

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging hagaseth Planet 2

Saturday 15th February, 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 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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1011000101001101000111011000111101001101011111010101010  
0011111111011010100100110110010111101000010101010101000  
001001010100111010001100010111001111011100001010011101  
0110001011011000010010111101100100110001010111110111110  
1011110100100100110000110100001011011000001001111101100  
101101000010001111111001000100011110101000101111001100  
1000100101111001110111100001100000110000010101010001101  
00010011011001111010110101100111011101111101010101011  
011000010001001111111000101111110010111101011110000011
```

This signal was first noticed at UTC 2071-07-03/07:21.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	3.49
Stellar Mass (Solar Masses)	1.37
Distance to Star (lightyears)	6.3
Planet Mass (Earth masses)	0.9
Atmospheric Pressure (atm)	25.3

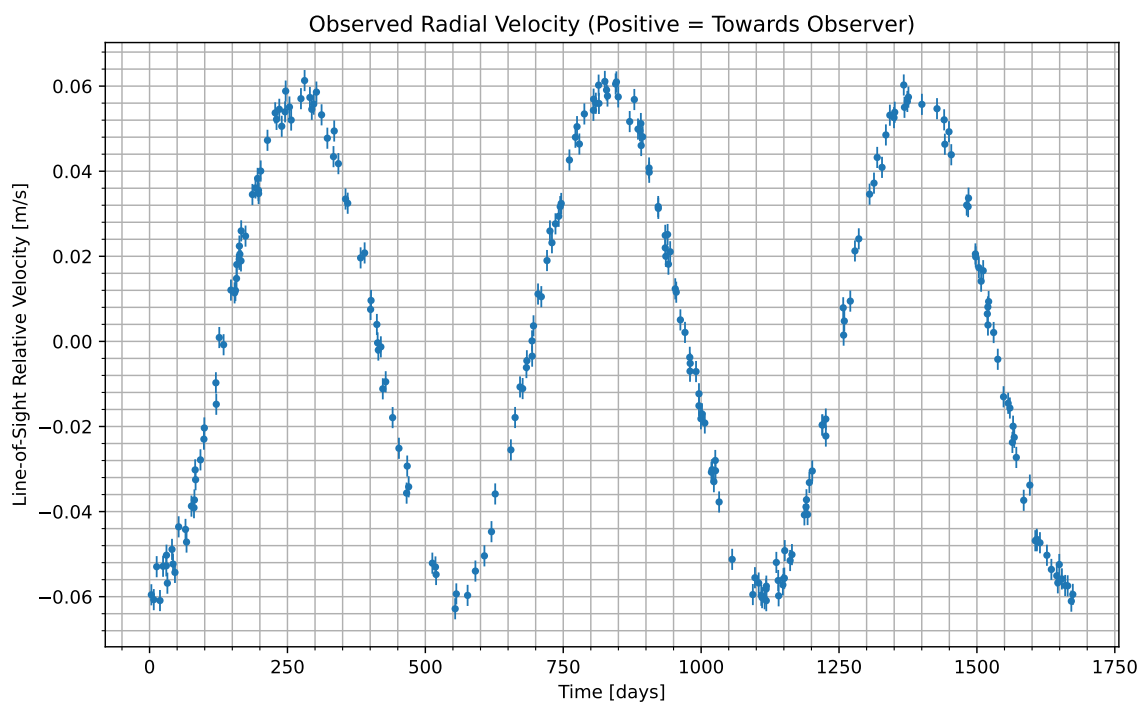


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2071-07-05/16:03. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	18.7
CO_2	63.3
H_2O	17.9

Gas Abundance (percent by volume)

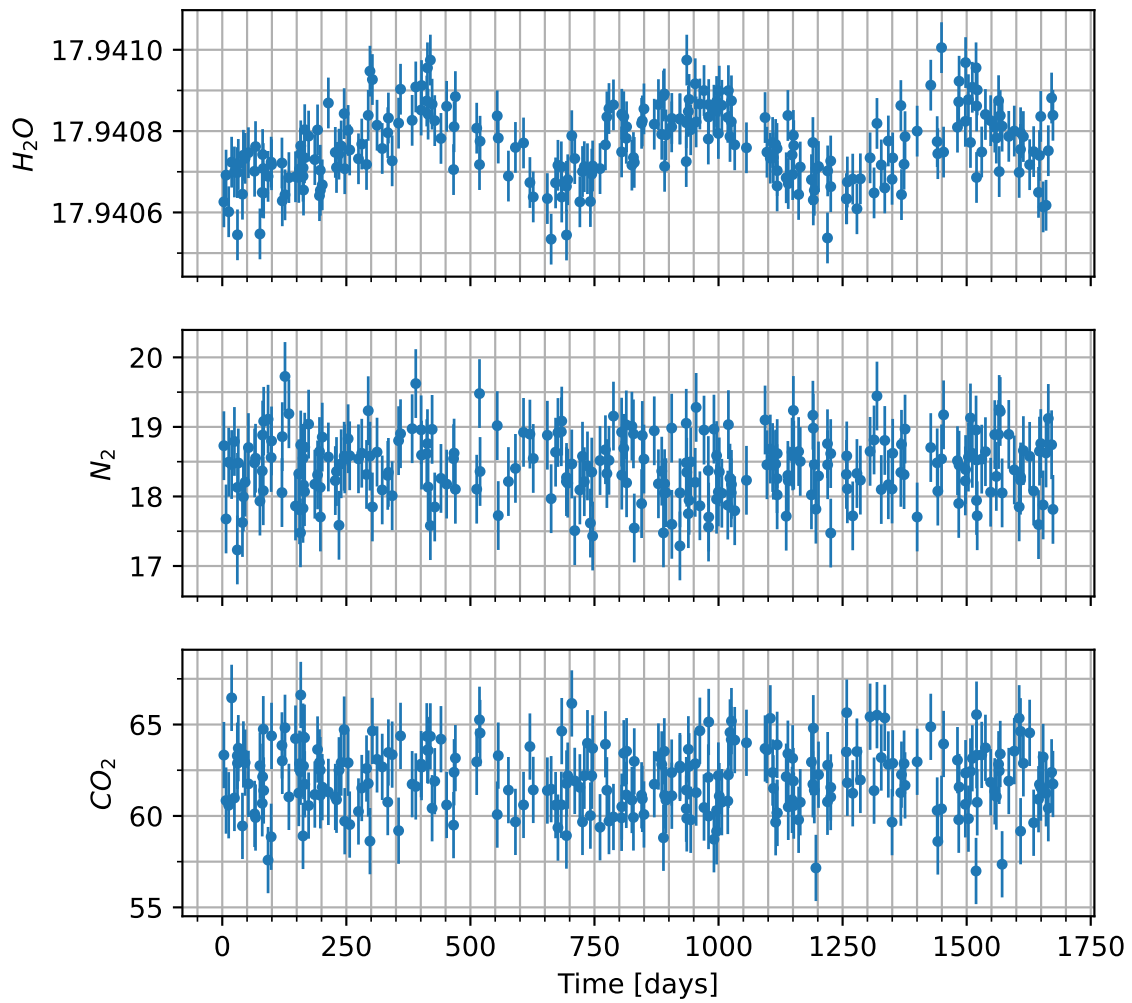


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

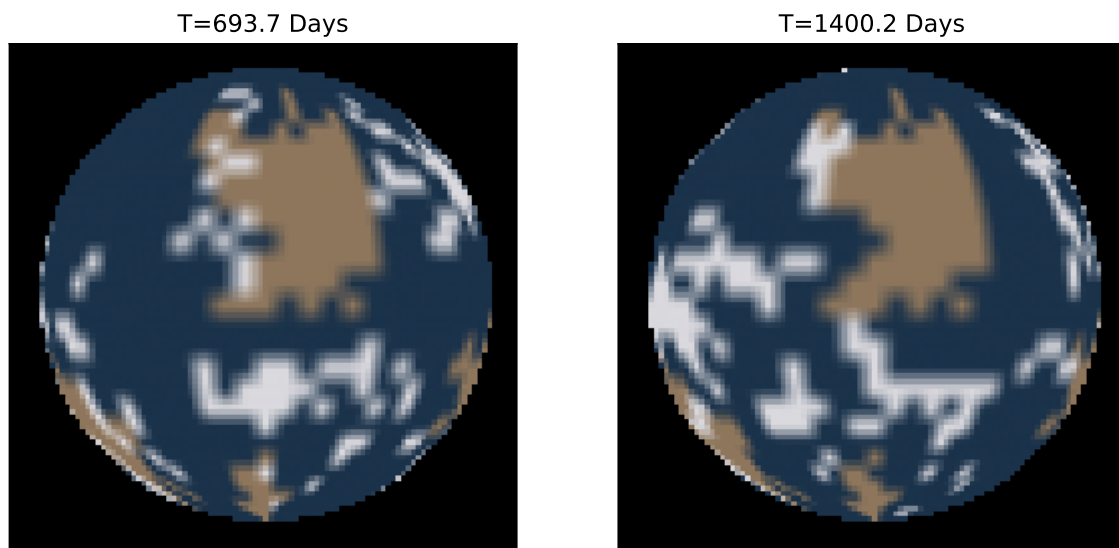


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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