

Physical Constants and Characteristics

<i>Gravitational constant:</i>	$G = 6.673 \times 10^{-11} \text{ m}^3 \text{ kg}^{-1} \text{ s}^{-2}$
<i>Stefan-Boltzmann constant:</i>	$\sigma = 5.67 \times 10^{-8} \text{ W m}^{-2} \text{ K}^{-4}$
<i>GM Sun:</i>	$\mu_{\text{Sun}} = 1.327 \times 10^{20} \text{ m}^3 \text{ s}^{-2}$
<i>GM Earth:</i>	$\mu_{\text{Earth}} = 3.986 \times 10^{14} \text{ m}^3 \text{ s}^{-2}$
<i>GM Moon:</i>	$\mu_{\text{Moon}} = 4.903 \times 10^{12} \text{ m}^3 \text{ s}^{-2}$
<i>GM Mercury:</i>	$\mu_{\text{Mercury}} = 2.094 \times 10^{13} \text{ m}^3 \text{ s}^{-2}$
<i>GM Venus :</i>	$\mu_{\text{Venus}} = 3.249 \times 10^{14} \text{ m}^3 \text{ s}^{-2}$
<i>GM Mars :</i>	$\mu_{\text{Mars}} = 4.269 \times 10^{13} \text{ m}^3 \text{ s}^{-2}$
<i>GM Jupiter :</i>	$\mu_{\text{Jupiter}} = 1.267 \times 10^{17} \text{ m}^3 \text{ s}^{-2}$
<i>Solar Constant:</i>	$S = 1.367 \times 10^3 \text{ W m}^{-2} \text{ at } 1 \text{ AU}$
<i>Sun radius (equatorial) :</i>	$R_{\text{Sun}} = 6.955 \times 10^8 \text{ m}$
<i>Astronomical Unit:</i>	$1 \text{ AU} = 1.496 \times 10^{11} \text{ m}$
<i>Earth mass:</i>	$M_{\text{Earth}} = 5.973 \times 10^{24} \text{ kg}$
<i>Earth radius (equatorial):</i>	$R_{\text{Earth}} = 6.378 \times 10^6 \text{ m}$
<i>Earth's gravitational acceleration:</i>	$g = 9.80665 \text{ m s}^{-2}$
<i>Sidereal day:</i>	$23\text{h } 56\text{min } 04.09 \text{ sec}$
<i>Moon mass:</i>	$M_{\text{Moon}} = 7.348 \times 10^{22} \text{ kg}$
<i>Moon radius:</i>	$R_{\text{Moon}} = 1.738 \times 10^6 \text{ m}$
<i>Moon's mean distance from Earth:</i>	$d_{\text{Moon}} = 3.844 \times 10^8 \text{ m}$
<i>Mercury's mean distance from Sun:</i>	$D_{\text{Mercury}} = 0.387 \text{ AU}$
<i>Venus' mean distance from Sun :</i>	$D_{\text{Venus}} = 0.723 \text{ AU}$
<i>Mars' mean distance from Sun:</i>	$D_{\text{Mars}} = 1.524 \text{ AU}$
<i>Jupiters' mean distance from Sun:</i>	$D_{\text{Jupiter}} = 5.204 \text{ AU}$