

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging chenz481 Planet 2

Monday 7th January, 2092

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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0100101100011000010001111001111111011010100111011101100110010100001010001110  
1000010100001000011010111110000011100111001011111101111011000101110111001001  
0011101101110111011101111011110110001001110110010110100110011110011100010110  
00011001011100000111101000010101100000100010101010000000110100011110110001101  
11110110000011001101000101001011100011111010000011011101011001101010001001010
```

This signal was first noticed at UTC 2090-09-02/22:34.

Parameters of the candidate planet of origin and its host star

Spectral Type	G
Stellar Luminosity (Solar Units)	0.555
Stellar Mass (Solar Masses)	0.863
Distance to Star (lightyears)	123.2
Planet Mass (Earth masses)	2.7
Atmospheric Pressure (atm)	0.5

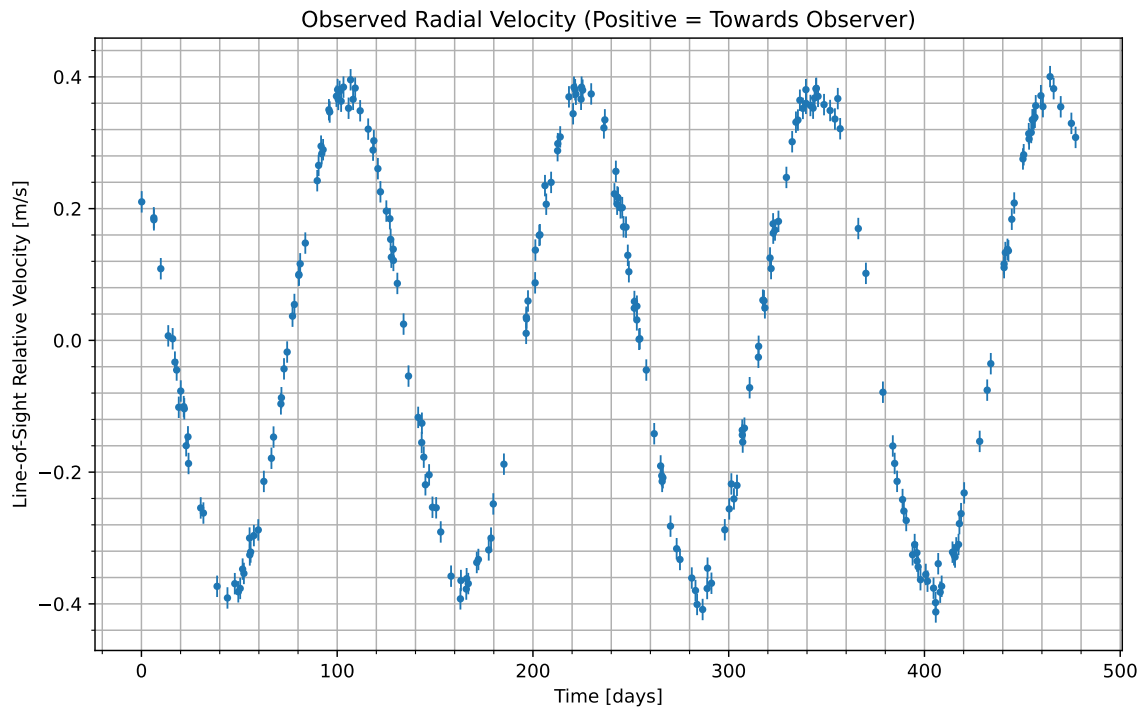


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2090-09-05/11:41. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	37.8
CO_2	51.6
H_2O	10.6

Gas Abundance (percent by volume)

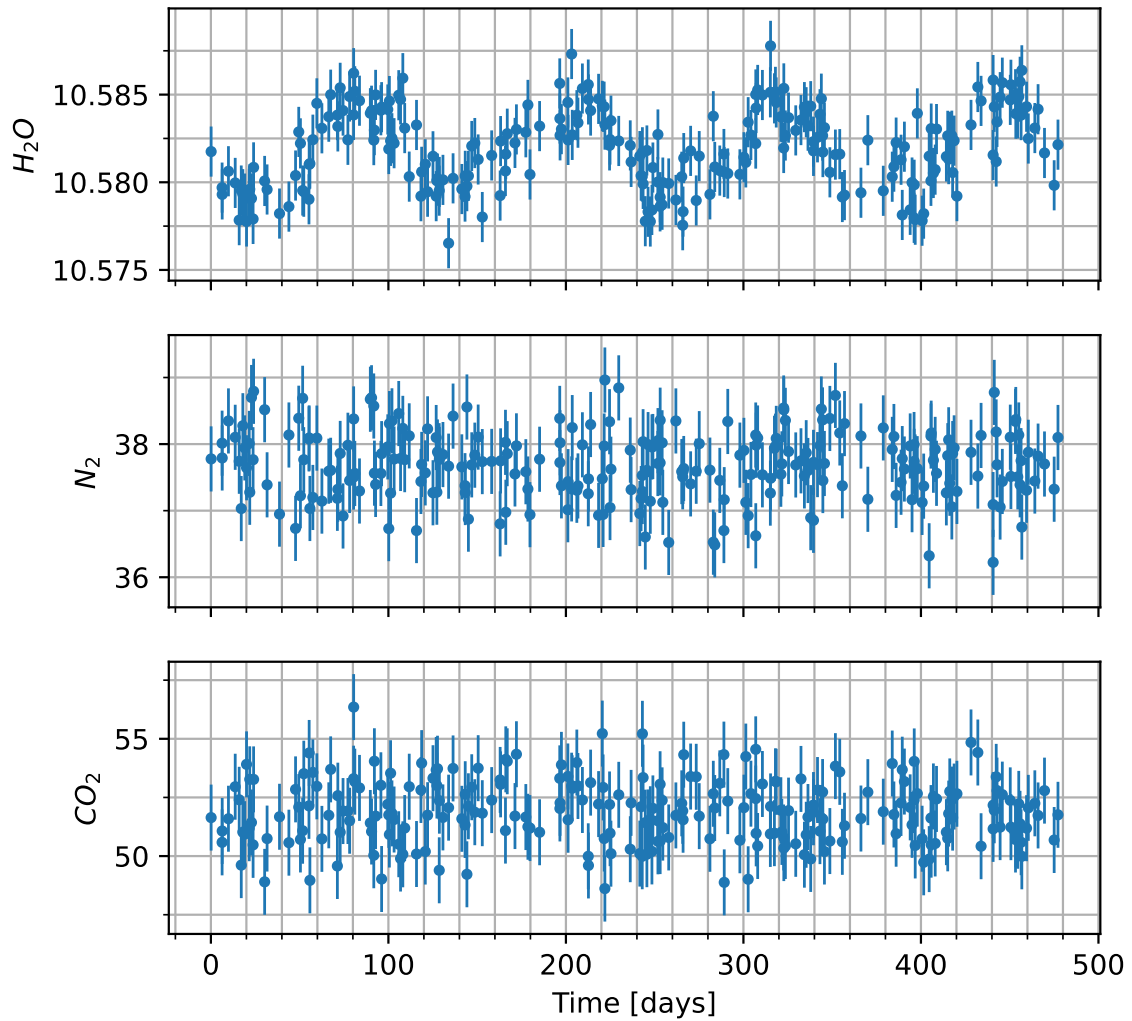


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

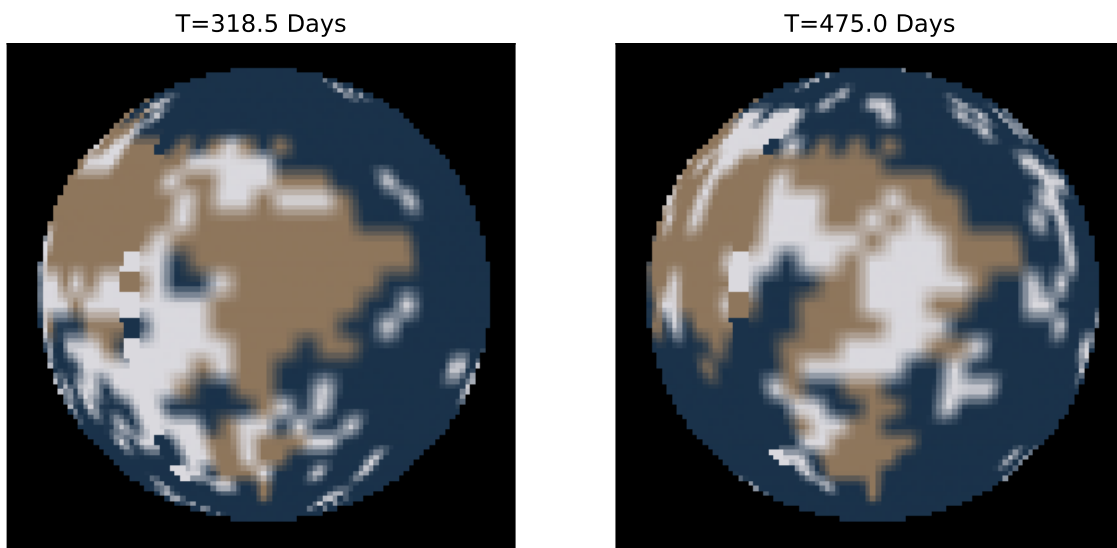


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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