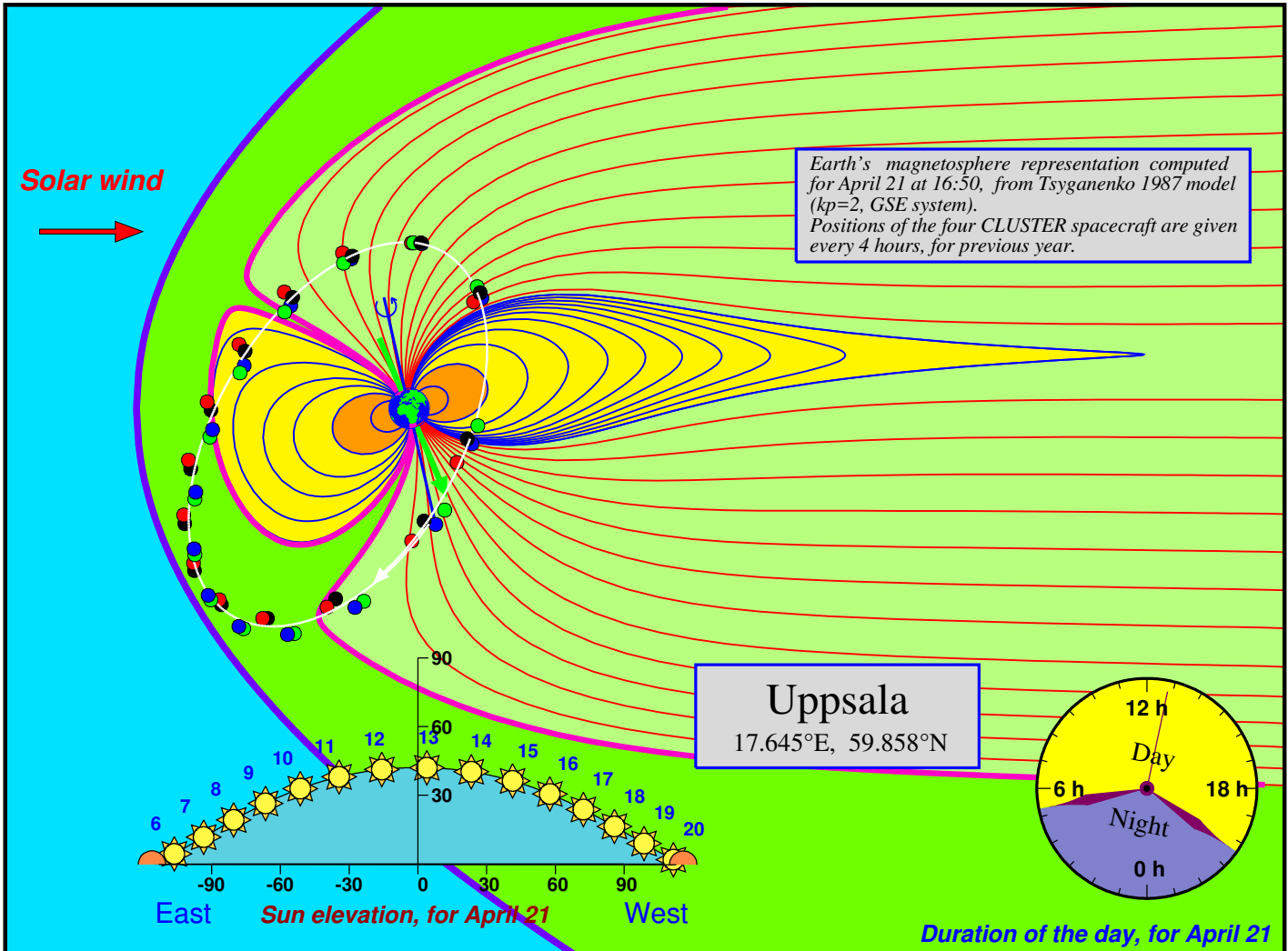


March 2018

Time change
March 25

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

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

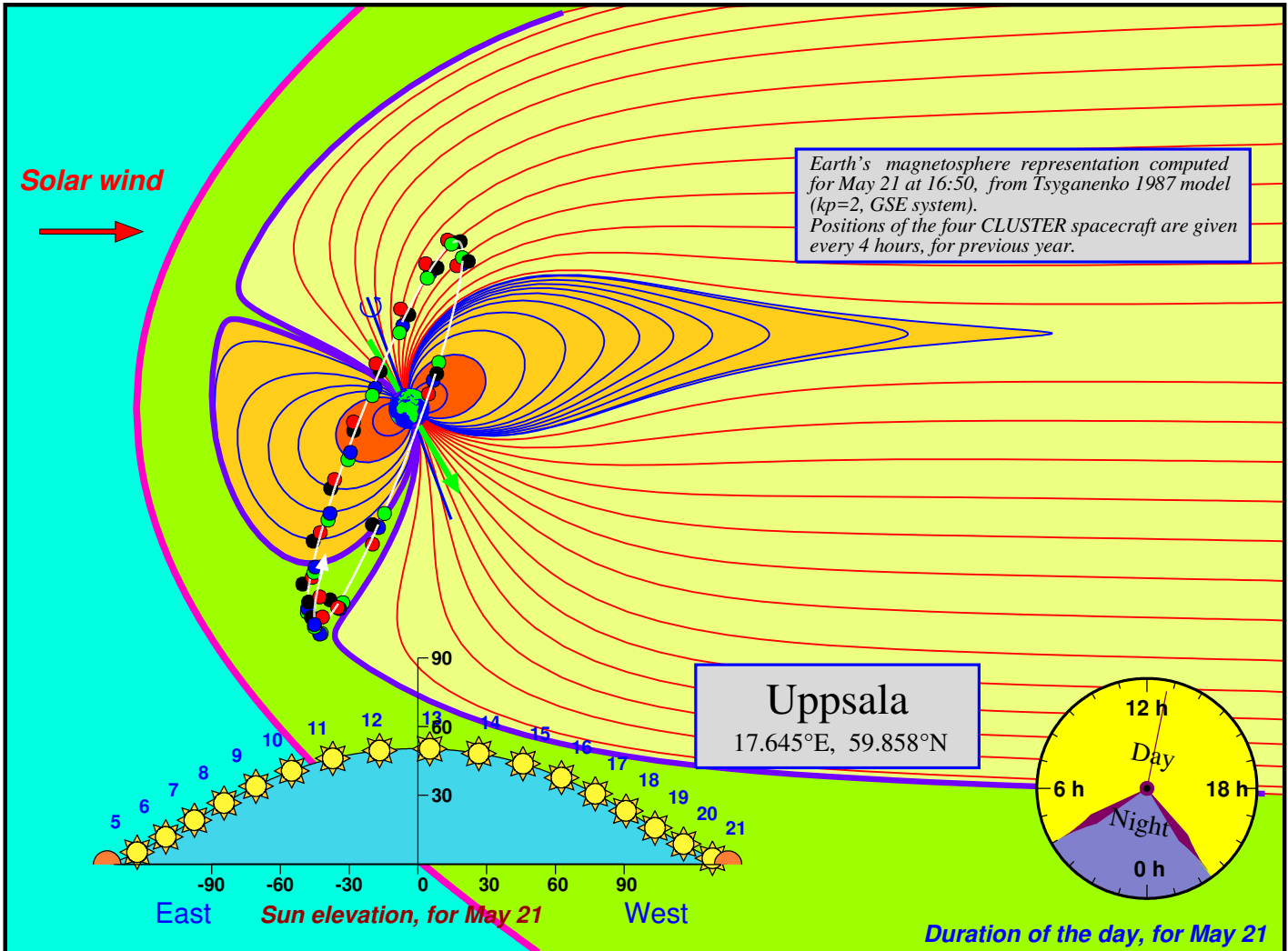


April 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
13	26 85 - 280 06:34 - 19:18 12:45 +6 m. 32°	27 86 - 279 06:31 - 19:21 12:50 +5 m. 33°	28 87 - 278 06:28 - 19:23 12:55 +5 m. 33°	29 88 - 277 06:25 - 19:26 13:01 +6 m. 34°	30 89 - 276 06:22 - 19:28 13:06 +5 m. 34°	31 90 - 275 06:19 - 19:30 13:12 +6 m. 34°	1 91 - 274 06:16 - 19:33 13:17 +5 m. 35°
14	2 92 - 273 06:13 - 19:35 13:23 +6 m. 35°	3 93 - 272 06:10 - 19:38 13:28 +5 m. 36°	4 94 - 271 06:07 - 19:40 13:34 +6 m. 36°	5 95 - 270 06:04 - 19:43 13:39 +5 m. 36°	6 96 - 269 06:01 - 19:45 13:44 +5 m. 37°	7 97 - 268 05:58 - 19:47 13:50 +6 m. 37°	8 98 - 267 05:55 - 19:50 13:55 +5 m. 37°
15	9 99 - 266 05:52 - 19:52 14:01 +6 m. 38°	10 100 - 265 05:49 - 19:55 14:06 +5 m. 38°	11 101 - 264 05:46 - 19:57 14:11 +5 m. 39°	12 102 - 263 05:43 - 20:00 14:17 +6 m. 39°	13 103 - 262 05:40 - 20:02 14:22 +5 m. 39°	14 104 - 261 05:37 - 20:04 14:28 +6 m. 40°	15 105 - 260 05:34 - 20:07 14:33 +5 m. 40°
16	16 106 - 259 05:31 - 20:09 14:38 +5 m. 40°	17 107 - 258 05:28 - 20:12 14:44 +6 m. 41°	18 108 - 257 05:25 - 20:14 14:49 +5 m. 41°	19 109 - 256 05:22 - 20:17 14:54 +5 m. 41°	20 110 - 255 05:19 - 20:19 15:00 +6 m. 42°	21 111 - 254 05:17 - 20:22 15:05 +5 m. 42°	22 112 - 253 05:14 - 20:24 15:11 +6 m. 42°
17	23 113 - 252 05:11 - 20:27 15:16 +5 m. 43°	24 114 - 251 05:08 - 20:29 15:21 +5 m. 43°	25 115 - 250 05:05 - 20:32 15:26 +5 m. 43°	26 116 - 249 05:02 - 20:34 15:32 +6 m. 44°	27 117 - 248 05:00 - 20:37 15:37 +5 m. 44°	28 118 - 247 04:57 - 20:39 15:42 +5 m. 44°	29 119 - 246 04:54 - 20:41 15:47 +5 m. 45°
18	30 120 - 245 04:51 - 20:44 15:53 +6 m. 45°	1 121 - 244 04:49 - 20:46 15:58 +5 m. 45°	2 122 - 243 04:46 - 20:49 16:03 +5 m. 46°	3 123 - 242 04:43 - 20:51 16:08 +5 m. 46°	4 124 - 241 04:41 - 20:54 16:13 +5 m. 46°	5 125 - 240 04:38 - 20:56 16:18 +5 m. 46°	6 126 - 239 04:35 - 20:59 16:23 +5 m. 47°

