

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging

stodda28
Planet 3

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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 lasted a short duration and then stopped. The transmission is shown below:

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01011111101111001000110100011001111100110110010001011000110000110001110100111111
00010010100000101111011011001011011011101001111000110011101101010000010000100000
00001100100011101010100001001110101101110000100110110001010011100010001000100001
1101110011100111111101101011010000010000110010110111011011010101000110110111010
00001001101101100001011000010110010100001010000101110000011000111110010011000100
10001110111101000010010110001101000110101100110101001100111000011110101001101011
11100111001010000010000010100011011111100011000001101001110001000001100010011000
01110010000100110101110100010010100001101010110110000001101110010001100001011110
```

This signal was first noticed at UTC 2068-03-15/19:09.

Parameters of the candidate planet of origin and its host star

Spectral Type	G
Stellar Luminosity (Solar Units)	0.794
Stellar Mass (Solar Masses)	0.944
Distance to Star (lightyears)	10.9
Planet Mass (Earth masses)	3.1
Atmospheric Pressure (atm)	2.7

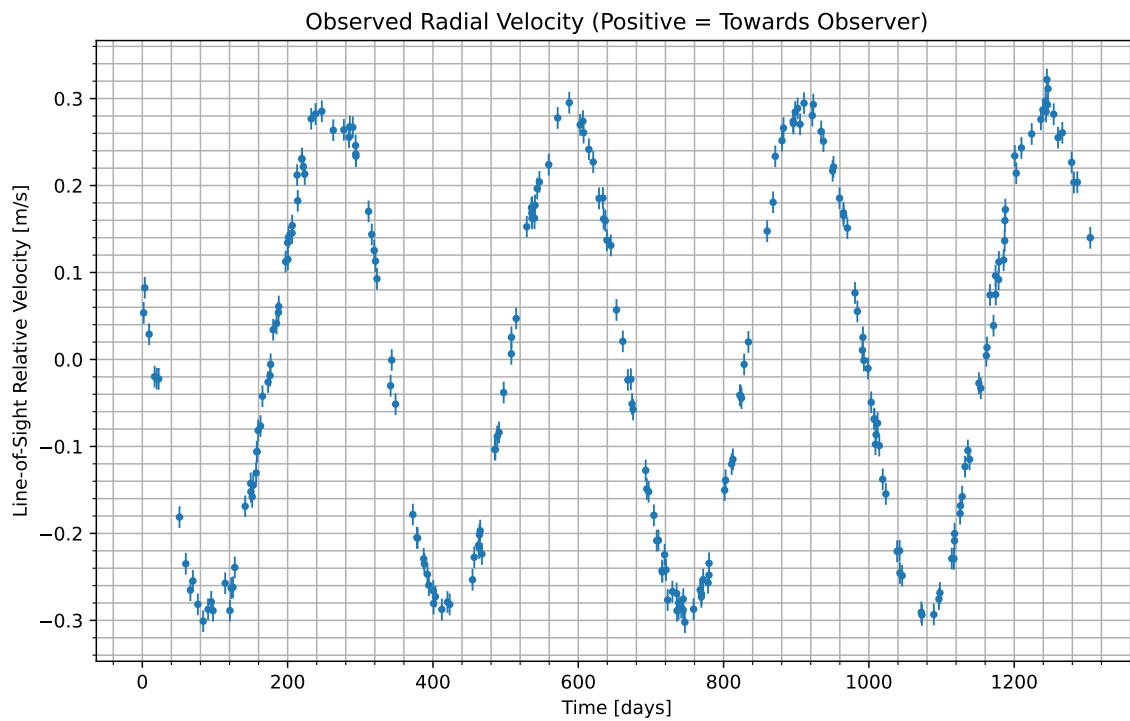


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2068-03-16/00:43. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	47.6
CO_2	33.2
H_2O	19.2

Gas Abundance (percent by volume)

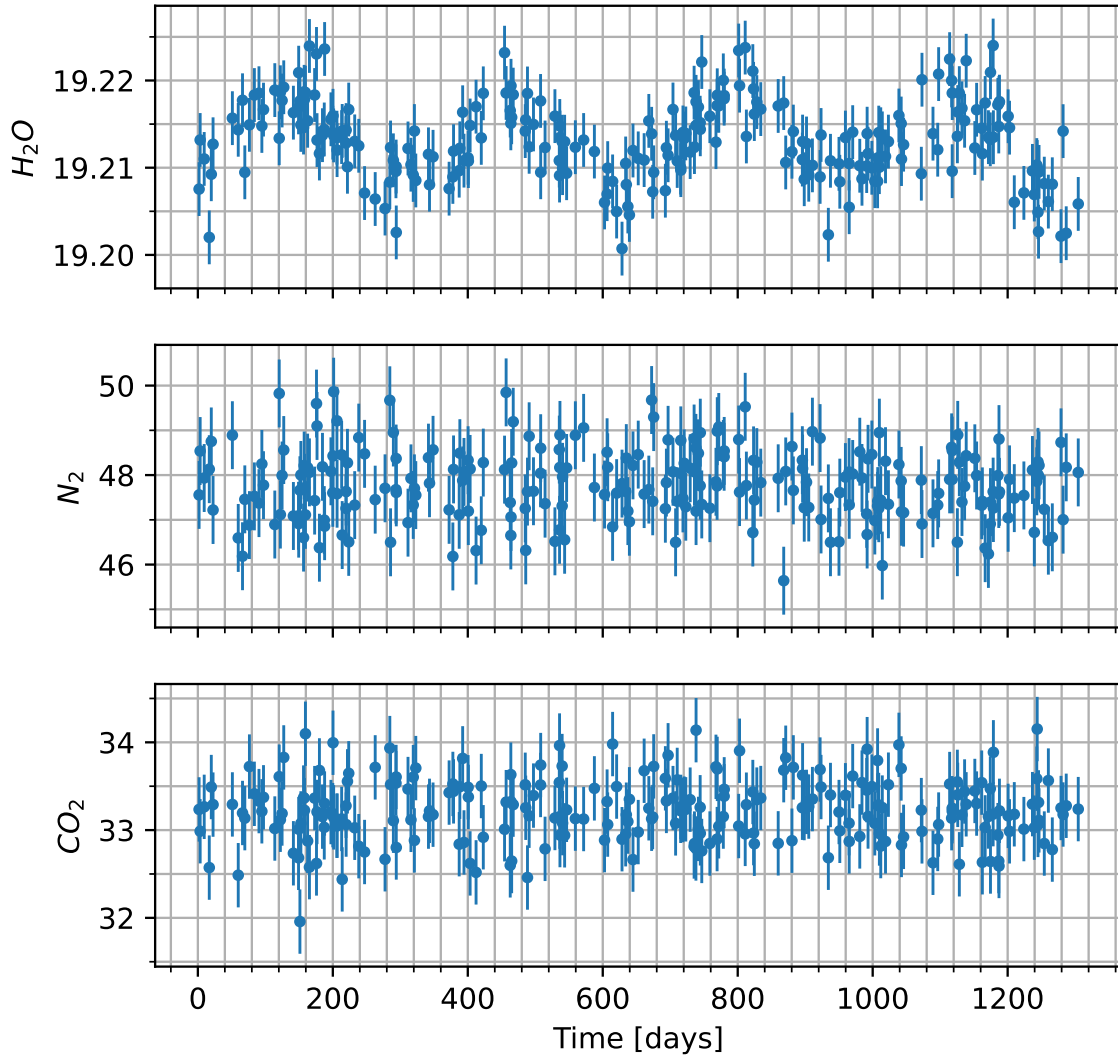


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

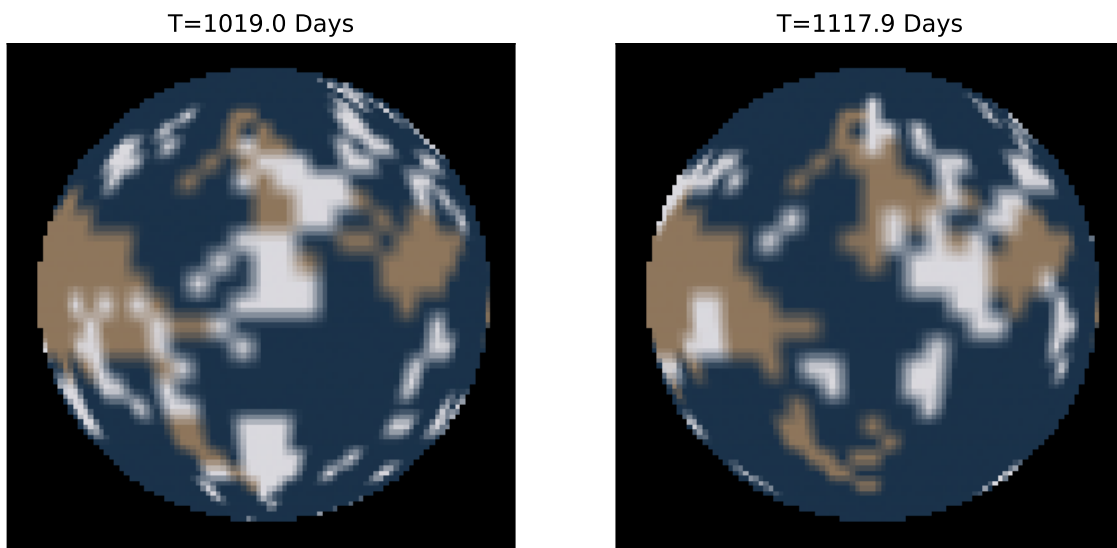


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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