

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

Friday 2nd February, 2091

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

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0011100110010010001011001001000000111011011000001  
1111110001111011001001111100101010010011010110001  
100010110001100111011101011111110011101000100100  
0000111100001000011011110111101101100110101011111  
010110011011001011010000000010100000000001001000  
1100111101000111010001011011010010101100101101011
```

This signal was first noticed at UTC 2090-11-18/01:45.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.0176
Stellar Mass (Solar Masses)	0.35
Distance to Star (lightyears)	818.2
Planet Mass (Earth masses)	0.8
Atmospheric Pressure (atm)	3.6

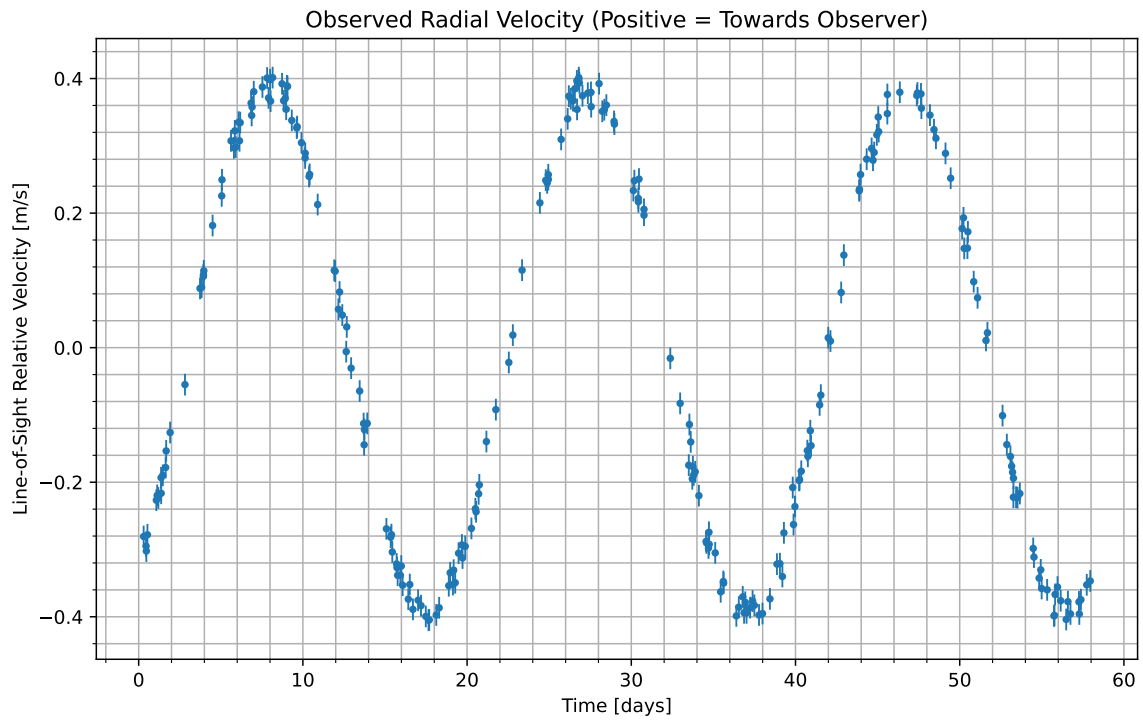


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2090-11-19/07:57. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	21
CO_2	50.2
H_2O	28.8

Gas Abundance (percent by volume)

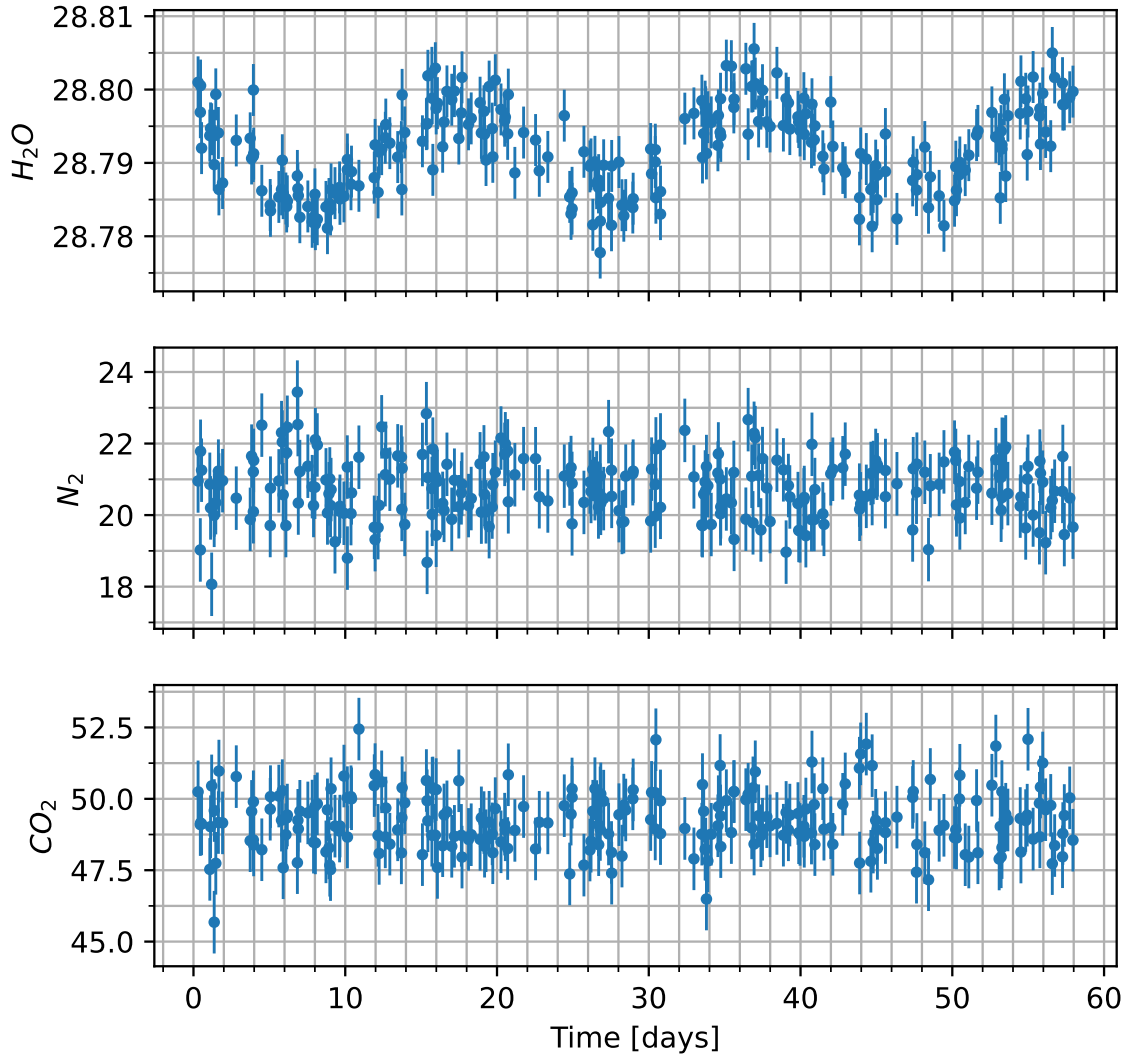


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

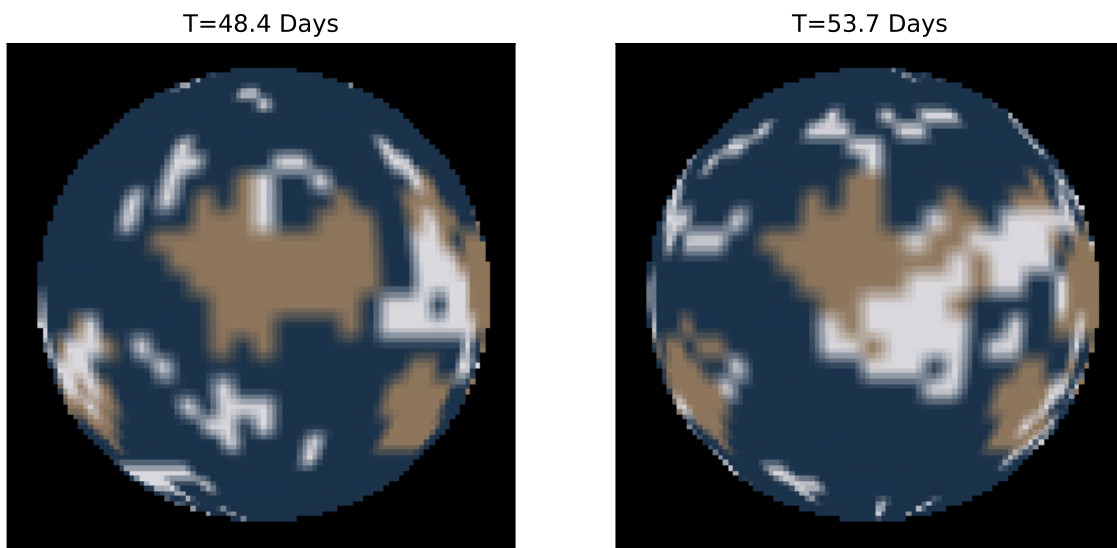


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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