Landscape Signal – An Investigative Report It's Point of Origin

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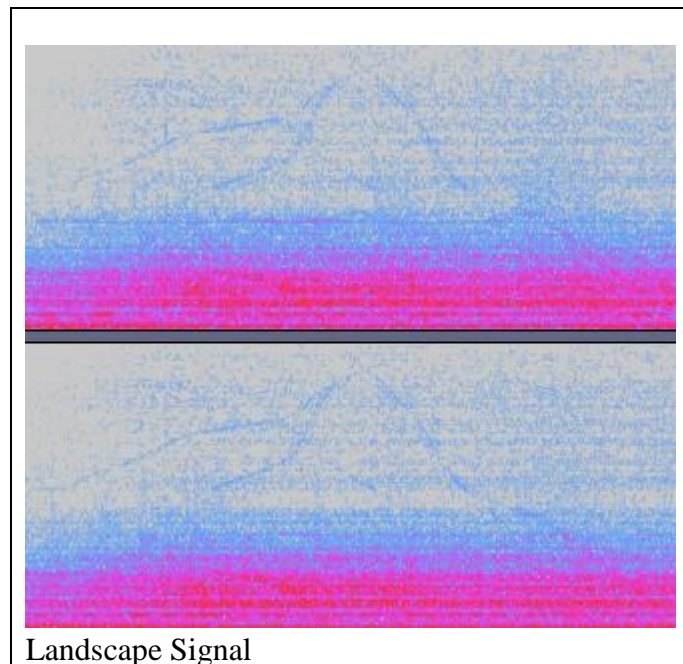CMDR Scolio

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Abstract

On Wednesday, March 27th 3305 Commander PublicStaticVoid stumbled upon a signal pattern appearing in the deep space audio during a routine audiological analysis of the Diamondback Explorer's (DBX) computer system. The signal, dubbed 'Landscape Signal', was initially discovered in Sol and immediately reconfirmed in multiple other systems. Detection can be made by bringing the vessel to a complete stop in deep space and pointing the nose in the general direction of Sagittarius A*. In order to visualize the signal audio software such as Audacity or Sonic Visualizer is required. A request was made by CMDR Void to the researchers within Independent Raxxla Hunters to conduct an open and transparent investigation into the Landscape Signal.

Landscape Signal

Audio Software and Signal Acquisition Guide

Software:

Sonic Visualizer: https://www.sonicvisualiser.org/

Audacity: https://www.audacityteam.org/download/

Quick start (Sonic Visualizer):

1. Open a FLAC recording

2. Pane > Spectrogram

3. Click the X to hide the waveform, unless you want it for some reason

4. File > Export the spectrogram as SVG (very high res files, if doing image analysis) or

some other format (PNG, JPG for posting)

Sonic Visualiser

Sonic Visualiser is a program for viewing and analysing the contents of music audio files.

Quick Start (Audacity):

1. Adjust microphone settings so that you can record Elite while playing (For me, I had to

choose Windows WSAPI + Realtek Audio to get it to record).

2. Press R to record.

3. In the pulldown that says 'Audio Recording', choose 'Spectrogram'

4. If you are pointing in the general area of the signal, you should see the signal within 2

minutes.

The signal varies in strength (a little, a 4 might appear as a 3 in one loop), a faint signal

may require you to watch for 4-6 minutes. An extremely faint signal may require you to

export the recording (as FLAC) and open in Sonic Visualizer

5. Press the Stop button to stop recording. You can delete parts of the recording when stopped. To append to a previous recording, press Shift+R

Checking for any signal with audacity:

1. Exit supercruise and enter normal space

2. Aim at point you want to check for a signal (center the dot in your screen)

3. Modules > Disable Thrusters

4. Go to Options > Audio, set Sound Effects to max Volume and put Music and Voice on Muted. Set audio to "Full Range" as well

