

Mass of sun:

$$M_{\odot} = 1.988409870698051 \times 10^{30} \text{Kg}, \quad m_{\odot} = 1.988409870698051$$

from [Astropy]

Gravitational constant:

$$G = 6.67\,430(15) \times 10^{-11} \text{ m}^3 \cdot \text{Kg}^{-1} \cdot \text{s}^{-2}$$

from ["CODATA Recommended Values of the Fundamental Physical Constants: 2018"]

Speed of light:

$$c = 299\,792\,458 \text{ m} \cdot \text{s}^{-1} = 2.99\,792\,458 \times 10^8 \text{ m} \cdot \text{s}^{-1}$$

idem.

$$1 \text{ AU} = 149\,597\,870\,700 \text{ m} = 1.49\,597\,870\,700 \times 10^{11} \text{ m}$$

from [International Astronomical Union](#)

$$1 \text{ Persec} = 3.085\,677\,581\,491\,367 \times 10^{16} \text{ m}$$