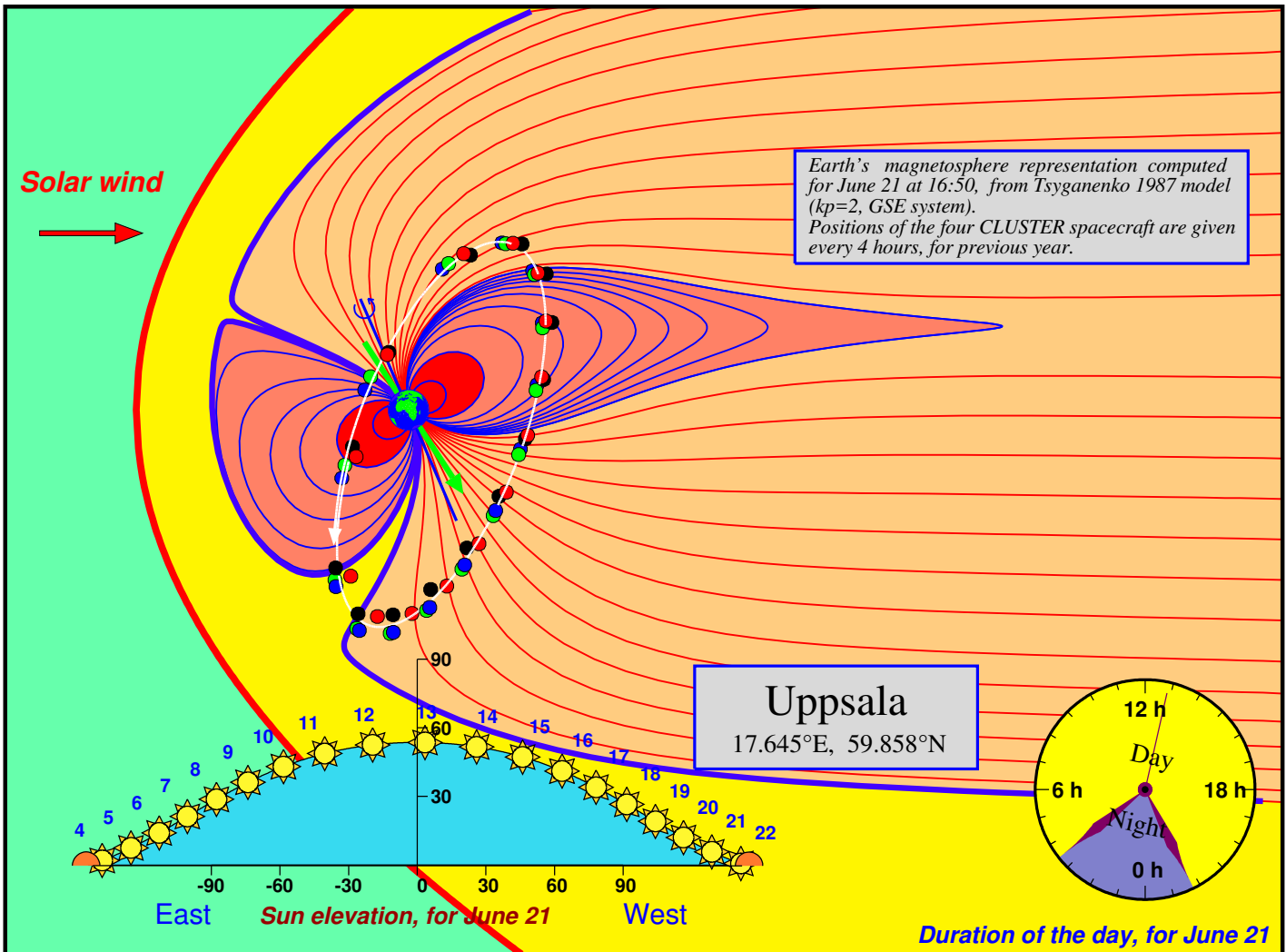


May 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
18	30 120 - 245 04:51 - 20:44 15:53 +6 m. 45°	1 121 - 244 04:49 - 20:46 15:58 +5 m. 45°	2 122 - 243 04:46 - 20:49 16:03 +5 m. 46°	3 123 - 242 04:43 - 20:51 16:08 +5 m. 46°	4 124 - 241 04:41 - 20:54 16:13 +5 m. 46°	5 125 - 240 04:38 - 20:56 16:18 +5 m. 46°	6 126 - 239 04:35 - 20:59 16:23 +5 m. 47°
19	7 127 - 238 04:33 - 21:01 16:28 +5 m. 47°	8 128 - 237 04:30 - 21:04 16:33 +5 m. 47°	9 129 - 236 04:28 - 21:06 16:38 +5 m. 48°	10 130 - 235 04:25 - 21:08 16:43 +5 m. 48°	11 131 - 234 04:23 - 21:11 16:48 +5 m. 48°	12 132 - 233 04:20 - 21:13 16:53 +5 m. 48°	13 133 - 232 04:18 - 21:16 16:58 +5 m. 49°
20	14 134 - 231 04:16 - 21:18 17:02 +4 m. 49°	15 135 - 230 04:13 - 21:20 17:07 +5 m. 49°	16 136 - 229 04:11 - 21:23 17:12 +5 m. 49°	17 137 - 228 04:09 - 21:25 17:16 +4 m. 50°	18 138 - 227 04:07 - 21:27 17:21 +5 m. 50°	19 139 - 226 04:04 - 21:29 17:25 +4 m. 50°	20 140 - 225 04:02 - 21:32 17:29 +4 m. 50°
21	21 141 - 224 04:00 - 21:34 17:34 +5 m. 50°	22 142 - 223 03:58 - 21:36 17:38 +4 m. 51°	23 143 - 222 03:56 - 21:38 17:42 +4 m. 51°	24 144 - 221 03:54 - 21:40 17:46 +4 m. 51°	25 145 - 220 03:52 - 21:42 17:50 +4 m. 51°	26 146 - 219 03:50 - 21:44 17:54 +4 m. 51°	27 147 - 218 03:49 - 21:46 17:58 +4 m. 51°
22	28 148 - 217 03:47 - 21:48 18:01 +3 m. 52°	29 149 - 216 03:45 - 21:50 18:05 +4 m. 52°	30 150 - 215 03:44 - 21:52 18:08 +3 m. 52°	31 151 - 214 03:42 - 21:54 18:12 +4 m. 52°	1 152 - 213 03:40 - 21:56 18:15 +3 m. 52°	2 153 - 212 03:39 - 21:57 18:18 +3 m. 52°	3 154 - 211 03:38 - 21:59 18:21 +3 m. 52°

