

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging golyche1 Planet 1

Tuesday 9th March, 2077

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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0001101111011000001101110000010110011100000100011000010110101001011
010001001100011100010011000111111011011010000110101111010111101111
1110010100001011010101011010000100001111100101001101001001010111101
1011011000000011101100111000111000100011100100111011001011011100000
0000011011110001111110110011101000011001100110001111011110101101100
0001011111001001100111100100100100110010011010001011011010000100001
0011001001110001000100010100011110111101110000001000011111011100101
0001111000000010111100101100001101110011110000100000010111001101100
1110111000010001110010101111101110100100011011110100001110010101110
1100011000101001111000001010010011101000101101010100000101010110100
```

This signal was first noticed at UTC 2075-01-27/03:39.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	1.63
Stellar Mass (Solar Masses)	1.13
Distance to Star (lightyears)	88.4
Planet Mass (Earth masses)	1.3
Atmospheric Pressure (atm)	1.8

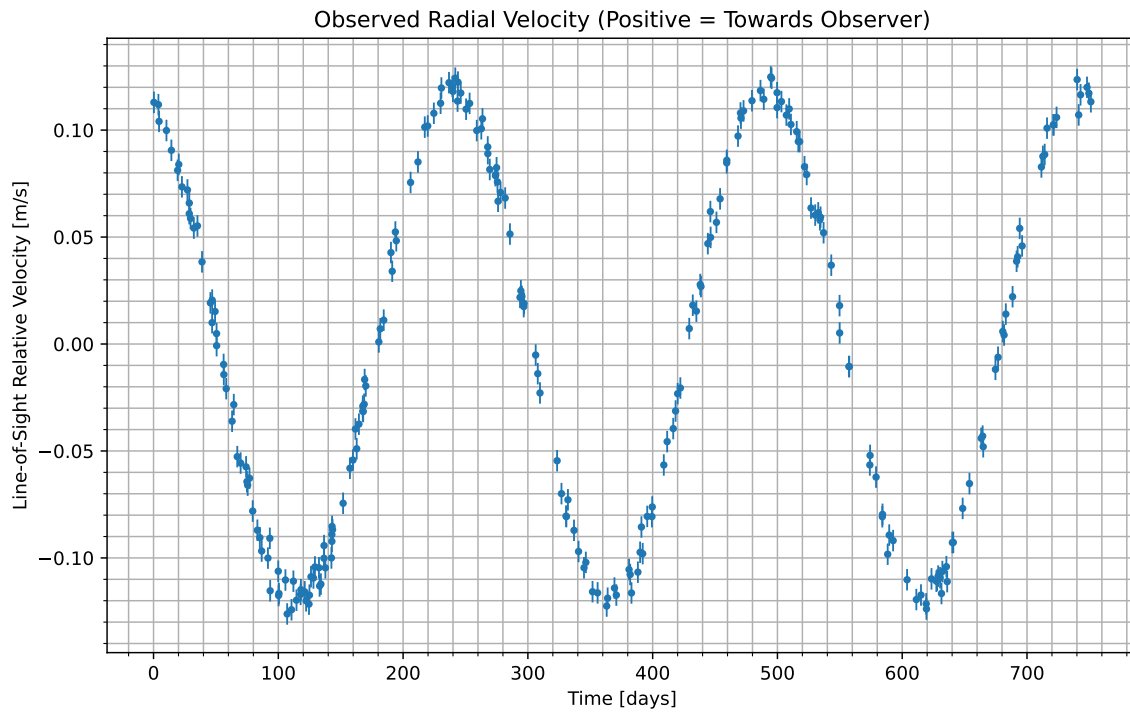


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2075-01-28/11:50. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	16.2
CO_2	57.7
H_2O	26.1

Gas Abundance (percent by volume)

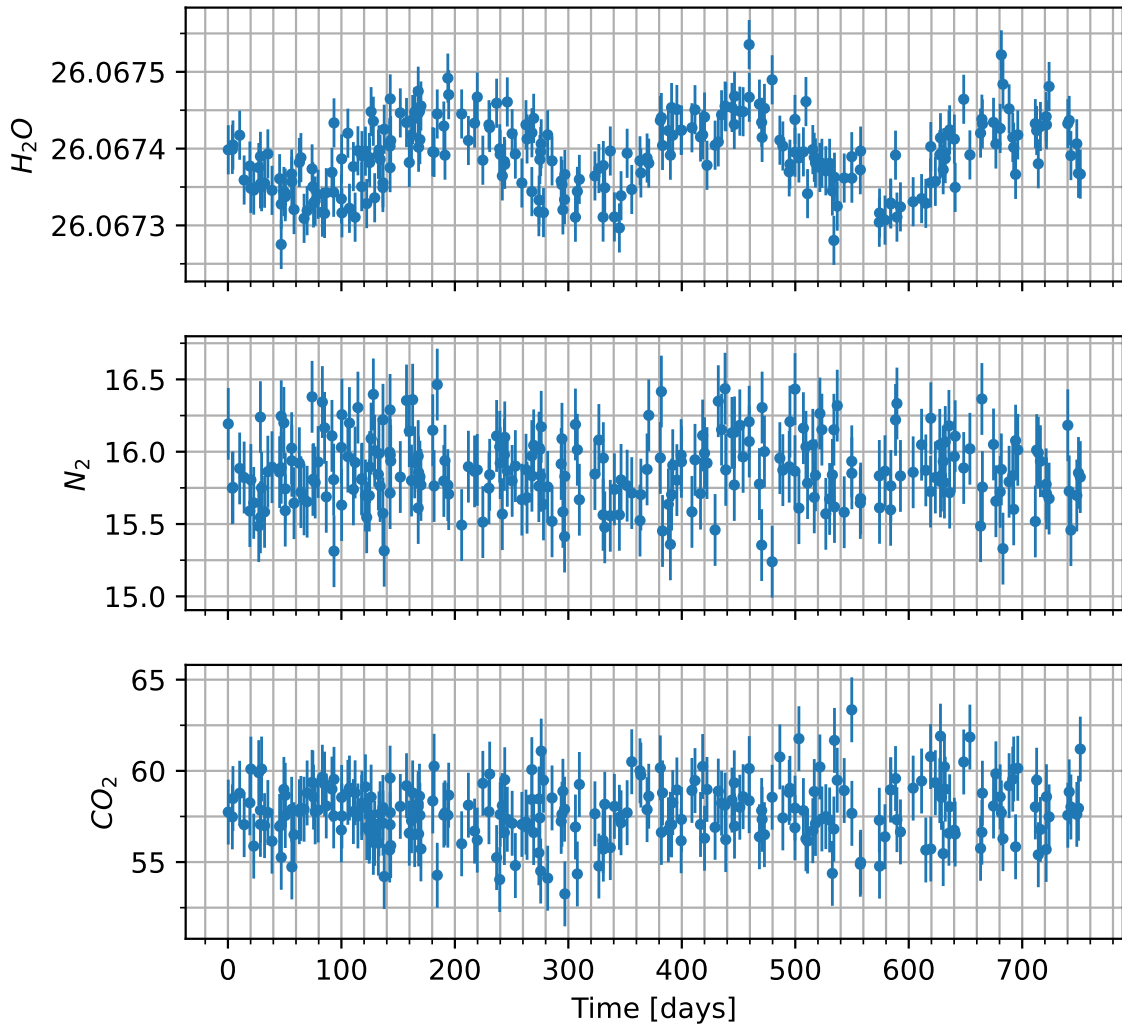


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

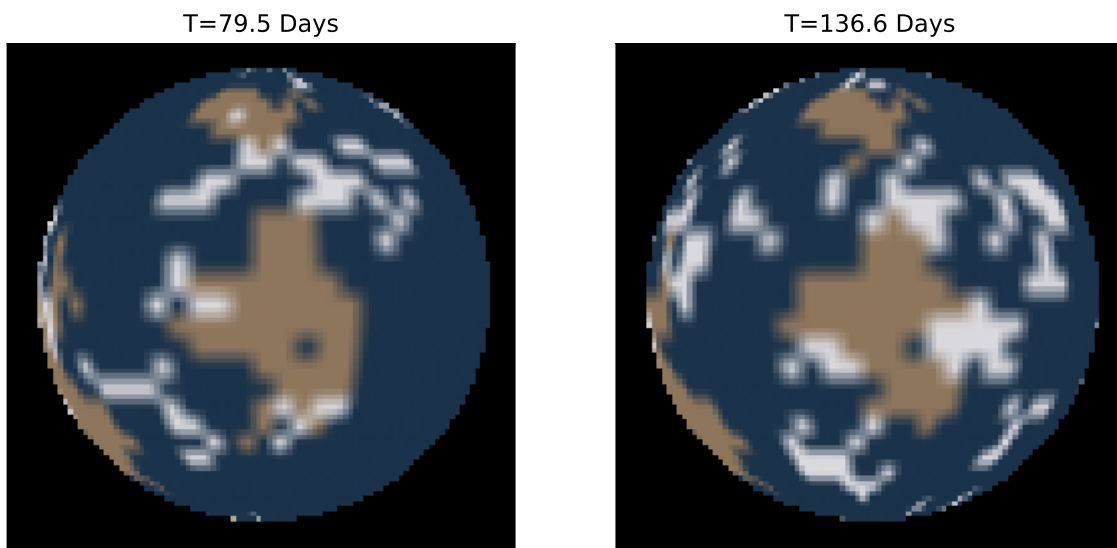


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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