5. Aim back at the center of the screen

6. Start recording. If you are aiming with ~120 degrees of the signal, it should be at least partially detectable. The most recognizable part is the "Tail"
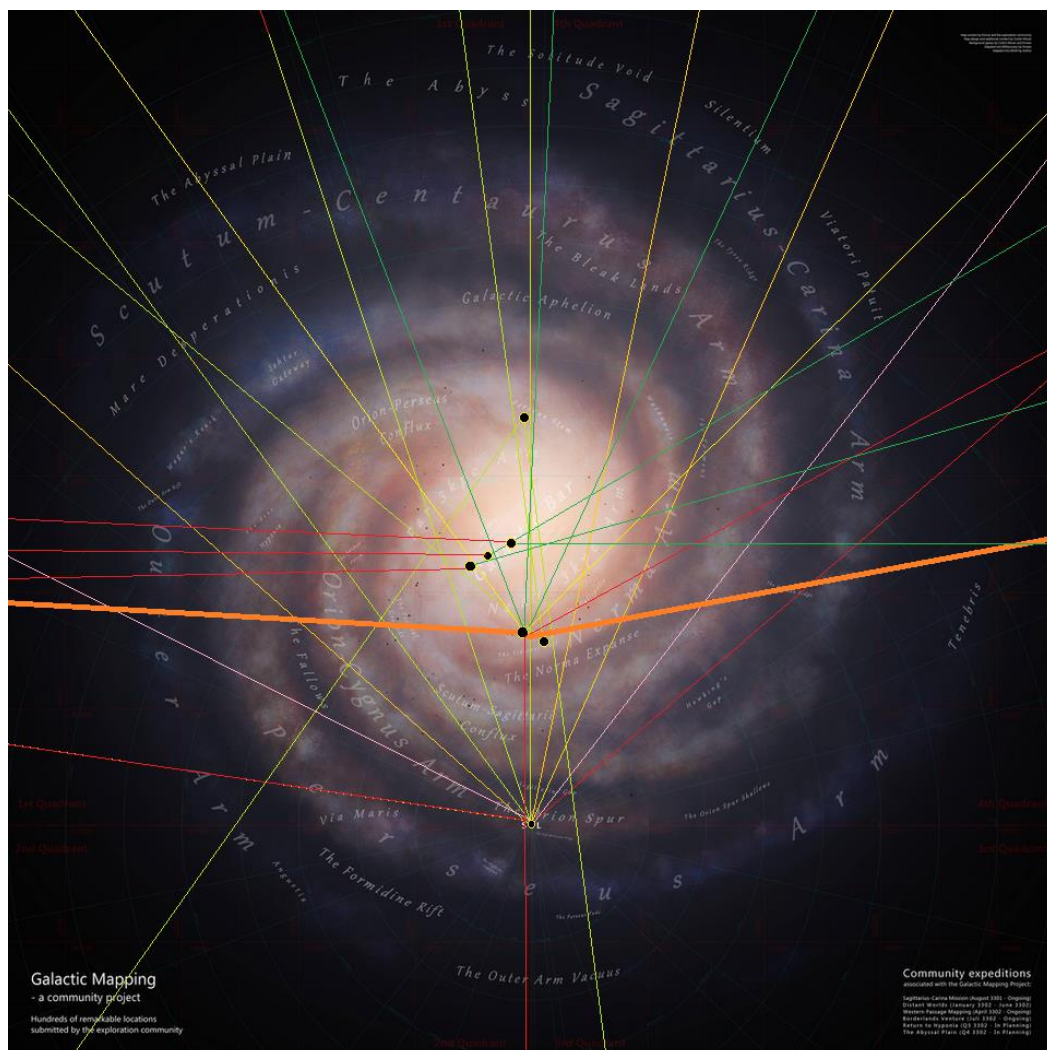
Taking a pristine recording for analysis:

1. Exit supercruise and enter normal space

2. Center the point you want to aim at on the screen

3. Take a screenshot (F10 by default in windows; stored in \Pictures\Frontier Developments\Elite Dangerous)

4. Pull up the screenshot, preferably on 2nd monitor

5. In Elite, use the Free Camera (Default: Ctrl+Alt+Space, then Num 0)

6. Fly the camera in front of the ship and try to line up the center of the image as before, using your screenshot for reference now that the targeting circle is gone

