

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging cascia11 Planet 3

Wednesday 3rd January, 2085

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:

```
111100110000100010000001101110000000011111110100011001000101100000100  
1100001101001001000011110000011001101101100101111001111011001101100000  
0111000010100010101101110101101011100000011000011000101011000100010011  
1000110000000011100010101111011101111010111000100010000111001011011101  
1011000001110101100000011100011110110110111001111011010110011101010101
```

This signal was first noticed at UTC 2080-04-25/09:48.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	1.76
Stellar Mass (Solar Masses)	1.15
Distance to Star (lightyears)	75.9
Planet Mass (Earth masses)	3.4
Atmospheric Pressure (atm)	1.2

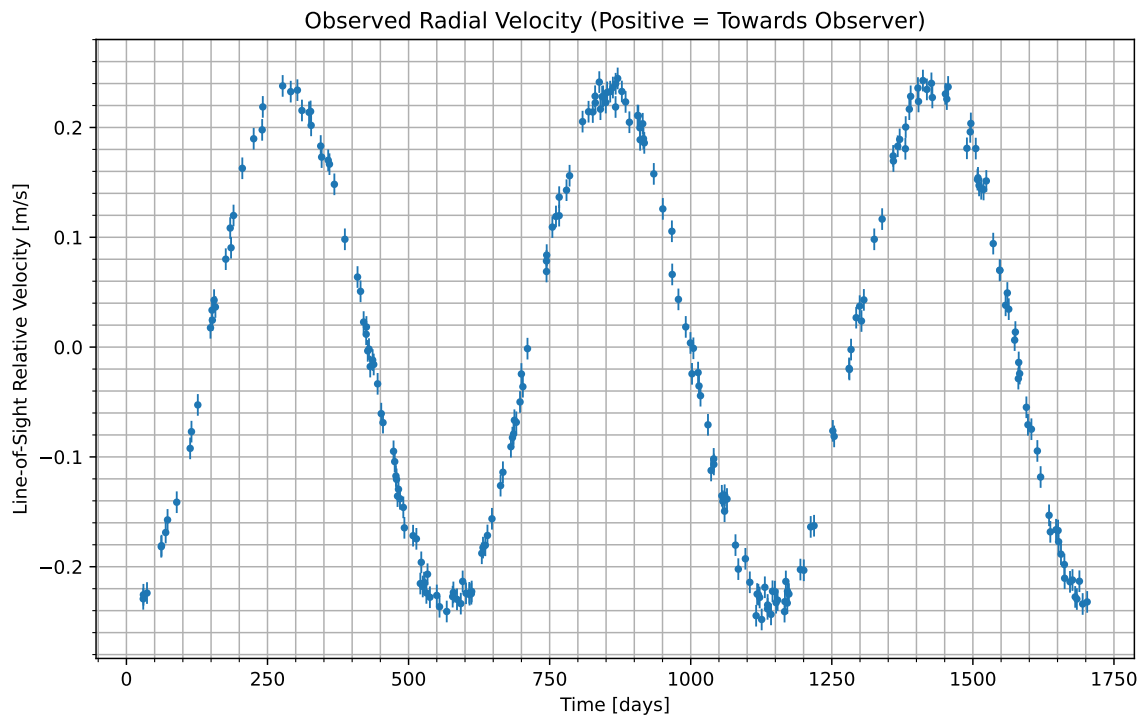


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2080-04-26/16:10. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	36.3
CO_2	53
H_2O	10.7

Gas Abundance (percent by volume)

