

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging luashle1 Planet 2

Saturday 23rd October, 2088

We have identified what may be an indication of extraterrestrial intelligence, as well as the planet where it may have originated. This document summarizes the information gathered so far about the candidate message and its candidate planet of origin.

Potential evidence for extraterrestrial intelligence

Astronomers have detected a broadband radio transmission that appears to have originated from this planet's solar system. The transmission is believed to contain an image and is displayed below with the most likely aspect ratio. The transmission is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

```
110110101010111110111100100100110101010100110111  
110110011110100011010001011001101010111000010001  
000000101110011101101110000010101000110010011000  
111101010100011111100110101101001001011111000010  
101011000000000110101001100101001011010001010110  
011010000110100011001111010101101110001010111011
```

This signal was first noticed at UTC 2088-06-06/01:51.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0321
Stellar Mass (Solar Masses)	0.422
Distance to Star (lightyears)	179.5
Planet Mass (Earth masses)	0.6
Atmospheric Pressure (atm)	1.4

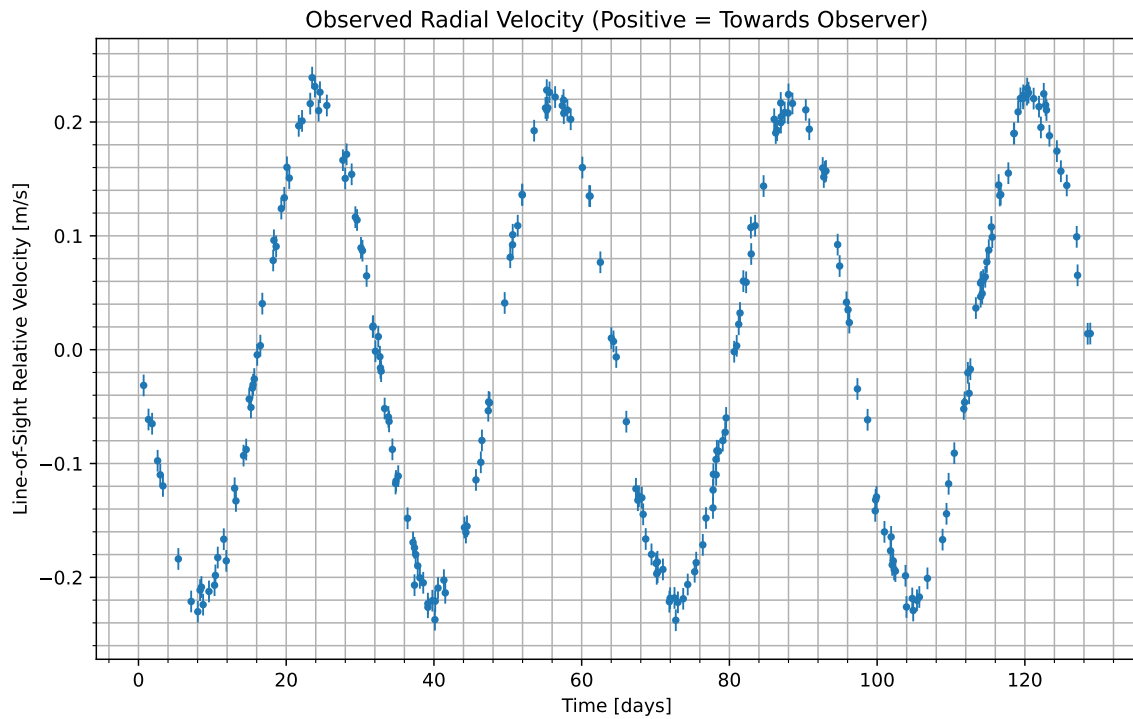


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2088-06-06/21:45. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	56.7
CO_2	35.6
H_2O	7.7

Gas Abundance (percent by volume)