7. Go to Options > Audio, set Sound Effects to max Volume and put Music and Voice on Muted. Set audio to "Full Range".
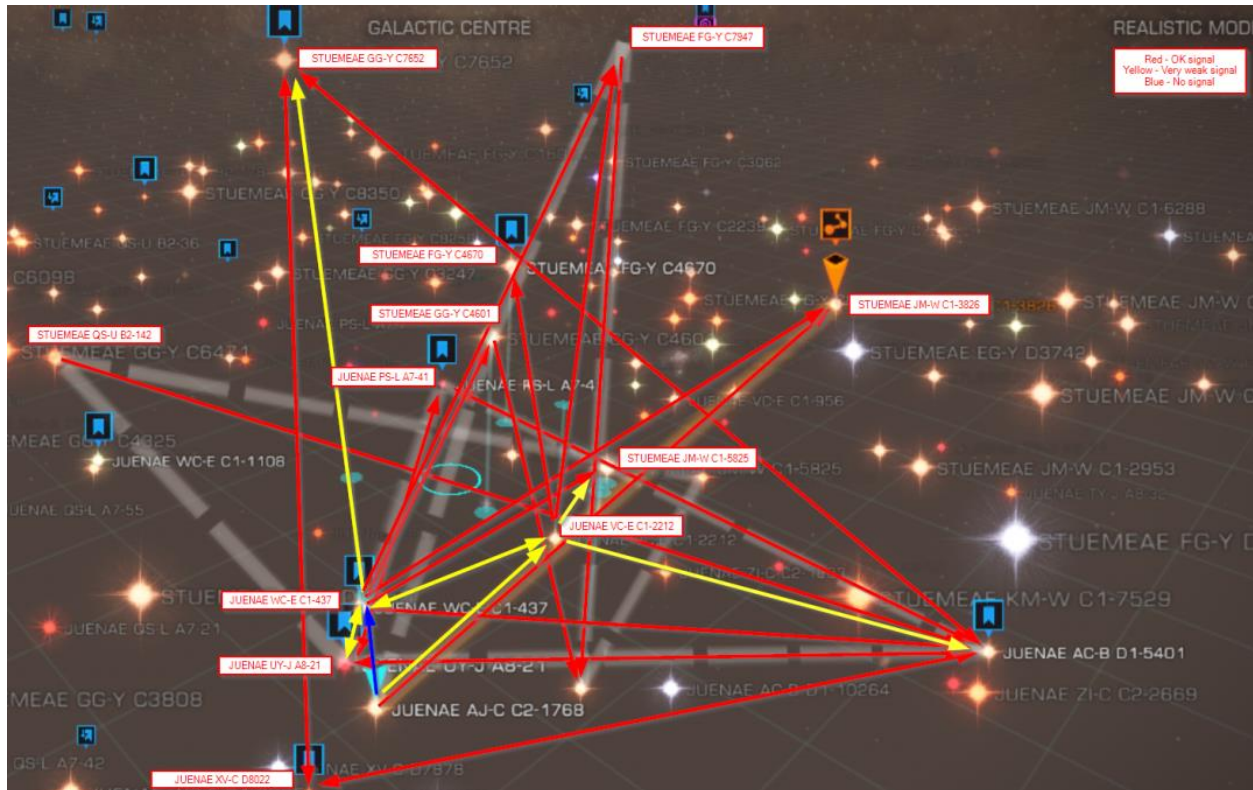
8. Record audio (20 minute preferred for audio analysis, at least 6 minutes for showing signal strength)

9. Save as FLAC (unless the audio team wants a different format). In the Notes section, record what system you were in and what you were facing

Landscape Signal – An Investigative Report It's Point of Origin

A Study into Signal Acquisition

During the initial phase of the investigation multiple researchers began dumping positional data and signal acquisition data into the IRH's #embr-signals Discord channel and launched missions to the core of the galaxy to further help study this signal. The data was swiftly compiled to paint a picture of how orientation affects signal strength. During the infancy of the investigation it was believed the signal could be acquired 180 degrees from wingtip to wing tip thus simple signal strengths models were compiled with greens and yellows indicating signal acquisitions bearings and reds indicating the loss of the signal bearings.
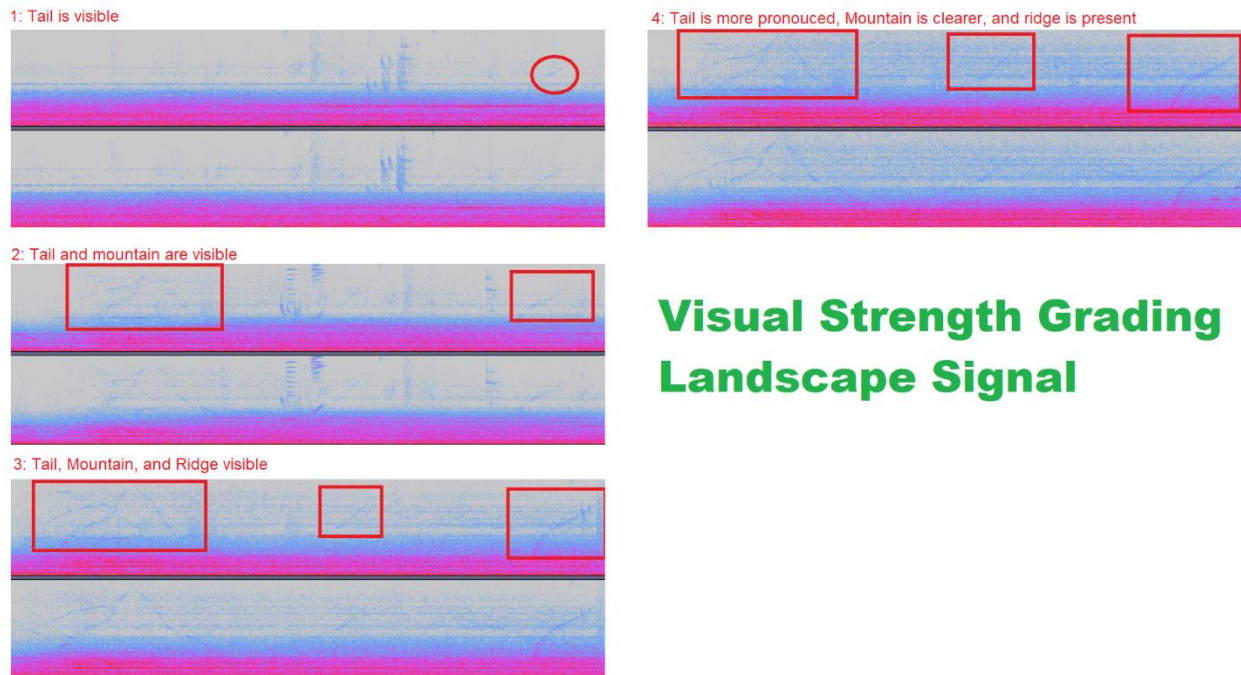
The dedication of a few Elite explorers used this crude methodology to swiftly narrow the signal down to a few tens of systems within the Galactic Center. The position of these stars lies relatively near Sagittarius A* (Within a few tens of light years).