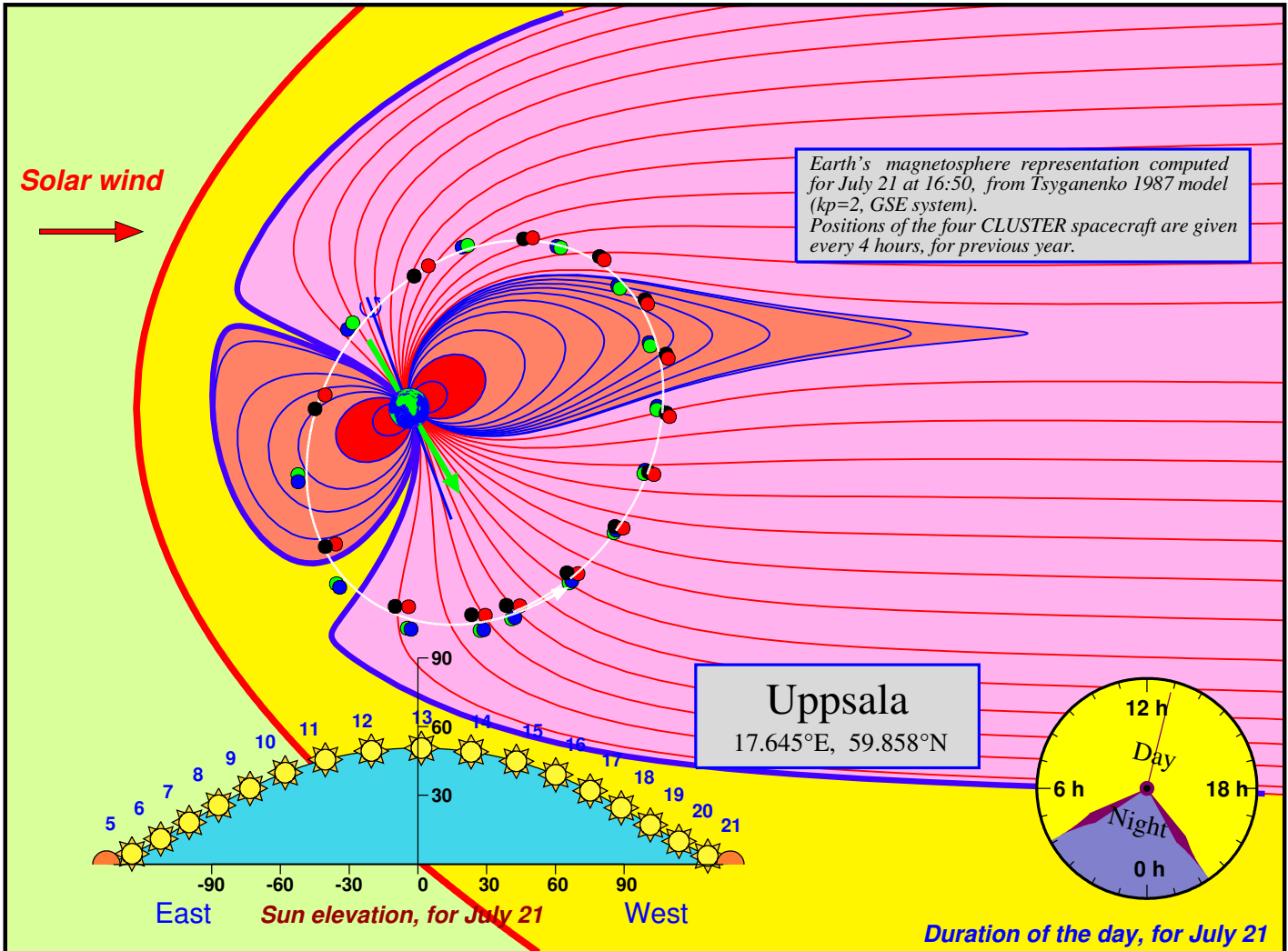


June 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
22	28 148 - 217 03:47 - 21:48 18:01 +3 m. 52°	29 149 - 216 03:45 - 21:50 18:05 +4 m. 52°	30 150 - 215 03:44 - 21:52 18:08 +3 m. 52°	31 151 - 214 03:42 - 21:54 18:12 +4 m. 52°	1 152 - 213 03:40 - 21:56 18:15 +3 m. 52°	2 153 - 212 03:39 - 21:57 18:18 +3 m. 52°	3 154 - 211 03:38 - 21:59 18:21 +3 m. 52°
23	4 155 - 210 03:36 - 22:00 18:24 +3 m. 53°	5 156 - 209 03:35 - 22:02 18:27 +3 m. 53°	6 157 - 208 03:34 - 22:03 18:29 +2 m. 53°	7 158 - 207 03:33 - 22:05 18:32 +3 m. 53°	8 159 - 206 03:32 - 22:06 18:34 +2 m. 53°	9 160 - 205 03:31 - 22:07 18:36 +2 m. 53°	10 161 - 204 03:30 - 22:09 18:38 +2 m. 53°
24	11 162 - 203 03:30 - 22:10 18:40 +2 m. 53°	12 163 - 202 03:29 - 22:11 18:42 +2 m. 53°	13 164 - 201 03:28 - 22:12 18:43 +1 m. 53°	14 165 - 200 03:28 - 22:12 18:45 +2 m. 53°	15 166 - 199 03:27 - 22:13 18:46 +1 m. 53°	16 167 - 198 03:27 - 22:14 18:47 +1 m. 54°	17 168 - 197 03:27 - 22:14 18:48 +1 m. 54°
25	18 169 - 196 03:27 - 22:15 18:48 +0 m. 54°	19 170 - 195 03:27 - 22:15 18:49 +1 m. 54°	20 171 - 194 03:27 - 22:16 18:49 +0 m. 54°	21 172 - 193 03:27 - 22:16 18:49 +0 m. 54°	22 173 - 192 03:27 - 22:16 18:49 +0 m. 54°	23 174 - 191 03:27 - 22:16 18:49 +0 m. 54°	24 175 - 190 03:28 - 22:16 18:48 -1 m. 54°
26	25 176 - 189 03:28 - 22:16 18:47 -1 m. 54°	26 177 - 188 03:29 - 22:16 18:47 +0 m. 54°	27 178 - 187 03:30 - 22:15 18:46 -1 m. 53°	28 179 - 186 03:30 - 22:15 18:45 -1 m. 53°	29 180 - 185 03:31 - 22:14 18:43 -2 m. 53°	30 181 - 184 03:32 - 22:14 18:42 -1 m. 53°	1 182 - 183 03:33 - 22:13 18:40 -2 m. 53°

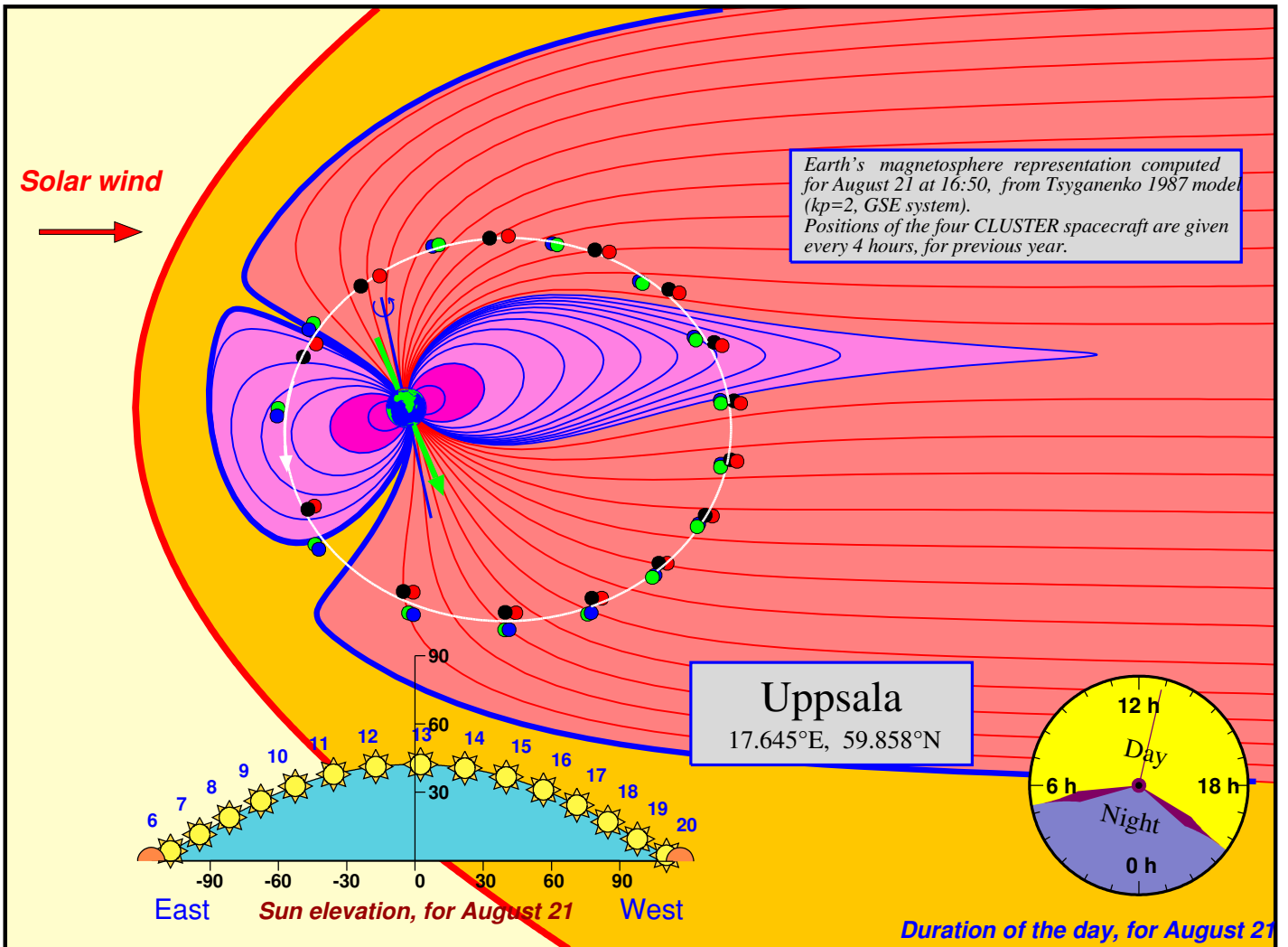


July 2018

Sunrise and Sunset at Uppsala (TL $\pm$ 1 mn)

