

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging wuzezho1 Planet 1

Monday 3rd January, 2095

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 radio 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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1110000101100110000001000010010100010101010111001111010011000101110001  
110100011001111101100111011111000000101101000011001000110010001110100  
1011100011101010110011001011000000100101111110111100110100110111100110  
1000011010001001001111000100101110010001010100001110001010110110111011  
0000001000000111100011100000011001110111110110011111100110011101100110  
0011010001111000110010011110000111100010001001010000010100111011010111
```

This signal was first noticed at UTC 2094-05-20/23:09.

Parameters of the candidate planet of origin and its host star

Spectral Type	K
Stellar Luminosity (Solar Units)	0.089
Stellar Mass (Solar Masses)	0.546
Distance to Star (lightyears)	284.5
Planet Mass (Earth masses)	1.0
Atmospheric Pressure (atm)	27.1

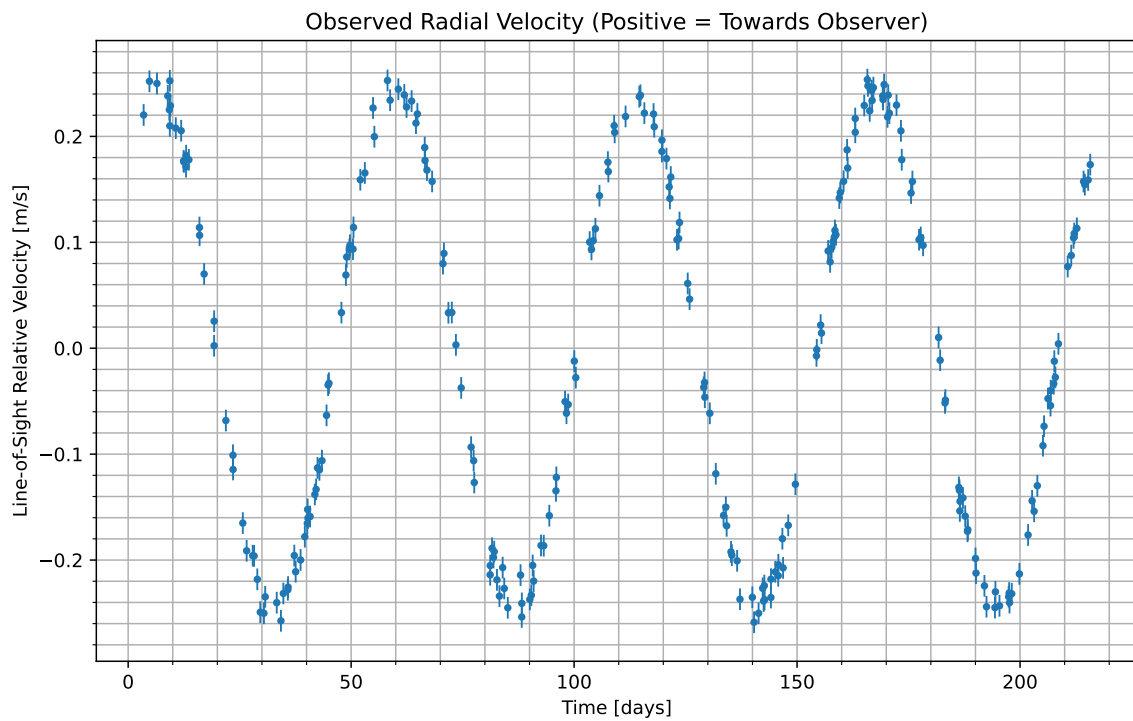


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2094-05-23/02:00. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	17.2
CO_2	48
H_2O	34.8

Gas Abundance (percent by volume)

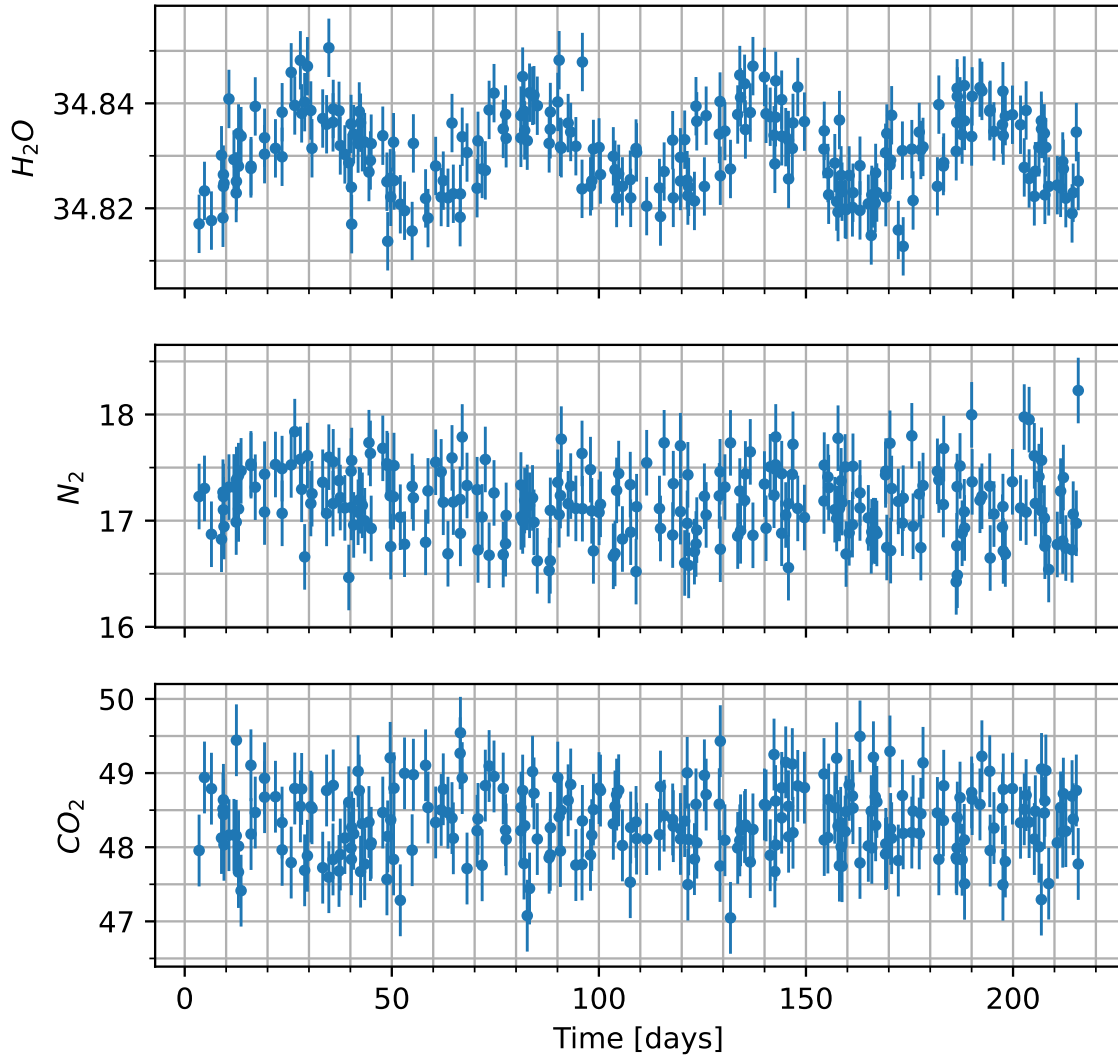


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

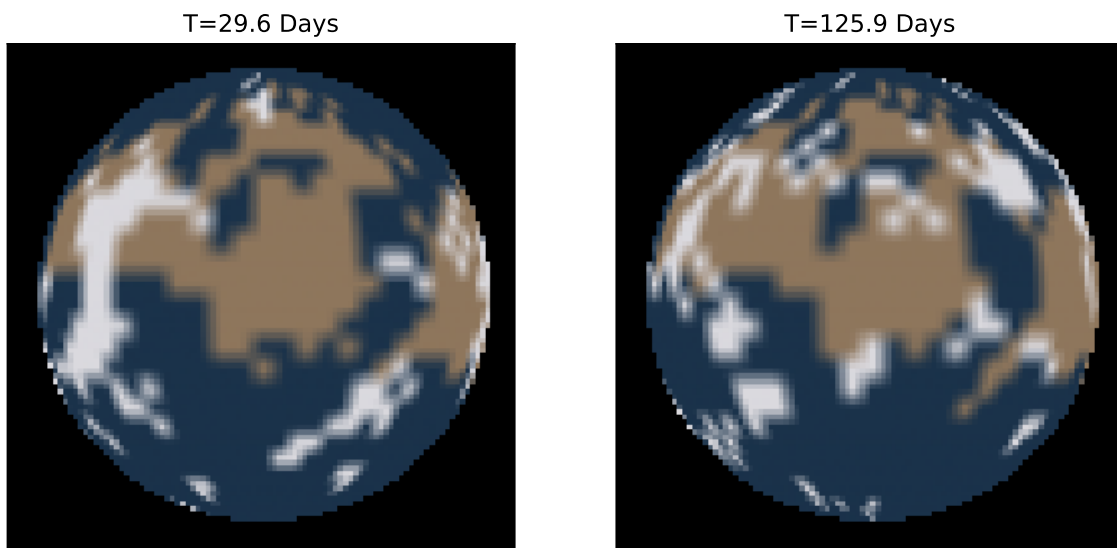


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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