

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging wilki198 Planet 2

Saturday 26th January, 2075

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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01101100111110100111110010111111001011000110100  
00001100011110111011100110001010000100111110000  
01011000101100010111010001011111010111010111111  
1001011000000110111000110111010001111110100000  
11001110011100001000010110110001011110001010001
```

This signal was first noticed at UTC 2067-07-12/17:19.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	2.16
Stellar Mass (Solar Masses)	1.21
Distance to Star (lightyears)	353.8
Planet Mass (Earth masses)	0.3
Atmospheric Pressure (atm)	1.7

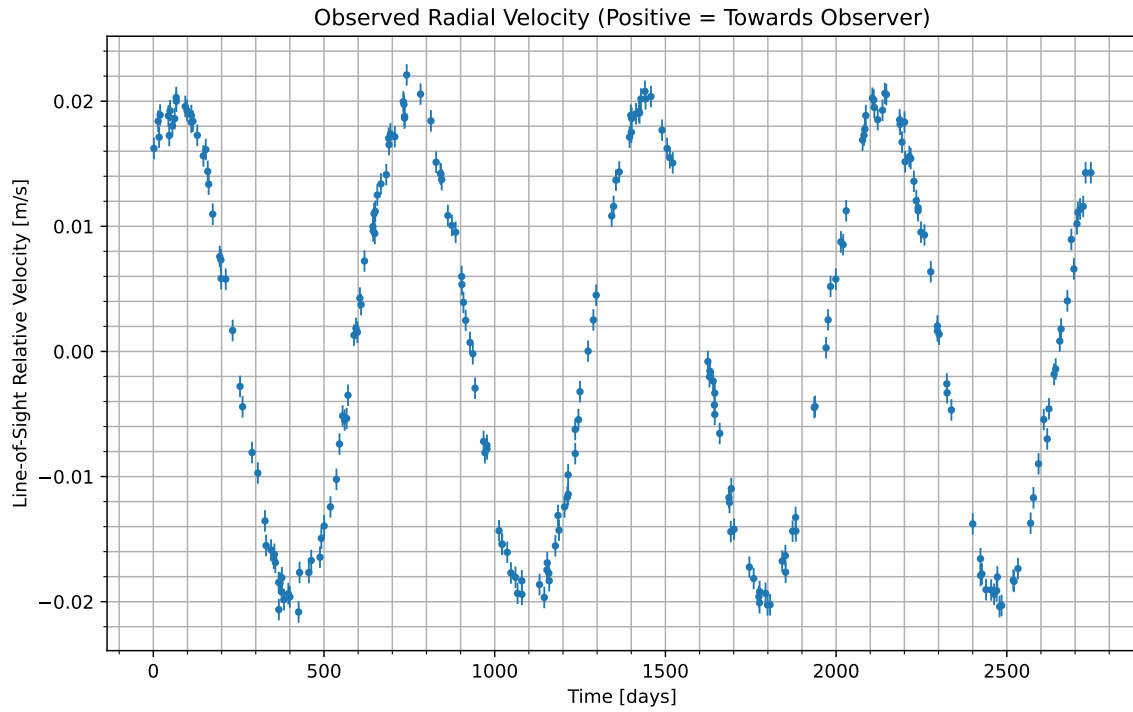


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2067-07-13/13:45. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	45.4
CO_2	33.3
H_2O	21.3

Gas Abundance (percent by volume)

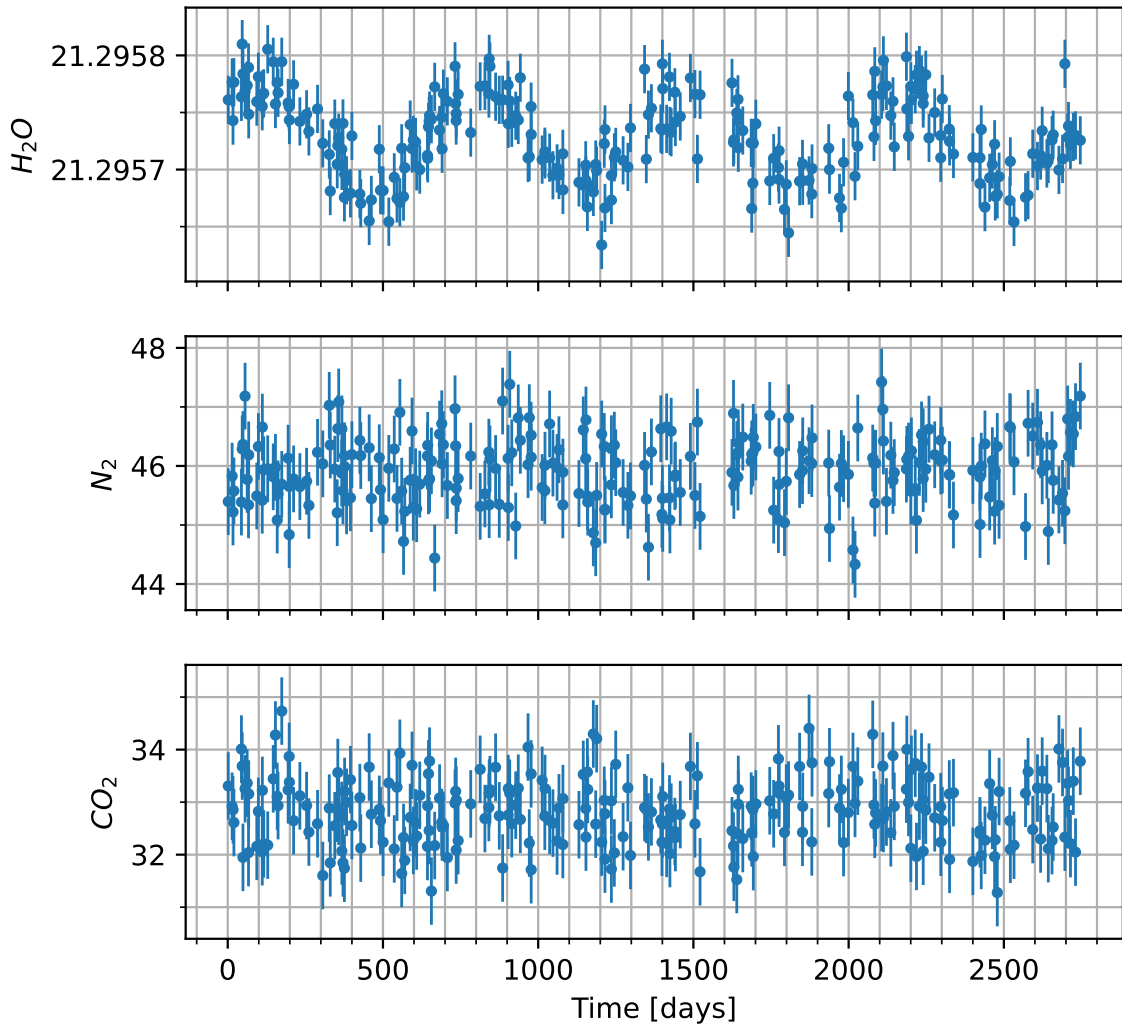


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=116.0 Days



T=289.3 Days

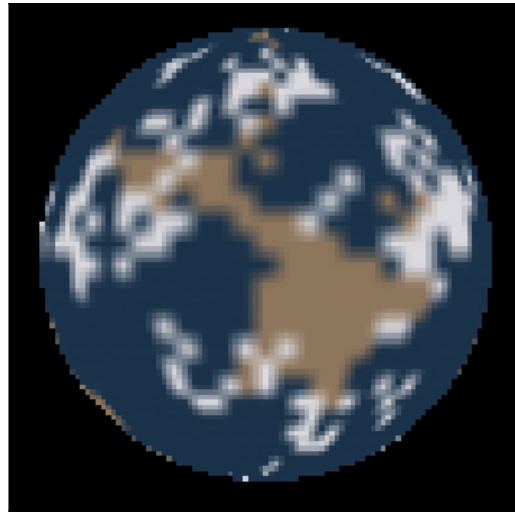


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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