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26	25 176 - 189 03:28 - 22:16 18:47 -1 m. 54°	26 177 - 188 03:29 - 22:16 18:47 +0 m. 54°	27 178 - 187 03:30 - 22:15 18:46 -1 m. 53°	28 179 - 186 03:30 - 22:15 18:45 -1 m. 53°	29 180 - 185 03:31 - 22:14 18:43 -2 m. 53°	30 181 - 184 03:32 - 22:14 18:42 -1 m. 53°	1 182 - 183 03:33 - 22:13 18:40 -2 m. 53°
27	2 183 - 182 03:34 - 22:12 18:38 -2 m. 53°	3 184 - 181 03:35 - 22:11 18:36 -2 m. 53°	4 185 - 180 03:37 - 22:11 18:34 -2 m. 53°	5 186 - 179 03:38 - 22:10 18:32 -2 m. 53°	6 187 - 178 03:39 - 22:08 18:29 -3 m. 53°	7 188 - 177 03:41 - 22:07 18:27 -2 m. 53°	8 189 - 176 03:42 - 22:06 18:24 -3 m. 53°
28	9 190 - 175 03:44 - 22:05 18:21 -3 m. 52°	10 191 - 174 03:45 - 22:03 18:18 -3 m. 52°	11 192 - 173 03:47 - 22:02 18:15 -3 m. 52°	12 193 - 172 03:49 - 22:00 18:12 -3 m. 52°	13 194 - 171 03:51 - 21:59 18:08 -4 m. 52°	14 195 - 170 03:52 - 21:57 18:05 -3 m. 52°	15 196 - 169 03:54 - 21:56 18:01 -4 m. 52°
29	16 197 - 168 03:56 - 21:54 17:58 -3 m. 51°	17 198 - 167 03:58 - 21:52 17:54 -4 m. 51°	18 199 - 166 04:00 - 21:50 17:50 -4 m. 51°	19 200 - 165 04:02 - 21:48 17:46 -4 m. 51°	20 201 - 164 04:04 - 21:46 17:42 -4 m. 51°	21 202 - 163 04:06 - 21:44 17:38 -4 m. 51°	22 203 - 162 04:08 - 21:42 17:34 -4 m. 50°
30	23 204 - 161 04:11 - 21:40 17:30 -4 m. 50°	24 205 - 160 04:13 - 21:38 17:25 -5 m. 50°	25 206 - 159 04:15 - 21:36 17:21 -4 m. 50°	26 207 - 158 04:17 - 21:34 17:17 -4 m. 50°	27 208 - 157 04:19 - 21:31 17:12 -5 m. 49°	28 209 - 156 04:22 - 21:29 17:07 -5 m. 49°	29 210 - 155 04:24 - 21:27 17:03 -4 m. 49°
31	30 211 - 154 04:26 - 21:24 16:58 -5 m. 49°	31 212 - 153 04:29 - 21:22 16:53 -5 m. 48°	1 213 - 152 04:31 - 21:19 16:49 -4 m. 48°	2 214 - 151 04:33 - 21:17 16:44 -5 m. 48°	3 215 - 150 04:36 - 21:14 16:39 -5 m. 48°	4 216 - 149 04:38 - 21:12 16:34 -5 m. 47°	5 217 - 148 04:40 - 21:09 16:29 -5 m. 47°

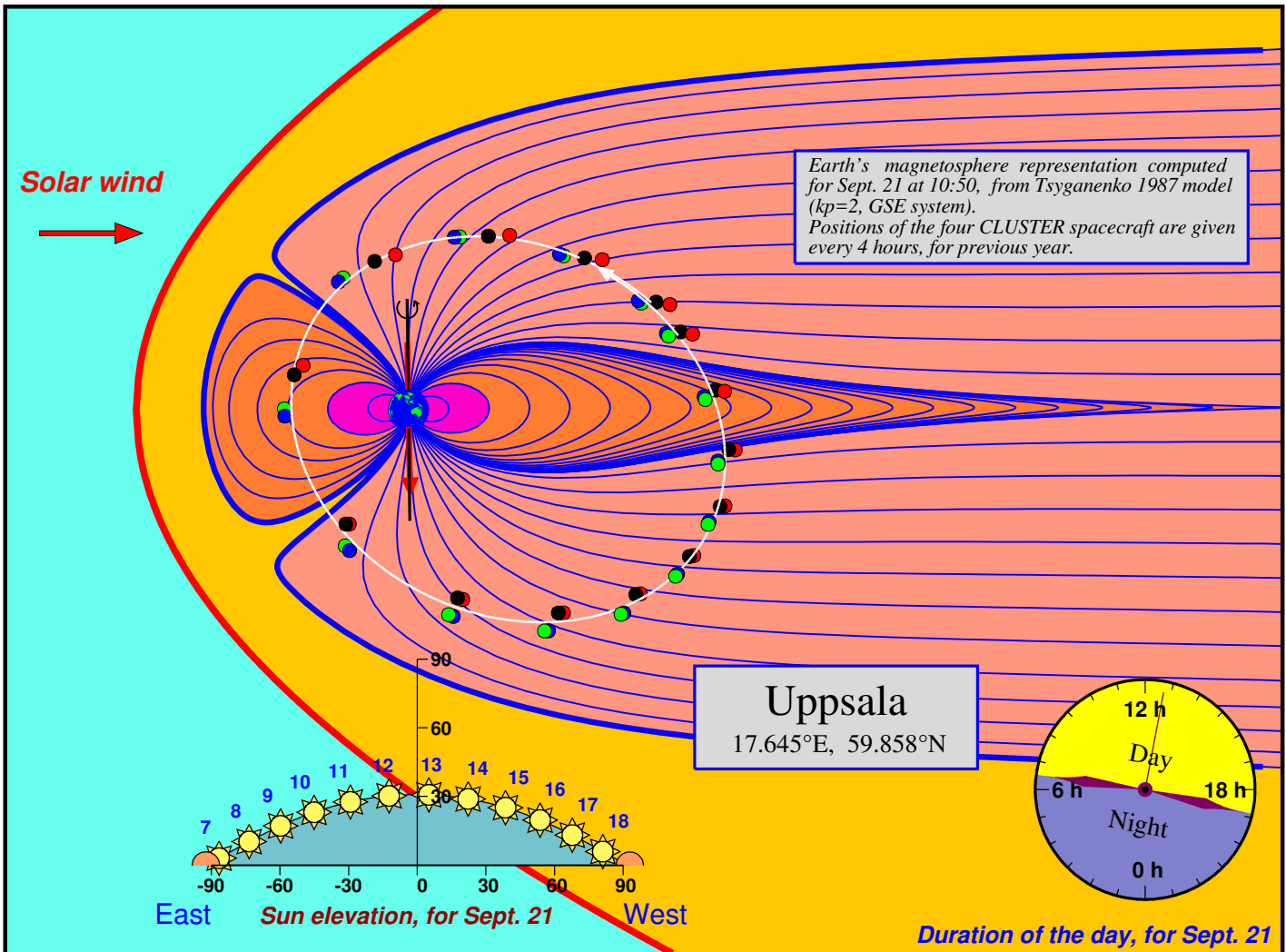


August 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)