Methods for narrowing the signal's origin down further required a more precise understanding of signal acquisition and much more data. An IRH researcher thus developed the positional angle calculator to help determine that signal angles of acquisition. This tool lead to the understanding that signal acquisition angles are predicated on not only positional data but also the software being used to analyze the signal. Signal reception is ~72 degrees from center within Audacity and ~75 degrees from center within Sonic Visualizer.

Signal Grading

A method to determine signal strength visually within Audacity or Sonic Visualizer was constructed to aid in locating the POO. All signals are broken into 5 strength levels. A strength level of 0 indicates that no signal has been detected. Red was chosen to represent this signal grade in future graphs and graphics.

Strength grade 1 indicates that the tail feature of the signal is barely detectable with no other features being apparent. Strength grade 2 indicates that the Mountain feature and the Tail are detectable however, the Ridge is not detectable. Due to minor deviations in signal strength as a result of random filters, grades 1 and 2 are both represented in graphs and graphics using Yellow. The final two signal grades, 3 and 4, are represented with Green in graphs. Both signal grades can be determined based on the presence of the Mountain feature, the Ridge feature, and the Tail

feature. Grading between '3' and '4' is dependent upon how pronounced these features appear within the spectrogram.

Pinpointing the Point of Origin (POO)

Data was collected by multiple researchers and used to narrow the signal source down to a handful of closely positioned systems:

<div align="center">

JUENAE AC-B D1-10264

JUENAE AJ-C C2-1768

JUENAE BC-B D1-2830

JUENAE PS-L A7-41

JUENAE VC-E C1-2212

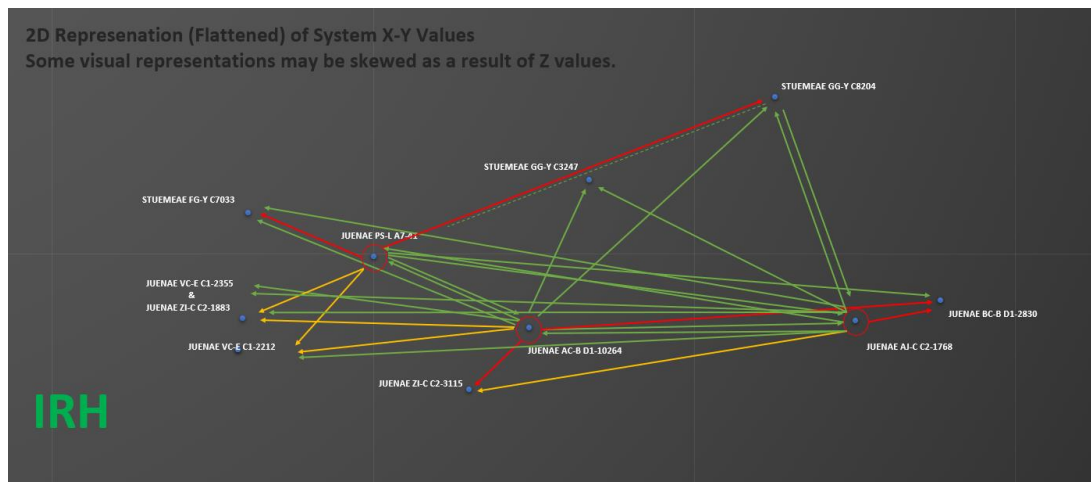JUENAE VC-E C1-2355

JUENAE ZI-C C2-1883

JUENAE ZI-C C2-3115

STUEMEAE FG-Y C7033

STUEMEAE GG-Y C3247

STUEMEAE GG-Y C8204

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Multiple measurements were taken in these systems to develop a <X, Y> weighted scatter plot representation of the signal data. The Z axis was ignored for visualization purposes.

