

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging

patel689
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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11100010110110110001111011011000101100000011000001000011001000
00101100100101001000010011000100101111000011000101111001111011
10010011101110011101110010111100011000101111000000011000110000
00110000101101001001000001010000011000011111101010011111111010
11011101000111001111011011010000111001001100011000011001011101
00110101100011010011110011000101000000010110011011110110111010
01101010001111001101010001110100110110000101101011100010001100
11100001101011101011101000010100100111010100011001001100010110
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This signal was first noticed at UTC 2084-07-31/15:52.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.00039
Stellar Mass (Solar Masses)	0.107
Distance to Star (lightyears)	98.8
Planet Mass (Earth masses)	2.7
Atmospheric Pressure (atm)	9.5

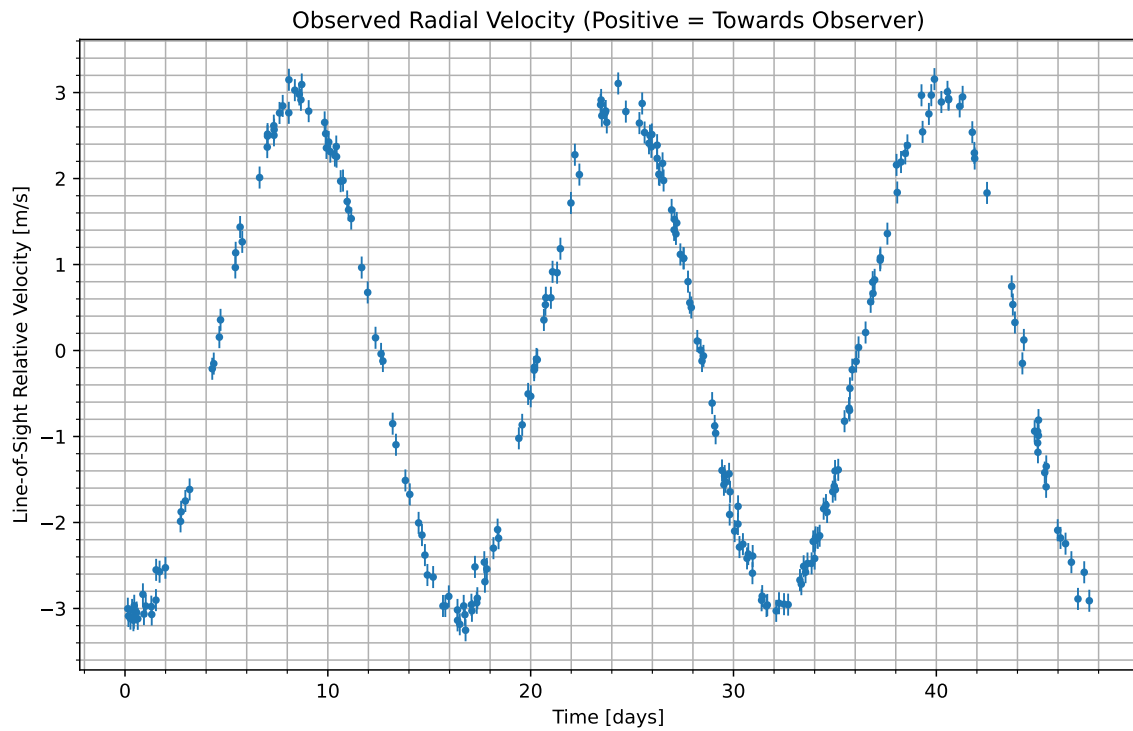


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2084-08-01/19:37. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	13.3
CO_2	59.7
H_2O	27

Gas Abundance (percent by volume)

