

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging sing1467 Planet 2

Monday 20th April, 2071

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:

```
101000001010000000111000100010101000101000001010110  
100110111110000110000110101000000111111100011111011  
01110111101111100111100000111111101101100100001111  
100100011001010111000110110110101001100010101110010  
010111101101111011101100010010010101001010001010000  
011000110011001011100101000001110001011110010101000  
11111011000110100100100110011001010000001110001010
```

This signal was first noticed at UTC 2068-04-21/21:16.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	1.54
Stellar Mass (Solar Masses)	1.11
Distance to Star (lightyears)	244.6
Planet Mass (Earth masses)	0.3
Atmospheric Pressure (atm)	1.9

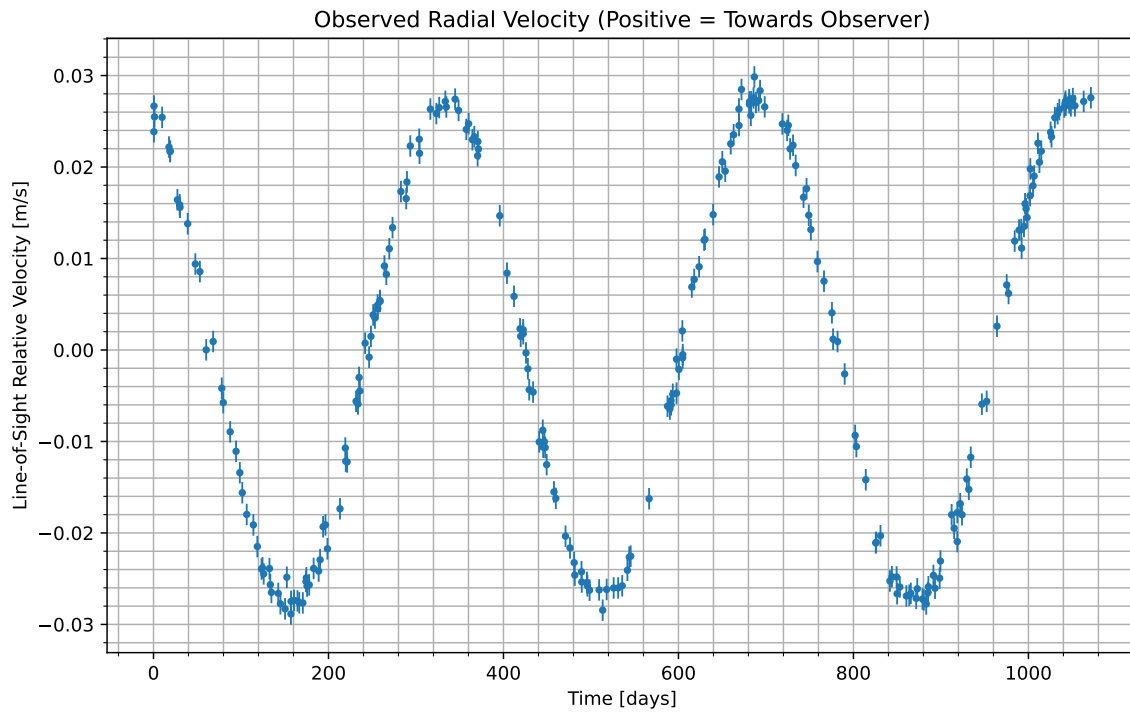


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2068-04-24/06:04. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	28.5
CO_2	58.6
H_2O	12.9

Gas Abundance (percent by volume)

