

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

Saturday 26th July, 2070

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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10000110111100010001010011010111110111011011011111  
10111100100010000110000011001001011100000110010  
11111001100111011100010100001100010010111010111  
10010111100101110011100110011101101101000110001  
11100101110010001010011101101010011111110100110
```

This signal was first noticed at UTC 2066-04-27/21:04.

Parameters of the candidate planet of origin and its host star

Spectral Type	F
Stellar Luminosity (Solar Units)	2.53
Stellar Mass (Solar Masses)	1.26
Distance to Star (lightyears)	27.6
Planet Mass (Earth masses)	1.9
Atmospheric Pressure (atm)	3.3

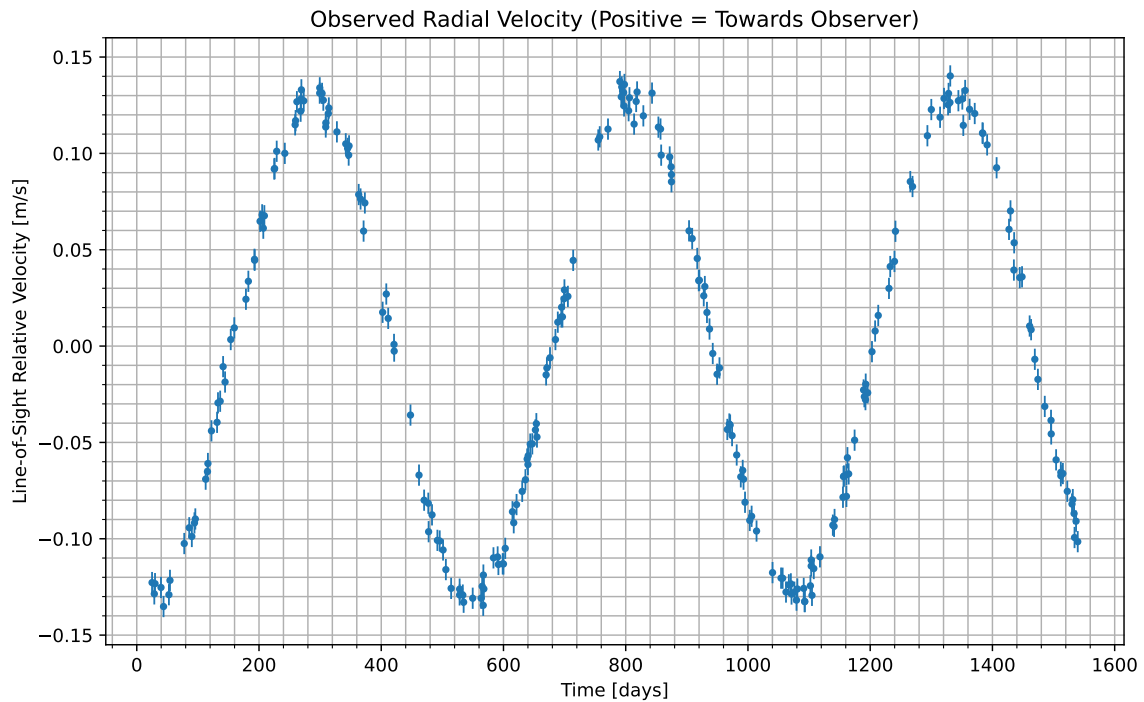


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2066-04-28/22:09. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	61.2
CO_2	30.5
H_2O	8.33

Gas Abundance (percent by volume)

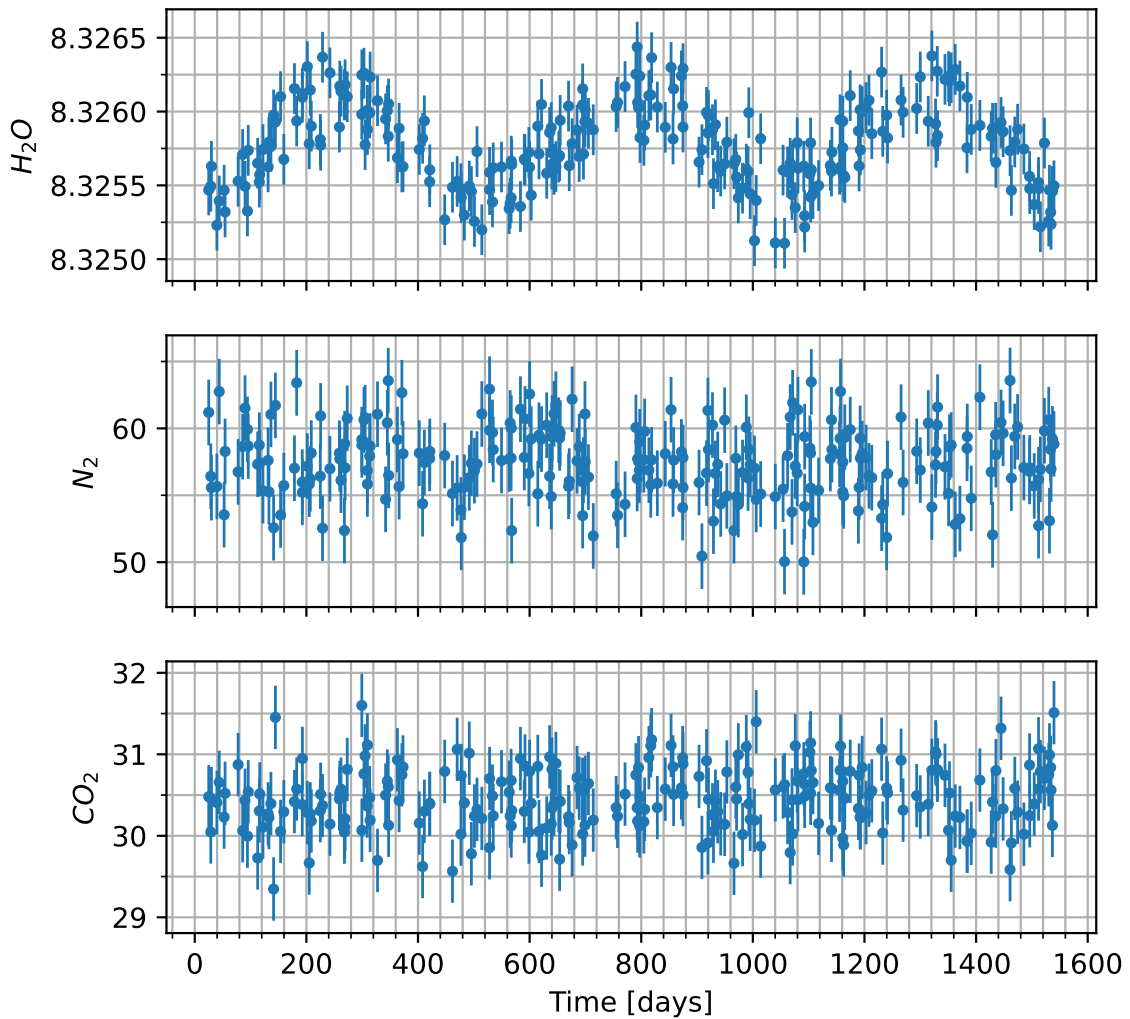


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

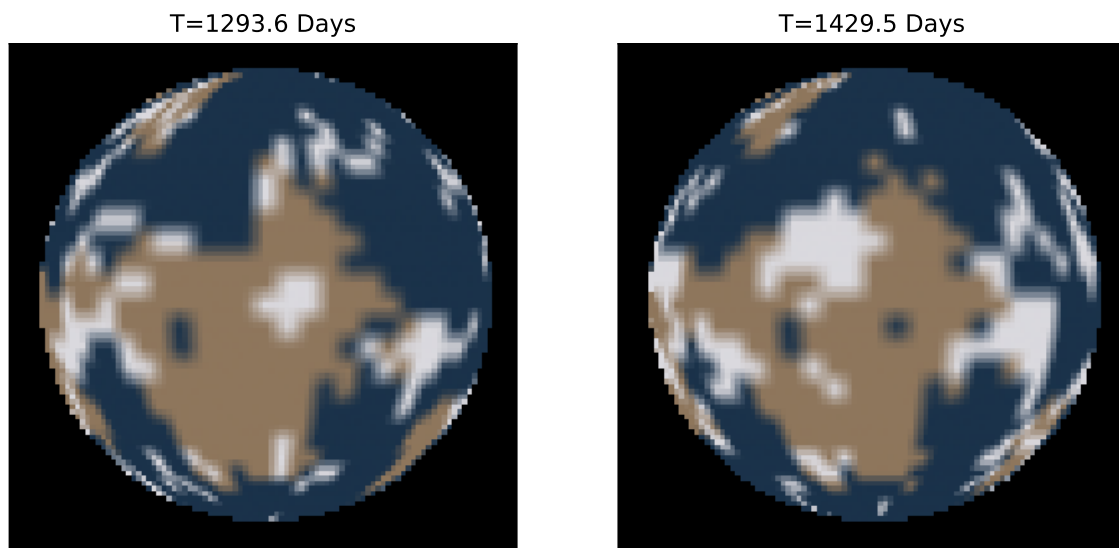


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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