

**SATURNO - EFFEMERIDI 2011**

Generato con Saturn Ephemeris Generator 2.4  
 ([http://pds-rings.seti.org/tools/ephem2\\_sat.html](http://pds-rings.seti.org/tools/ephem2_sat.html))

Effemeridi di Saturno dal 1/1/2010 al 31/12/2010

Intervallo: 5 giorni

mm = mese

gg = giorno

hr = ora

mi = minuto

fase = fase di Saturno, in gradi (angolo Sole-Saturno-Terra)

s-tilt = apertura degli anelli rispetto al Sole, in gradi

tilt = apertura degli anelli rispetto alla Terra (latitudine saturnocentrica della Terra), in gradi

rad. = raggio equatoriale apparente del pianeta, in secondi d'arco

dister = distanza di Saturno dalla Terra, in Km

elong. = elongazione (distanza angolare di Saturno dal Sole visto dalla Terra)

| anno | mm | gg | hr | mi | fase  | s-tilt | tilt   | rad.  | dister     | elong.  |
|------|----|----|----|----|-------|--------|--------|-------|------------|---------|
| 2011 | 1  | 1  | 0  | 0  | 5.851 | 7.583  | 10.141 | 8.615 | 1.4430E+09 | 83.548  |
| 2011 | 1  | 6  | 0  | 0  | 5.885 | 7.655  | 10.205 | 8.690 | 1.4306E+09 | 88.442  |
| 2011 | 1  | 11 | 0  | 0  | 5.877 | 7.727  | 10.250 | 8.766 | 1.4181E+09 | 93.376  |
| 2011 | 1  | 16 | 0  | 0  | 5.825 | 7.798  | 10.277 | 8.843 | 1.4058E+09 | 98.351  |
| 2011 | 1  | 21 | 0  | 0  | 5.729 | 7.870  | 10.285 | 8.920 | 1.3936E+09 | 103.366 |
| 2011 | 1  | 26 | 0  | 0  | 5.588 | 7.941  | 10.274 | 8.997 | 1.3817E+09 | 108.420 |
| 2011 | 1  | 31 | 0  | 0  | 5.402 | 8.012  | 10.244 | 9.073 | 1.3701E+09 | 113.515 |
| 2011 | 2  | 5  | 0  | 0  | 5.173 | 8.083  | 10.195 | 9.148 | 1.3589E+09 | 118.649 |
| 2011 | 2  | 10 | 0  | 0  | 4.900 | 8.155  | 10.129 | 9.220 | 1.3483E+09 | 123.817 |
| 2011 | 2  | 15 | 0  | 0  | 4.585 | 8.226  | 10.045 | 9.289 | 1.3383E+09 | 129.014 |
| 2011 | 2  | 20 | 0  | 0  | 4.230 | 8.297  | 9.946  | 9.354 | 1.3290E+09 | 134.239 |
| 2011 | 2  | 25 | 0  | 0  | 3.839 | 8.368  | 9.832  | 9.414 | 1.3206E+09 | 139.489 |
| 2011 | 3  | 2  | 0  | 0  | 3.413 | 8.438  | 9.704  | 9.468 | 1.3130E+09 | 144.761 |
| 2011 | 3  | 7  | 0  | 0  | 2.956 | 8.509  | 9.564  | 9.516 | 1.3063E+09 | 150.048 |
| 2011 | 3  | 12 | 0  | 0  | 2.472 | 8.580  | 9.414  | 9.558 | 1.3006E+09 | 155.341 |
| 2011 | 3  | 17 | 0  | 0  | 1.967 | 8.650  | 9.255  | 9.592 | 1.2960E+09 | 160.627 |
