

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging dabassid Planet 1

Thursday 6th May, 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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1110110010111000010101010001011000111111111010010010110110010001
1010000101010100110000110001110011110010101011101011010111001101
011011100000100010111100000011111101001000111111011111001101110
0011110010010100000110111010011001011010000011100000110101111111
0010001100101101010000011001100011101001101000110001010011110111
0110111100101100110101101010111000100111000110111001110010001010
```

This signal was first noticed at UTC 2074-04-15/11:06.

Parameters of the candidate planet of origin and its host star

Spectral Type	K
Stellar Luminosity (Solar Units)	0.441
Stellar Mass (Solar Masses)	0.815
Distance to Star (lightyears)	173.9
Planet Mass (Earth masses)	0.6
Atmospheric Pressure (atm)	2.0

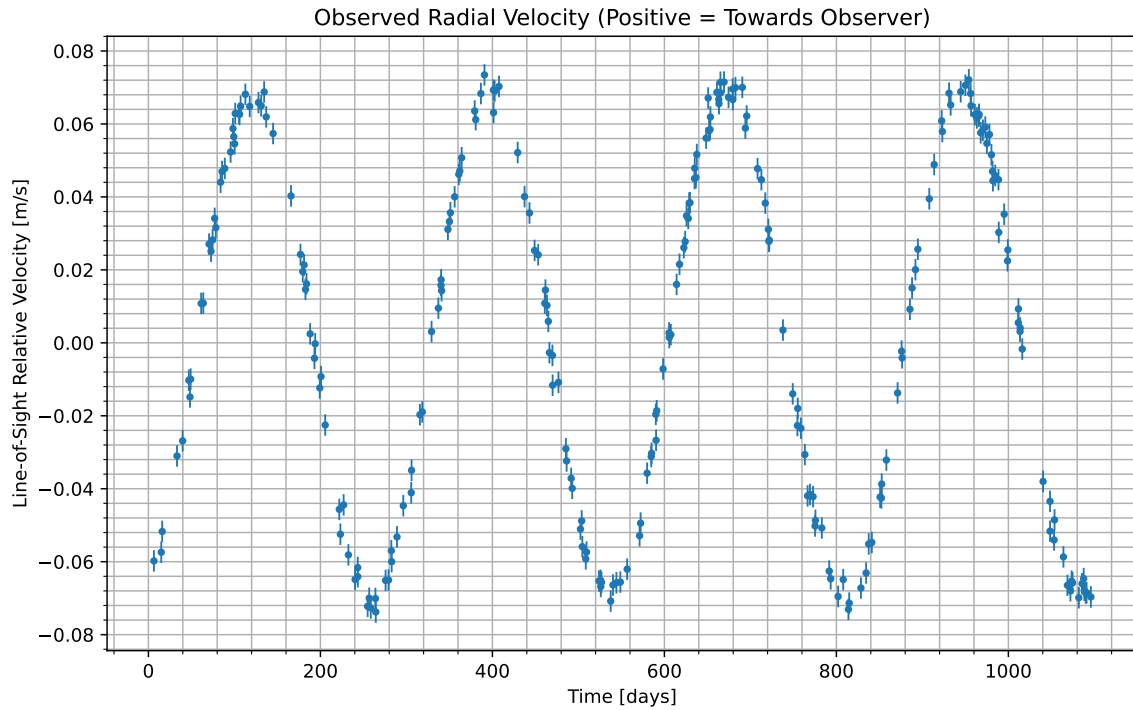


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2074-04-17/17:44. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	39.5
CO_2	27.6
H_2O	32.9

Gas Abundance (percent by volume)

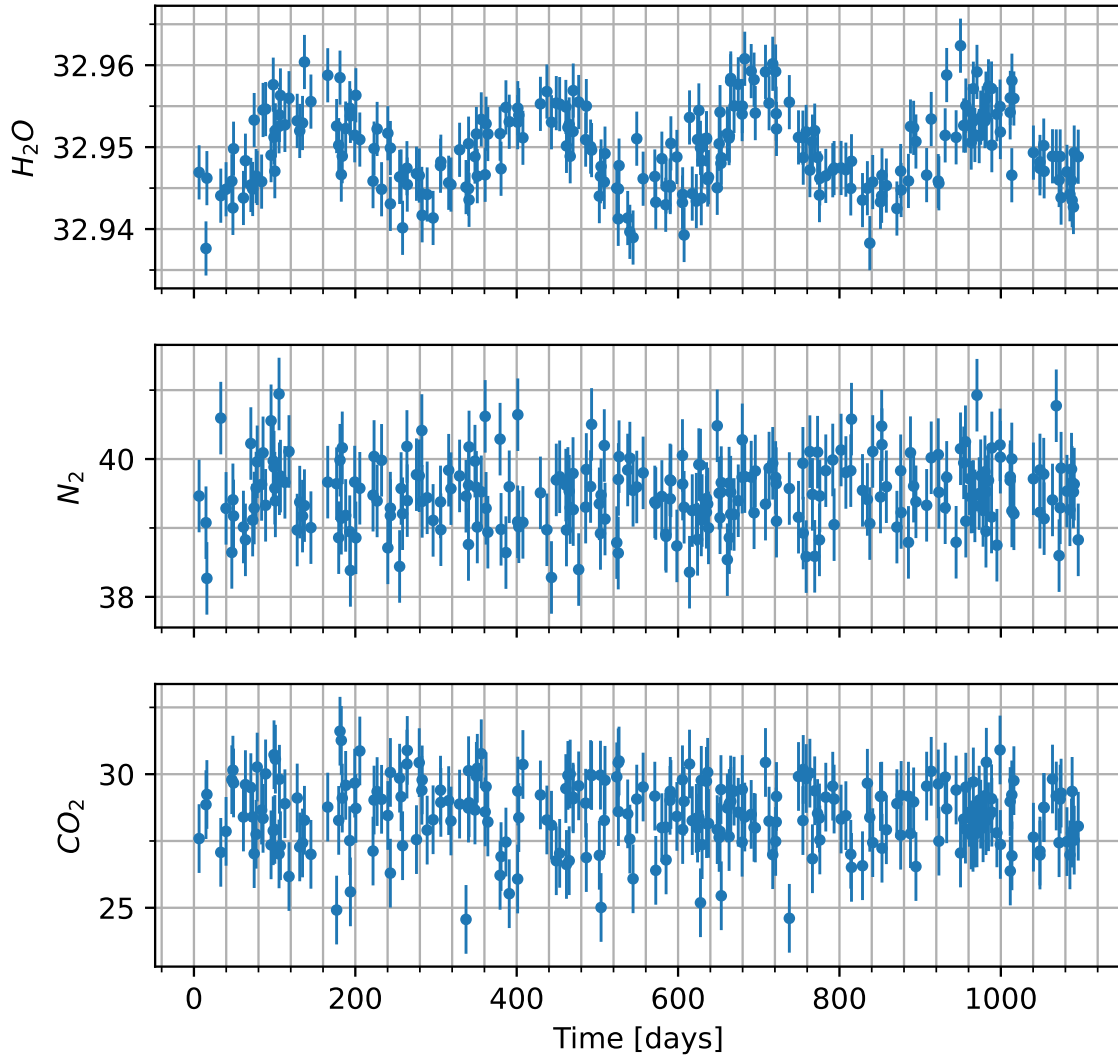


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

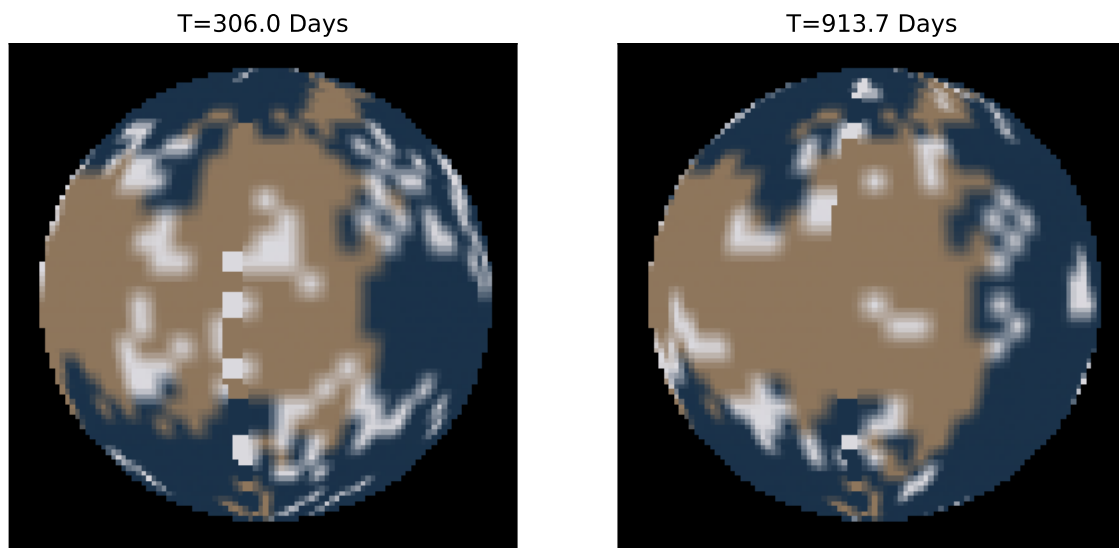


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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