AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging
shar2134
Planet 3

Monday 19th April, 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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00010110001101100100000010111100111110001000001001111 00
11111011111000100100010101000010111101111100001111101 11
11001010100100011101110100101011010000100011110000000 10
01101111010101000100101100101001101111110110110001000 11
10111001010011001001010000100001011111010100011111010 10
```

This signal was first noticed at UTC 2083-02-19/13:23.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.00111
Stellar Mass (Solar Masses)	0.148
Distance to Star (lightyears)	196.8
Planet Mass (Earth masses)	1.2
Atmospheric Pressure (atm)	1.6

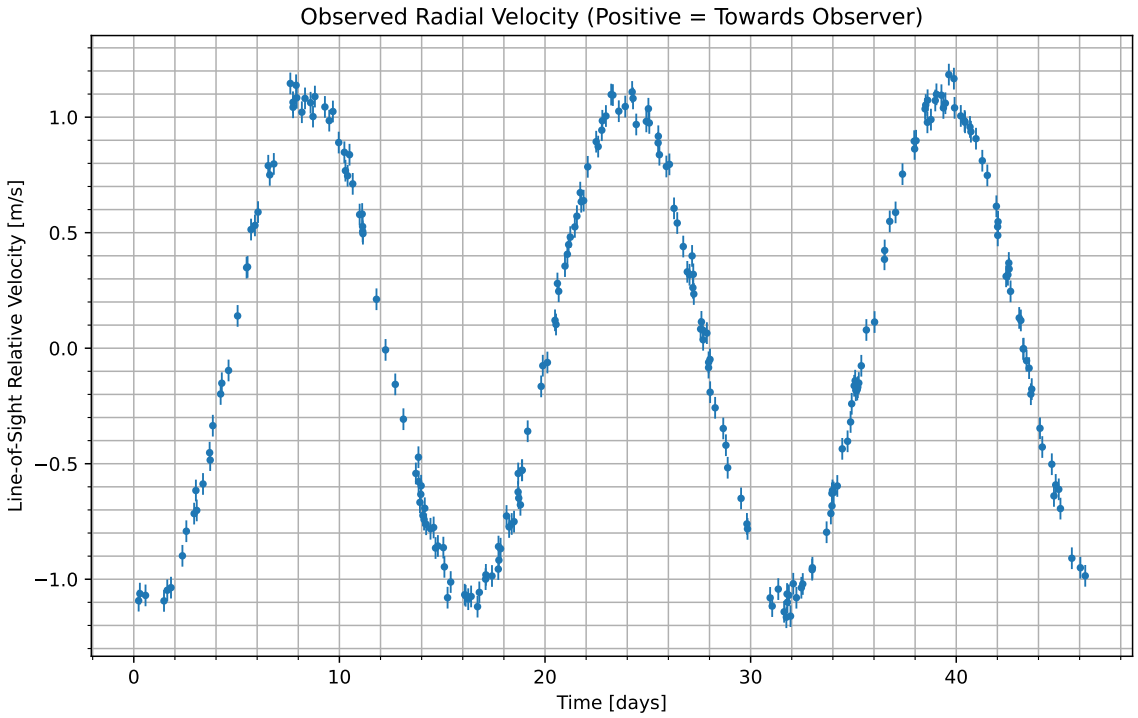

Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2083-02-21/03:05. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	26.2
CO_2	65.4
H_2O	8.37

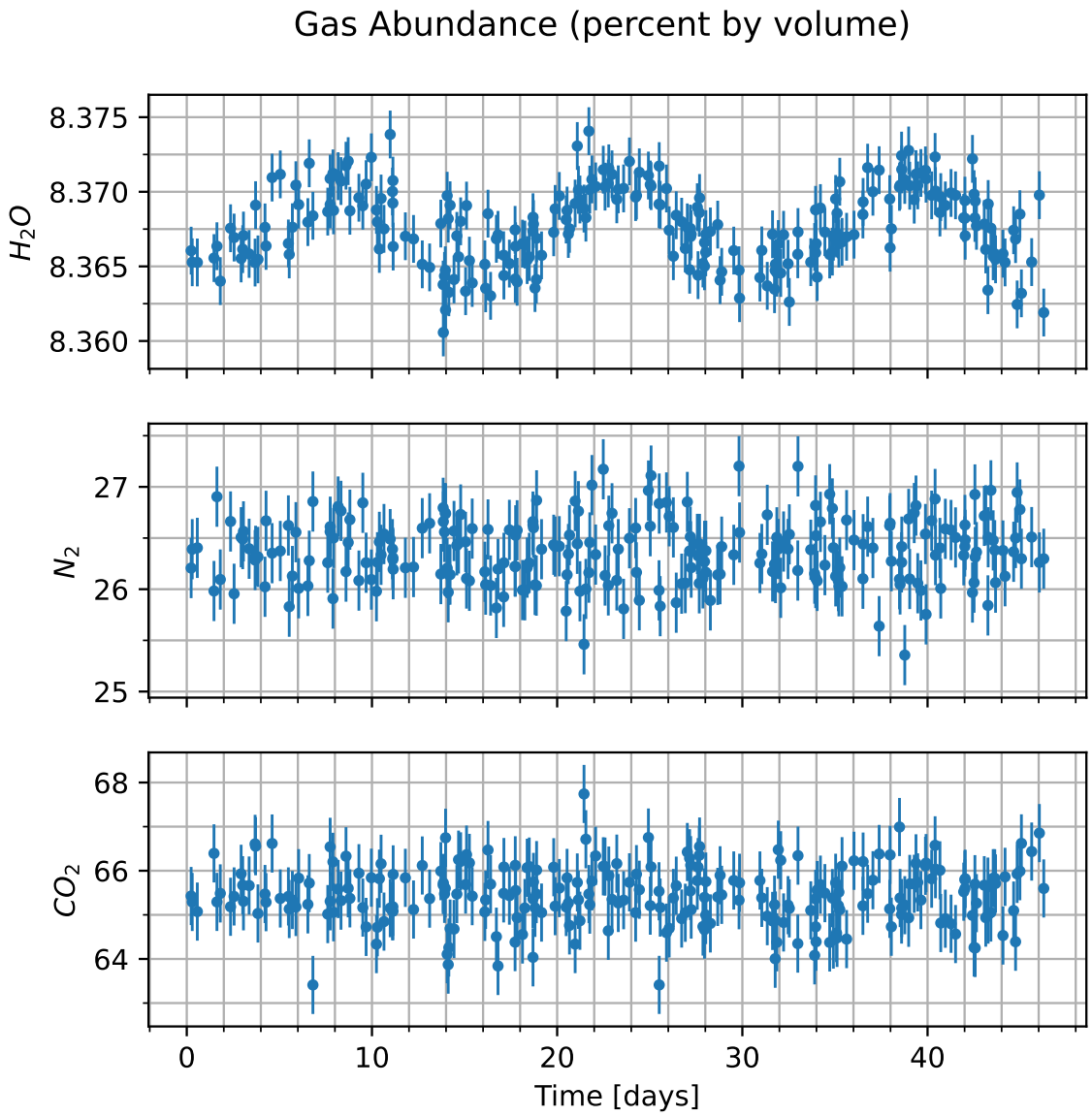

Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

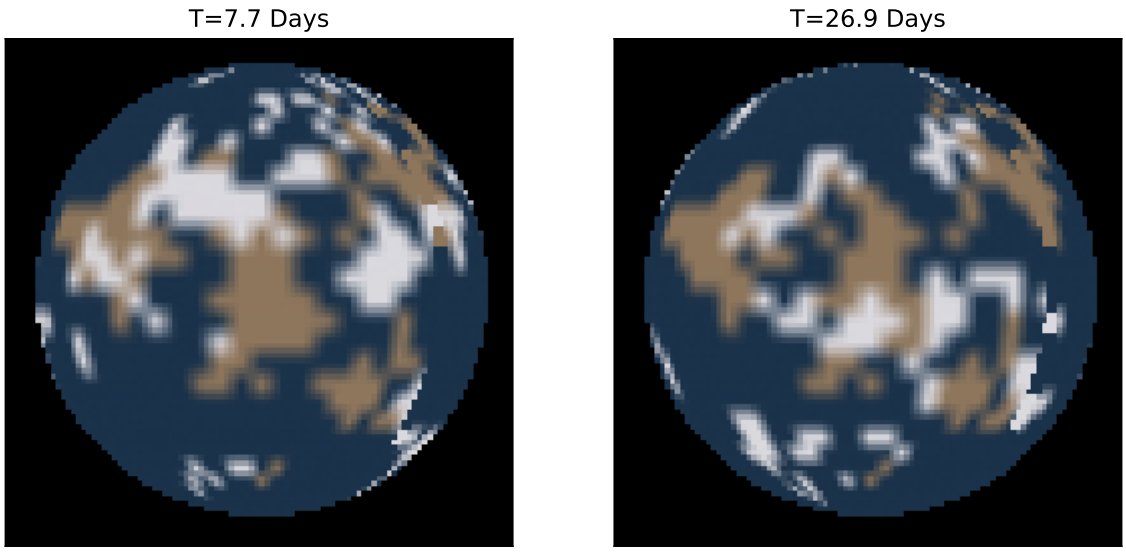

Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to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