

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

Tuesday 31st August, 2088

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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111110001100101001010110000010111001100001001001001100011000111110110011  
010010001101110010100000111110010101000001100000101011000110100111101111  
011100001010100010001000011101001001011000001000100110111011100111111101  
00010000101001100000000100010000011010001010000010110101111110110010110  
101000101011111001101110110100001011110000011111000001010111000000000001  
000110011001010001111100110100001010010011101000111111011100001000011111  
100110100100000100011111011100100101000000011100010111000101110101010101  
010011100011110001011111000000100000000100010100001101110100100001110111  
001001100101100101100001101010011101010001111100000010011011000000110000  
10101111101111111110100111001011010100101100010110101110100011111010000
```

This signal was first noticed at UTC 2084-10-21/03:54.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.22
Stellar Mass (Solar Masses)	1.34
Distance to Star (lightyears)	1430.0
Planet Mass (Earth masses)	2.3
Atmospheric Pressure (atm)	6.0

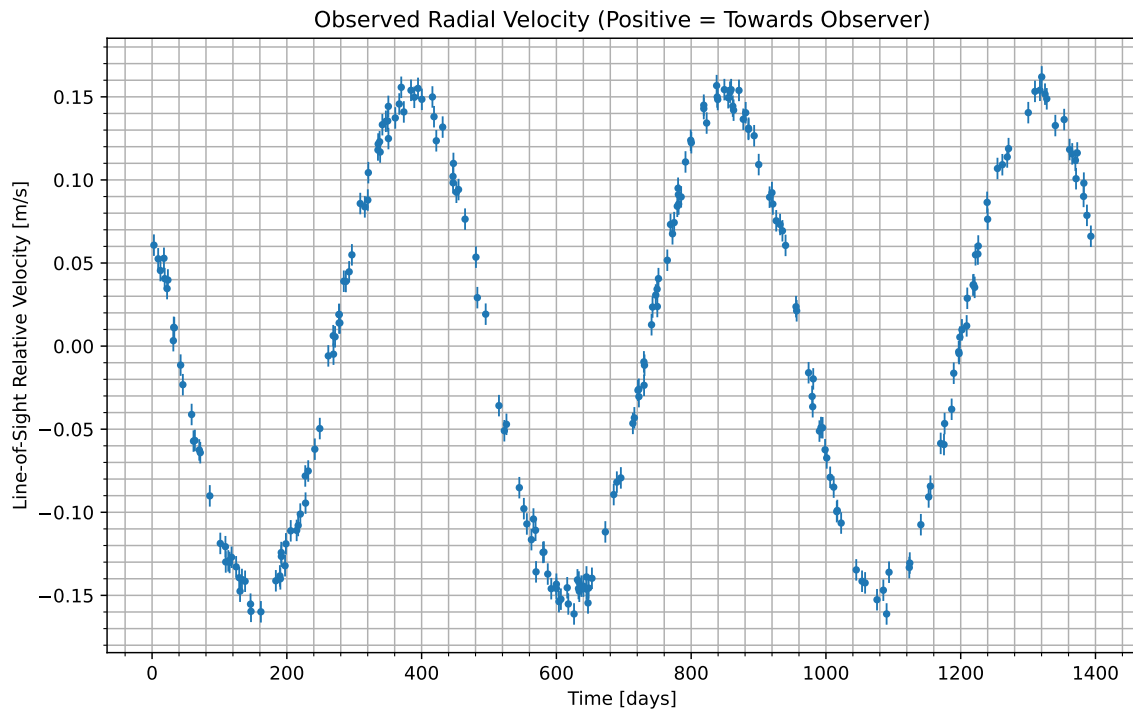


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2084-10-23/13:28. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	19.9
CO_2	63
H_2O	17.1

Gas Abundance (percent by volume)

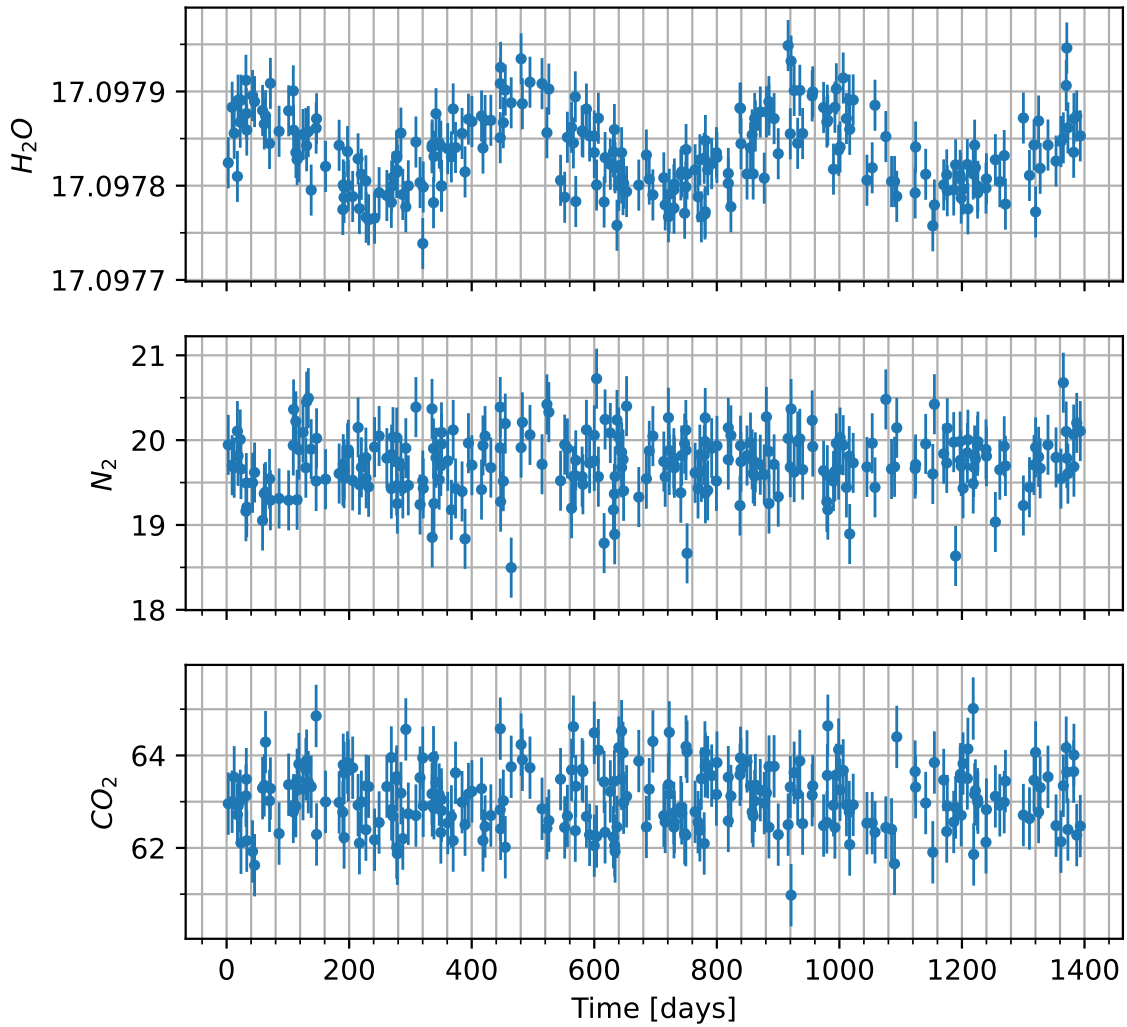


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

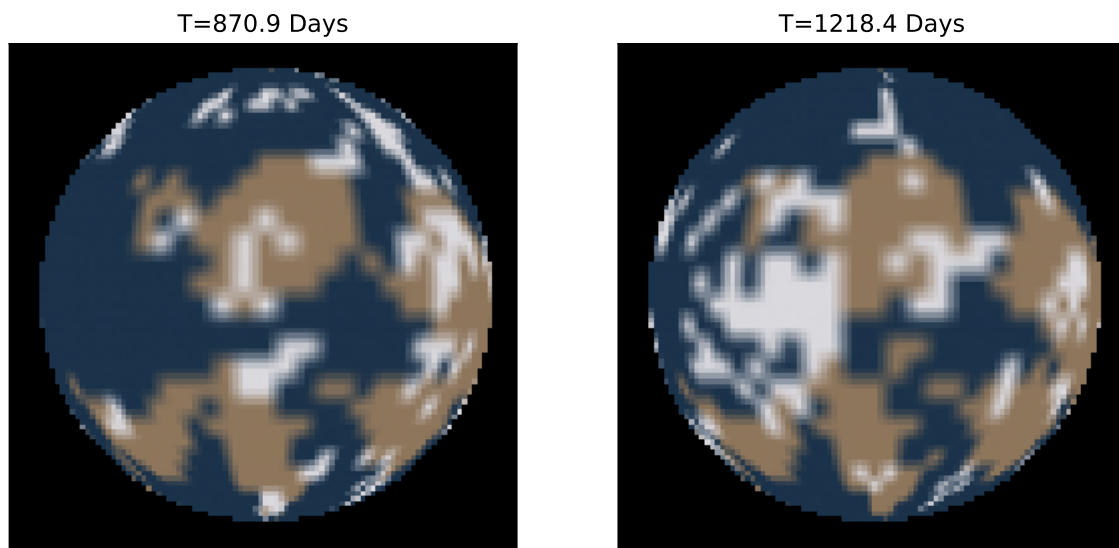


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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