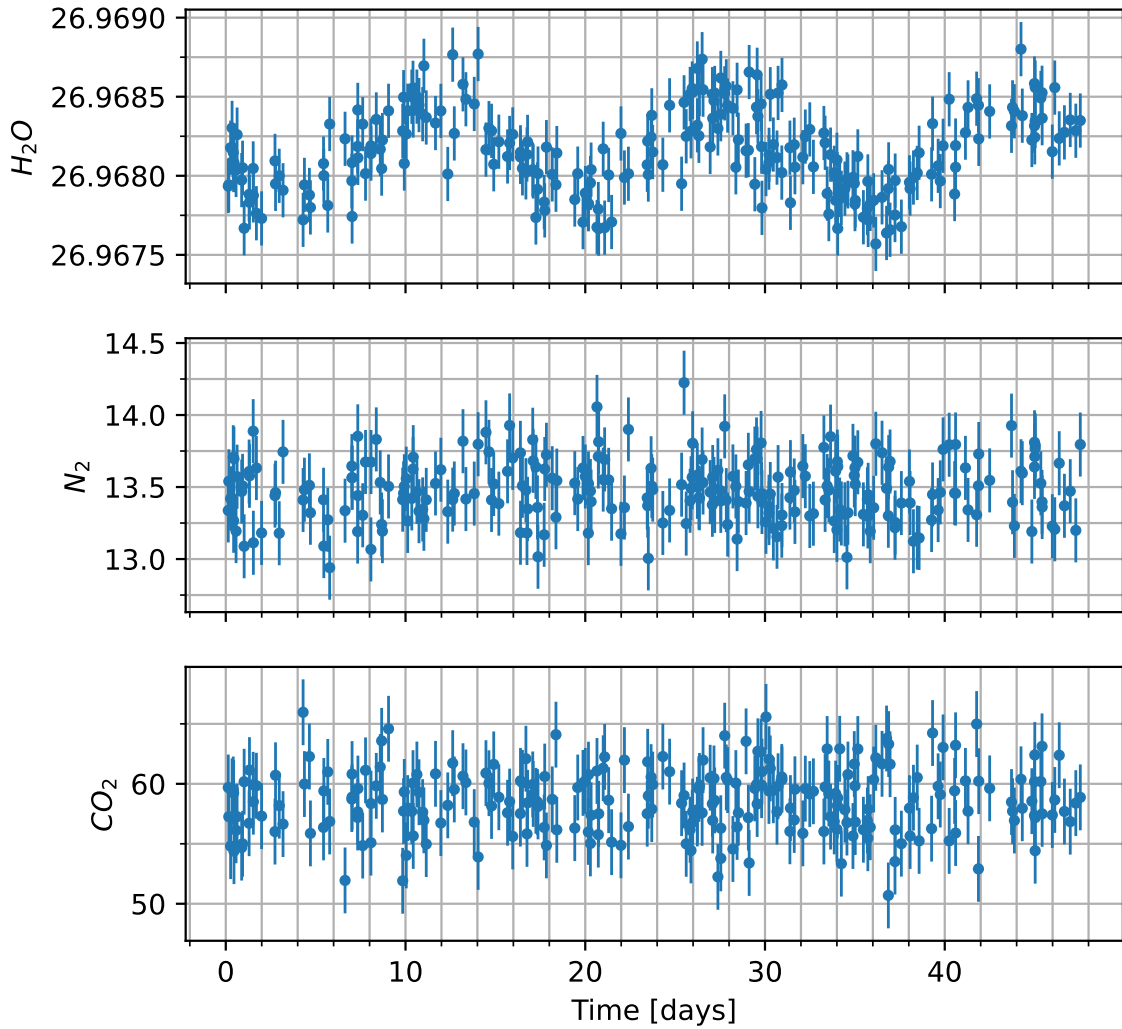


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

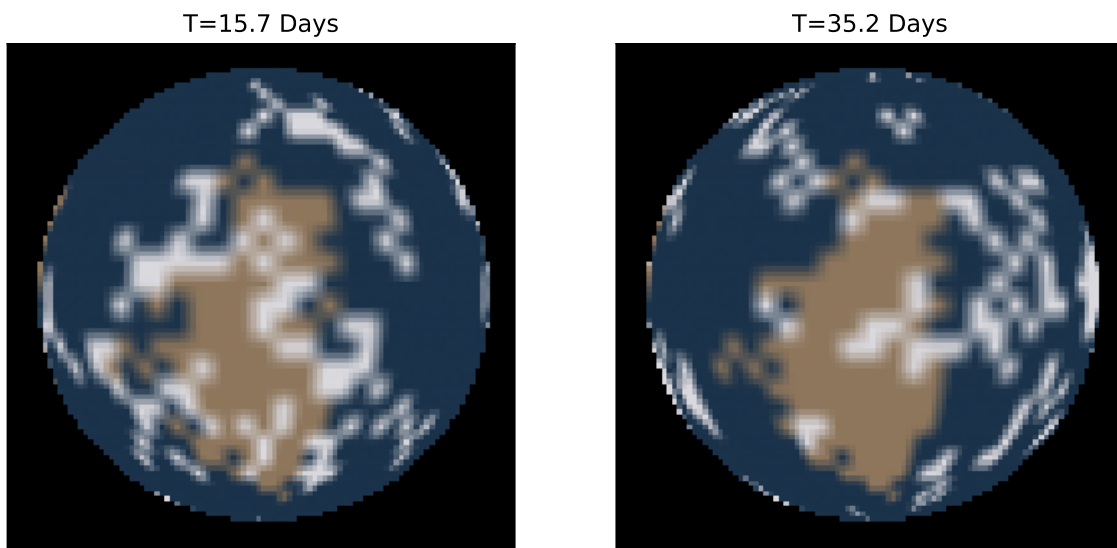


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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