A bidirectional signal detected triangle was discovered between systems JUENAE AC-B D1-10264, JUENAE PS-L A7-41, and JUENAE AJ-C C2-1768.

Logical Condition:

There exists a location such that signal acquisition is bidirectional in all bearing permutations of star sets [A,B,C] inferring that some signal source exists between [A,B,C]

Proof:

[A] JUENAE AC-B D1-10264 [B] JUENAE PS-L A7-41 [C] JUENAE AJ-C C2-1768

The following permutations were observed to have the following signal grades:

A -> B: Signal Grade of 4

B -> A: Signal Grade of 3

B -> C: Signal Grade of 4

C -> B: Signal Grade of 4

C -> A: Signal Grade of 4

A -> C: Signal Grade of 3

A <-> B <-> C <-> A

Thus it can be inferred that the source of the Landscape signal is in between points A, B, and C.

To further prove the location of the source is between [A,B,C] beyond simply the logical condition being met, an additional measurement was taken which bisects the triad of stars.

Logical Condition:

If a signal source does exist between points [A, B, C] then there also exists an edge between a set of points [D, E] that bisects [A,B,C] such that a bidirectional signal acquisition of maximum grade 4 is observed:.

Proof:

[D] : Juenae ZI-C c2-3115

[E]: Stuemeae GG-Y c4801

D -> E: Signal Grade of 4

E -> D: Signal Grade of 4

Additional measurements were also taken from point [D] to points [A, B, C] and with all signal strengths being of 3 or less, further proving the existence of the source between [A, B, C]. A 3D visual

representation of the this data has been established by an IRH researcher in order to better assist in

visualization of the above proofs. [3d visualization model]

Signal POO Conclusion

It is thus concluded that the point of origin for the Landscape Signal is between the following 5 systems

which if connected form a diamond around the source:

[A] JUENAE AC-B D1-10264

[B] JUENAE PS-L A7-41

[C] JUENAE AJ-C C2-1768

[D] JUENAE ZI-C C2-3115

[E]: STUEMEAE GG-Y C4801

Raw Measurement Data

Raw Signal Data:

Host System	Cordinates	Observed System	Cordinates	Signal Strength
JUENAE AC-B D1-10264	14.96875/-26.25/25896.5	JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	3
JUENAE AC-B D1-10264	14.96875/-26.25/25896.6	JUENAE PS-L A7-41	14/- 25.03125/25892.625	4
JUENAE AC-B D1-10264	14.96875/-26.25/25896.7	JUENAE ZI-C C2-3115	14.59375/- 27.3125/25895.3125	0
JUENAE AC-B D1-10264	14.96875/-26.25/25896.8	JUENAE VC-E C1-2212	13.46875/- 26.6875/25893.9375	2
JUENAE AC-B D1-10264	14.96875/-26.25/25896.9	JUENAE ZI-C C2-1883	13.1875/- 26.09375/25892.96875	1
JUENAE AC-B D1-10264	14.96875/-26.25/25896.10	JUENAE VC-E C1-2355	13.1875/- 26.09375/25892.96875	4
JUENAE AC-B D1-10264	14.96875/-26.25/25896.11	JUENAE BC-B D1-2830	17.53125/- 25.78125/25896.40625	0
JUENAE AC-B D1-10264	14.96875/-26.25/25896.12	STUEMEAE GG-Y C8204	16.5/- 22.3125/25893.03125	4
JUENAE AC-B D1-10264	14.96875/-26.25/25896.13	STUEMEAE GG-Y C3247	15.34375/- 23.71875/25891.625	4
JUENAE AC-B D1-10264	14.96875/-26.25/25896.14	STUEMEAE FG-Y C7033	13.21875/- 24.28125/25891.65625	3
JUENAE AC-B D1-10264	17 / -26.124 / 25895.09375	Sagittarius A*	25.21875 / -20.90625 / 25899.96875	0
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	4
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE AC-B D1-10264	14.96875/- 26.25/25896.5	3
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE ZI-C C2-3115	14.59375/- 27.3125/25895.3125	
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE VC-E C1-2212	13.46875/- 26.6875/25893.9375	1
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE ZI-C C2-1883	13.1875/- 26.09375/25892.96875	2
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE VC-E C1-2355	13.1875/- 26.09375/25892.96875	
JUENAE PS-L A7-41	14/- 25.03125/25892.625	JUENAE BC-B D1-2830	17.53125/- 25.78125/25896.40625	4
JUENAE PS-L A7-41	14/- 25.03125/25892.625	STUEMEAE GG-Y C8204	16.5/- 22.3125/25893.03125	0
JUENAE PS-L A7-41	14/- 25.03125/25892.625	STUEMEAE GG-Y C3247	15.34375/- 23.71875/25891.625	
JUENAE PS-L A7-41	14/- 25.03125/25892.625	STUEMEAE FG-Y C7033	13.21875/- 24.28125/25891.65625	0

