

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

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1001110010101010000110100110010101101100000111000011010000110101  
111111011100010011100001001110111011001110111110001100000100110  
1100101010111101010010000000010001111011110101010001011111000101  
0001111100101100110000000100111110010110110000001001010011111011  
111110001001111011010101100111101100110110000000000111111100011  
100111001100111100000101011110110000000011100001101001000110011  
0101111111000011011001001000010000000111111010000000110111110000  
1011000101100101100011101111100111010111000101101000110001001111
```

This signal was first noticed at UTC 2089-10-19/03:38.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0016
Stellar Mass (Solar Masses)	0.166
Distance to Star (lightyears)	5.5
Planet Mass (Earth masses)	2.5
Atmospheric Pressure (atm)	16.6

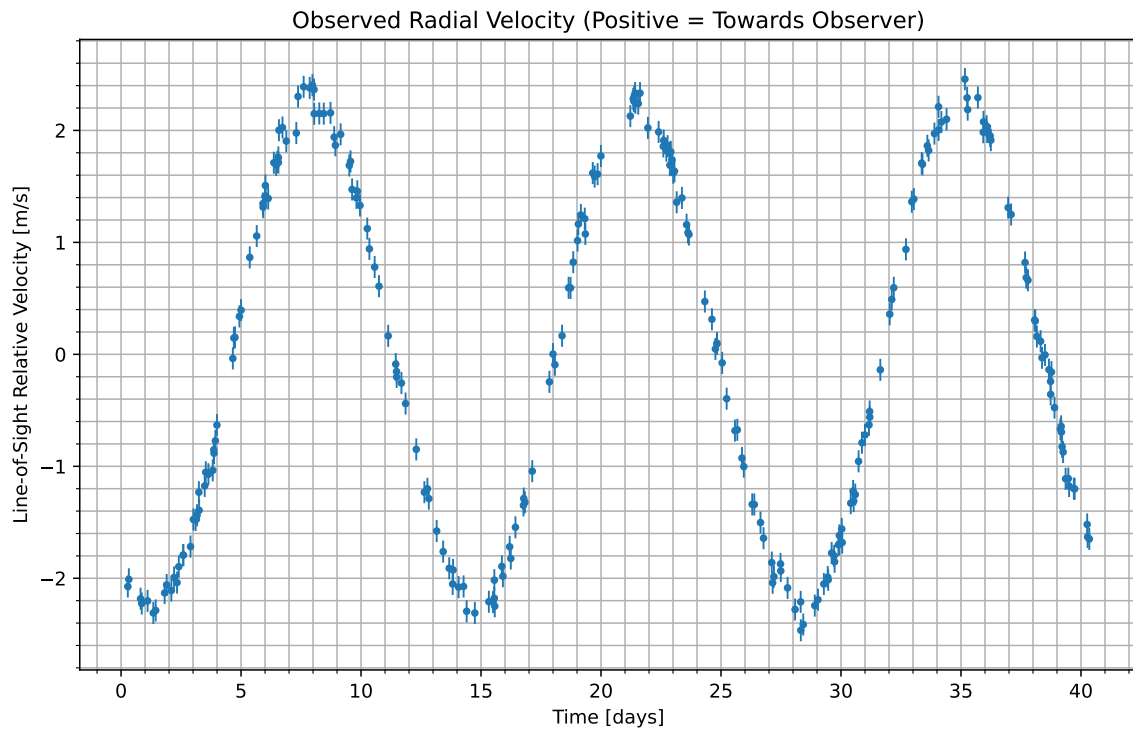


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2089-10-21/08:01. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	30.5
CO_2	56.7
H_2O	12.8

Gas Abundance (percent by volume)

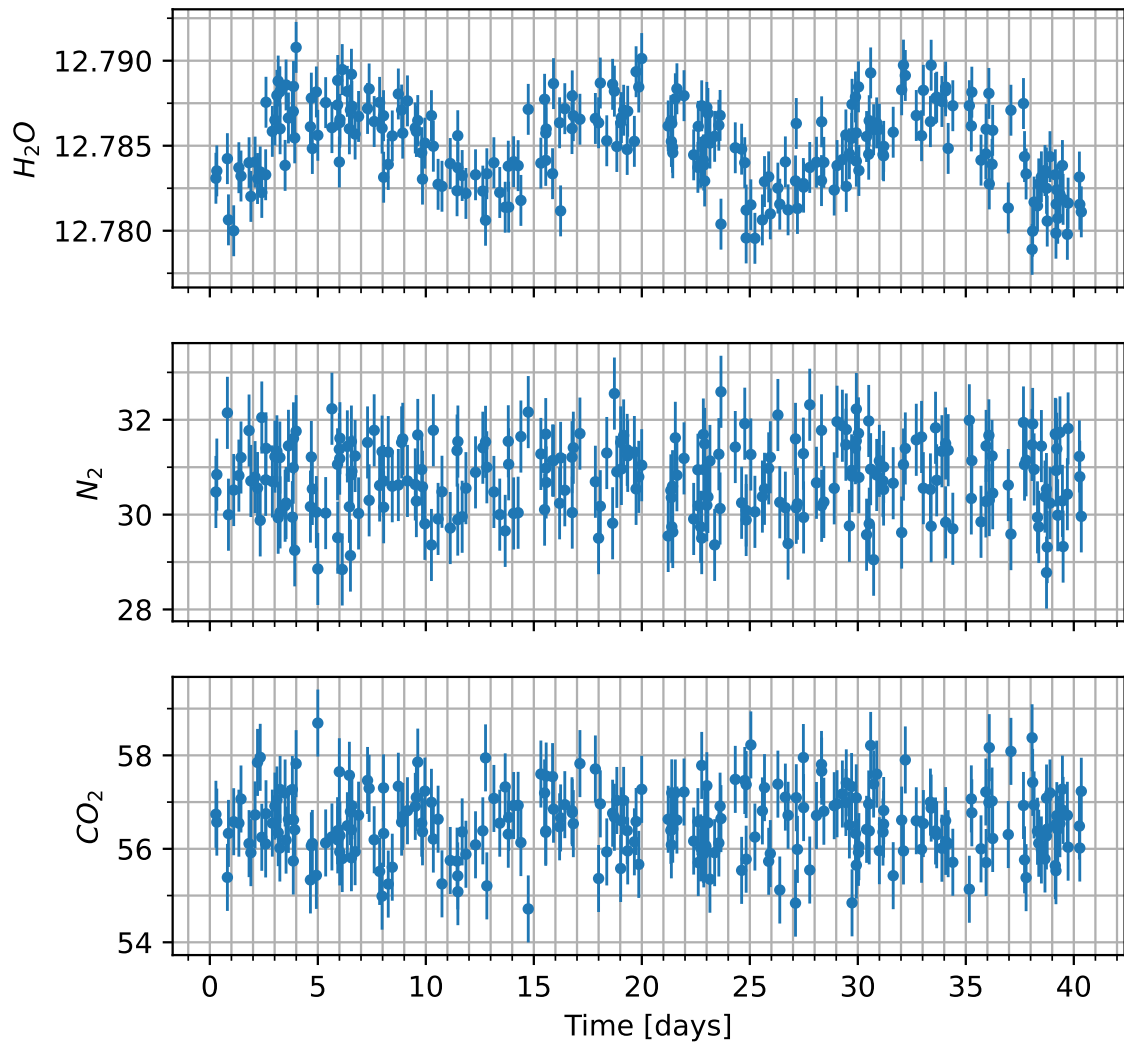


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

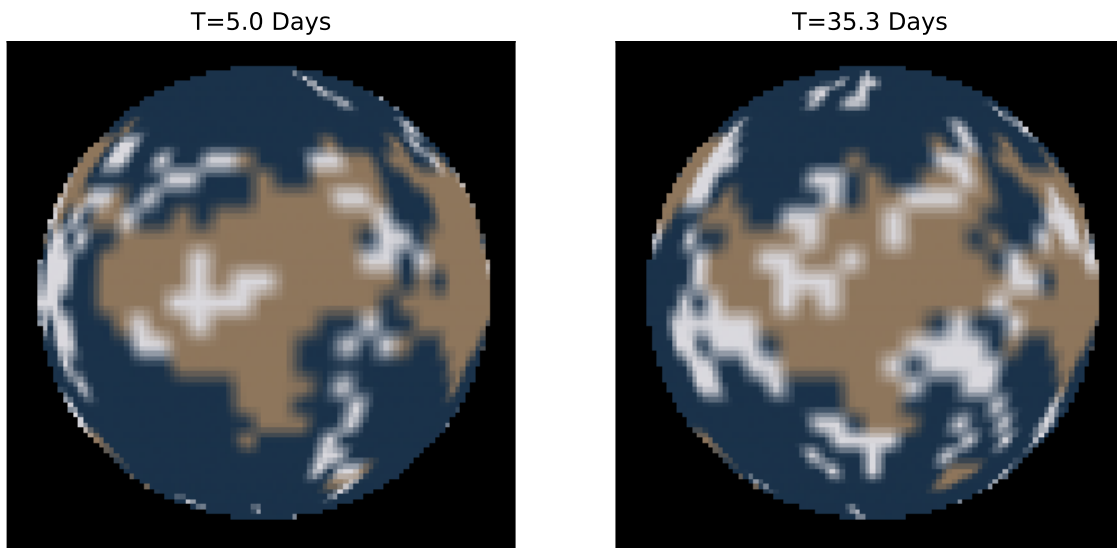


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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