

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging sheik337 Planet 3

Monday 11th November, 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 narrowband 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 is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

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1001011100011010010010111110010000010010011001011001
1001101110001111010011000011011011110111011011110100
0110001011001001010100100111001001000000100101010000
0111010110100000010100000001101010111001101110011000
1111000101011010110101001101000101110111011000101001
011000100000000001011010010100010011110101101010111
1110111010111101010001100000111110011011111101000110
110110101011101110110011100111001100111001000111000
0111000011110000100100011001101000110010011111110000
1000110011010101011101010100011100100011011100101100
```

This signal was first noticed at UTC 2097-08-14/22:08.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0139
Stellar Mass (Solar Masses)	0.325
Distance to Star (lightyears)	166.2
Planet Mass (Earth masses)	4.3
Atmospheric Pressure (atm)	2.9

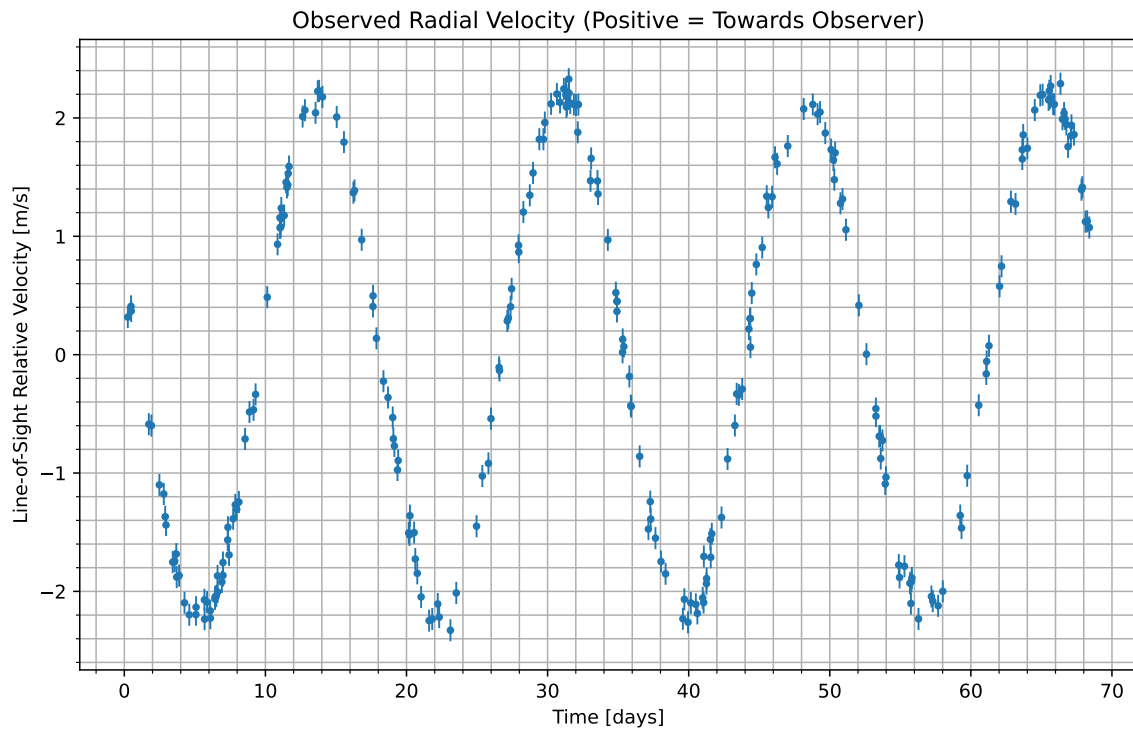


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2097-08-16/04:35. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	44.2
CO_2	24.9
H_2O	30.9

Gas Abundance (percent by volume)

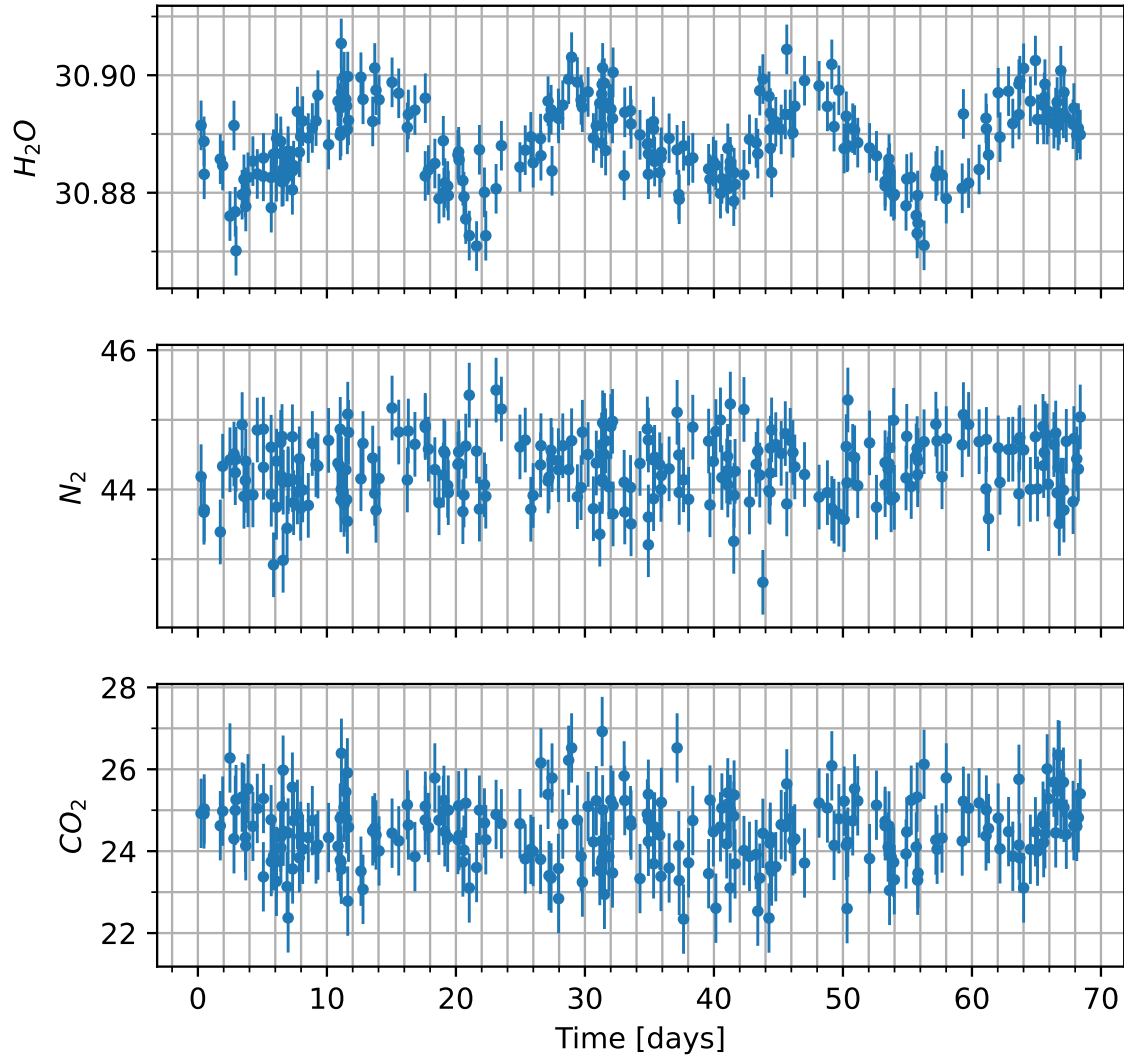


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

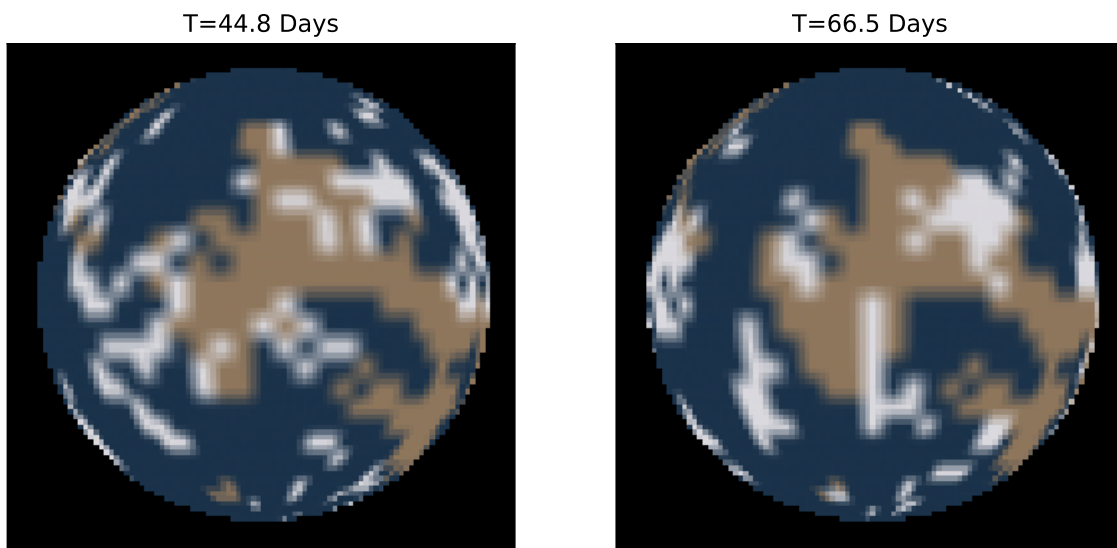


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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