

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging otoolek4 Planet 2

Thursday 7th November, 2097

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 microwave 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 lasted a short duration and then stopped. The transmission is shown below:

```
010011000101001101011011010101111001011101001010100110011010  
000101011001110111011011110111010001000011111010110000110100  
10110001000100101010011111100101000111000111111011110010000  
110001000101100001111110101010011111000100100110010011110110  
000000111100110000110111011010110000111000011101100100101010  
100100000001111000111001100100111001100100011101110101001010
```

This signal was first noticed at UTC 2095-05-20/03:15.

Parameters of the candidate planet of origin and its host star

Spectral Type	G
Stellar Luminosity (Solar Units)	0.894
Stellar Mass (Solar Masses)	0.972
Distance to Star (lightyears)	330.7
Planet Mass (Earth masses)	2.4
Atmospheric Pressure (atm)	5.6

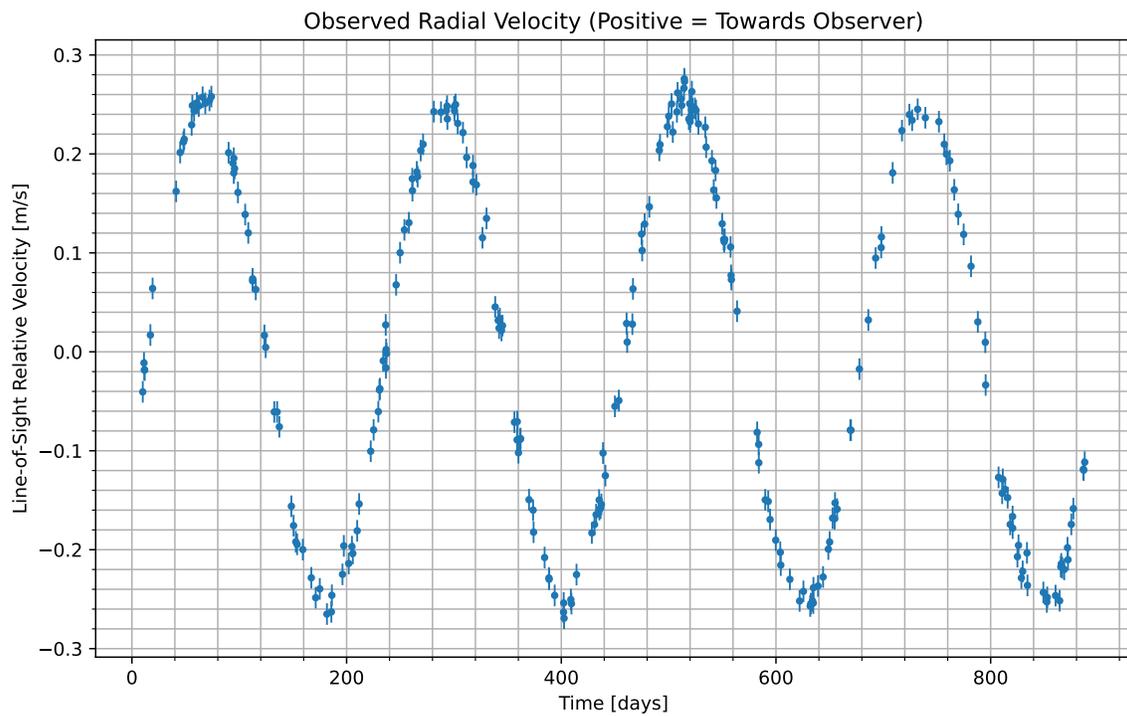


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2095-05-21/14:26. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	35.1
CO_2	38.5
H_2O	26.4

Gas Abundance (percent by volume)

