

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging message2 Planet 3

Tuesday 13th October, 2076

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 radio 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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00101100101111000001101011001011110111101000100000101011010001111  
1111011001000111010101101100100000101111110000011000011011111011  
0000001010100001100011010011011100010101111000011101000110101011  
0010110010010100100101101101001001011001100111100001000100101000  
1010101101010100100011010110111001001010110010101010110001001110
```

This signal was first noticed at UTC 2076-03-26/07:21.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0226
Stellar Mass (Solar Masses)	0.378
Distance to Star (lightyears)	30.4
Planet Mass (Earth masses)	0.3
Atmospheric Pressure (atm)	1.2

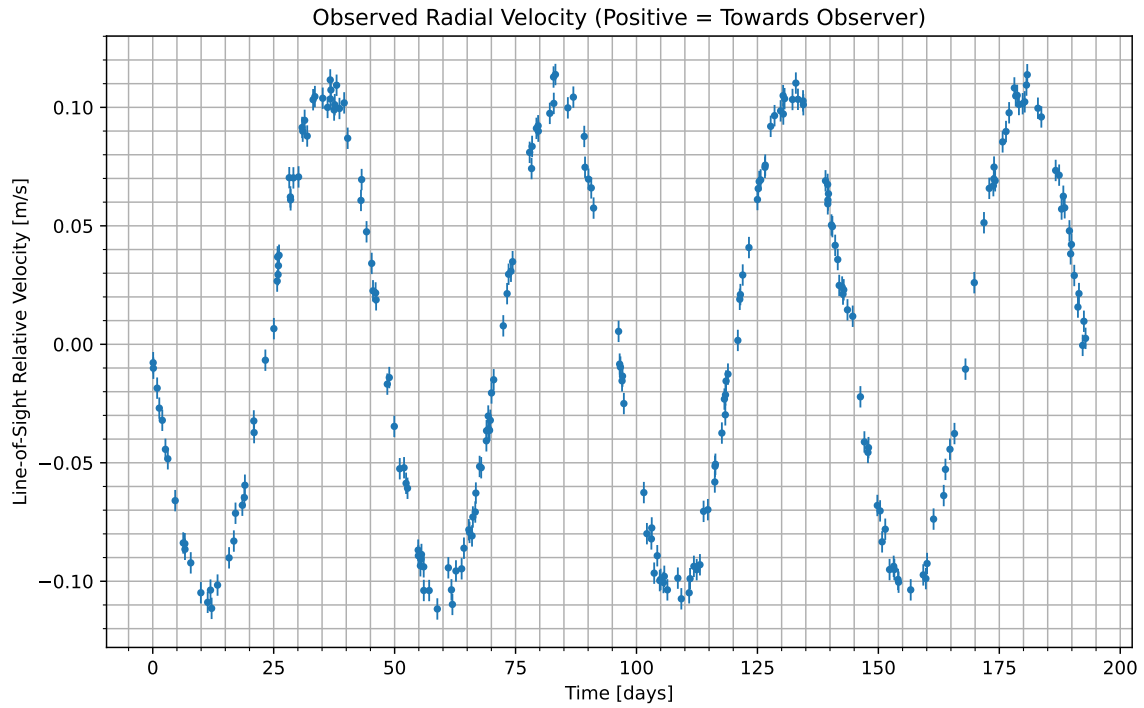


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2076-03-26/11:56. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	8.51
CO_2	61.2
H_2O	30.3

Gas Abundance (percent by volume)

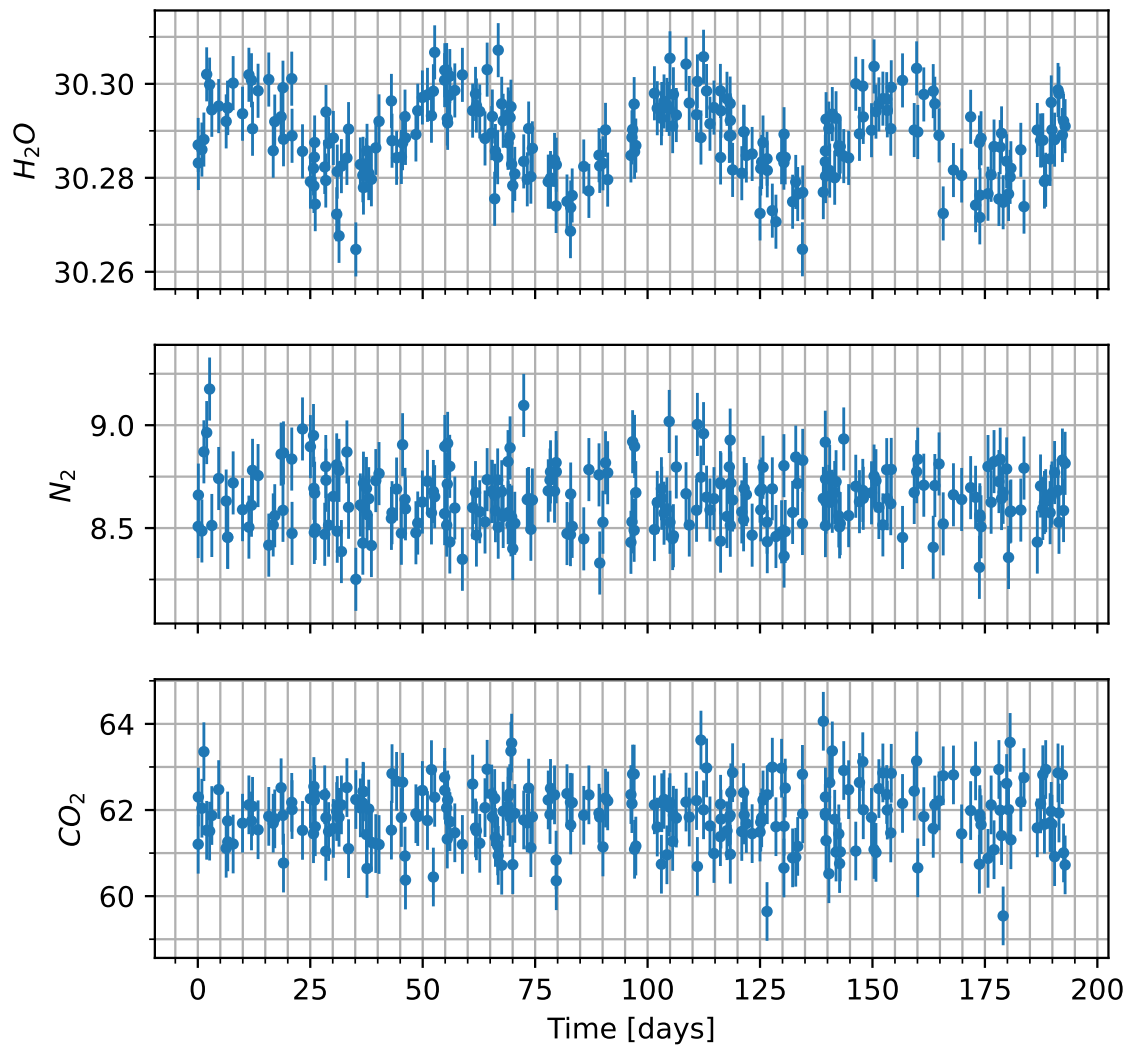


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

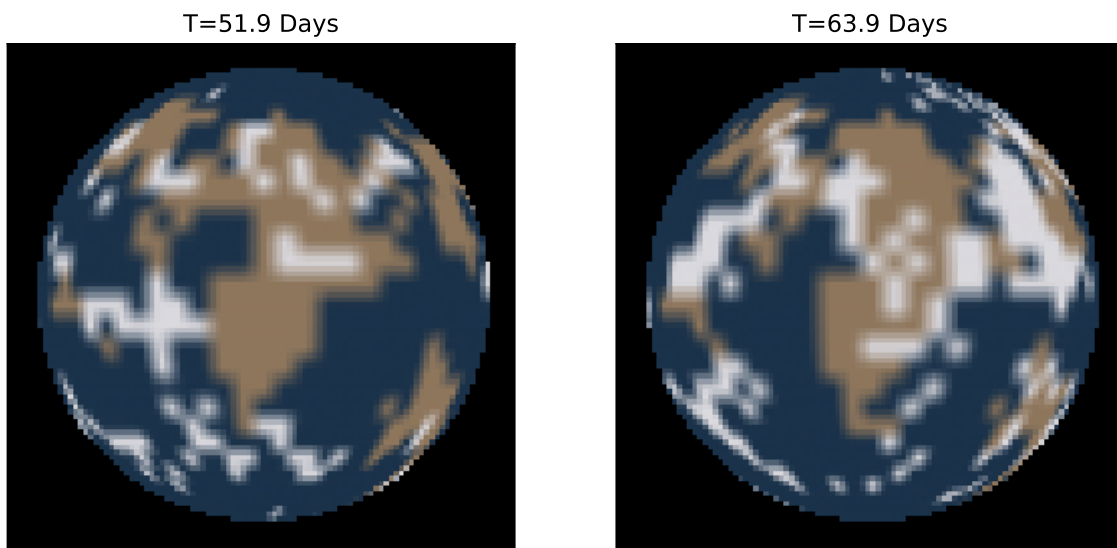


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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