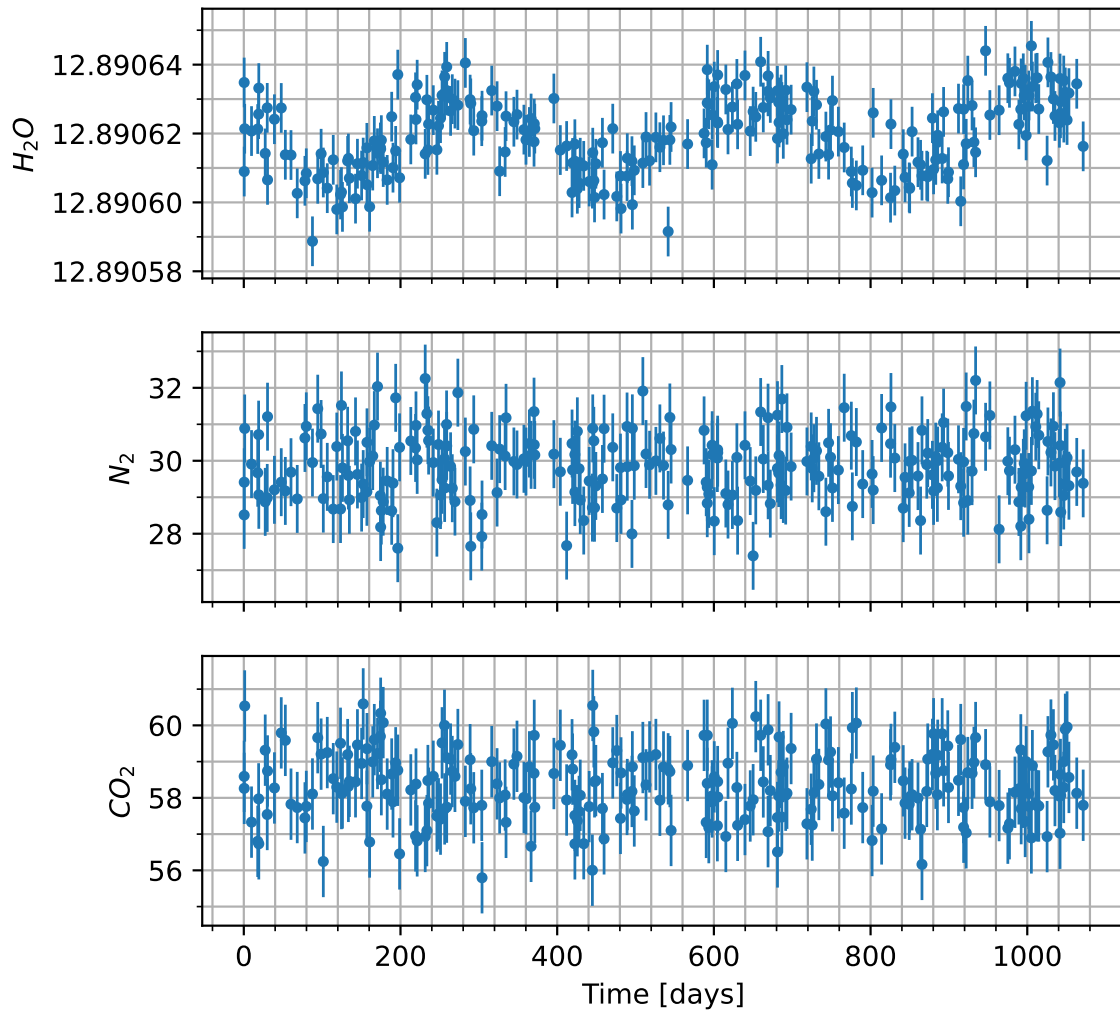


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

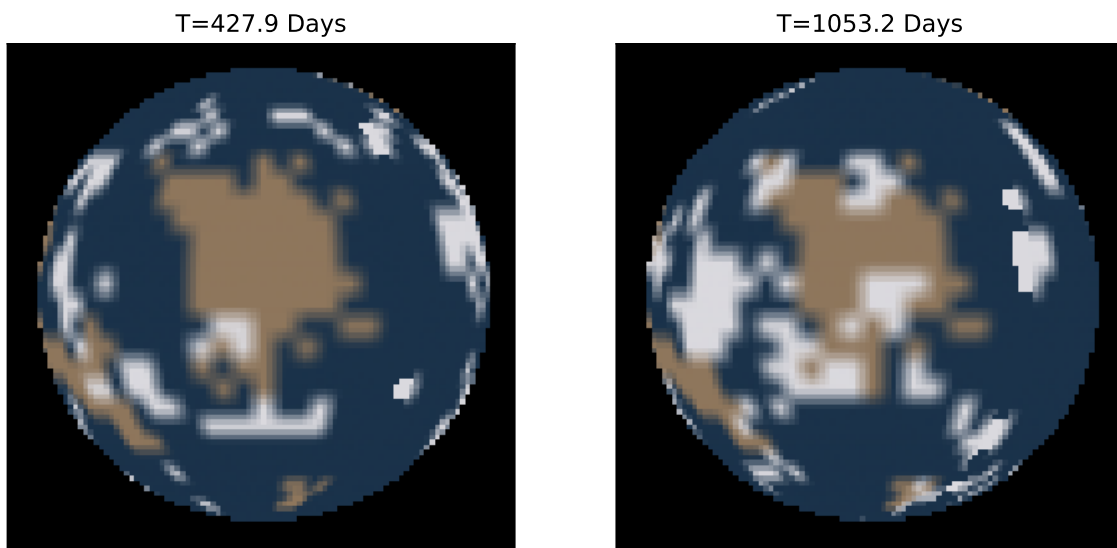


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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