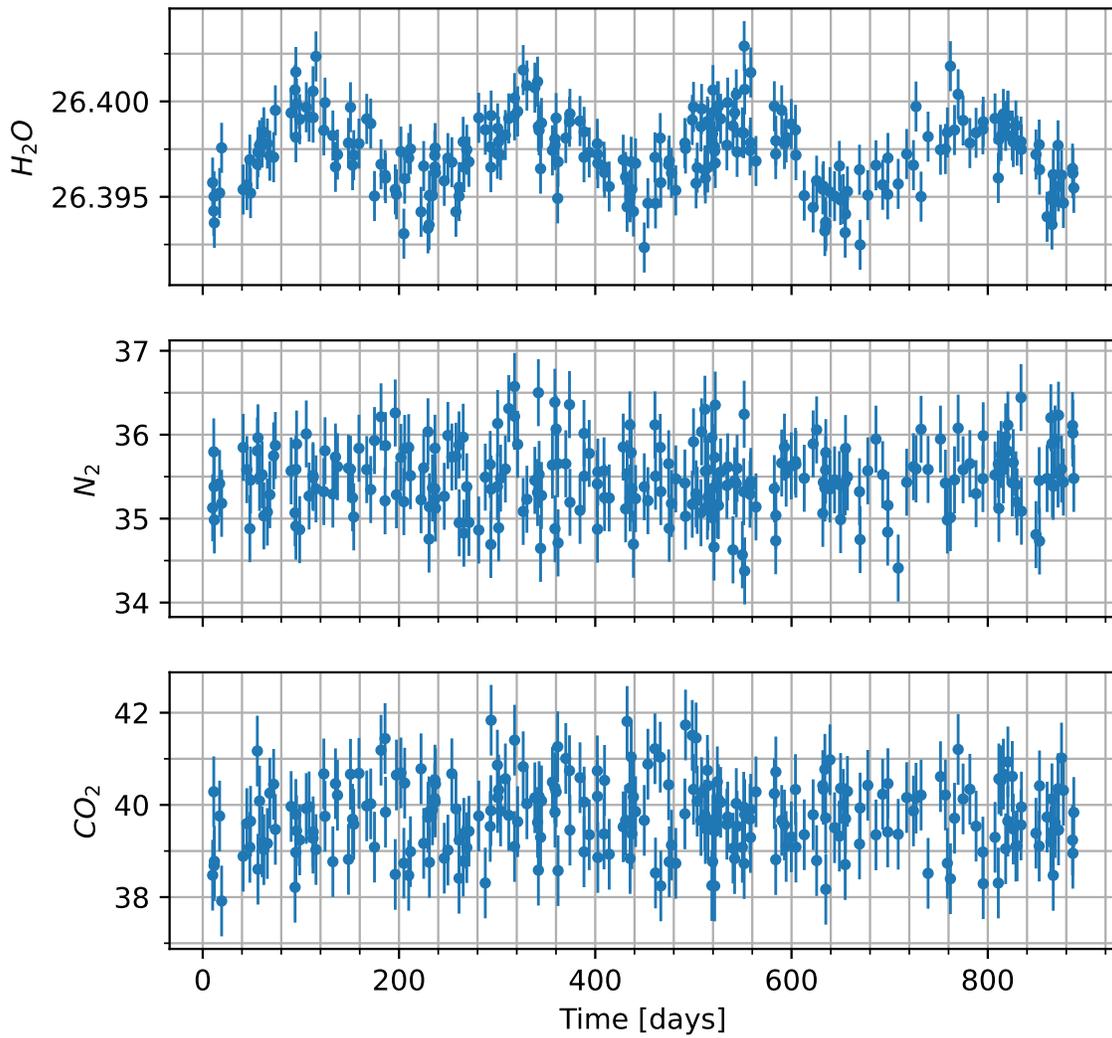


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

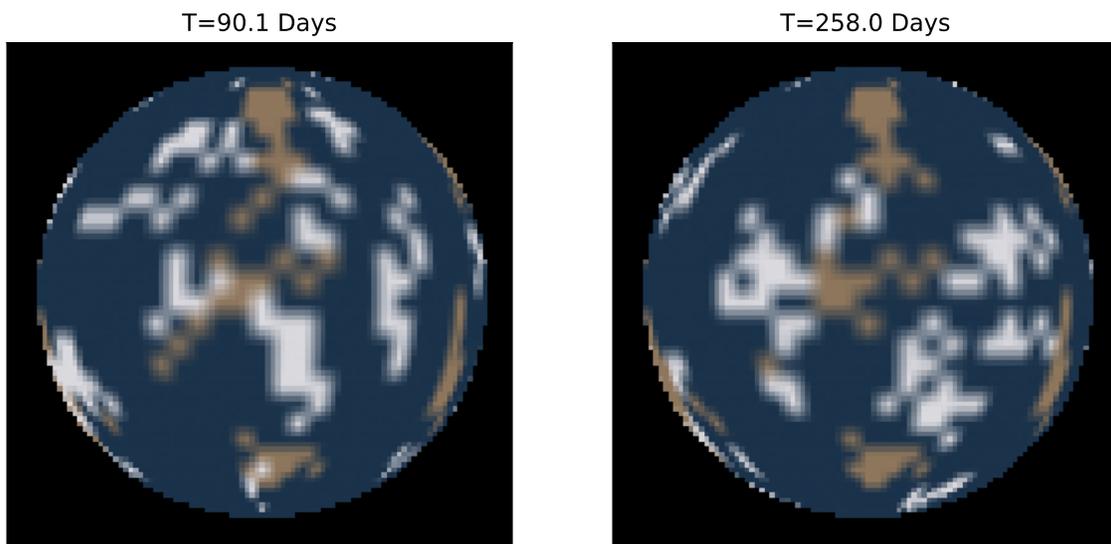


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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