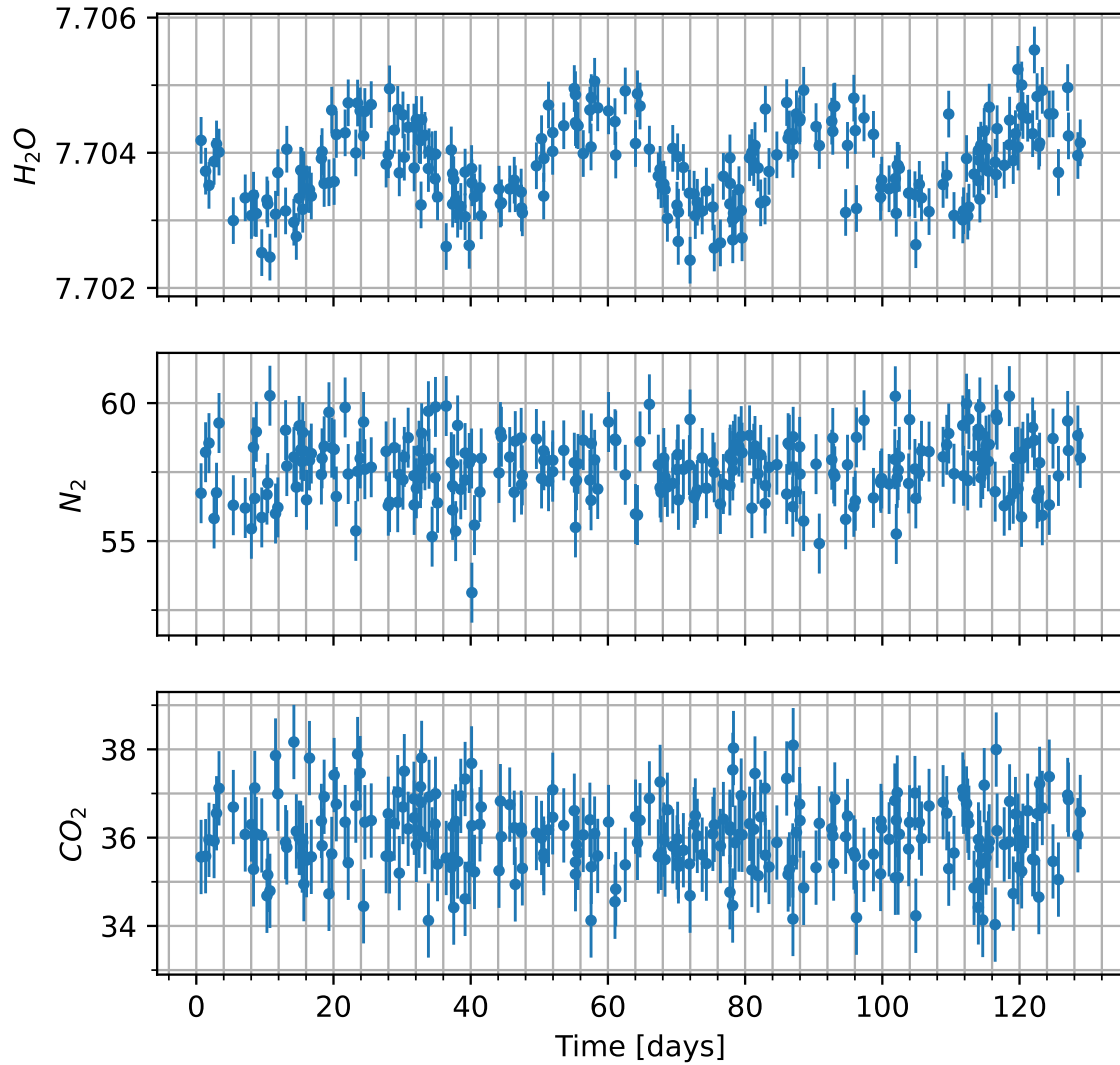


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

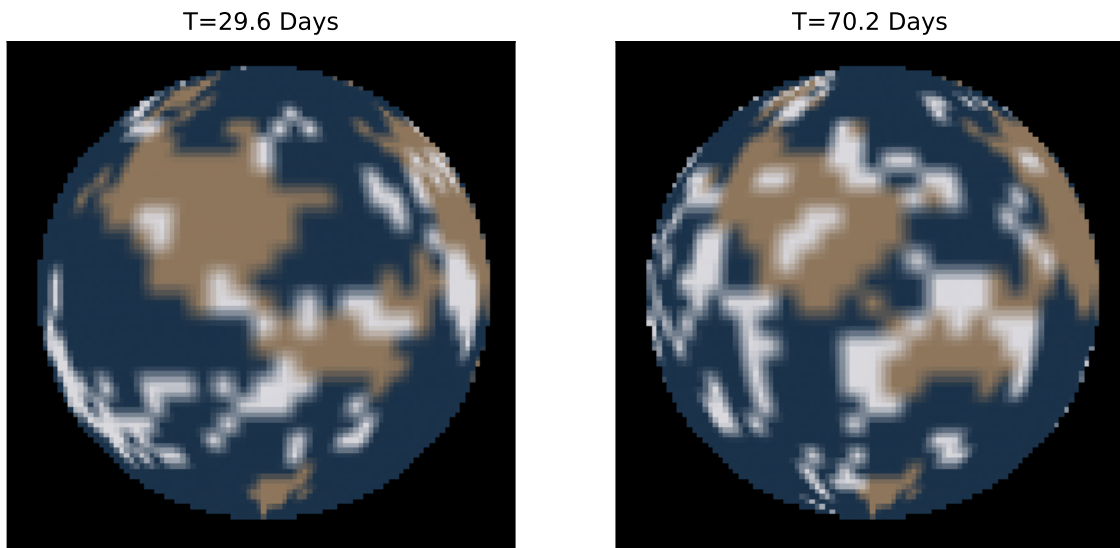


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to be liquid regions of some kind. Other colors present reflect the visible color as best as we are able to measure.