

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging henina1 Planet 3

Saturday 13th August, 2095

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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1011001101100000001011010100100011000111001111110111100111111001000101111111000
1011011110100101000000101010100100011000010001111010110111010010100011111100000
1010000000000100001100010111001101011110001110011111011101010111110011111010011
1011001001100011110001111011111000100000110010100001101001100101111011011011000
111100000010000101001001001010101000101001111100100000111110001000111100111100
```

This signal was first noticed at UTC 2095-05-10/14:15.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.00727
Stellar Mass (Solar Masses)	0.266
Distance to Star (lightyears)	825.3
Planet Mass (Earth masses)	2.8
Atmospheric Pressure (atm)	8.6

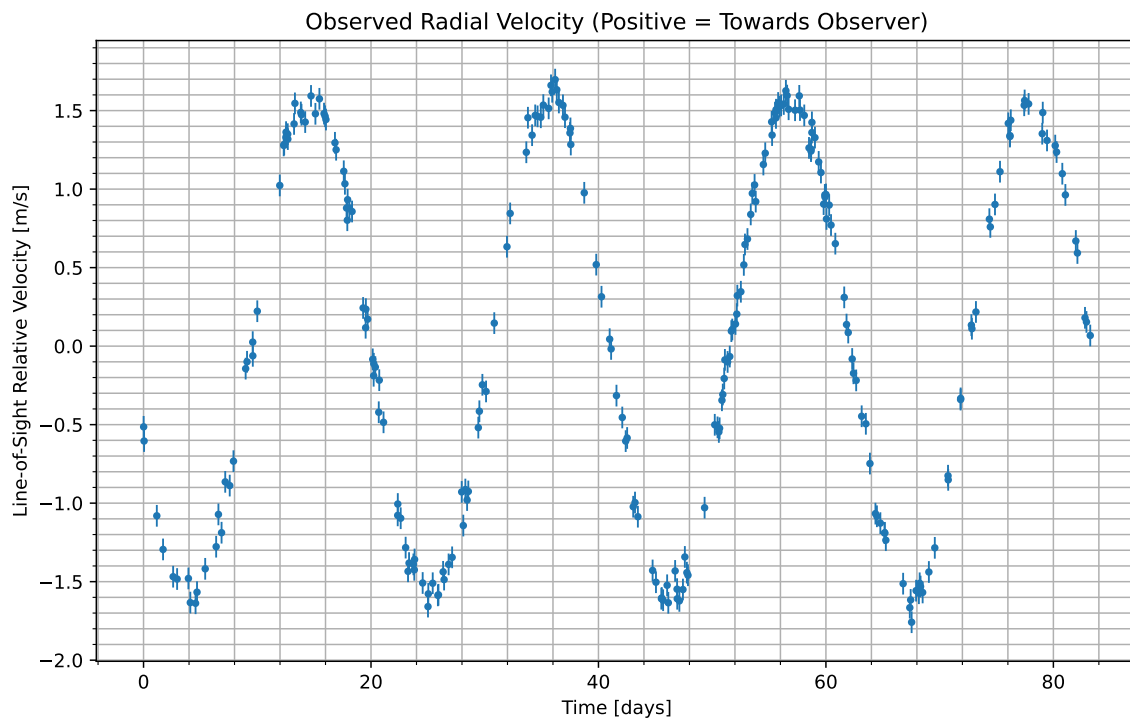


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2095-05-11/21:07. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	57.5
CO_2	37.4
H_2O	5.05

Gas Abundance (percent by volume)

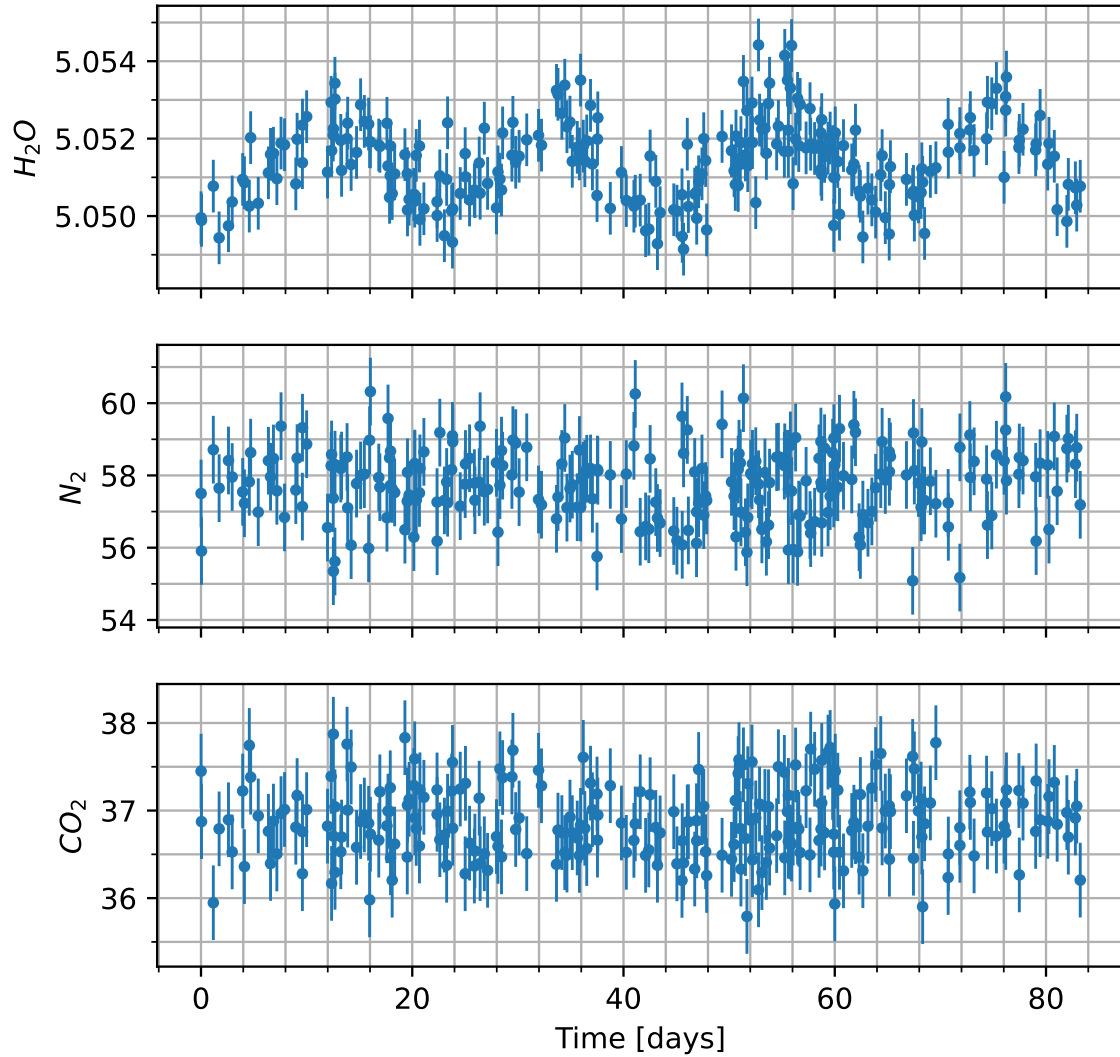


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

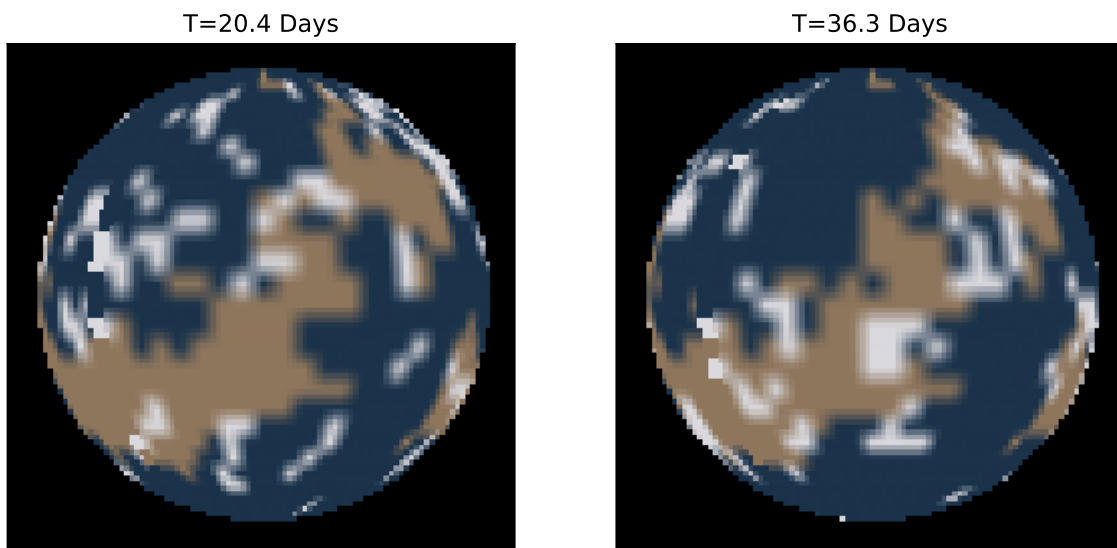


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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