

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

Friday 13th December, 2086

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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01110010001110010101101010000011111111010100111  
10111010100000011100001101101000011110011100100  
10100010001100000000111101000111111100011011111  
01101010101011100011011110011101001000101110100  
10011110110011011000011010101001110111101111100  
00010011100111011100110100111010010101111101100  
11111010110101110001110111100101101000101001010  
11100101000100110011101111101010000110010001111
```

This signal was first noticed at UTC 2084-06-20/21:17.

Parameters of the candidate planet of origin and its host star

Spectral Type	K
Stellar Luminosity (Solar Units)	0.209
Stellar Mass (Solar Masses)	0.676
Distance to Star (lightyears)	130.0
Planet Mass (Earth masses)	2.4
Atmospheric Pressure (atm)	12.6

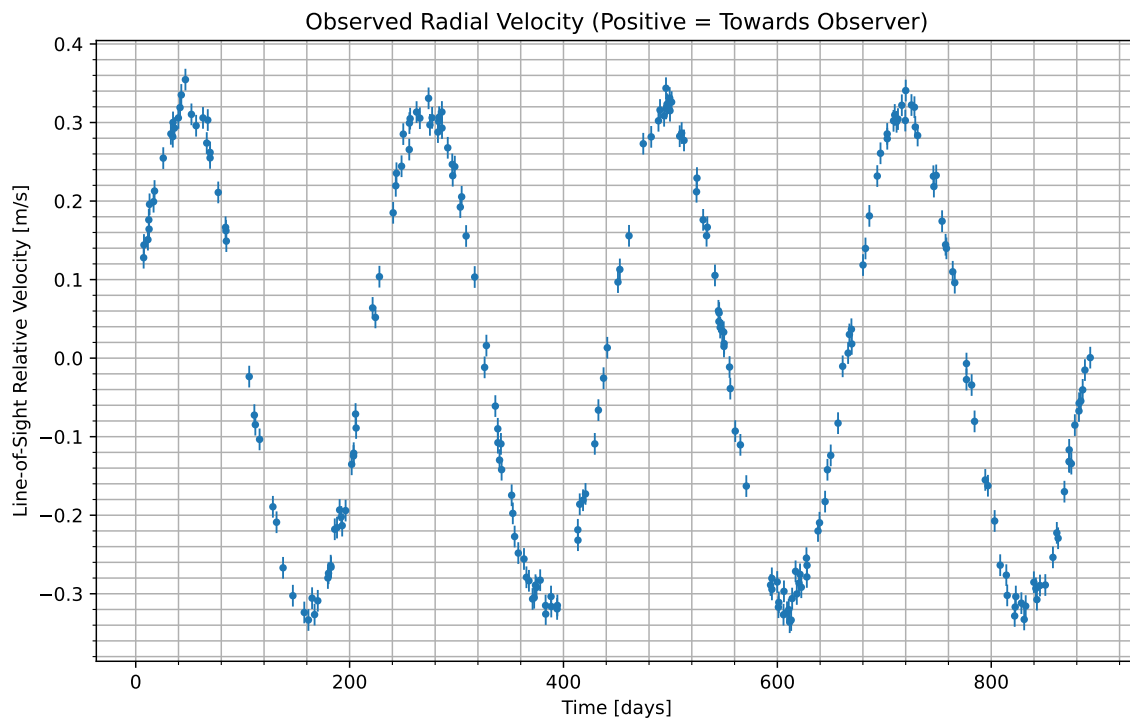


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2084-06-23/14:40. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	42.2
CO_2	38.4
H_2O	19.4

Gas Abundance (percent by volume)

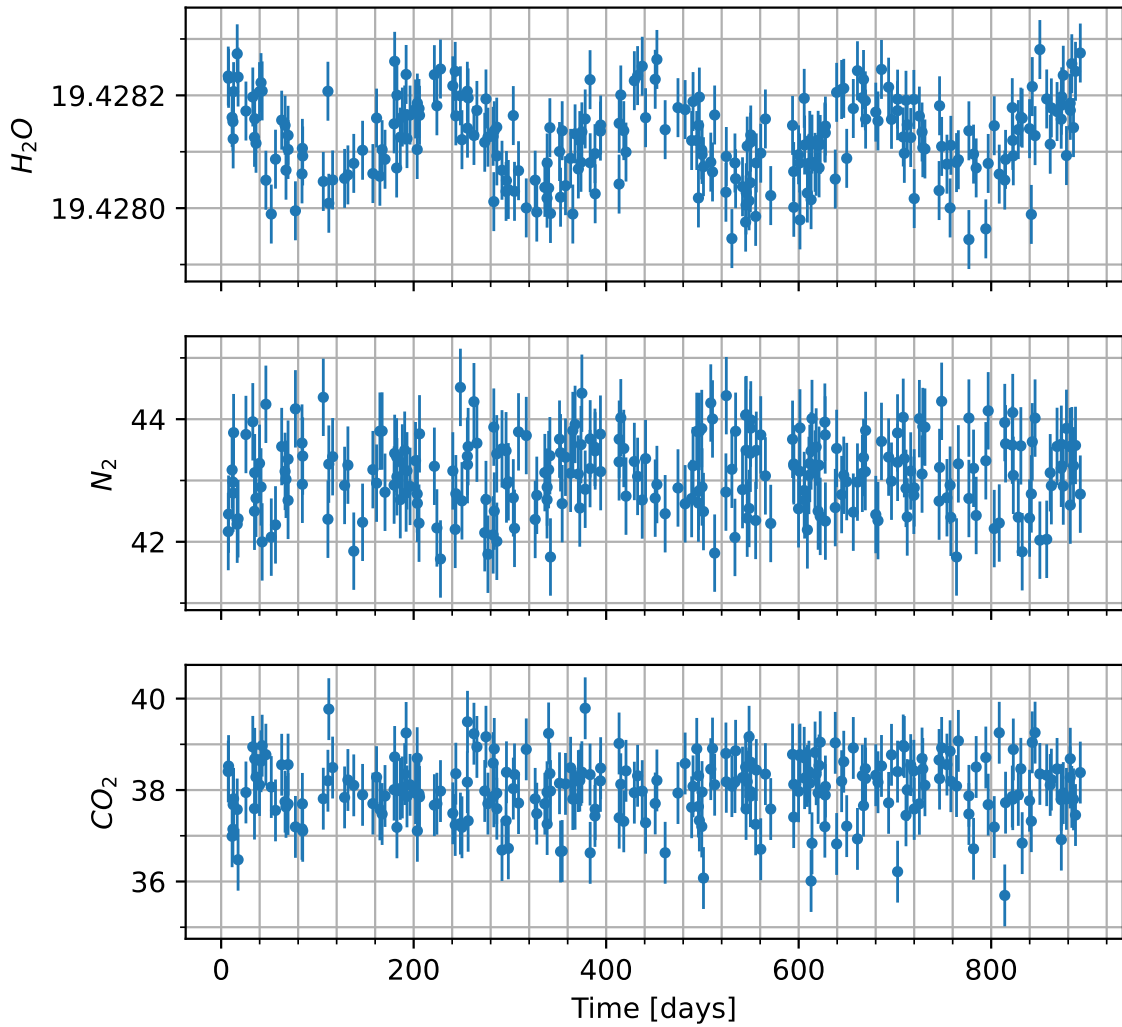


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=190.7 Days



T=248.6 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.