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 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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0101100111101100100010011101101101011000000011001010000001111000
0110111111010000110110100100010010101000010110111010110100000101
1100101101101100011110001111111010101101100001000010001001111110
0100001101110101110111101000000100100100101000000001100010000100
1101100001011110101101001110111011010001000001000010000010000000
0110100001110101100111100001010101111110110011111100010100110011
1011100110101100010001011011100110101000100010011011100001101001
0000010010111110001100011111100101101110000100110110010110010111
0111001000010010110011000000101010111010110011000101101010000111
```

This signal was first noticed at UTC 2091-03-24/01:58.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.81
Stellar Mass (Solar Masses)	1.4
Distance to Star (lightyears)	14.1
Planet Mass (Earth masses)	2.1
Atmospheric Pressure (atm)	2.2

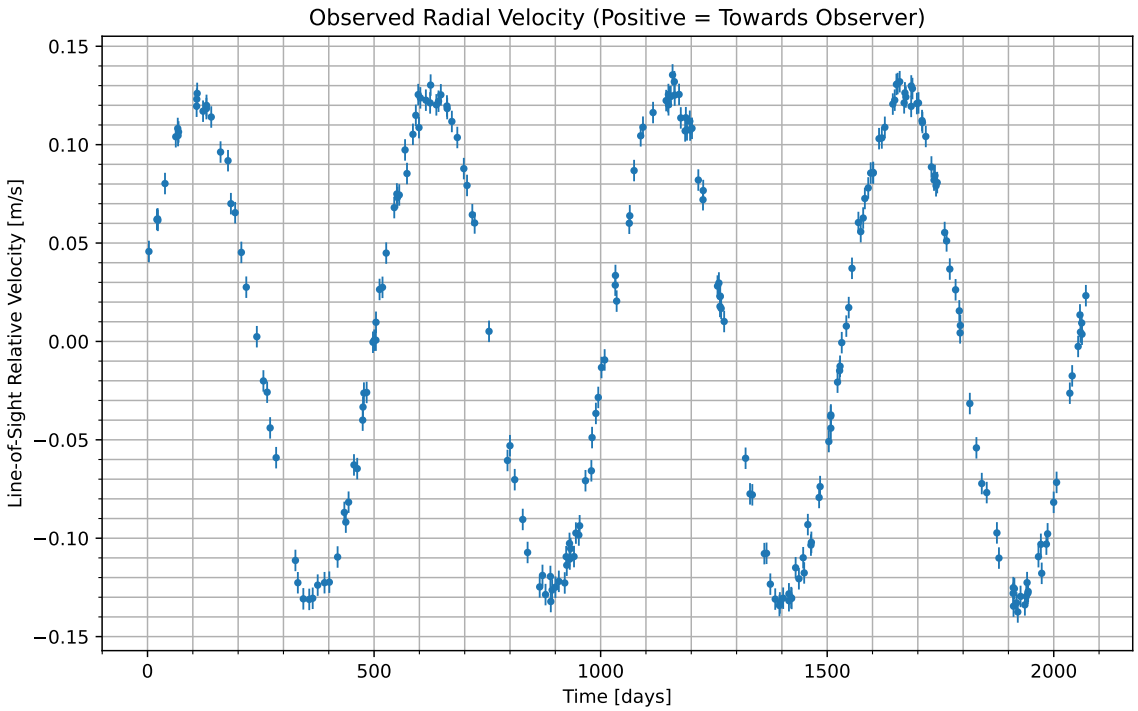

Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2091-03-24/21:28. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	24.9
CO_2	54.6
H_2O	20.5

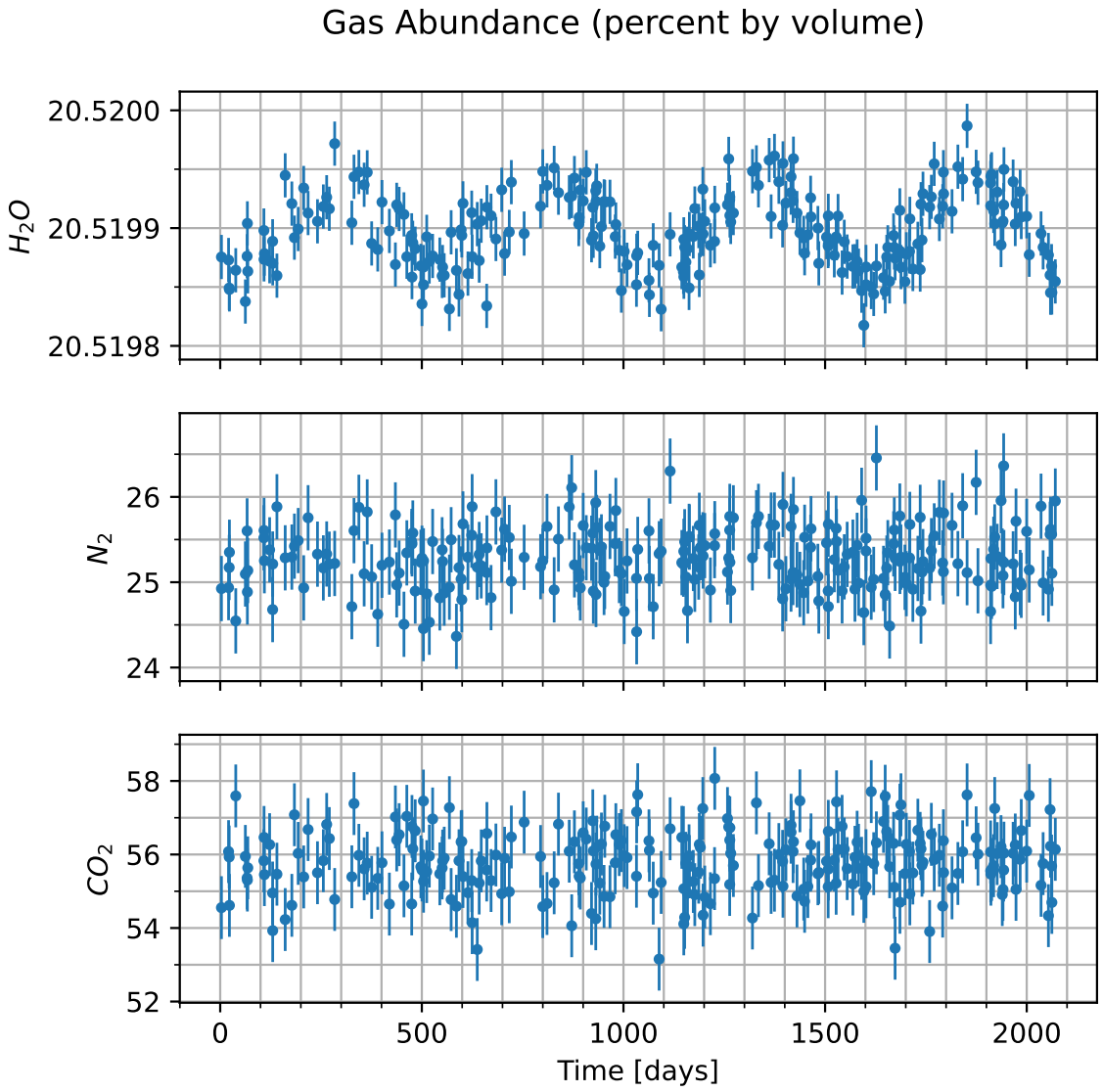

Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

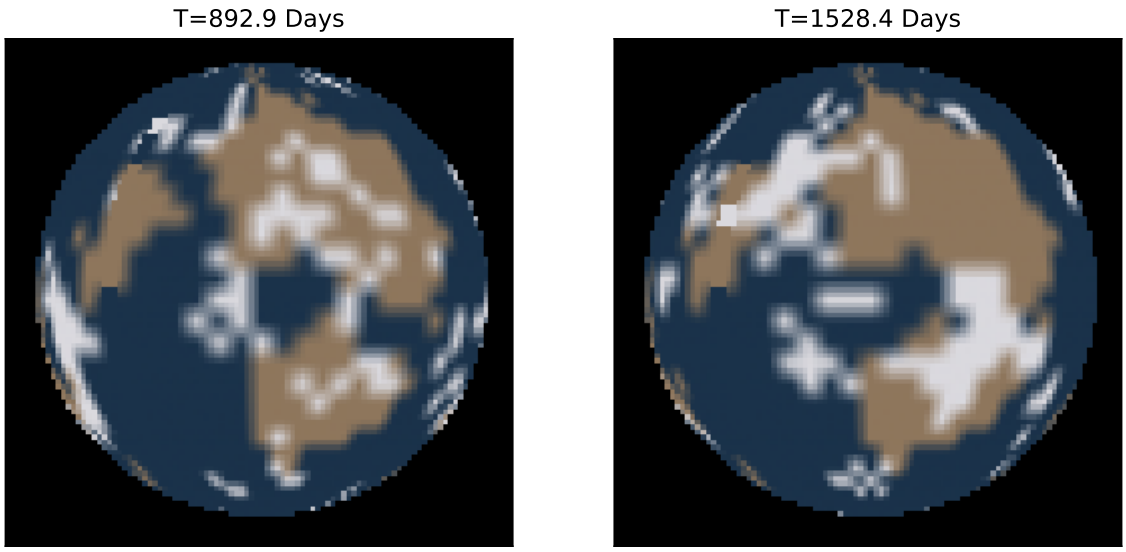

Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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