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

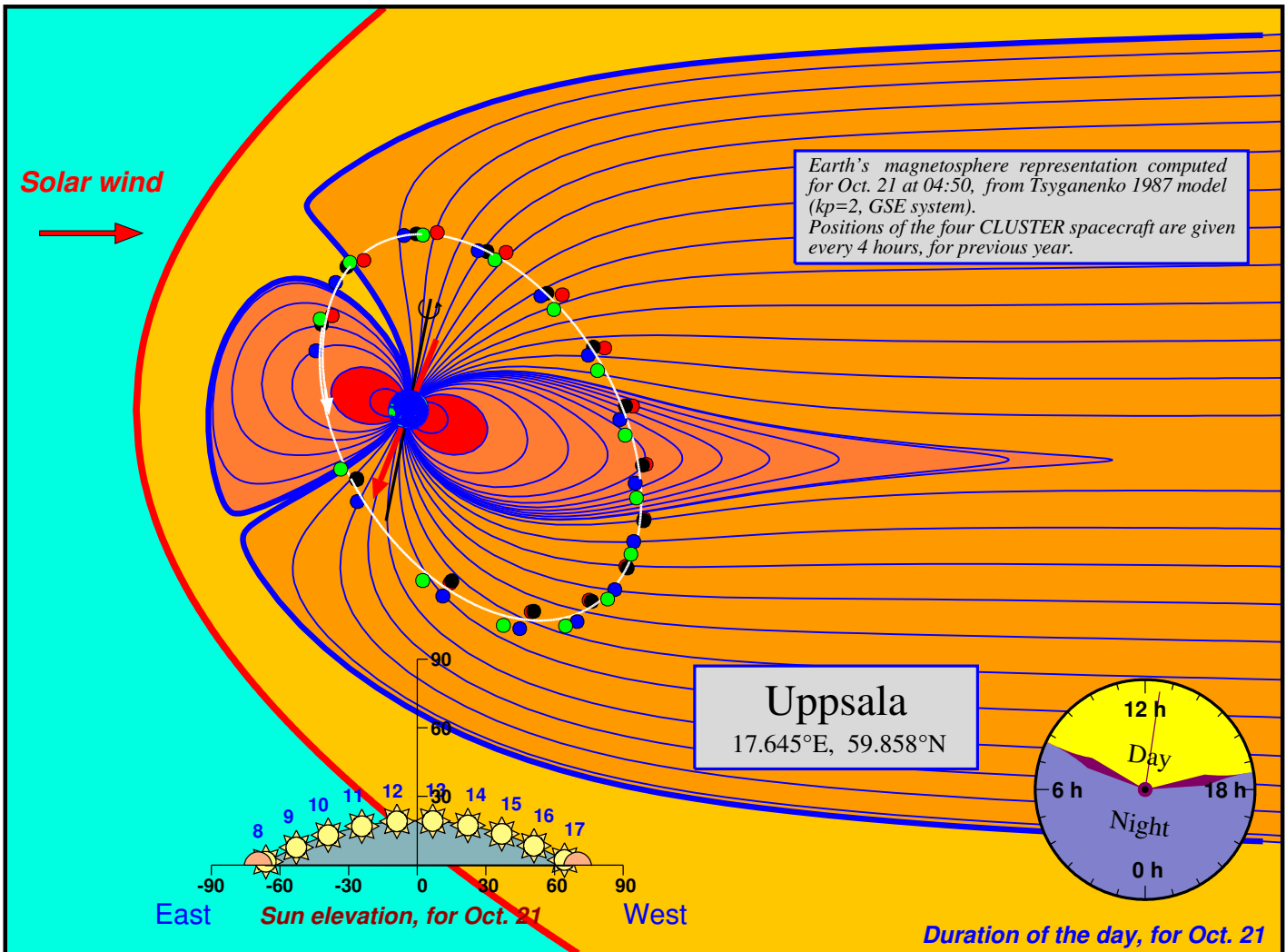
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
31	30 211 - 154 04:26 - 21:24 16:58 -5 m. 49°	31 212 - 153 04:29 - 21:22 16:53 -5 m. 48°	1 213 - 152 04:31 - 21:19 16:49 -4 m. 48°	2 214 - 151 04:33 - 21:17 16:44 -5 m. 48°	3 215 - 150 04:36 - 21:14 16:39 -5 m. 48°	4 216 - 149 04:38 - 21:12 16:34 -5 m. 47°	5 217 - 148 04:40 - 21:09 16:29 -5 m. 47°
32	6 218 - 147 04:43 - 21:07 16:24 -5 m. 47°	7 219 - 146 04:45 - 21:04 16:19 -5 m. 47°	8 220 - 145 04:47 - 21:01 16:14 -5 m. 46°	9 221 - 144 04:50 - 20:59 16:09 -5 m. 46°	10 222 - 143 04:52 - 20:56 16:04 -5 m. 46°	11 223 - 142 04:55 - 20:53 15:59 -5 m. 45°	12 224 - 141 04:57 - 20:51 15:54 -5 m. 45°
33	13 225 - 140 04:59 - 20:48 15:49 -5 m. 45°	14 226 - 139 05:02 - 20:45 15:44 -5 m. 44°	15 227 - 138 05:04 - 20:42 15:38 -6 m. 44°	16 228 - 137 05:06 - 20:40 15:33 -5 m. 44°	17 229 - 136 05:09 - 20:37 15:28 -5 m. 44°	18 230 - 135 05:11 - 20:34 15:23 -5 m. 43°	19 231 - 134 05:14 - 20:31 15:18 -5 m. 43°
34	20 232 - 133 05:16 - 20:28 15:12 -6 m. 43°	21 233 - 132 05:18 - 20:25 15:07 -5 m. 42°	22 234 - 131 05:21 - 20:23 15:02 -5 m. 42°	23 235 - 130 05:23 - 20:20 14:57 -5 m. 42°	24 236 - 129 05:26 - 20:17 14:51 -6 m. 41°	25 237 - 128 05:28 - 20:14 14:46 -5 m. 41°	26 238 - 127 05:30 - 20:11 14:41 -5 m. 41°
35	27 239 - 126 05:33 - 20:08 14:36 -5 m. 40°	28 240 - 125 05:35 - 20:05 14:30 -6 m. 40°	29 241 - 124 05:37 - 20:02 14:25 -5 m. 39°	30 242 - 123 05:40 - 19:59 14:20 -5 m. 39°	31 243 - 122 05:42 - 19:56 14:14 -6 m. 39°	1 244 - 121 05:44 - 19:53 14:09 -5 m. 38°	2 245 - 120 05:47 - 19:50 14:04 -5 m. 38°