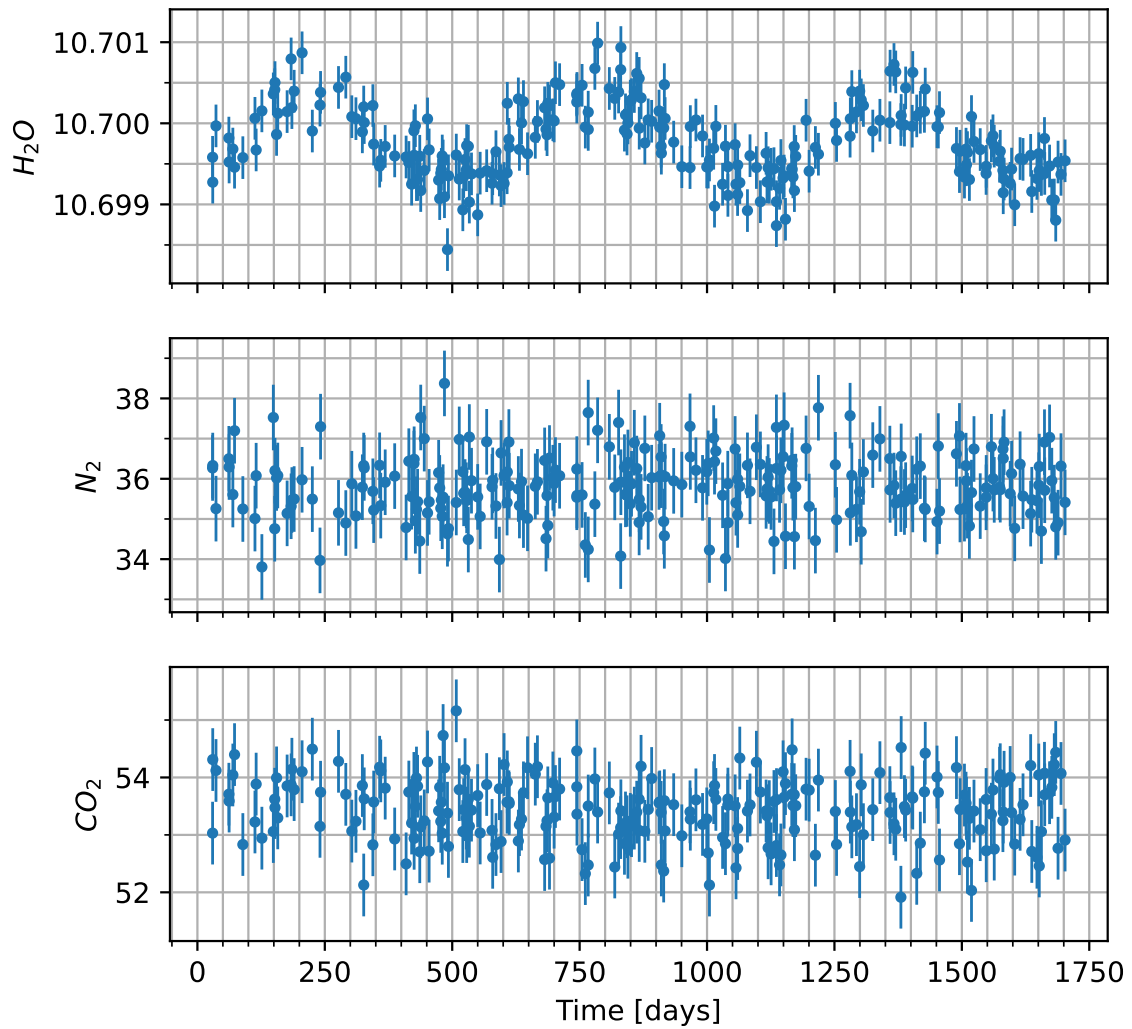


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

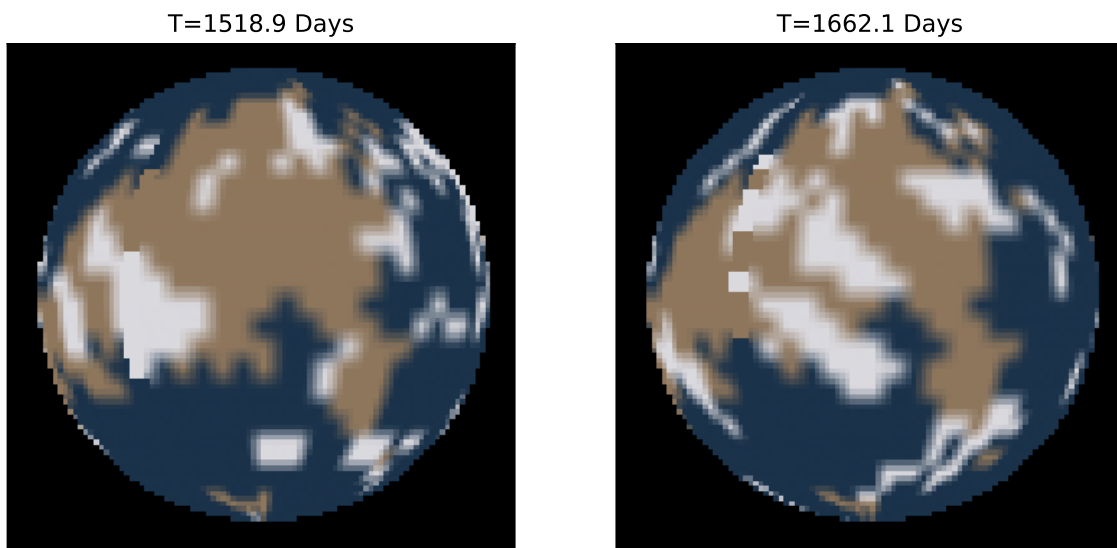


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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