

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging pipenath Planet 3

Saturday 3rd September, 2072

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 is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

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000111011011100100101001101010110111101011101011010  
0110000101000001100011111101011111111111110101110010  
101100011101111110101001111010111110010011111001101  
110011101001101000101010100100011010101000001111001  
010010111000011001011001000101010111100000111001001  
01110100111100111100101011111100011010101001010010  
00101000101001101010111001001011111111001101100011  
001010110100101110110111100010101111101111111101011  
100110001100001111110000110000011110110001110100100  
110110010100000111110000010101001011001010110111010
```

This signal was first noticed at UTC 2070-04-27/06:41.

Parameters of the candidate planet of origin and its host star

Spectral Type	G
Stellar Luminosity (Solar Units)	1.11
Stellar Mass (Solar Masses)	1.03
Distance to Star (lightyears)	1423.6
Planet Mass (Earth masses)	4.3
Atmospheric Pressure (atm)	1.5

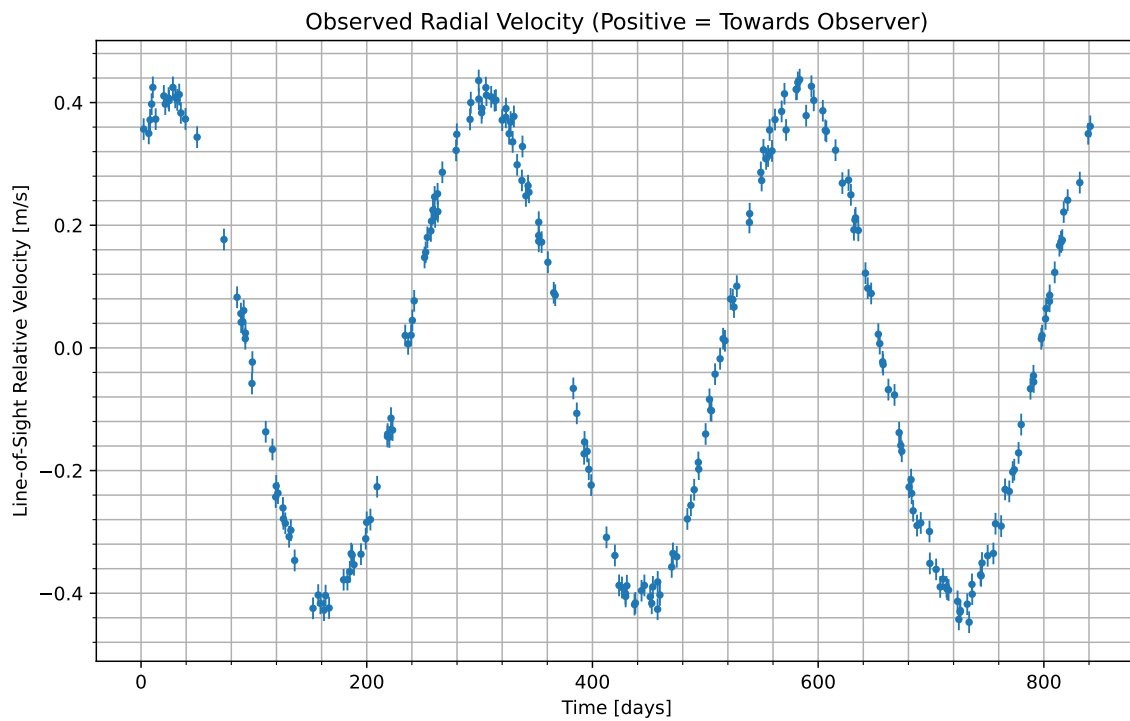


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2070-04-30/01:11. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	51.7
CO_2	34.5
H_2O	13.8

Gas Abundance (percent by volume)

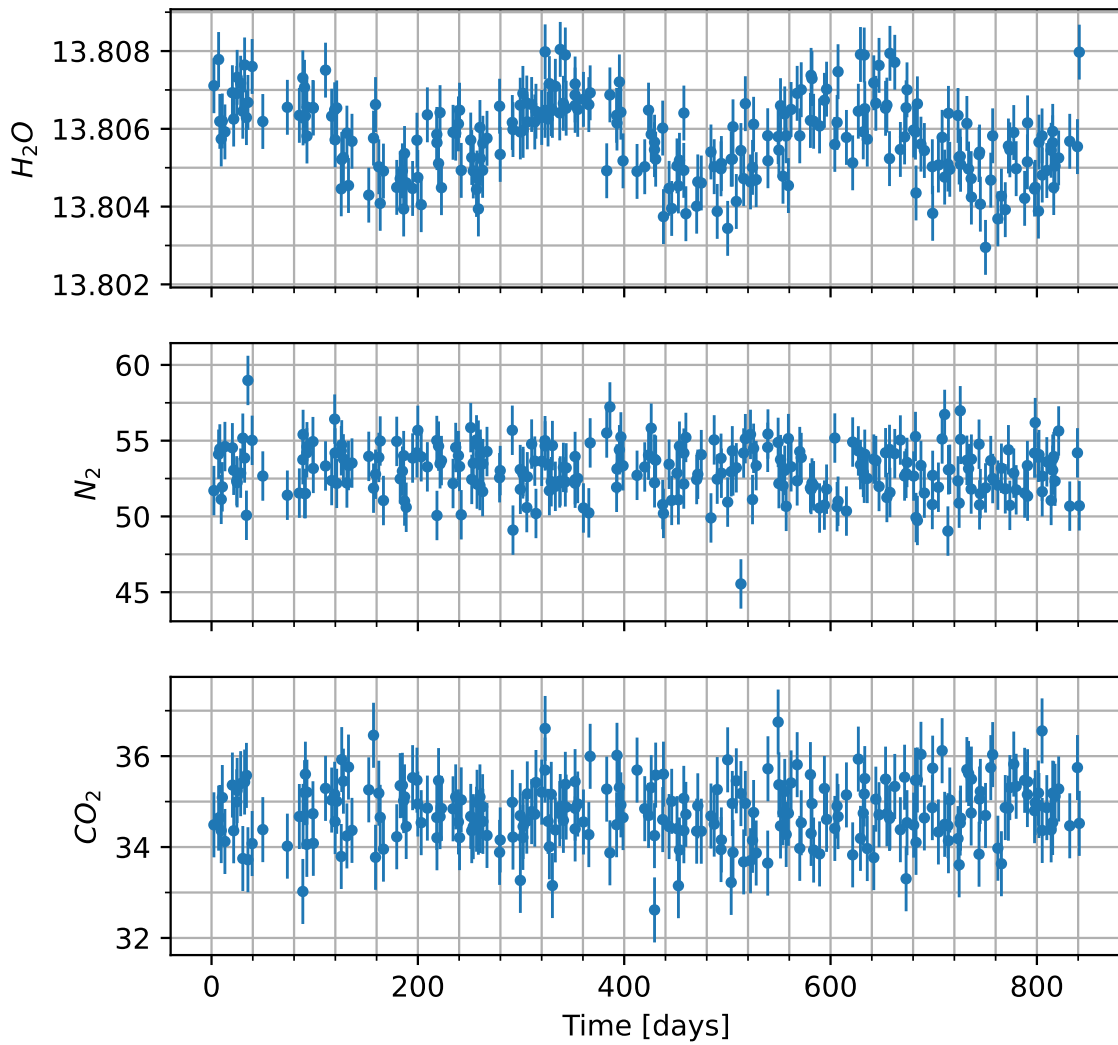


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

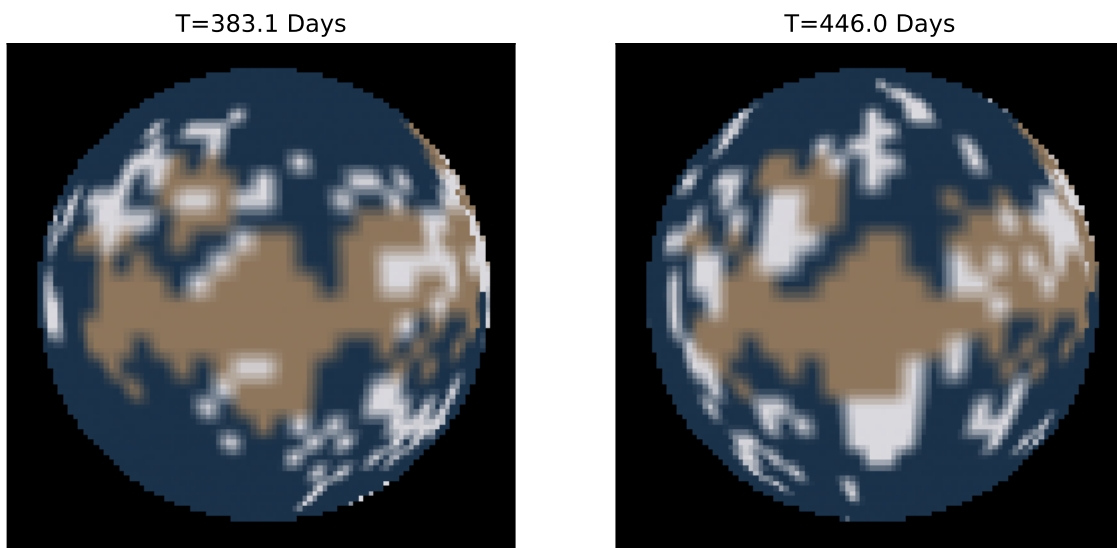


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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