JUENAE PS-L A7-41	14/- 25.03125/25892.625	Sagittarius A*	25.21875 / -20.90625 / 25899.96875	4
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE AC-B D1-10264	14.96875/- 26.25/25896.5	4
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE PS-L A7-41	14/- 25.03125/25892.625	4
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE ZI-C C2-3115	14.59375/- 27.3125/25895.3125	1
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE VC-E C1-2212	13.46875/- 26.6875/25893.9375	3
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE ZI-C C2-1883	13.1875/- 26.09375/25892.96875	4
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE VC-E C1-2355	13.1875/- 26.09375/25892.96875	3
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	JUENAE BC-B D1-2830	17.53125/- 25.78125/25896.40625	0
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	STUEMEAE GG-Y C8204	16.5/- 22.3125/25893.03125	3
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	STUEMEAE GG-Y C3247	15.34375/- 23.71875/25891.625	3
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	STUEMEAE FG-Y C7033	13.21875/- 24.28125/25891.65625	3
JUENAE AJ-C C2-1768	17 / -26.124 / 25895.09375	Sagittarius A*	25.21875 / -20.90625 / 25899.96875	0

Systems Nearby

From	To	Distance
JUENAE WC-E C1-437	JUENAE AC-B D1-10264	3.07
STUEMEAE GG-Y C4601	JUENAE AC-B D1-10264	3.3
STUEMEAE JM-W C1-5825	JUENAE AC-B D1-10264	1.96
JUENAE WC-E C1-437	JUENAE AC-B D1-2051	4.27
STUEMEAE JM-W C1-5825	JUENAE AC-B D1-2051	3.57
JUENAE WC-E C1-437	JUENAE AJ-C C2-1589	3.44
JUENAE WC-E C1-437	JUENAE AJ-C C2-1768	1.79
STUEMEAE GG-Y C4601	JUENAE AJ-C C2-1768	3.06
STUEMEAE JM-W C1-5825	JUENAE AJ-C C2-1768	2.87
JUENAE WC-E C1-437	JUENAE AJ-C C2-3815	4
JUENAE WC-E C1-437	JUENAE AJ-C C2-4124	3.65
JUENAE WC-E C1-437	JUENAE BC-B D1-2830	3.23
STUEMEAE GG-Y C4601	JUENAE BC-B D1-2830	3.42
STUEMEAE JM-W C1-5825	JUENAE BC-B D1-2830	3.43
JUENAE WC-E C1-437	JUENAE PS-L A7-2	3.05

JUENAE WC-E C1-437	JUENAE PS-L A7-26	4.2
JUENAE WC-E C1-437	JUENAE PS-L A7-41	2.68
STUEMEAE GG-Y C4601	JUENAE PS-L A7-41	3.17
STUEMEAE JM-W C1-5825	JUENAE PS-L A7-41	2.67
JUENAE WC-E C1-437	JUENAE QS-L A7-21	3.02
JUENAE WC-E C1-437	JUENAE QS-L A7-22	4
JUENAE WC-E C1-437	JUENAE QS-L A7-3	3.81
JUENAE WC-E C1-437	JUENAE QS-L A7-32	4.06
JUENAE WC-E C1-437	JUENAE QS-L A7-40	3.77
JUENAE WC-E C1-437	JUENAE QS-L A7-42	3.94
JUENAE WC-E C1-437	JUENAE QS-L A7-44	2.15
JUENAE WC-E C1-437	JUENAE QS-L A7-59	4.29
STUEMEAE JM-W C1-5825	JUENAE TY-J A8-30	3.33
STUEMEAE JM-W C1-5825	JUENAE TY-J A8-35	3.19
STUEMEAE JM-W C1-5825	JUENAE TY-J A8-50	2.73
JUENAE WC-E C1-437	JUENAE TY-J AB-35	3.63
STUEMEAE JM-W C1-5825	JUENAE TY-J AB-71	3.8
STUEMEAE GG-Y C4601	JUENAE UY-J A8-15	3.8
STUEMEAE GG-Y C4601	JUENAE UY-J A8-21	2.64
STUEMEAE JM-W C1-5825	JUENAE UY-J A8-21	3.14
JUENAE WC-E C1-437	JUENAE UY-J A8-49	4.11
STUEMEAE GG-Y C4601	JUENAE UY-J A8-49	3.68
JUENAE WC-E C1-437	JUENAE UY-J A8-65	4.2
STUEMEAE JM-W C1-5825	JUENAE UY-J AB-149	3.73
JUENAE WC-E C1-437	JUENAE UY-J AB-15	3.47
JUENAE WC-E C1-437	JUENAE UY-J AB-21	2.84
JUENAE WC-E C1-437	JUENAE UY-J AB-52	4.21
STUEMEAE JM-W C1-5825	JUENAE UY-J AB8-15	3.75
JUENAE WC-E C1-437	JUENAE VC-E C1-2212	2.59
STUEMEAE GG-Y C4601	JUENAE VC-E C1-2212	3.98
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-2212	2.46
JUENAE WC-E C1-437	JUENAE VC-E C1-2355	2.94
STUEMEAE GG-Y C4601	JUENAE VC-E C1-2355	4.04
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-2355	2.89
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-2575	3.6
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-956	3.38
JUENAE WC-E C1-437	JUENAE WC-E C1-1108	4.12
JUENAE WC-E C1-437	JUENAE WC-E C1-1813	2.3
JUENAE WC-E C1-437	JUENAE WC-E C1-2065	3.36
JUENAE WC-E C1-437	JUENAE WC-E C1-2798	4.06
JUENAE WC-E C1-437	JUENAE WC-E C1-2812	3.8

