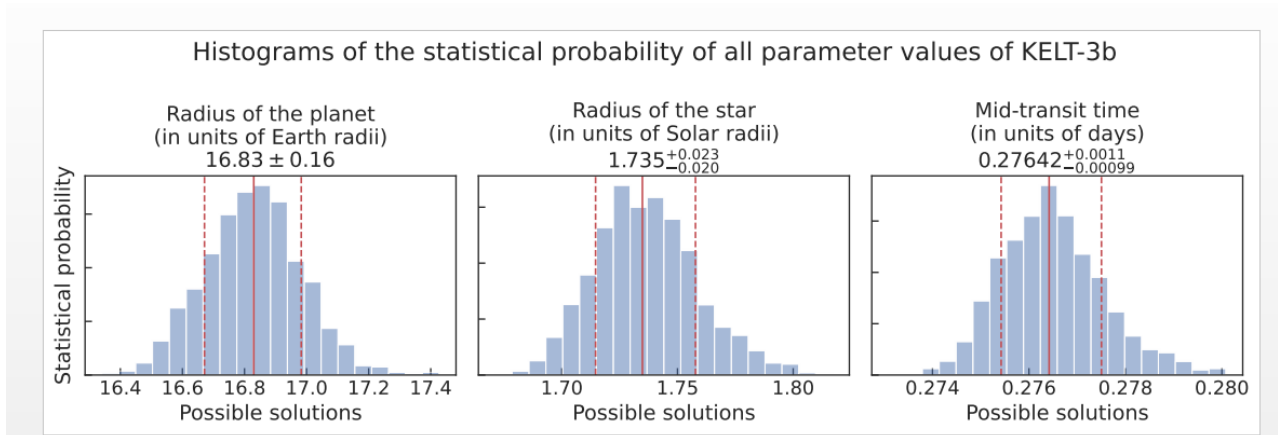
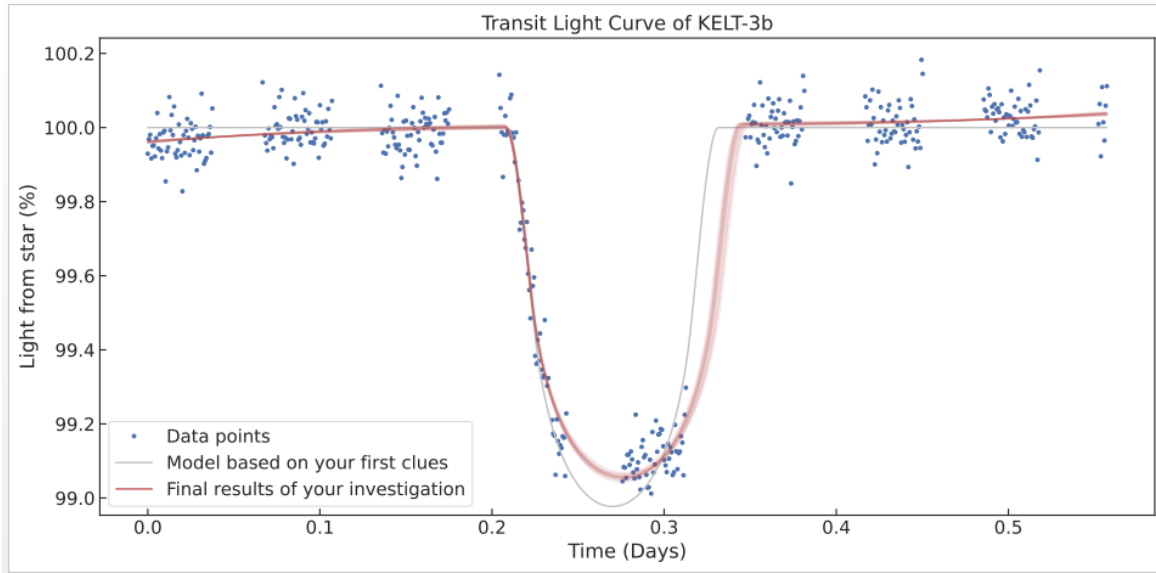


KELT-3b

1. DATA ACCESS



• Hacer un exoplaneta (Kalt-eb)

1. Período a los días
2. Tamaño del exoplaneta

$$\text{Relación de transitoria} = \frac{\pi R_p^2}{\pi R_s^2} \times 100$$

$$R_p = 1,7$$

$$P = 0,9$$

$$P = \frac{R_p^2}{R_s^2} \times 100$$

$$R_s = 10^9 R_p$$

$$R_p^2 = R_s^2 \times \frac{P}{100}$$

$$R_p^2 = \sqrt{1,7 \times 0,9 \times 10^9}$$

$$R_p = 0,161 R_s$$

$$R_p = 0,161 \times 10^9 = 17,5 R_{\text{Earth}}$$

3. Período Orbital Tiempo en que tarda en completar una órbita completa alrededor del sol

$$T^2 = \left(\frac{4\pi^2}{GM_s} \right) d^3$$

$$G_s = 6,67430 \times 10^{-11} \text{ m}^3 \text{ Kg}^{-1} \text{ s}^{-2}$$

$$M_s = 1,96 \times 10^{30} \text{ Kg}$$

$$3,90 \times 10^{26} \text{ Kg}$$

$$M_p = 1,9884 \times 10^{30} \text{ Kg}$$

$$T = 2,20334 \text{ años}$$

$$87600 \text{ h} = 233,573 \text{ d}$$

$$d = \sqrt[3]{\frac{GM_s T^2}{4\pi^2}} = \sqrt[3]{\frac{6,67430 \times 10^{-11} \times 3,90 \times 10^{26} \times (233,573 \text{ d})^2}{4\pi^2}}$$

$$= 7,118 \times 10^7 \text{ m}$$

$$= 0,118 \text{ AU}$$

$$= \frac{14,959787 \times 10^{12} \text{ m}}{1000000} = 14,959787 \text{ km}$$

Que a Temperatura y habitabilidad
Para la composición

$$\rho = \frac{M}{V} \rightarrow V = \frac{M}{\rho}$$

$$R_p = 17,5 R_{\text{Earth}} = \frac{6378 \text{ km} \times 17,5}{1 \text{ km}} = 11161 \text{ km}$$

$$V = 1,1161 \times 10^{10} \text{ km}^3$$

$$M_p = 517,1 \text{ Tierra} = \frac{5,9722 \times 10^{24} \text{ Kg}}{3,685 \times 10^{23} \text{ Kg}} = 1,403 \text{ Tierra}$$

$$V_p = 3,14 \times (1,1161 \times 10^{10})^3$$

$$V = 5,83 \times 10^{30} \text{ km}^3$$

$$= 5,3 \times 10^{-4} \text{ Kg} \text{ km}^3$$

$$6,3 \times 10^{-4} \text{ Kg} \times \frac{1000 \text{ g}}{1 \text{ kg}}$$

$$0,63 \text{ gr} \times \frac{(1 \text{ km})^3}{1000000 \text{ m}^3}$$