

Astrodynamic Constants (JGM-2)

	Canonical	English	SI (metric)
<b>GEOCENTRIC:</b>			
Equatorial Radius $R_e$	1 DU	2.09256440288713x10 <sup>7</sup> ft 3963.190156983 miles 3443.918088553 NM	6378.1363 km
Time Unit	1 TU	13.44684985511 min	806.81099130673 s
Speed Unit	1 DU/TU	25936.240649101294 ft/sec	7.905366149846 km/s
Gravitational Parameter, $\mu_e$	1 DU <sup>3</sup> /TU <sup>2</sup>	1.407644174661070960x10 <sup>16</sup> ft <sup>3</sup> /sec <sup>2</sup> 9.563x10 <sup>4</sup> mi <sup>3</sup> /sec <sup>2</sup> 6.275x10 <sup>4</sup> NM <sup>3</sup> /sec <sup>2</sup>	3.986004415x10 <sup>5</sup> km <sup>3</sup> /s <sup>2</sup>
Angular Rotation	0.05883359980154919rad/TU	0.25068447733746215 deg/min	7.2921158553x10 <sup>-5</sup> rad/s
<b>HELIOCENTRIC:</b>			
Mean Distance Earth-Sun	1 AU	4.908125x10 <sup>11</sup> ft	1.4959965x10 <sup>8</sup> km
Time Unit	1 TU <sub>s</sub>	58.132821 days	5.0226757x10 <sup>6</sup> s
Speed Unit	1 AU/TU <sub>s</sub>	9.7719329x10 <sup>4</sup> ft/sec	29.784852 km/s
Gravitational Parameter, $\mu_s$	1 AU <sup>3</sup> /TU <sub>s</sub> <sup>2</sup>	4.6868016x10 <sup>21</sup> ft <sup>3</sup> /sec <sup>2</sup>	1.3271544x10 <sup>11</sup> km <sup>3</sup> /s <sup>2</sup>