

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging liolive2 Planet 3

Saturday 28th 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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101110101010000001010011110100111111001000101101010100000110111100  
100000010101101110001111110110101110011001111110111110000001110010  
101100100110100101110011100001000110010110011010010101000011011100  
100111101101001011110111010110100001111001010101001110100100011111  
010011101110111100111110111100110111111000101001111100100011011111
```

This signal was first noticed at UTC 2068-05-10/05:21.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.45
Stellar Mass (Solar Masses)	1.36
Distance to Star (lightyears)	8.7
Planet Mass (Earth masses)	1.0
Atmospheric Pressure (atm)	22.5

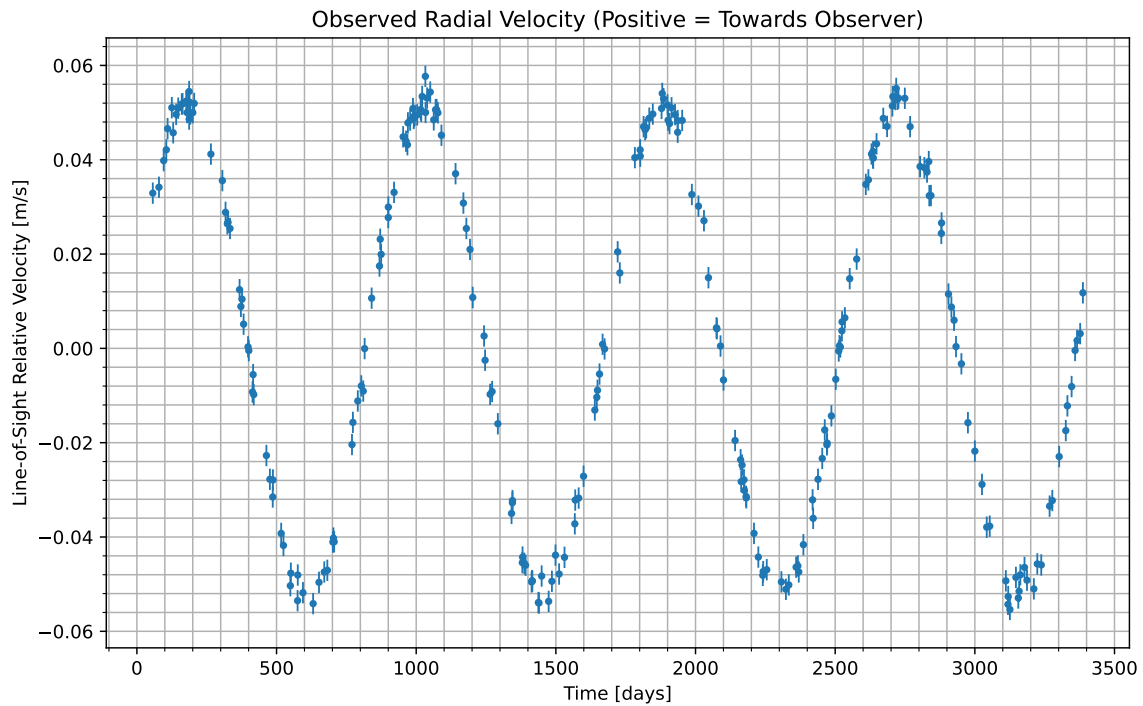


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2068-05-10/22:35. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	34.7
CO_2	44.9
H_2O	20.4

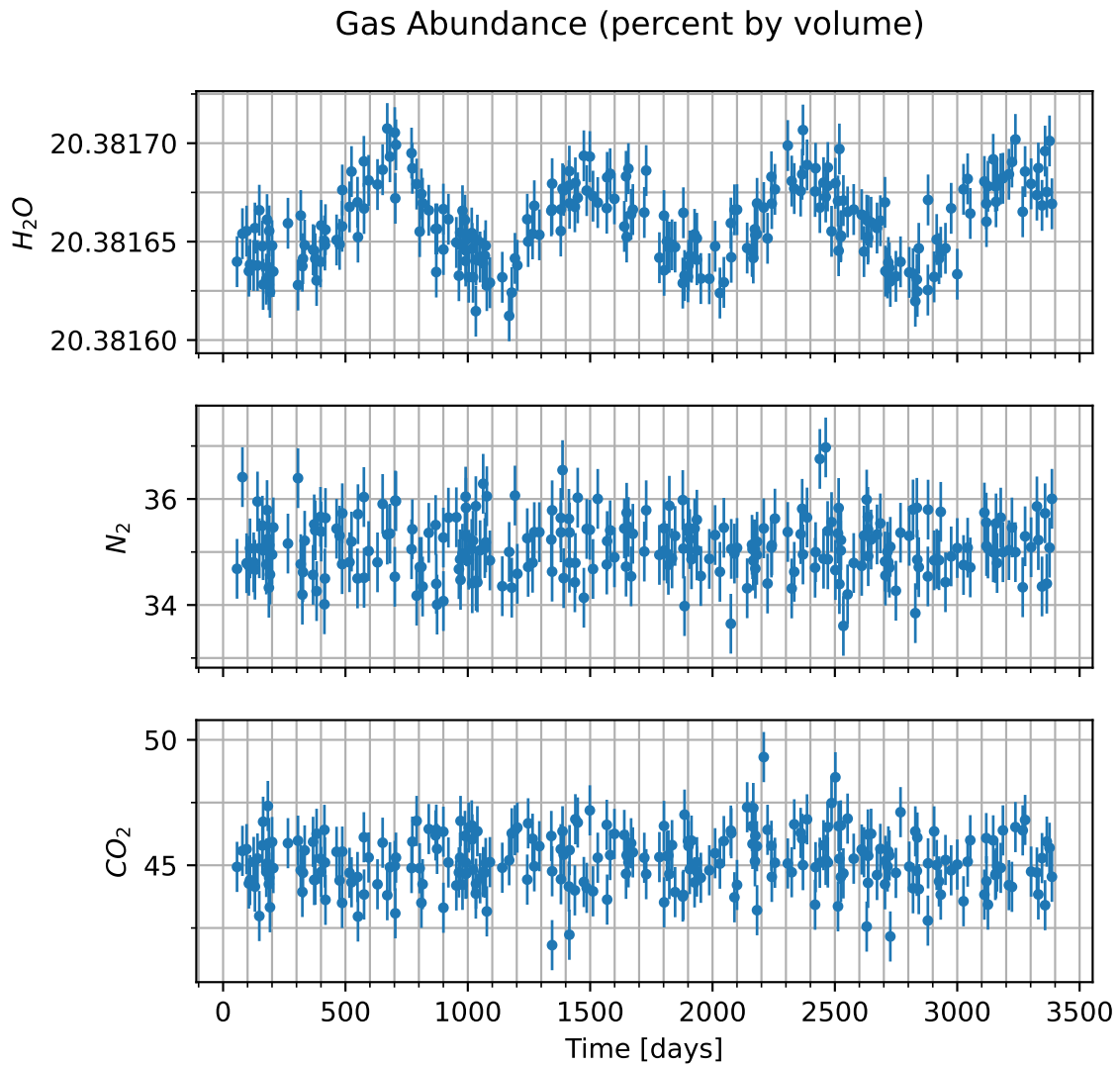
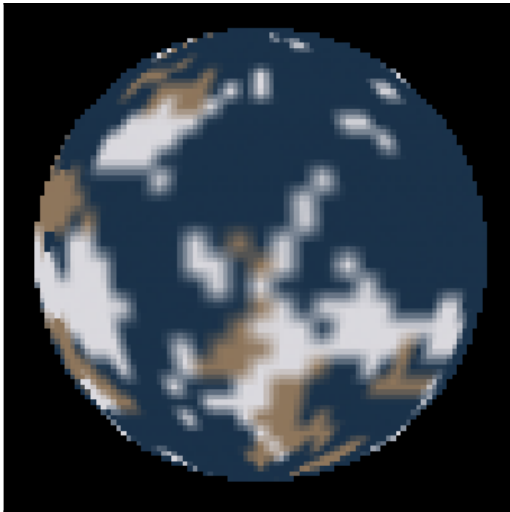


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

T=524.8 Days



T=3277.3 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.