

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging duongka2 Planet 1

Monday 31st January, 2089

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 is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

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10011001111100011110101001010100100001100001011111010101011000111  
01001010110100110001010100110010110010110011110110010000100001001  
1110001101000010011000001010111100011001110011001001001001100110  
10101001000000100111000000100011100011011001110100001011010110100  
1101010100110000001001110100110110011000000101100101101011110011  
01111101100000101001000101000101111100001011111101001101110011110
```

This signal was first noticed at UTC 2085-05-20/20:57.

Parameters of the candidate planet of origin and its host star

Spectral Type	G
Stellar Luminosity (Solar Units)	0.837
Stellar Mass (Solar Masses)	0.956
Distance to Star (lightyears)	191.1
Planet Mass (Earth masses)	2.8
Atmospheric Pressure (atm)	7.3

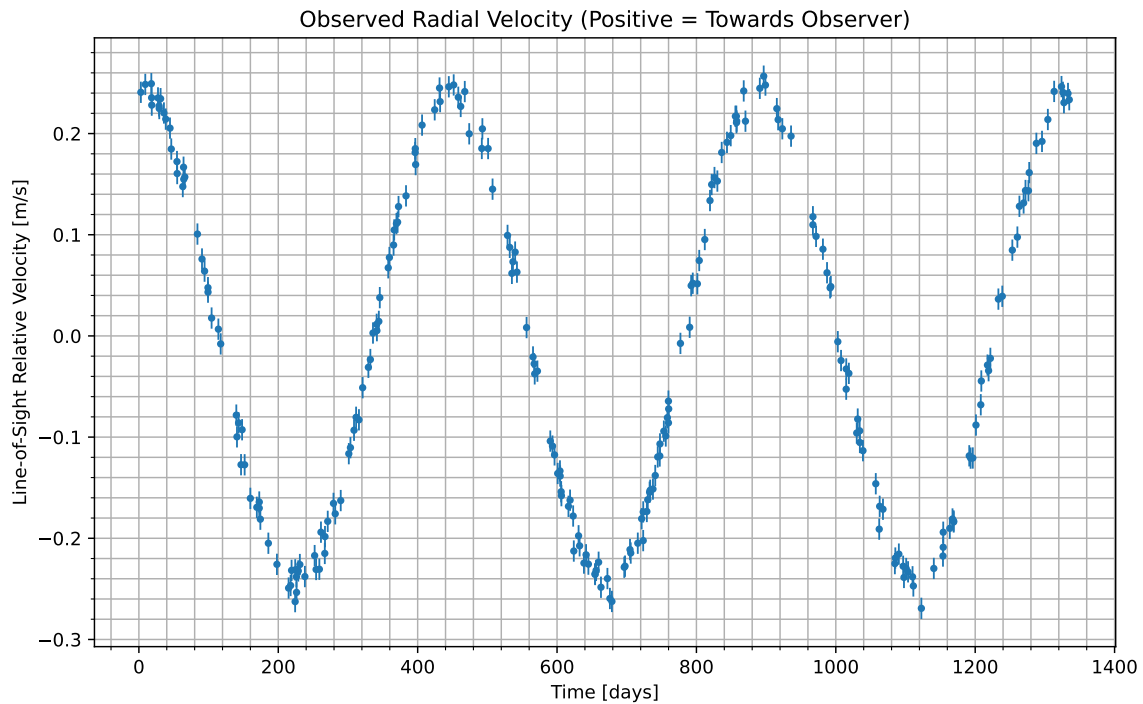


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2085-05-21/21:06. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	33.9
CO_2	36.7
H_2O	29.3

Gas Abundance (percent by volume)

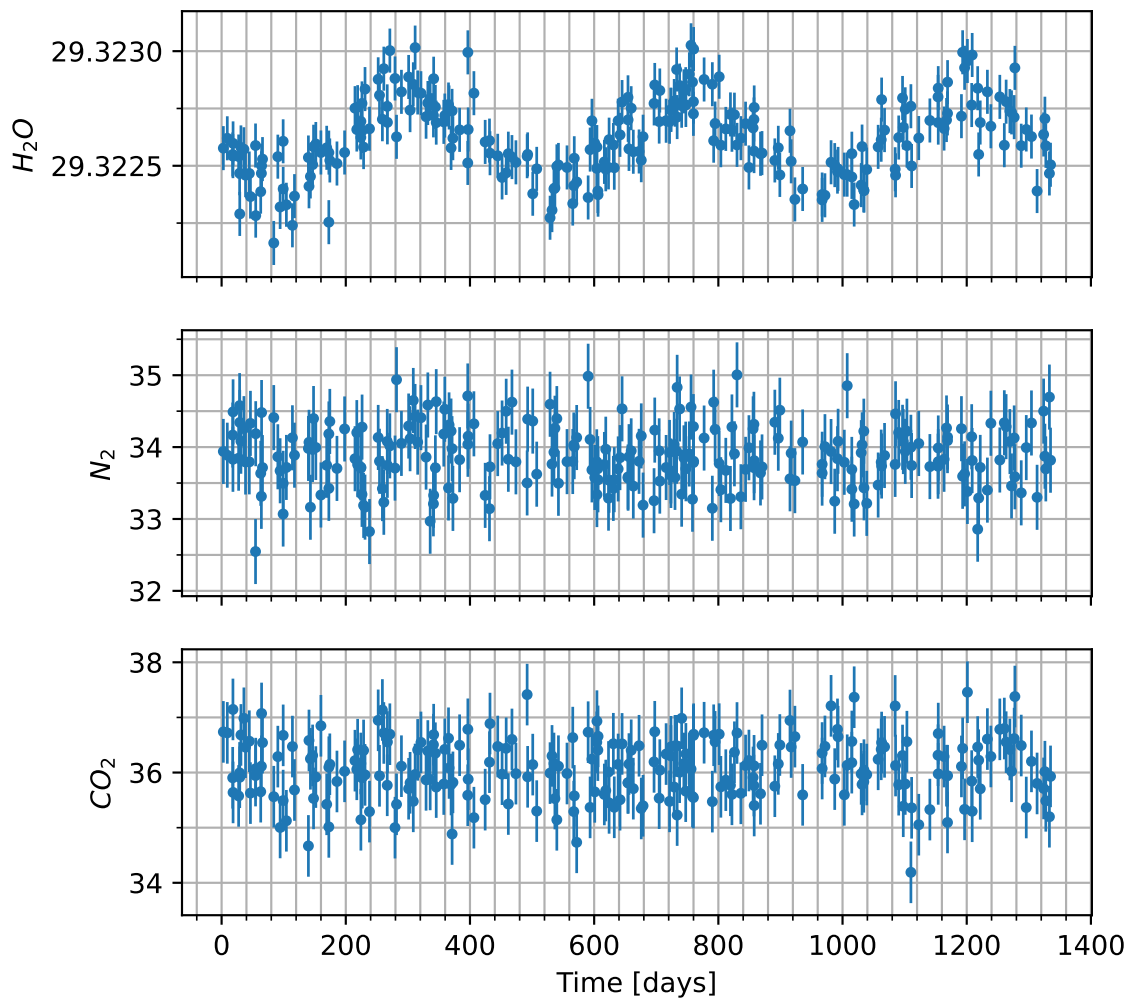


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=857.3 Days



T=1208.0 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.