| 2011 | 3  | 22 | 0  | 0  | 1.448 | 8.721  | 9.091  | 9.618 | 1.2925E+09 | 165.884 |
| 2011 | 3  | 27 | 0  | 0  | 0.924 | 8.791  | 8.922  | 9.636 | 1.2901E+09 | 171.055 |
| 2011 | 4  | 1  | 0  | 0  | 0.435 | 8.862  | 8.751  | 9.645 | 1.2888E+09 | 175.799 |
| 2011 | 4  | 6  | 0  | 0  | 0.361 | 8.932  | 8.580  | 9.646 | 1.2887E+09 | 176.534 |
| 2011 | 4  | 11 | 0  | 0  | 0.824 | 9.002  | 8.413  | 9.638 | 1.2898E+09 | 172.083 |
| 2011 | 4  | 16 | 0  | 0  | 1.346 | 9.072  | 8.250  | 9.622 | 1.2920E+09 | 167.002 |
| 2011 | 4  | 21 | 0  | 0  | 1.867 | 9.142  | 8.095  | 9.597 | 1.2953E+09 | 161.835 |
| 2011 | 4  | 26 | 0  | 0  | 2.376 | 9.212  | 7.948  | 9.565 | 1.2996E+09 | 156.660 |
| 2011 | 5  | 1  | 0  | 0  | 2.865 | 9.282  | 7.813  | 9.526 | 1.3050E+09 | 151.500 |
| 2011 | 5  | 6  | 0  | 0  | 3.329 | 9.352  | 7.690  | 9.479 | 1.3114E+09 | 146.368 |
| 2011 | 5  | 11 | 0  | 0  | 3.765 | 9.421  | 7.582  | 9.426 | 1.3188E+09 | 141.272 |
| 2011 | 5  | 16 | 0  | 0  | 4.168 | 9.491  | 7.489  | 9.368 | 1.3269E+09 | 136.219 |
| 2011 | 5  | 21 | 0  | 0  | 4.536 | 9.560  | 7.413  | 9.305 | 1.3359E+09 | 131.209 |
| 2011 | 5  | 26 | 0  | 0  | 4.868 | 9.630  | 7.354  | 9.238 | 1.3456E+09 | 126.243 |
| 2011 | 5  | 31 | 0  | 0  | 5.160 | 9.699  | 7.313  | 9.168 | 1.3559E+09 | 121.322 |
| 2011 | 6  | 5  | 0  | 0  | 5.412 | 9.768  | 7.291  | 9.095 | 1.3668E+09 | 116.447 |
| 2011 | 6  | 10 | 0  | 0  | 5.623 | 9.837  | 7.288  | 9.020 | 1.3782E+09 | 111.621 |
| 2011 | 6  | 15 | 0  | 0  | 5.791 | 9.906  | 7.304  | 8.944 | 1.3899E+09 | 106.843 |
| 2011 | 6  | 20 | 0  | 0  | 5.918 | 9.975  | 7.339  | 8.867 | 1.4019E+09 | 102.112 |
| 2011 | 6  | 25 | 0  | 0  | 6.004 | 10.044 | 7.392  | 8.791 | 1.4141E+09 | 97.424  |
| 2011 | 6  | 30 | 0  | 0  | 6.048 | 10.113 | 7.463  | 8.714 | 1.4265E+09 | 92.779  |
| 2011 | 7  | 5  | 0  | 0  | 6.051 | 10.182 | 7.552  | 8.639 | 1.4390E+09 | 88.174  |
| 2011 | 7  | 10 | 0  | 0  | 6.015 | 10.250 | 7.658  | 8.565 | 1.4513E+09 | 83.610  |
| 2011 | 7  | 15 | 0  | 0  | 5.941 | 10.319 | 7.780  | 8.493 | 1.4636E+09 | 79.086  |
| 2011 | 7  | 20 | 0  | 0  | 5.830 | 10.387 | 7.918  | 8.424 | 1.4757E+09 | 74.595  |
| 2011 | 7  | 25 | 0  | 0  | 5.684 | 10.456 | 8.071  | 8.357 | 1.4876E+09 | 70.136  |
| 2011 | 7  | 30 | 0  | 0  | 5.504 | 10.524 | 8.237  | 8.293 | 1.4991E+09 | 65.705  |

