

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging tsoukal6 Planet 1

Friday 5th November, 2100

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:

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01111001000010010000000100101000011110101010110100011011111001011000011110  
1011111111000111100010100100010011101010001000000011111101101100001010110  
10100110101101110101001000100101001110100100110010010000100000111100011100  
10101100000010010111101011101101110101001010101010010001111001011010011110  
01110100111100101110001000011000101100000110101110101111011001010101001000
```

This signal was first noticed at UTC 2096-12-27/09:44.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	1.9
Stellar Mass (Solar Masses)	1.17
Distance to Star (lightyears)	14.4
Planet Mass (Earth masses)	3.9
Atmospheric Pressure (atm)	0.7

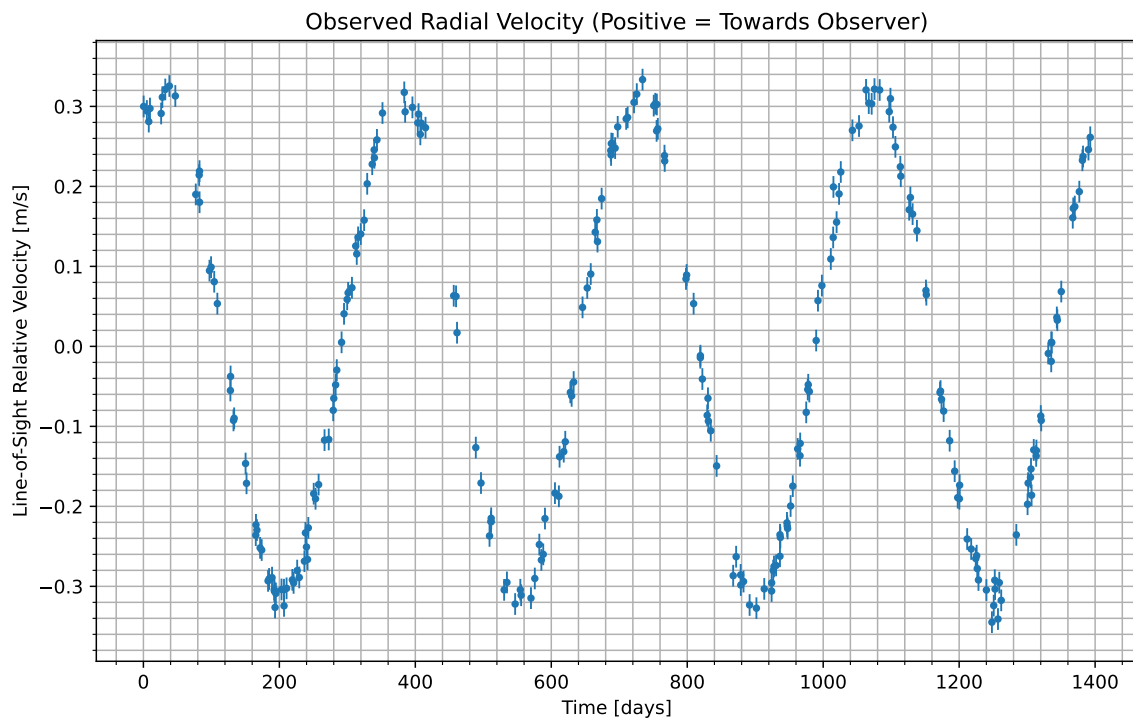


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2096-12-28/12:06. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	59.8
CO_2	33.7
H_2O	6.53

Gas Abundance (percent by volume)

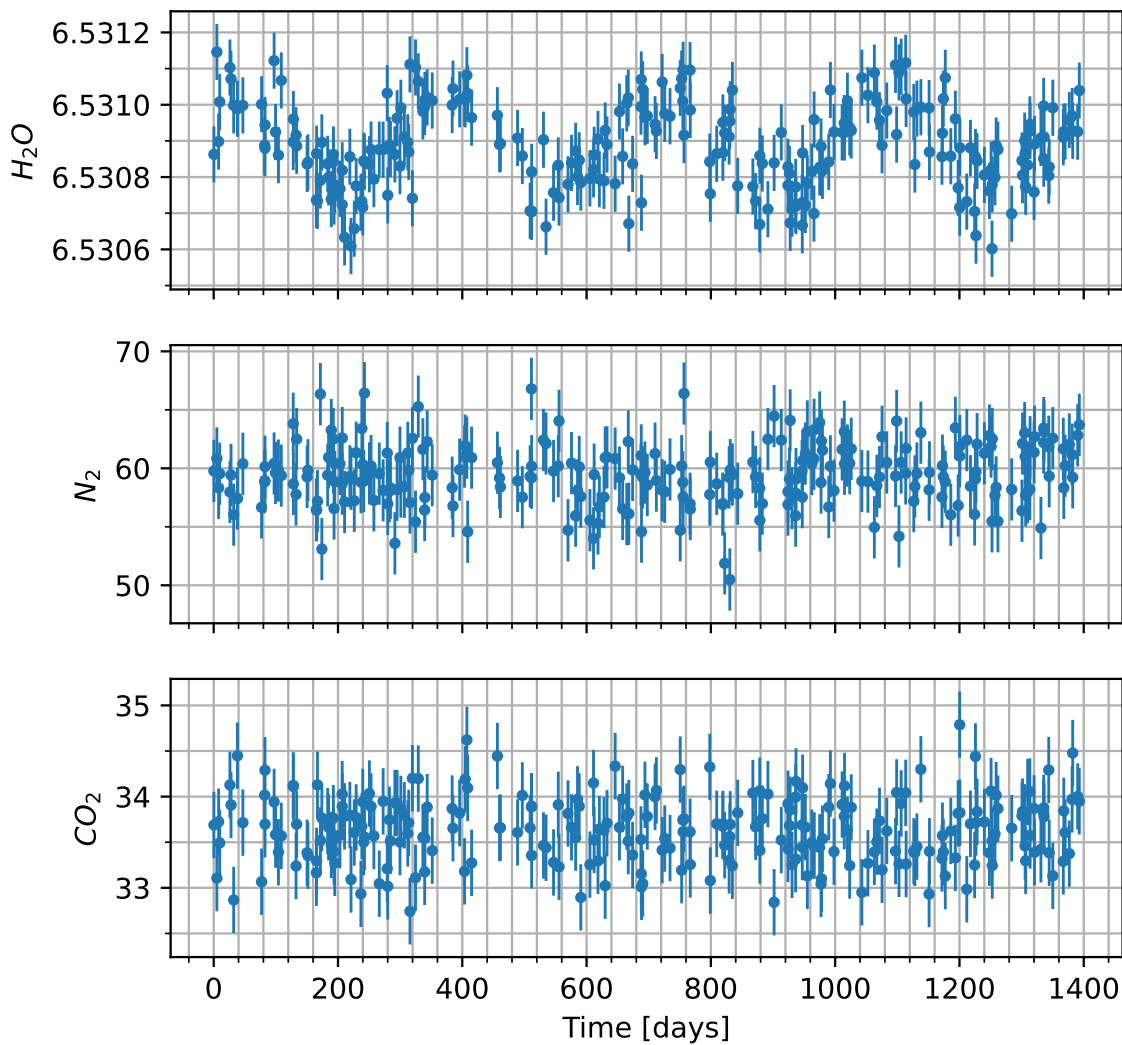


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=104.2 Days



T=712.3 Days

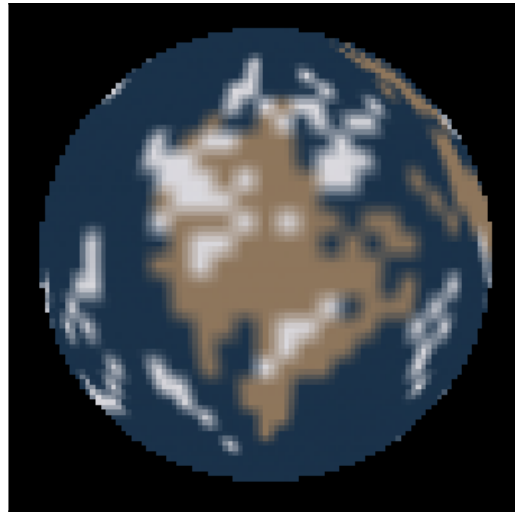


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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