Astronomical Data

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

MIT OpenCourseWare https://ocw.mit.edu

8.01 Classical Mechanics Spring 2022

For information about citing these materials or our Terms of Use, visit: https://ocw.mit.edu/terms.