September 2018

Sunrise and Sunset at Uppsala (TL $\pm$ 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
35	27 239 - 126 05:33 - 20:08 14:36 -5 m. 40°	28 240 - 125 05:35 - 20:05 14:30 -6 m. 40°	29 241 - 124 05:37 - 20:02 14:25 -5 m. 39°	30 242 - 123 05:40 - 19:59 14:20 -5 m. 39°	31 243 - 122 05:42 - 19:56 14:14 -6 m. 39°	1 244 - 121 05:44 - 19:53 14:09 -5 m. 38°	2 245 - 120 05:47 - 19:50 14:04 -5 m. 38°
36	3 246 - 119 05:49 - 19:47 13:58 -6 m. 38°	4 247 - 118 05:51 - 19:44 13:53 -5 m. 37°	5 248 - 117 05:54 - 19:41 13:48 -5 m. 37°	6 249 - 116 05:56 - 19:38 13:42 -6 m. 37°	7 250 - 115 05:58 - 19:35 13:37 -5 m. 36°	8 251 - 114 06:01 - 19:32 13:32 -5 m. 36°	9 252 - 113 06:03 - 19:29 13:26 -6 m. 35°
37	10 253 - 112 06:05 - 19:26 13:21 -5 m. 35°	11 254 - 111 06:08 - 19:23 13:16 -5 m. 35°	12 255 - 110 06:10 - 19:20 13:10 -6 m. 34°	13 256 - 109 06:12 - 19:17 13:05 -5 m. 34°	14 257 - 108 06:15 - 19:14 12:59 -6 m. 34°	15 258 - 107 06:17 - 19:11 12:54 -5 m. 33°	16 259 - 106 06:19 - 19:08 12:49 -5 m. 33°
38	17 260 - 105 06:22 - 19:05 12:43 -6 m. 32°	18 261 - 104 06:24 - 19:02 12:38 -5 m. 32°	19 262 - 103 06:26 - 18:59 12:33 -5 m. 32°	20 263 - 102 06:29 - 18:56 12:27 -6 m. 31°	21 264 - 101 06:31 - 18:53 12:22 -5 m. 31°	22 265 - 100 06:33 - 18:50 12:17 -5 m. 30°	23 266 - 99 06:36 - 18:47 12:11 -6 m. 30°
39	24 267 - 98 06:38 - 18:44 12:06 -5 m. 30°	25 268 - 97 06:40 - 18:41 12:00 -6 m. 29°	26 269 - 96 06:43 - 18:38 11:55 -5 m. 29°	27 270 - 95 06:45 - 18:35 11:50 -5 m. 28°	28 271 - 94 06:47 - 18:32 11:44 -6 m. 28°	29 272 - 93 06:50 - 18:29 11:39 -5 m. 28°	30 273 - 92 06:52 - 18:26 11:34 -5 m. 27°

