

## TRAPPIST-1 Scale Model

I started this project with the star of the TRAPPIST 1 system. I picked 500 pixels to be the width of the star. With the star being approximately 160,000 km across this gives each pixel the width of 320 km, which is just about the width of Iceland. Using this scale the Earth is 40 pixels across. All of the planets in this system are Earth sized, and they vary from 30 to 45 pixels across, or 9,600 to 14,400 km.

All of the planets orbit extremely close to their star, with their orbits being very short. The light from this star is almost all in the infrared, meaning it does not produce light that is visible by humans. Clicking on the star will change it to the equivalent size of the Sun. This star is so small that it is only slightly larger than Jupiter.

Clicking on the values on the top will bring you to the corresponding planetary object. The distance from TRAPPIST A is listed in the top right corner. Clicking on it will change the units. From the very small and some what ridiculous horse length, 2.4 meters, to a light year,  $9.46E+15$  meters. Double clicking on the background will activate light speed and will scroll the window at the same speed that light travels. All it takes is another double click to disable the light speed.