

09.01.2005

time	X	Y	Center-X	Center-Y	R-Sun
23.59.32	03.0391	467.4766	512.7229	511.9710	495.6804
01.23.32	99.7969	473.2656	512.5945	511.9751	495.6764

17.01.2005

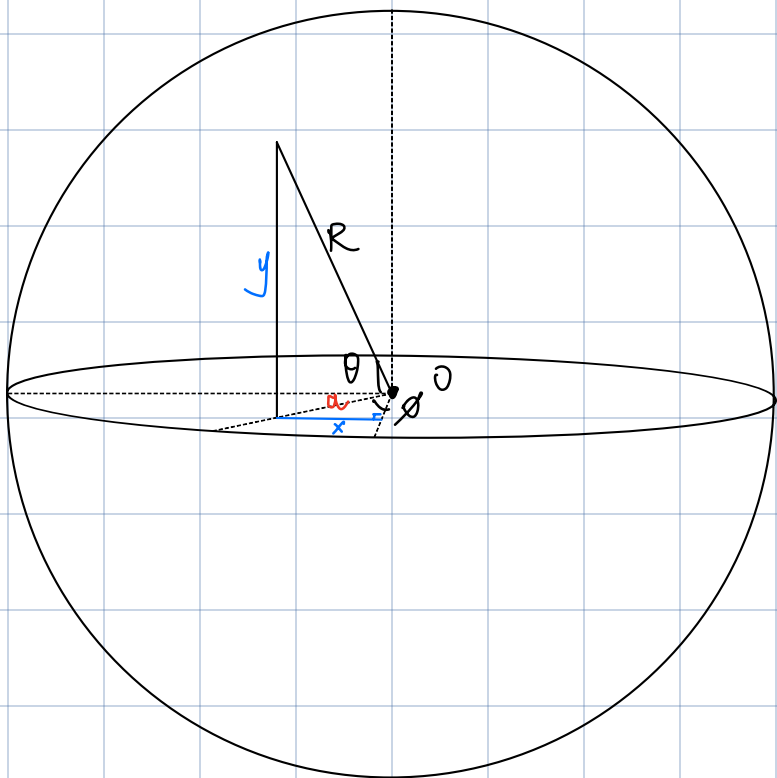
01.23.32	804.2656	479.8594	512.8961	511.9731	495.5756
15.59.32	840.2813	477.4063	512.8644	511.9624	495.5676

27.12.2009

04.51.01	216.6875	293.3125	512.7317	511.6197	496.3736
15.59.31	250.1484	294.1641	512.7270	511.6342	496.3957

02.01.2010

07.58.32	811.1875	300.3125	512.7383	511.6251	496.6172
23.59.32	855.3047	297.8984	512.7364	511.6225	496.6371



$$\theta = \arcsin\left(\frac{y}{R}\right)$$

$$a = \cos\theta \cdot R$$

$$\sin\phi = \frac{x}{a}$$

$$\Rightarrow \phi = \arcsin\left(\frac{x}{a}\right)$$