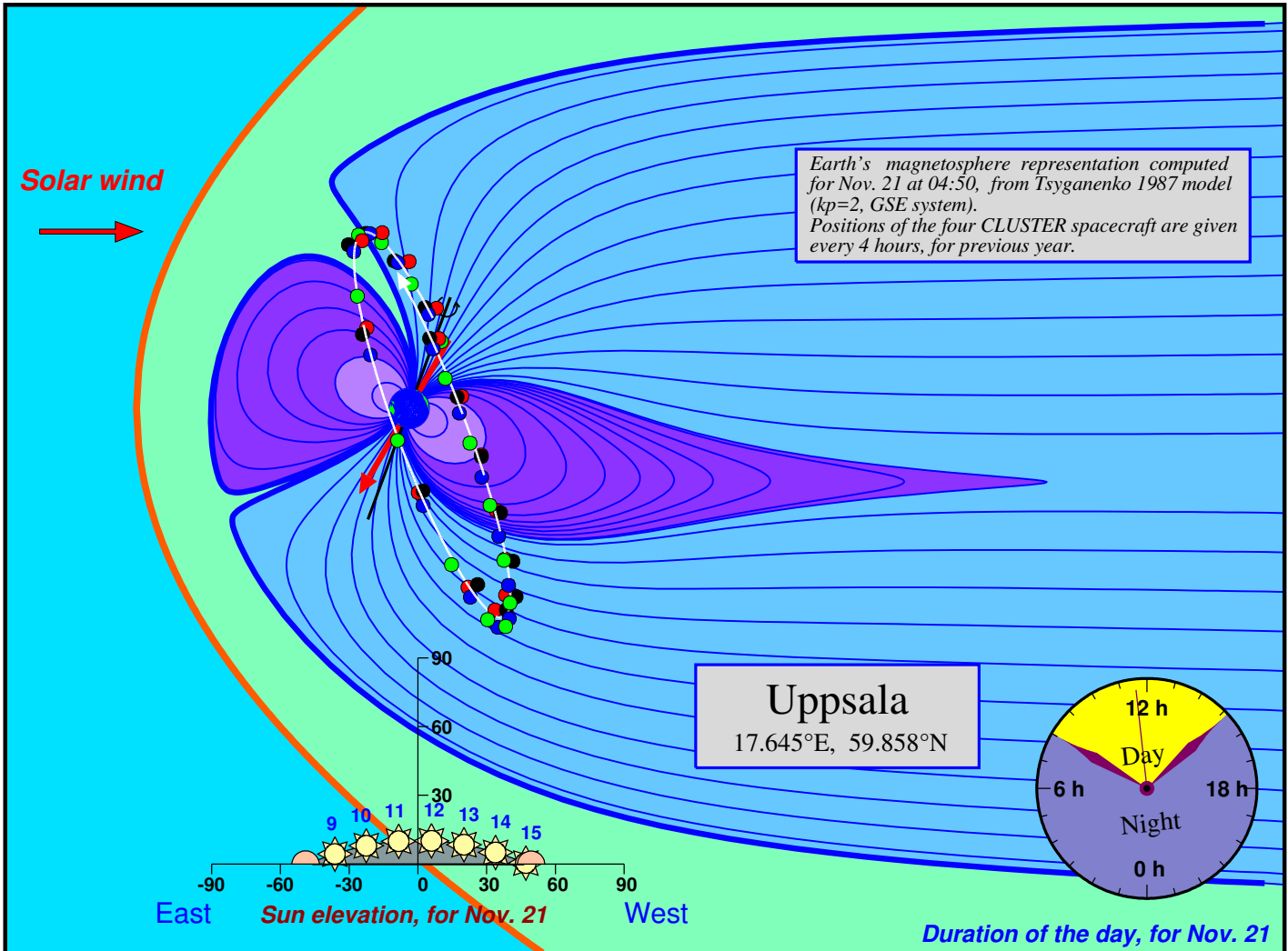


October 2018

Time change
Oct. 28

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

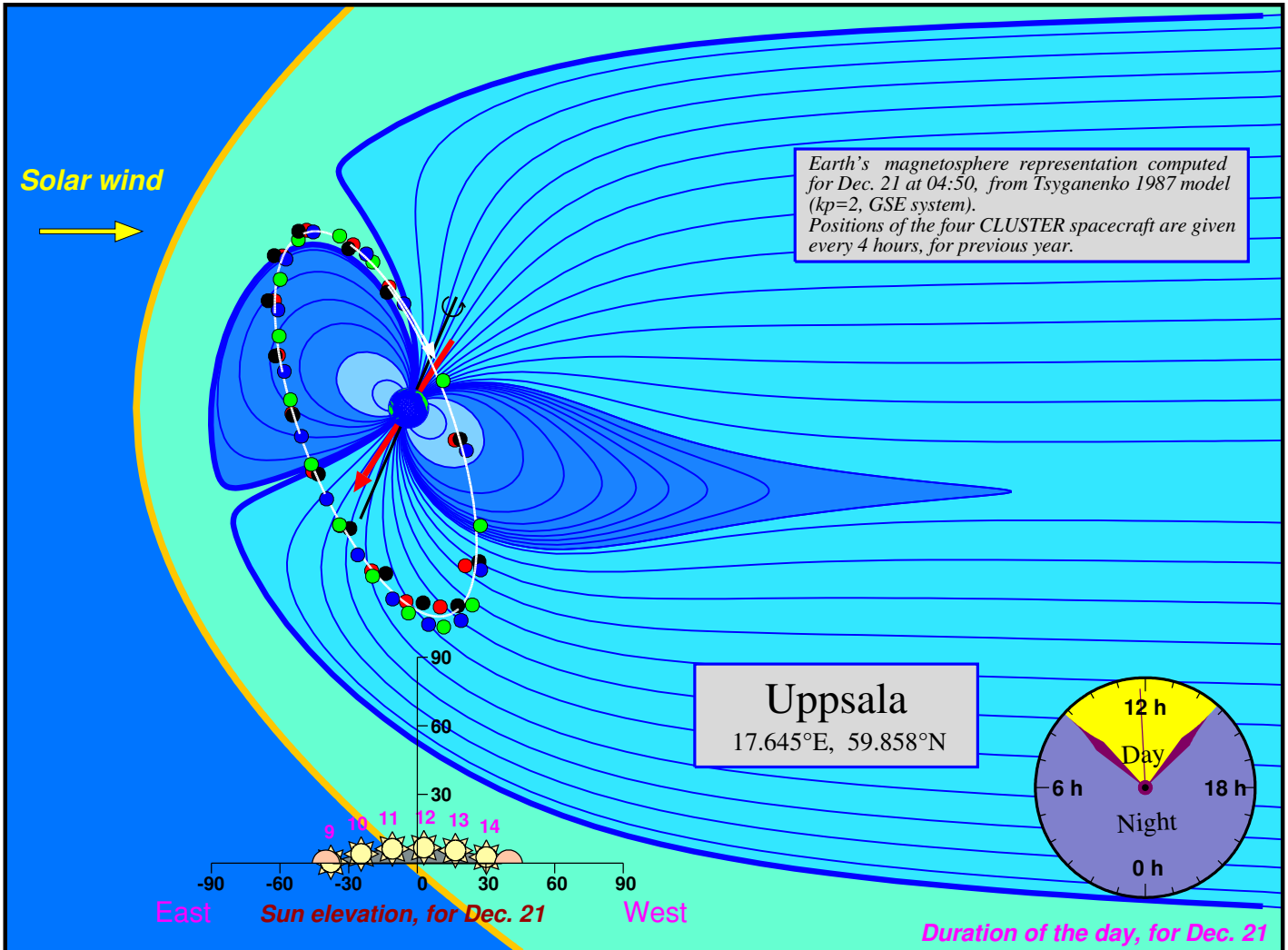
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
40	1 274 - 91 06:55 - 18:23 11:28 -6 m. 27°	2 275 - 90 06:57 - 18:20 11:23 -5 m. 27°	3 276 - 89 06:59 - 18:17 11:18 -5 m. 26°	4 277 - 88 07:02 - 18:14 11:12 -6 m. 26°	5 278 - 87 07:04 - 18:11 11:07 -5 m. 25°	6 279 - 86 07:06 - 18:08 11:01 -6 m.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



November 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

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



December 2018

Sunrise and Sunset at Uppsala (TL ± 1 mn)
Duration of the day - Variation - Sun maximal elevation (°)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
48	26 330 - 35 08:12 - 15:01 6:48 -4 m. 9°	27 331 - 34 08:15 - 14:59 6:44 -4 m. 9°	28 332 - 33 08:17 - 14:58 6:41 -3 m. 9°	29 333 - 32 08:19 - 14:56 6:37 -4 m. 9°	30 334 - 31 08:21 - 14:55 6:33 -4 m. 9°	1 335 - 30 08:23 - 14:54 6:30 -3 m. 8°	2 336 - 29 08:25 - 14:52 6:27 -3 m. 8°
49	3 337 - 28 08:27 - 14:51 6:24 -3 m. 8°	4 338 - 27 08:29 - 14:50 6:21 -3 m. 8°	5 339 - 26 08:31 - 14:49 6:18 -3 m. 8°	6 340 - 25 08:32 - 14:48 6:16 -2 m. 8°	7 341 - 24 08:34 - 14:48 6:13 -3 m. 8°	8 342 - 23 08:36 - 14:47 6:11 -2 m. 8°	9 343 - 22 08:37 - 14:46 6:08 -3 m. 7°
