

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging dongxue6 Planet 1

Friday 31st May, 2097

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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000000111010011101101011101010000101110110111  
111001001011110010100001110110000001010111011  
000100111101101111101111000010011110010110011  
100010111100000000011010110110101011001011001  
101010111001011001110110000110101100111010110
```

This signal was first noticed at UTC 2097-04-05/23:41.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0118
Stellar Mass (Solar Masses)	0.309
Distance to Star (lightyears)	7.3
Planet Mass (Earth masses)	0.8
Atmospheric Pressure (atm)	12.6

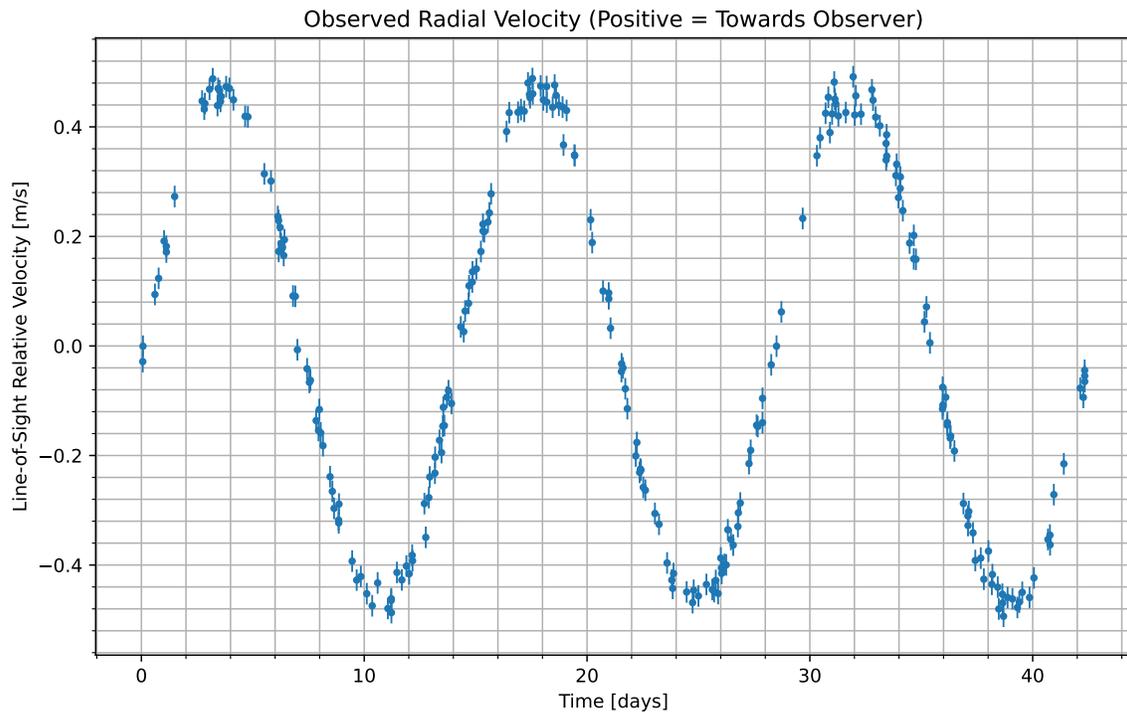


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2097-04-06/09:38. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	16.6
CO_2	68.7
H_2O	14.6

Gas Abundance (percent by volume)

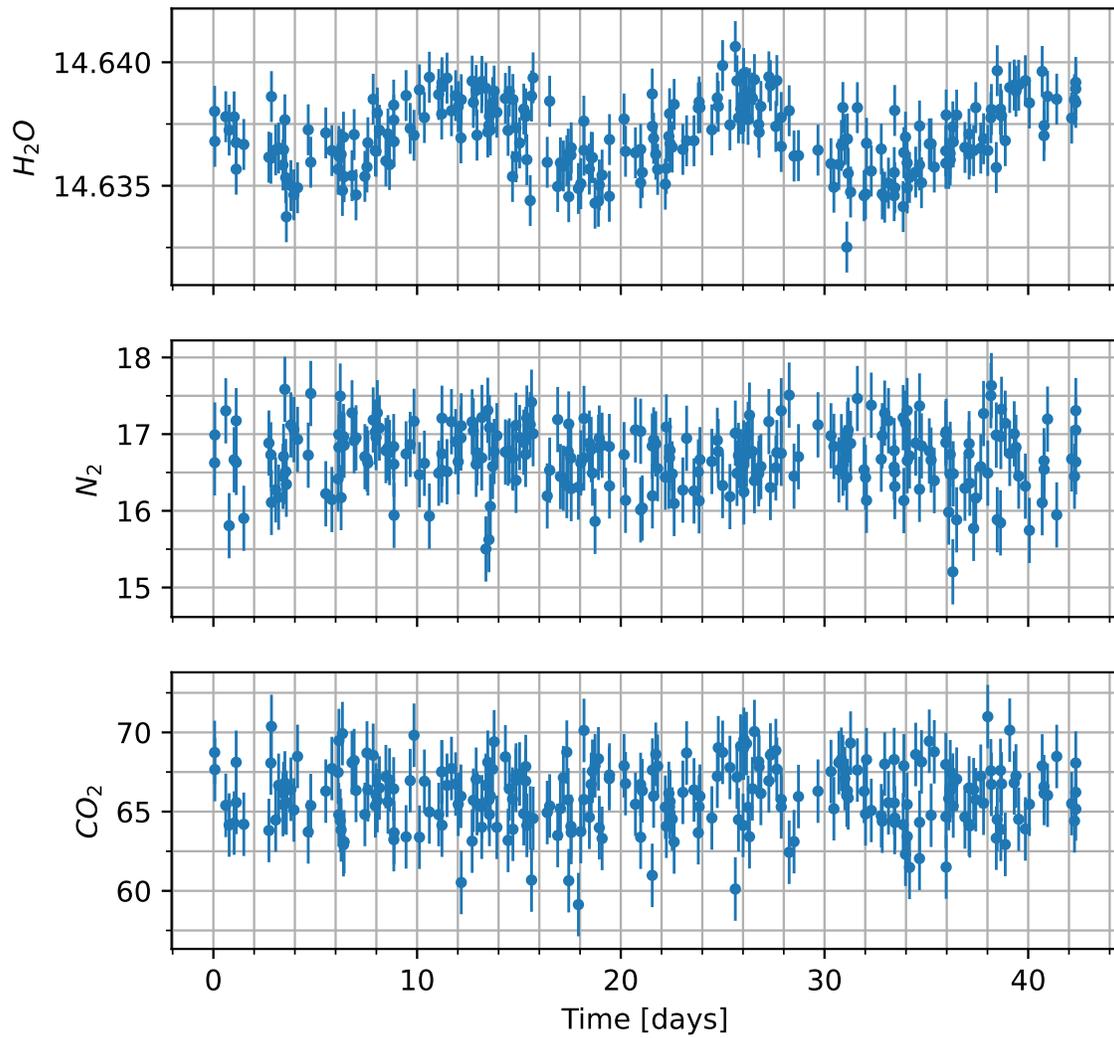


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

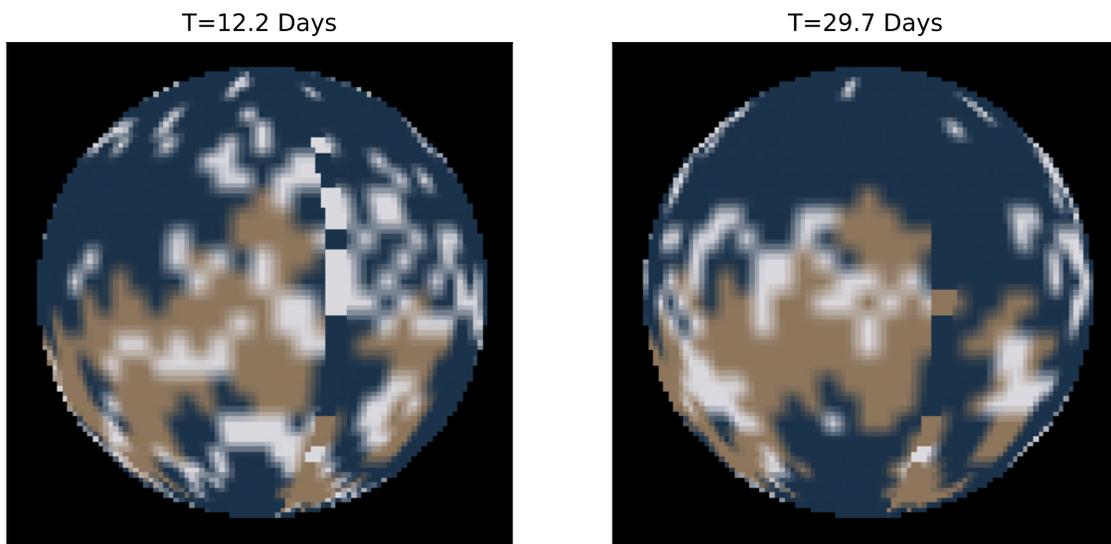


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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