STUEMEAE GG-Y C4601	JUENAE WC-E C1-437	3.31
STUEMEAE JM-W C1-5825	JUENAE WC-E C1-437	2.8
JUENAE WC-E C1-437	JUENAE WV-C D6157	3.97
STUEMEAE JM-W C1-5825	JUENAE WV-C D8798	3.23
JUENAE WC-E C1-437	JUENAE XV-C D3417	3.49
JUENAE WC-E C1-437	JUENAE XV-C D6637	4.24
JUENAE WC-E C1-437	JUENAE XV-C D7723	3.81
JUENAE WC-E C1-437	JUENAE XV-C D7878	1.7
STUEMEAE JM-W C1-5825	JUENAE XV-C D7878	3.92
JUENAE WC-E C1-437	JUENAE XV-C D8022	1.91
JUENAE WC-E C1-437	JUENAE ZI-C C2-1883	3.29
STUEMEAE GG-Y C4601	JUENAE ZI-C C2-1883	4.01
STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-1883	2.19
STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-2669	3.27
STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-275	3.43
JUENAE WC-E C1-437	JUENAE ZI-C C2-3115	2.37
STUEMEAE GG-Y C4601	JUENAE ZI-C C2-3115	4.02
STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-3115	2.47
JUENAE WC-E C1-437	STUEMAE GG-Y C4601	3.31
JUENAE WC-E C1-437	STUEMAEAE FG-Y C4670	3.56
STUEMEAE GG-Y C4601	STUEMEAE AA-A D680	3.12
STUEMEAE GG-Y C4601	STUEMEAE AA-A E2215	3.35
JUENAE WC-E C1-437	STUEMEAE BA-A D2966	4.21
STUEMEAE GG-Y C4601	STUEMEAE BA-A D4801	3.27
STUEMEAE GG-Y C4601	STUEMEAE EG-Y D1236	4.05
STUEMEAE JM-W C1-5825	STUEMEAE EG-Y D1236	3.79
STUEMEAE GG-Y C4601	STUEMEAE EG-Y D3742	2.55
STUEMEAE JM-W C1-5825	STUEMEAE EG-Y D3742	2.38
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C1226	3.38
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C1226	2.21
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C1606	2.89
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C1606	3.72
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C2239	3.95
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C2239	3.53
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C2613	3.14
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STUEMEAE GG-Y C4601	STUEMEAE FG-Y C6255	3.14
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C6255	4.02

