

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

Sunday 16th April, 2073

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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111100100100101001100000011110101111110101011111  
1011011010001000011000101101001101010001110110100  
1010010011011100100101001010010101010111001101110  
100000000100001111010010011010101001111101101101  
100111011111001110000111011101101001011001001110  
110101010010111111101101100110011110000110101111
```

This signal was first noticed at UTC 2072-06-26/06:29.

Parameters of the candidate planet of origin and its host star

Spectral Type	K
Stellar Luminosity (Solar Units)	0.105
Stellar Mass (Solar Masses)	0.569
Distance to Star (lightyears)	27.1
Planet Mass (Earth masses)	1.5
Atmospheric Pressure (atm)	9.9

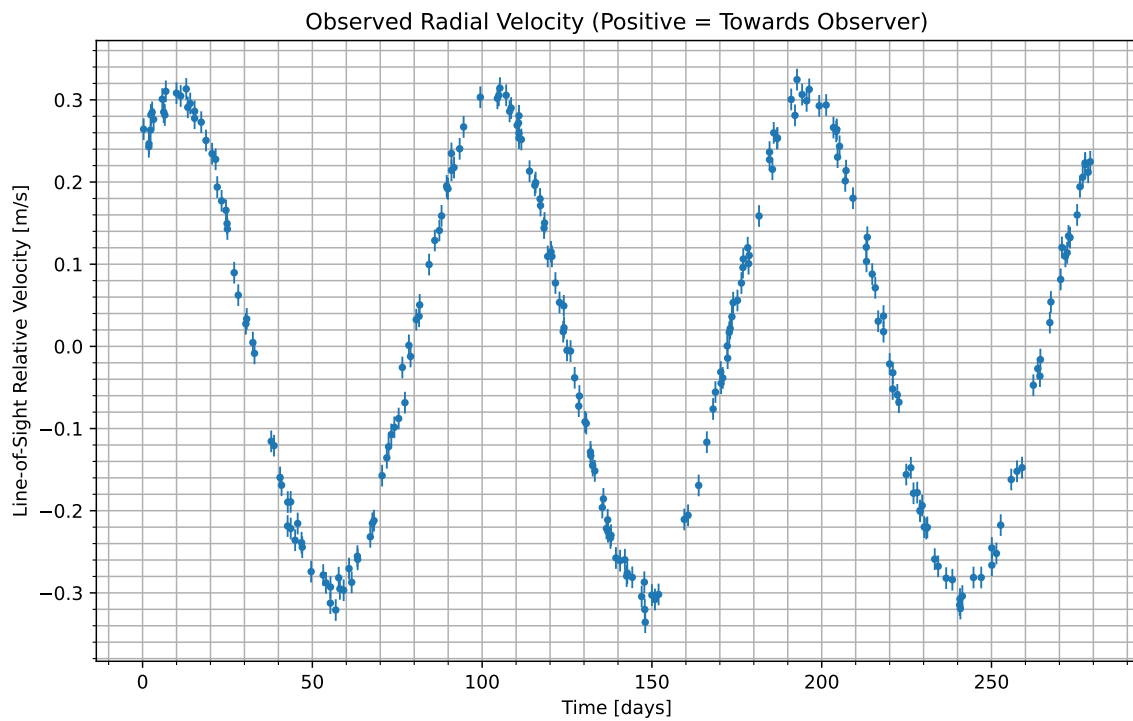


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2072-06-28/22:35. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	8.75
CO_2	63.1
H_2O	28.2

Gas Abundance (percent by volume)

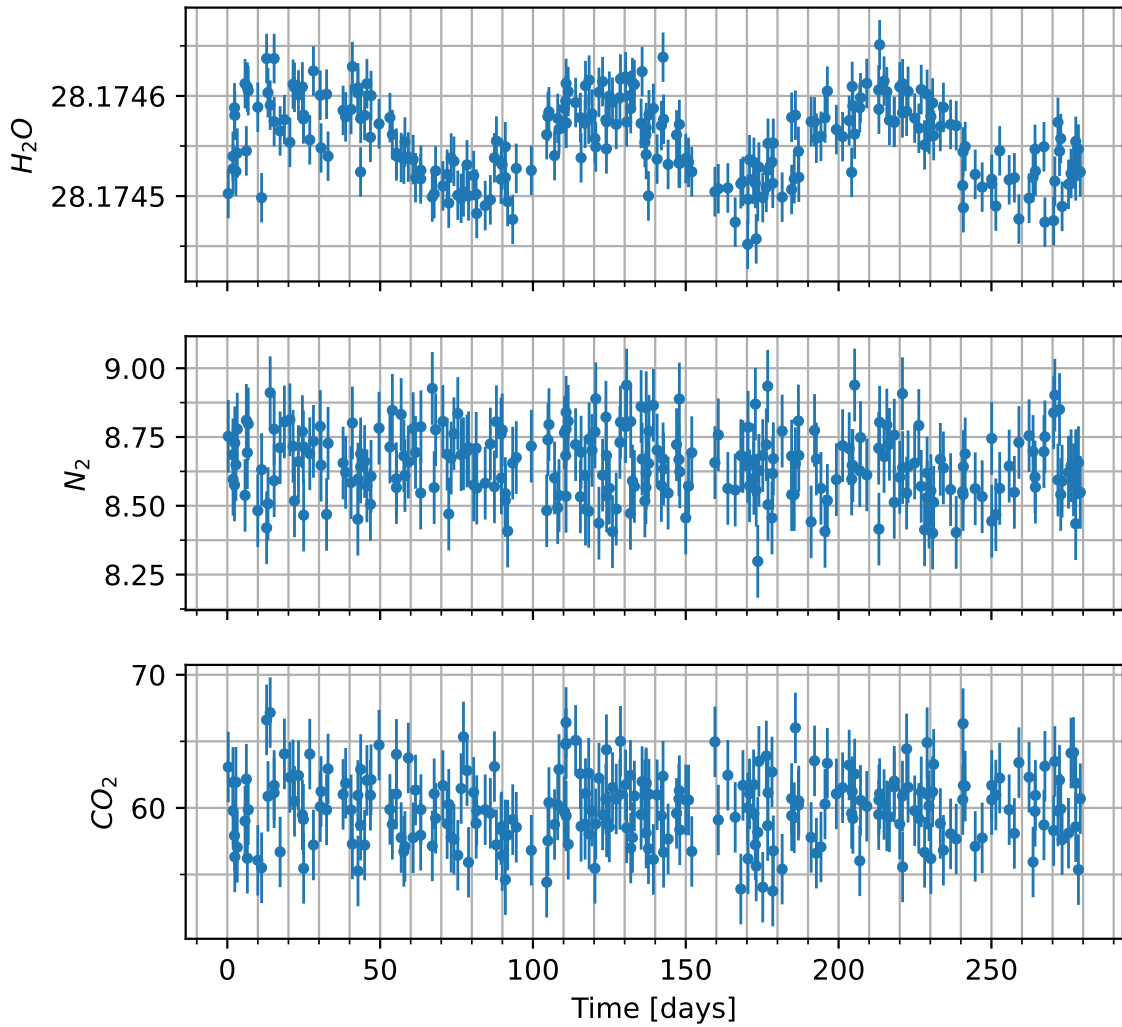


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

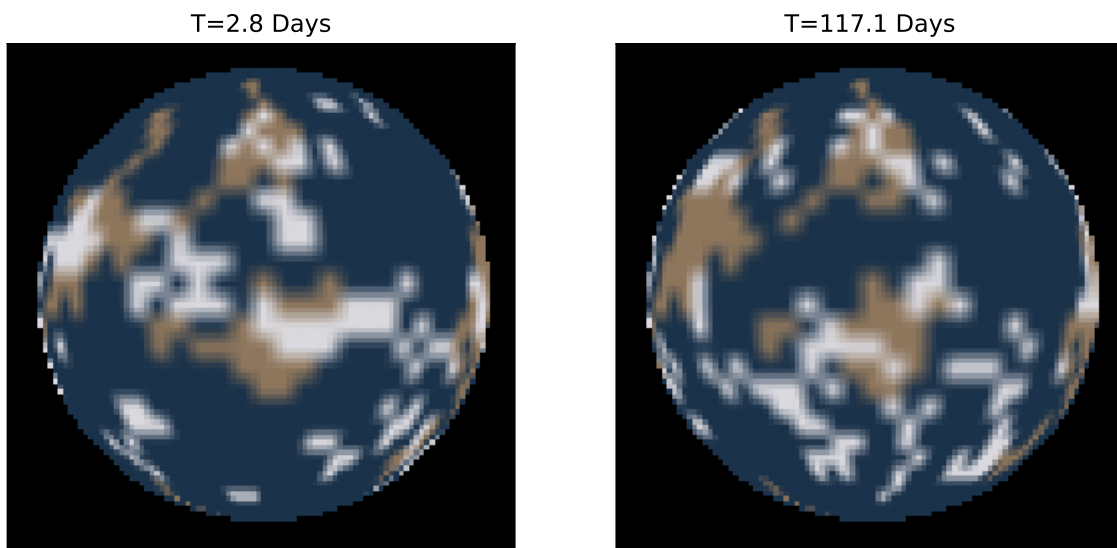


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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