|      |    |    |   |   |       |        |        |       |            |        |
|------|----|----|---|---|-------|--------|--------|-------|------------|--------|
| 2011 | 8  | 4  | 0 | 0 | 5.293 | 10.592 | 8.417  | 8.231 | 1.5102E+09 | 61.300 |
| 2011 | 8  | 9  | 0 | 0 | 5.051 | 10.660 | 8.608  | 8.174 | 1.5209E+09 | 56.921 |
| 2011 | 8  | 14 | 0 | 0 | 4.781 | 10.728 | 8.810  | 8.120 | 1.5310E+09 | 52.565 |
| 2011 | 8  | 19 | 0 | 0 | 4.485 | 10.796 | 9.022  | 8.069 | 1.5406E+09 | 48.226 |
| 2011 | 8  | 24 | 0 | 0 | 4.165 | 10.864 | 9.243  | 8.023 | 1.5495E+09 | 43.903 |
| 2011 | 8  | 29 | 0 | 0 | 3.822 | 10.931 | 9.472  | 7.980 | 1.5578E+09 | 39.591 |
| 2011 | 9  | 3  | 0 | 0 | 3.460 | 10.999 | 9.708  | 7.942 | 1.5653E+09 | 35.289 |
| 2011 | 9  | 8  | 0 | 0 | 3.080 | 11.066 | 9.949  | 7.907 | 1.5721E+09 | 30.998 |
| 2011 | 9  | 13 | 0 | 0 | 2.684 | 11.134 | 10.196 | 7.877 | 1.5781E+09 | 26.716 |
| 2011 | 9  | 18 | 0 | 0 | 2.275 | 11.201 | 10.446 | 7.852 | 1.5832E+09 | 22.438 |
| 2011 | 9  | 23 | 0 | 0 | 1.856 | 11.268 | 10.699 | 7.831 | 1.5875E+09 | 18.167 |
| 2011 | 9  | 28 | 0 | 0 | 1.428 | 11.336 | 10.953 | 7.814 | 1.5909E+09 | 13.906 |
| 2011 | 10 | 3  | 0 | 0 | 0.997 | 11.403 | 11.208 | 7.802 | 1.5934E+09 | 9.678  |
| 2011 | 10 | 8  | 0 | 0 | 0.575 | 11.469 | 11.463 | 7.794 | 1.5950E+09 | 5.569  |
| 2011 | 10 | 13 | 0 | 0 | 0.245 | 11.536 | 11.716 | 7.791 | 1.5956E+09 | 2.377  |
| 2011 | 10 | 18 | 0 | 0 | 0.435 | 11.603 | 11.967 | 7.792 | 1.5953E+09 | 4.225  |
| 2011 | 10 | 23 | 0 | 0 | 0.846 | 11.670 | 12.215 | 7.798 | 1.5941E+09 | 8.249  |
| 2011 | 10 | 28 | 0 | 0 | 1.276 | 11.736 | 12.458 | 7.809 | 1.5919E+09 | 12.519 |
| 2011 | 11 | 2  | 0 | 0 | 1.705 | 11.803 | 12.696 | 7.824 | 1.5888E+09 | 16.864 |
| 2011 | 11 | 7  | 0 | 0 | 2.128 | 11.869 | 12.928 | 7.844 | 1.5848E+09 | 21.252 |
| 2011 | 11 | 12 | 0 | 0 | 2.540 | 11.935 | 13.153 | 7.869 | 1.5798E+09 | 25.673 |
| 2011 | 11 | 17 | 0 | 0 | 2.939 | 12.001 | 13.369 | 7.898 | 1.5740E+09 | 30.126 |
| 2011 | 11 | 22 | 0 | 0 | 3.323 | 12.067 | 13.577 | 7.931 | 1.5674E+09 | 34.611 |
| 2011 | 11 | 27 | 0 | 0 | 3.688 | 12.133 | 13.775 | 7.969 | 1.5600E+09 | 39.128 |
| 2011 | 12 | 2  | 0 | 0 | 4.032 | 12.199 | 13.962 | 8.011 | 1.5517E+09 | 43.677 |
| 2011 | 12 | 7  | 0 | 0 | 4.353 | 12.265 | 14.138 | 8.057 | 1.5428E+09 | 48.258 |
| 2011 | 12 | 12 | 0 | 0 | 4.649 | 12.331 | 14.302 | 8.108 | 1.5332E+09 | 52.871 |
| 2011 | 12 | 17 | 0 | 0 | 4.916 | 12.396 | 14.453 | 8.162 | 1.5230E+09 | 57.518 |
| 2011 | 12 | 22 | 0 | 0 | 5.153 | 12.462 | 14.591 | 8.220 | 1.5123E+09 | 62.204 |
| 2011 | 12 | 27 | 0 | 0 | 5.358 | 12.527 | 14.714 | 8.282 | 1.5010E+09 | 66.926 |