

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging ngsiu5 Planet 1

Friday 6th August, 2077

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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0111110000010010100111000111011110001000010001110001001100111110  
011110101111011000010101100101110110001010011111110001111011010  
011001001011010101101111000101011010010001111001011111010001111  
1011000011011001011100100011110110001011011001010100011001101000  
1100101110101100100111111110100101000110000100011010011010110011
```

This signal was first noticed at UTC 2076-07-06/21:30.

Parameters of the candidate planet of origin and its host star

Spectral Type	K
Stellar Luminosity (Solar Units)	0.114
Stellar Mass (Solar Masses)	0.581
Distance to Star (lightyears)	1112.3
Planet Mass (Earth masses)	4.5
Atmospheric Pressure (atm)	6.7

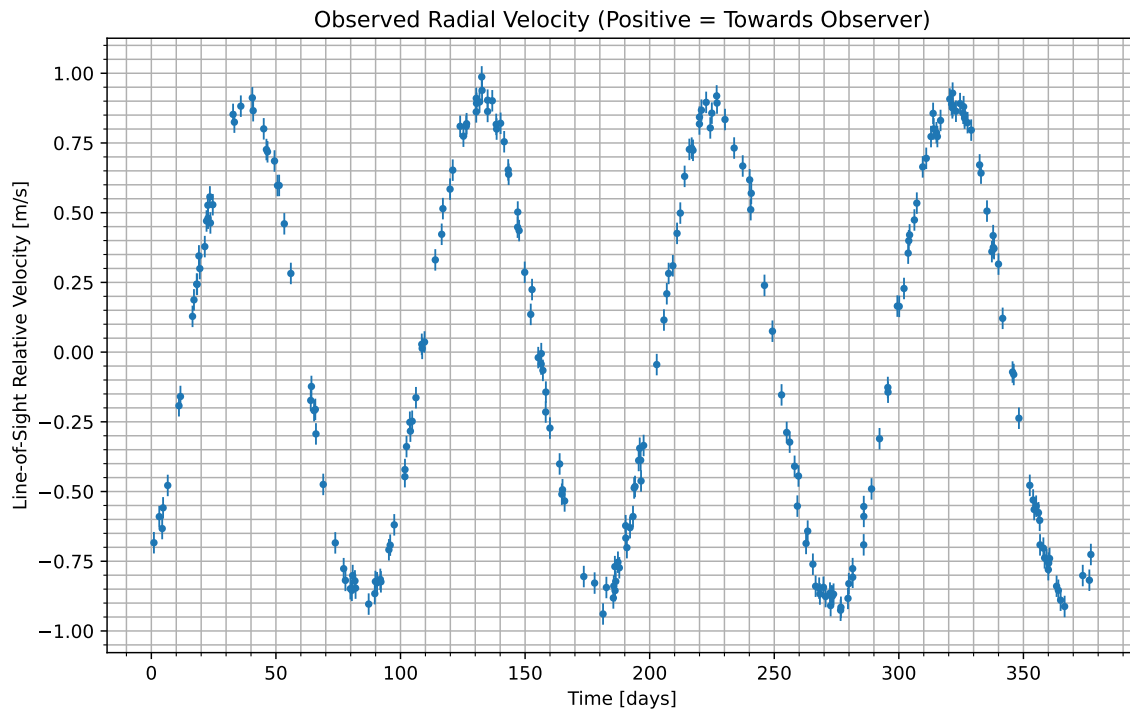


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2076-07-07/18:00. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	39.4
CO_2	45.5
H_2O	15.1

Gas Abundance (percent by volume)

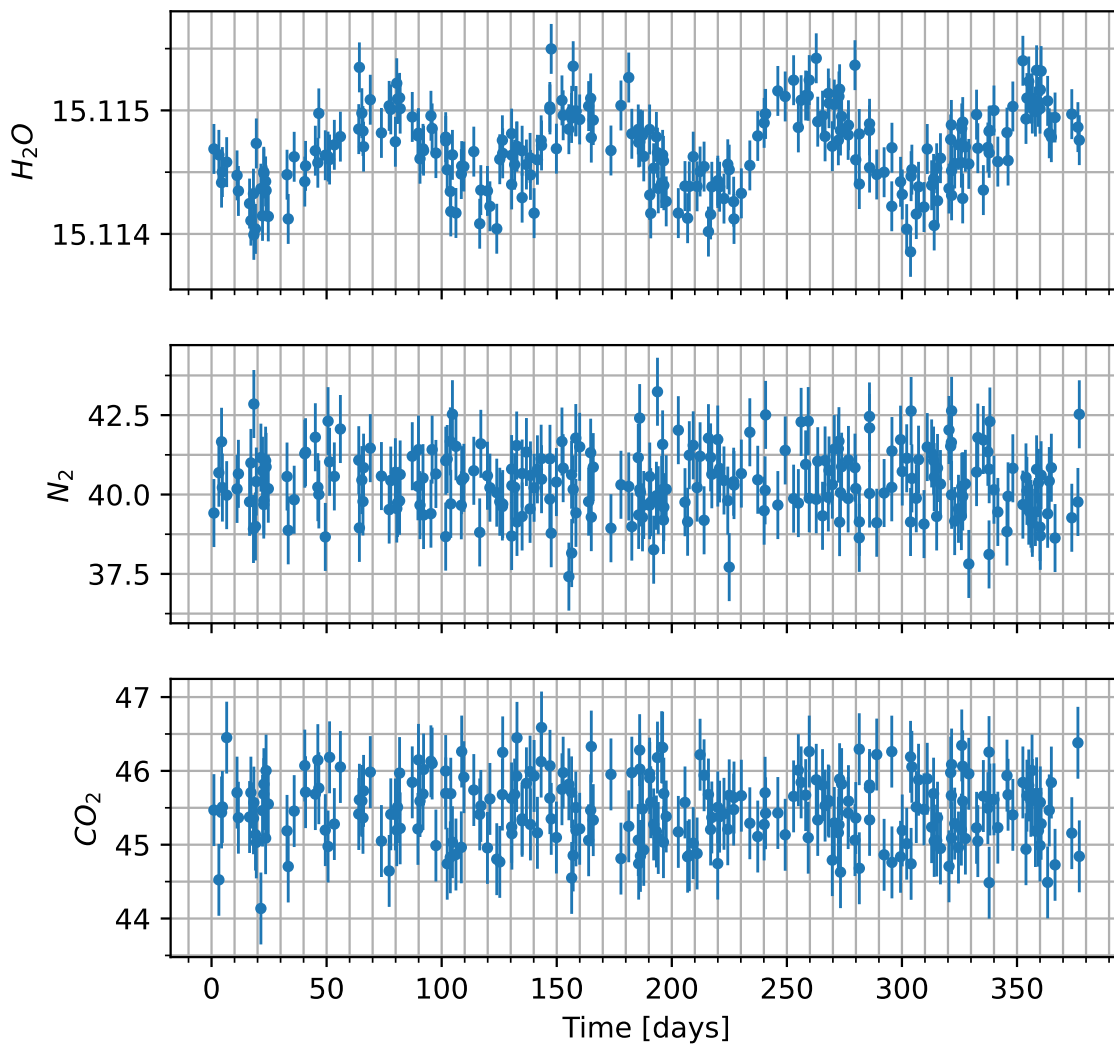


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

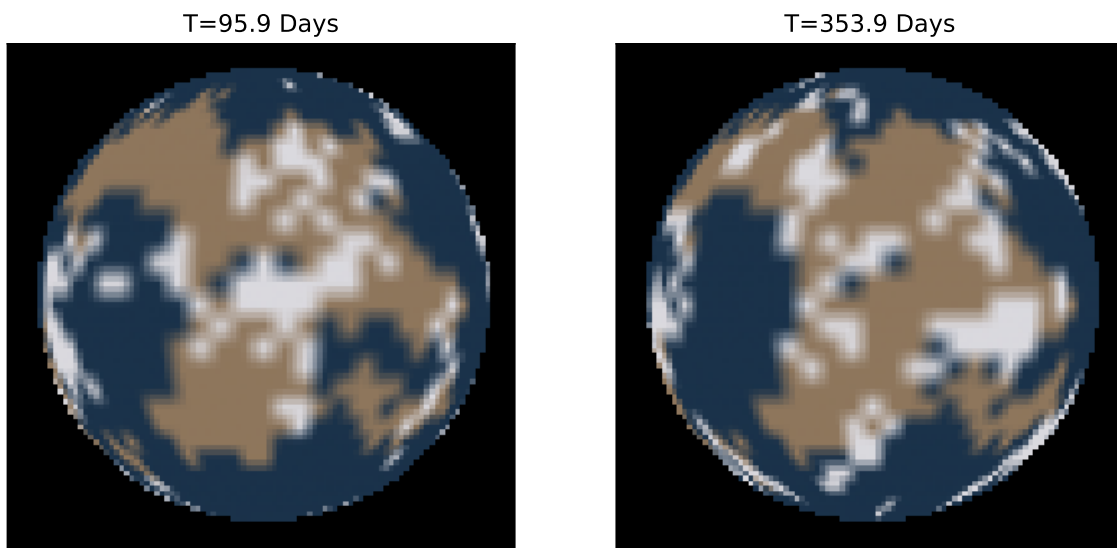


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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