AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging
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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 is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

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11101111101110101011101110001101110010101111001110101110010101110110100010010
00001001110110111111101100110101100001110010001101011100001011100110100001101111
01000101111111111101001011011101010010110001001011101000110001000101000000011000
11100010100001000011101101101010011110110110010101010111011001100110001101001100
00001011000100101110001110111110001110010101001001100010100010000101101101011100
10110111011100010100011000101110100000100011111111100110001011011110000011000100
01110011010001100000010111101010101111110011111110010010111000100000100010001111
01100101101110101011100111011010110011001011111010001100010111100101000111111101
10010001000001010110001000001100101111011001111111001000001011111111101011101100
00101111111110001100110100011011001111111110000101011110010111111110100101101100
```

This signal was first noticed at UTC 2071-09-24/21:43.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.32
Stellar Mass (Solar Masses)	1.35
Distance to Star (lightyears)	1003.2
Planet Mass (Earth masses)	4.4
Atmospheric Pressure (atm)	0.9

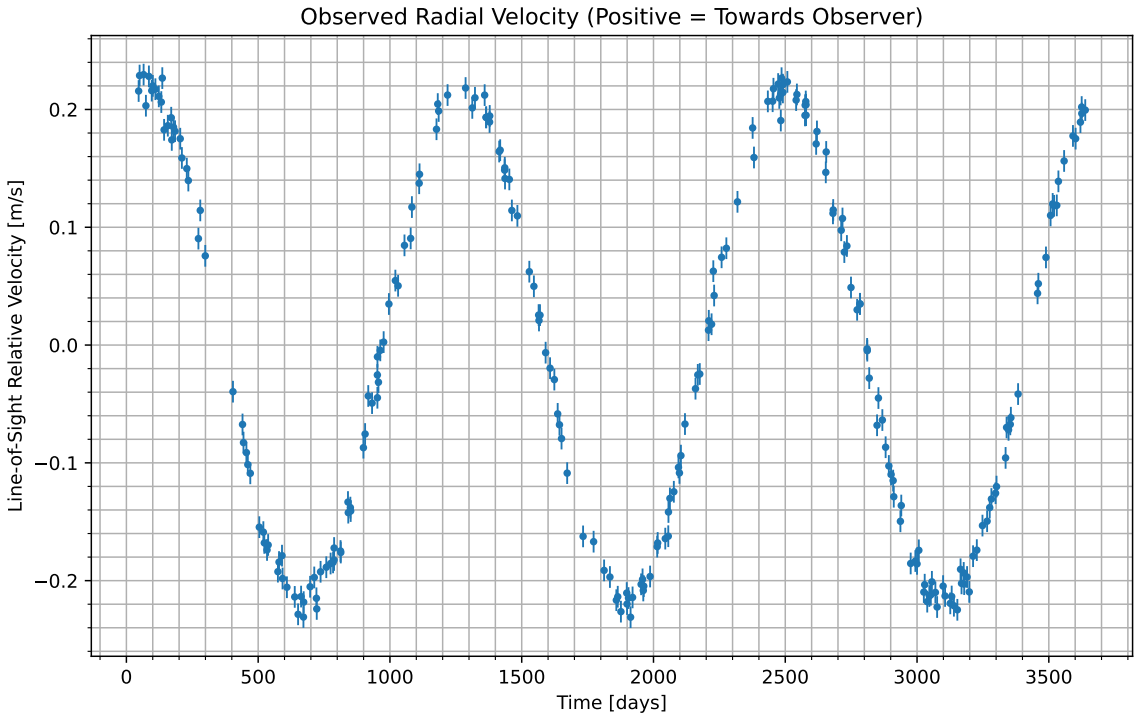

Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2071-09-25/22:54. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	20
CO_2	66.4
H_2O	13.6

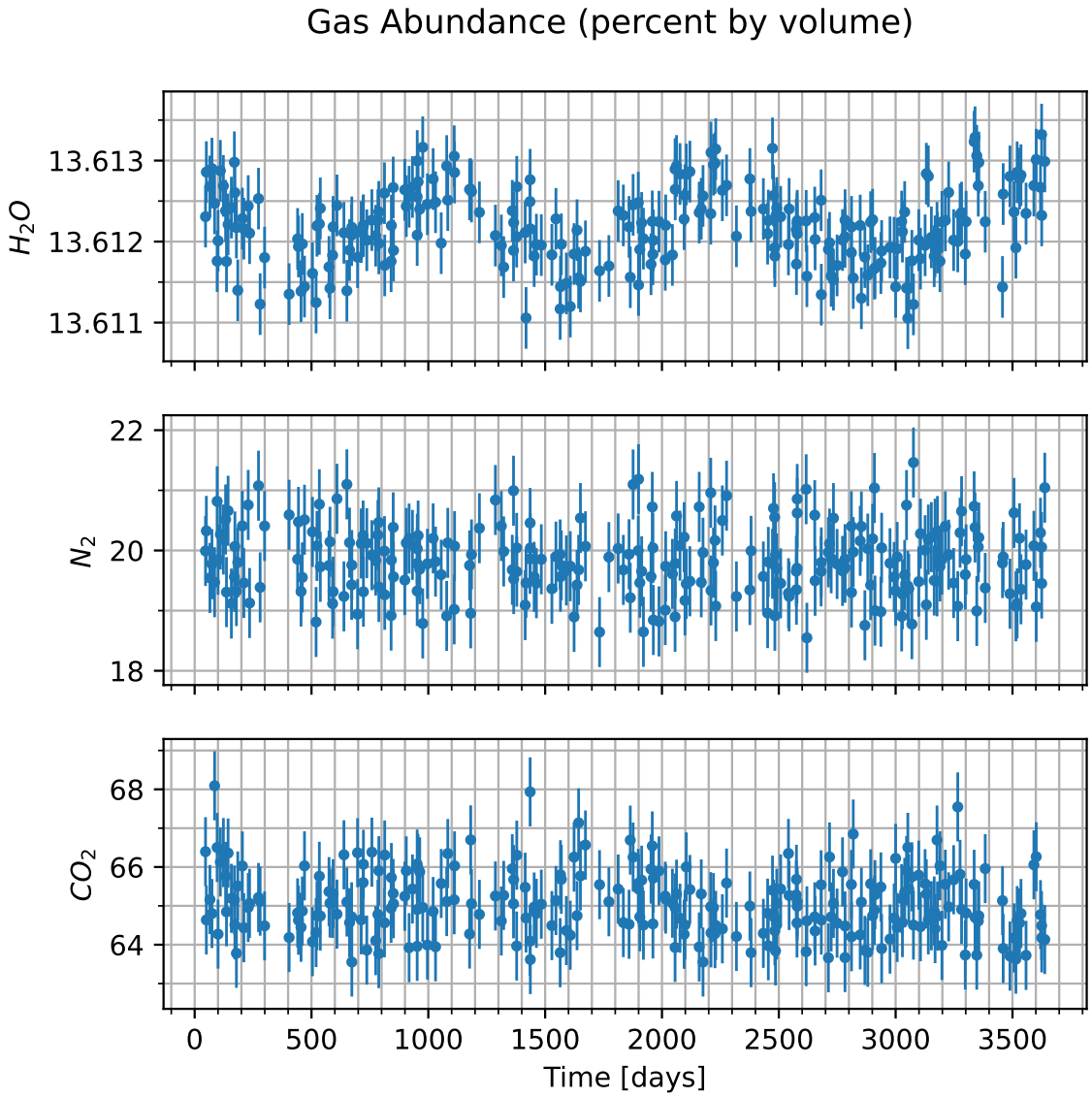

Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

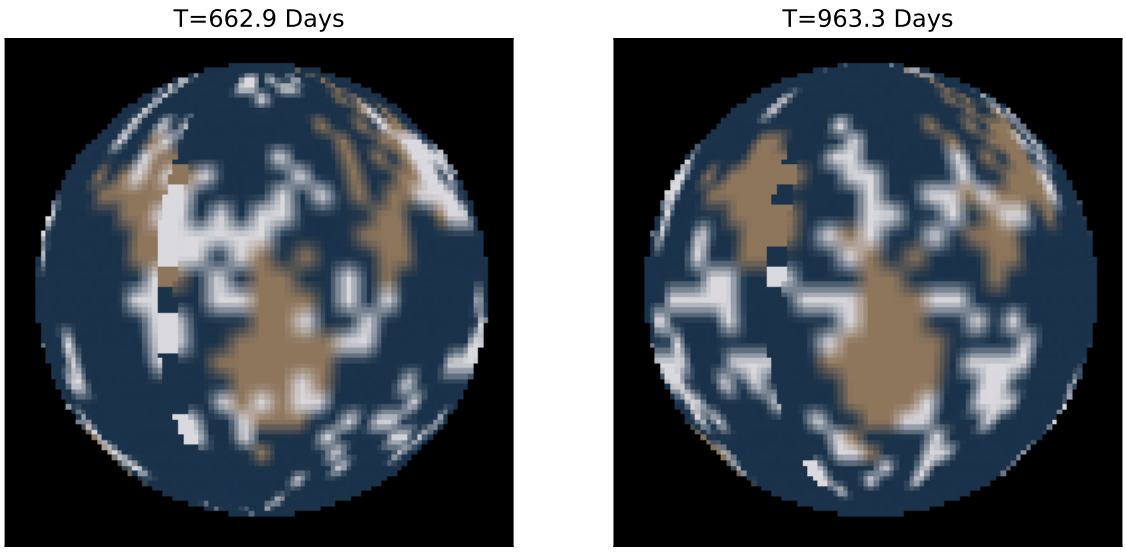

Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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