Astronomical Data

Earth	**Value**
Solar mass	$(1.98855 \pm 0.00025) \times 10^{30}$ kg
Earth mass	5.97219×10^{24} kg
Earth mean radius	6.371009×10^{6} m
Mean solar day	8.6400×10^{4} s
Earth-Sun Orbit	
Aphelion	$1.52098232 \times 10^{11}$ km
Perihelion	$1.470098290 \times 10^{11}$ km
Eccentricity	0.01671123
Orbital Period	3.15581495×10^{7} s
Moon	
Moon mass	7.3477×10^{22} kg
Moon mean radius	1.73710×10^{6} m
Moon orbital period (sidereal month)	2.3605847×10^{6} s
Moon synodic period	2.5514429×10^{6} s

8.01 Classical Mechanics

Spring 2022