

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

Friday 20th March, 2099

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:

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01100001001000000101001000000001000000110100100100110000001100110000111001000101  
01000000110000010110110001001111011110101111110110000010111101101111000010111100  
11101100101111001010000101110100001000100001100010101101000100010001001000001111  
10101100010100001010001110011011110011110000011111001100100000100011010011110100  
01011011001000110010100000010011000110101001001111000001011010111111100101000000  
01001101111000011001010110001001111010111000001110110000101011010010110100010110  
11111011110111101000111101111110010111110101001001110110011010011001011011101010  
01111000010100011001100011010010100000110110001110110111000111100011010010010100  
10110101010011001111110010100100111001011110101011110000111000001001000011100001  
01011110110111010000111001111011011110001101001000110001101101001010111000100110
```

This signal was first noticed at UTC 2092-05-22/15:18.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.1
Stellar Mass (Solar Masses)	1.33
Distance to Star (lightyears)	650.6
Planet Mass (Earth masses)	3.9
Atmospheric Pressure (atm)	6.5

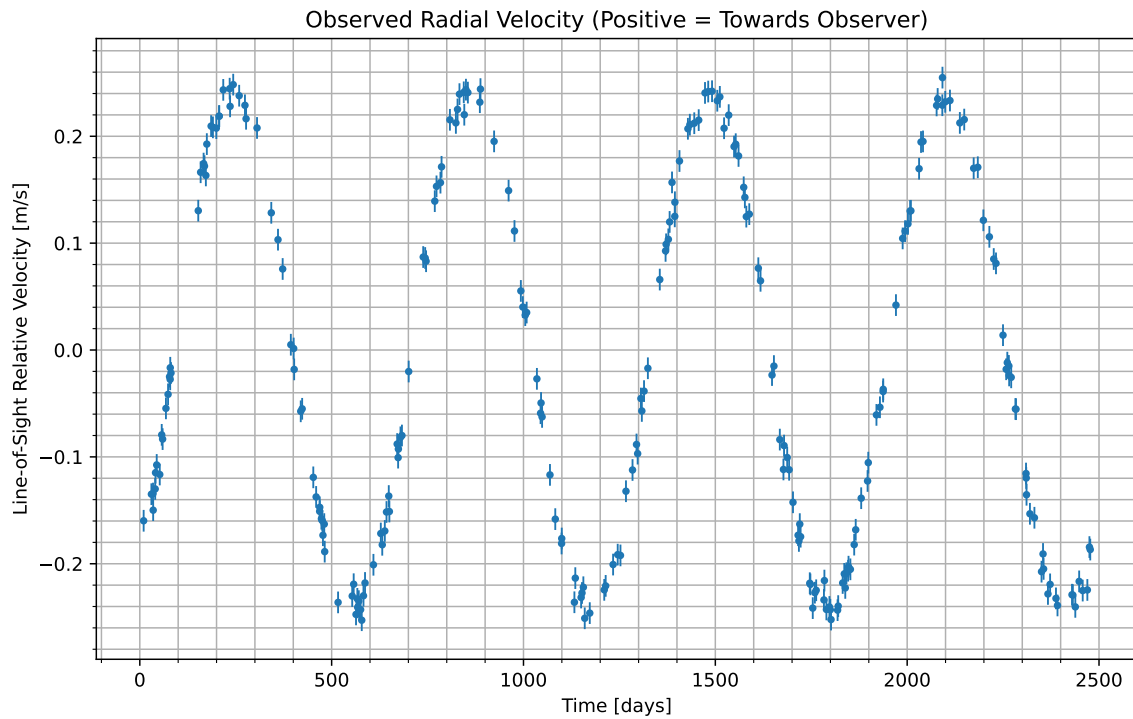


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2092-05-25/10:35. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	30.4
CO_2	61
H_2O	8.58

Gas Abundance (percent by volume)

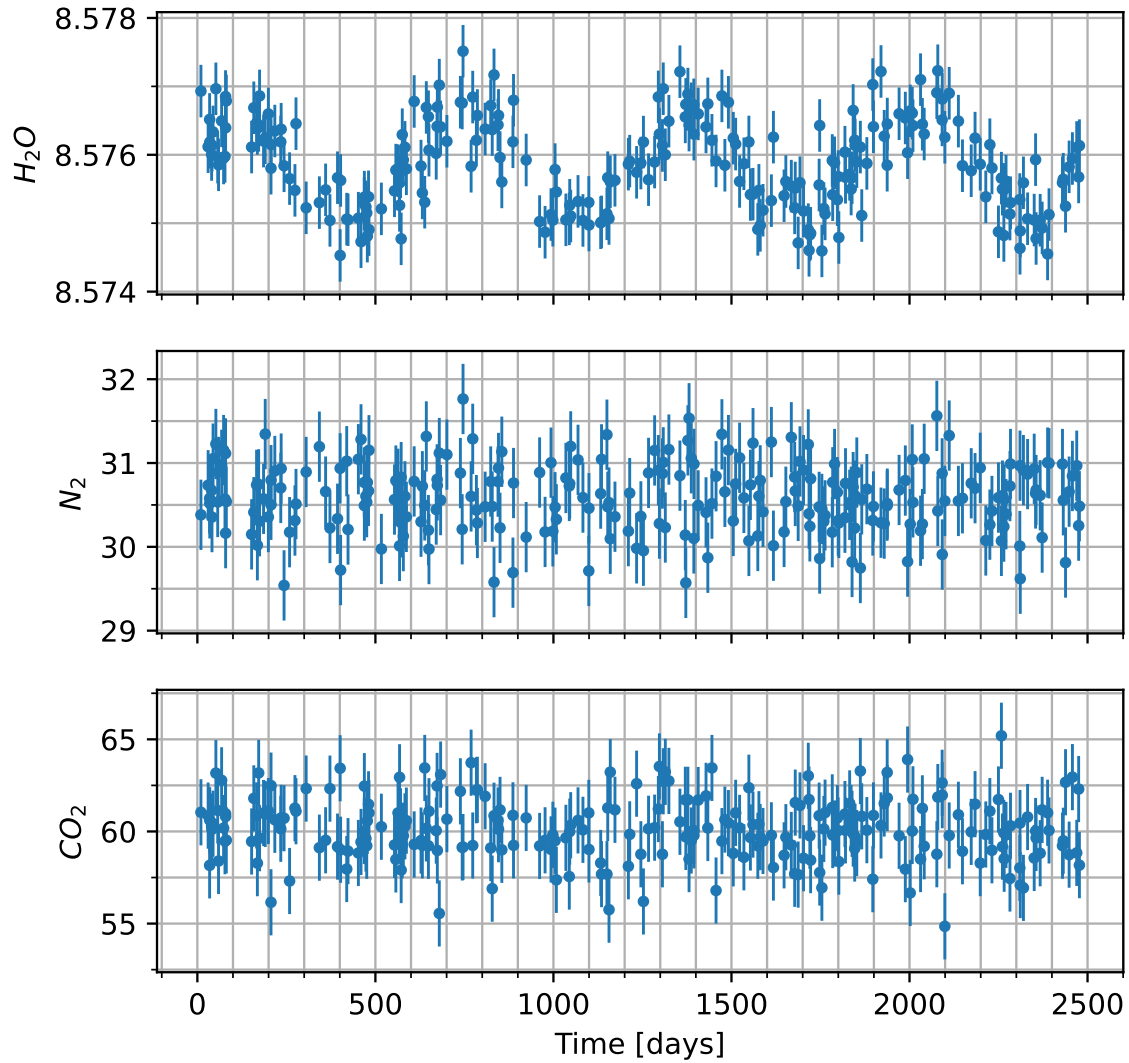


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=608.9 Days



T=746.1 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.