

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

Saturday 7th August, 2083

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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11111000110111010001111011000001111001001110101111001010  
10000100011110110111011000000000010100110110010000100010  
00001000010111001111000011011000001110001000101010010100  
11100011110111010111100011110100001111100001001001111010  
01011100001101010101001011000111010111101011100010000100  
0110010100010111000011110010010010101111100101111001000  
11111000100000010001110001101001100001101010100011011010  
11110100000000110001011100011100001010001100010100110111
```

This signal was first noticed at UTC 2083-06-04/12:46.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.000706
Stellar Mass (Solar Masses)	0.128
Distance to Star (lightyears)	272.4
Planet Mass (Earth masses)	1.4
Atmospheric Pressure (atm)	1.1

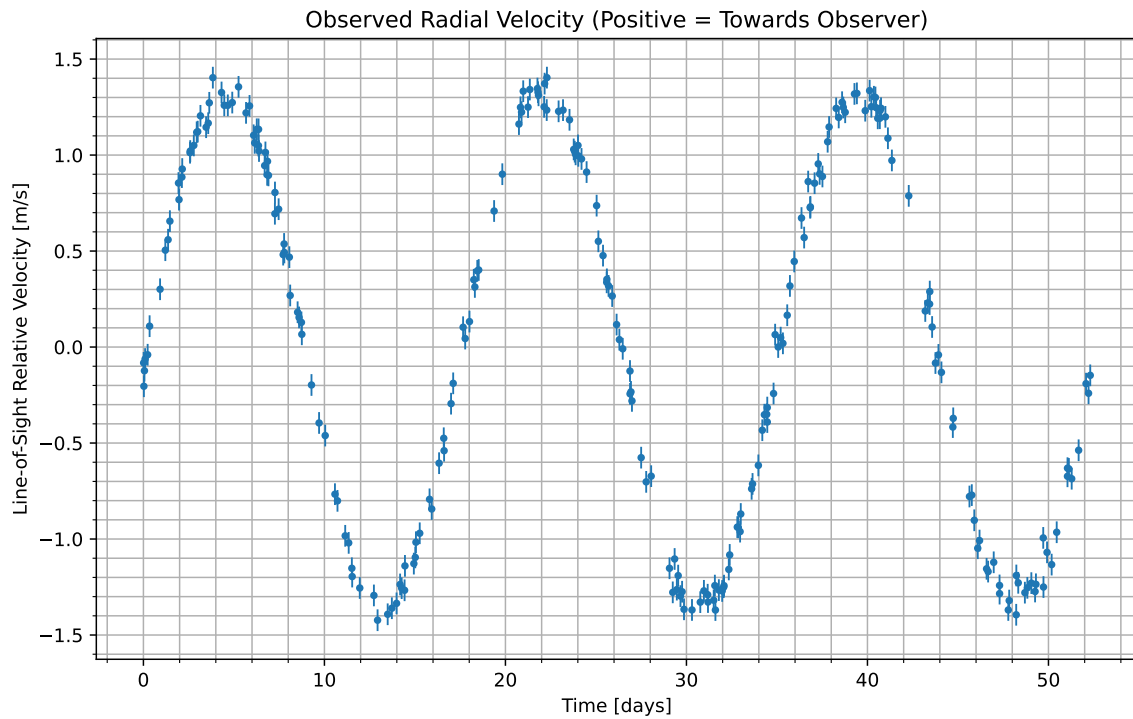


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2083-06-05/05:22. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	31
CO_2	56.5
H_2O	12.5

Gas Abundance (percent by volume)

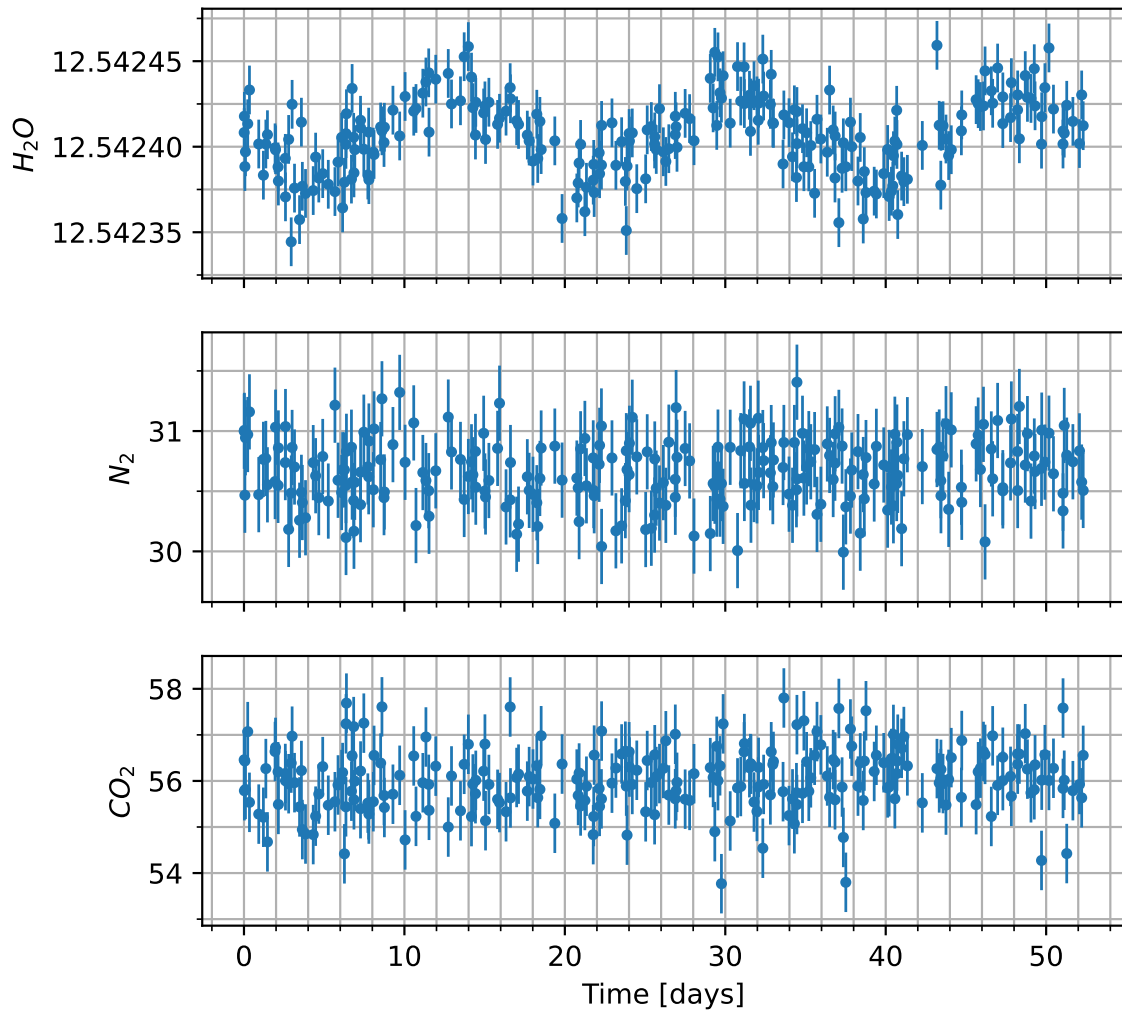


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

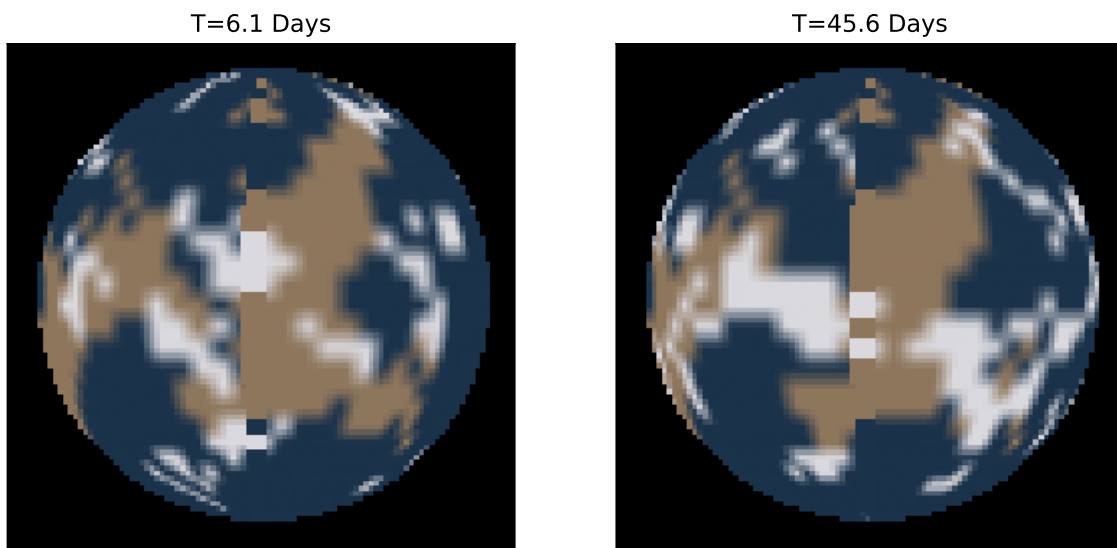


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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