

66.13: Astronomical Data

Table 66.13.1: Astronomical constants.

Description	Symbol	Value
Astronomical unit	AU	$1.49597870 \times 10^{11} \text{ m}$
Obliquity of ecliptic (J2000)	ε	$23^{\circ}.4392911$
Solar mass	M_{\odot}	$1.9891 \times 10^{30} \text{ kg}$
Solar radius	R_{\odot}	696,000km
Earth grav. const.	GM_{\oplus}	$3.986004415 \times 10^{14} \text{ m}^3 \text{ s}^{-2}$
Sun grav. const.	GM_{\odot}	$1.32712440041 \times 10^{20} \text{ m}^3 \text{ s}^{-2}$

Table 66.13.1: Planetary Data.

Planet	Mass ((Yg))	Eq. radius ((km))	Orbit semi-major axis (Gm)
Mercury	330.2	2439.7	57.91
Venus	4868.5	6051.8	108.21
Earth	5973.6	6378.1	149.6
Mars	641.85	3396.2	227.92
Jupiter	1,898,600	71,492	778.57
Saturn	568,460	60,268	1433.53
Uranus	86,832	25,559	2872.46
Neptune	102,430	24,764	4495.06
Pluto	12.5	1195	5906.38

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