50	10 344 - 21 08:39 - 14:46 6:06 -2 m. 7°	11 345 - 20 08:40 - 14:45 6:04 -2 m. 7°	12 346 - 19 08:42 - 14:45 6:03 -1 m. 7°	13 347 - 18 08:43 - 14:44 6:01 -2 m. 7°	14 348 - 17 08:44 - 14:44 6:00 -1 m. 7°	15 349 - 16 08:45 - 14:44 5:58 -2 m. 7°	16 350 - 15 08:46 - 14:44 5:57 -1 m. 7°
51	17 351 - 14 08:47 - 14:44 5:56 -1 m. 7°	18 352 - 13 08:48 - 14:44 5:56 +0 m. 7°	19 353 - 12 08:49 - 14:44 5:55 -1 m. 7°	20 354 - 11 08:50 - 14:45 5:55 +0 m. 7°	21 355 - 10 08:50 - 14:45 5:55 +0 m. 7°	22 356 - 9 08:51 - 14:46 5:55 +0 m. 7°	23 357 - 8 08:51 - 14:46 5:55 +0 m. 7°
52	24 358 - 7 08:51 - 14:47 5:55 +0 m. 7°	25 359 - 6 08:52 - 14:48 5:56 +1 m. 7°	26 360 - 5 08:52 - 14:49 5:56 +0 m. 7°	27 361 - 4 08:52 - 14:50 5:57 +1 m. 7°	28 362 - 3 08:52 - 14:51 5:58 +1 m. 7°	29 363 - 2 08:52 - 14:52 6:00 +2 m. 7°	30 364 - 1 08:51 - 14:53 6:01 +1 m. 7°
53	31 365 - 0 08:51 - 14:54 6:03 +2 m. 7°						

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, 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, the "Comagnetolib". All the graphical is produced by an own 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", then completed by all the routines allowing calendar and time conversions. Sunrise, sunset and local noon time are now available for polar zones in the last 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 "Institut de Mécanique Céleste" 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 Patrickjf.Robert@gmail.com

Many calendar examples computed for various places in the world are available here : <http://www.scientidev.fr>