JUENAE WC-E C1-437	STUEMEAE FG-Y C7033	4.07
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C7033	4.07
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C7033	3.84
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C7947	3.38
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C8259	3.21
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C8259	2.32
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C9007	4.03
STUEMEAE GG-Y C4601	STUEMEAE FG-Y D4785	3.98
STUEMEAE GG-Y C4601	STUEMEAE FG-Y D7550	3.38
STUEMEAE GG-Y C4601	STUEMEAE GF-Y C2613	3.1
STUEMEAE GG-Y C4601	STUEMEAE GF-Y C7947	2.38
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y 4601	1.84
JUENAE WC-E C1-437	STUEMEAE GG-Y C3247	3.47
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C3247	3.27
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y C3247	3.9
JUENAE WC-E C1-437	STUEMEAE GGY C4325	3.94
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C4325	4.01
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C4801	2.07
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y C4801	3.86
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C5269	3.08
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C6471	3.33
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C7652	2.48
JUENAE WC-E C1-437	STUEMEAE GG-Y C8204	4.22
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C8204	2.35
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y C8204	3.95
JUENAE WC-E C1-437	STUEMEAE GG-Y C8350	4.14
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C8350	3.22
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-1077	3.82
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-2074	4.11
STUEMEAE JM-W C1-5825	STUEMEAE JM-W C1-2074	3.57
STUEMEAE JM-W C1-5825	STUEMEAE JM-W C1-2319	4.09
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-2953	3.28
STUEMEAE JM-W C1-5825	STUEMEAE JM-W C1-2953	2.47
STUEMEAE JM-W C1-5825	STUEMEAE JM-W C1-3826	3.41
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-5579	2.7
STUEMEAE JM-W C1-5825	STUEMEAE JM-W C1-5579	3.36
JUENAE WC-E C1-437	STUEMEAE JM-W C1-5825	2.8
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-5825	1.84
STUEMEAE GG-Y C4601	STUEMEAE JM-W C1-8118	3.55
STUEMEAE GG-Y C4601	STUEMEAE KM-W C1-6701	3.88
STUEMEAE GG-Y C4601	STUEMEAE KM-W C1-7529	3.37

STUEMEAE JM-W C1-5825	STUEMEAE KM-W C1-7529	3.66
STUEMEAE JM-W C1-5825	STUEMEAE PS-U B2-139	3.15
STUEMEAE JM-W C1-5825	STUEMEAE PS-U B2-166	4.07
JUENAE WC-E C1-437	STUEMEAE QS-U B2-142	3.57
STUEMEAE GG-Y C4601	STUEMEAE QS-U B2-142	3.53
STUEMEAE GG-Y C4601	STUEMEAE QS-U B2-17	3.4
STUEMEAE GG-Y C4601	STUEMEAE TY-S B3-29	2.32
STUEMEAE JM-W C1-5825	STUEMEAE TY-S B3-29	3.5

Closest Shared

From	To	Distance	Average Distance
JUENAE WC-E C1-437	JUENAE AC-B D1-10264	3.07	
STUEMEAE GG-Y C4601	JUENAE AC-B D1-10264	3.3	2.776666667
STUEMEAE JM-W C1-5825	JUENAE AC-B D1-10264	1.96	
JUENAE WC-E C1-437	JUENAE AJ-C C2-1768	1.79	
STUEMEAE GG-Y C4601	JUENAE AJ-C C2-1768	3.06	2.573333333
STUEMEAE JM-W C1-5825	JUENAE AJ-C C2-1768	2.87	
JUENAE WC-E C1-437	JUENAE BC-B D1-2830	3.23	
STUEMEAE GG-Y C4601	JUENAE BC-B D1-2830	3.42	3.36
STUEMEAE JM-W C1-5825	JUENAE BC-B D1-2830	3.43	
JUENAE WC-E C1-437	JUENAE PS-L A7-41	2.68	
STUEMEAE GG-Y C4601	JUENAE PS-L A7-41	3.17	2.84
STUEMEAE JM-W C1-5825	JUENAE PS-L A7-41	2.67	
JUENAE WC-E C1-437	JUENAE VC-E C1-2212	2.59	
STUEMEAE GG-Y C4601	JUENAE VC-E C1-2212	3.98	3.01
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-2212	2.46	
JUENAE WC-E C1-437	JUENAE VC-E C1-2355	2.94	
STUEMEAE GG-Y C4601	JUENAE VC-E C1-2355	4.04	3.29
STUEMEAE JM-W C1-5825	JUENAE VC-E C1-2355	2.89	
JUENAE WC-E C1-437	JUENAE ZI-C C2-1883	3.29	
STUEMEAE GG-Y C4601	JUENAE ZI-C C2-1883	4.01	3.163333333

STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-1883	2.19	
JUENAE WC-E C1-437	JUENAE ZI-C C2-3115	2.37	
STUEMEAE GG-Y C4601	JUENAE ZI-C C2-3115	4.02	2.953333333
STUEMEAE JM-W C1-5825	JUENAE ZI-C C2-3115	2.47	
JUENAE WC-E C1-437	STUEMEAE FG-Y C7033	4.07	
STUEMEAE GG-Y C4601	STUEMEAE FG-Y C7033	4.07	3.993333333
STUEMEAE JM-W C1-5825	STUEMEAE FG-Y C7033	3.84	
JUENAE WC-E C1-437	STUEMEAE GG-Y C3247	3.47	
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C3247	3.27	3.546666667
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y C3247	3.9	
JUENAE WC-E C1-437	STUEMEAE GG-Y C8204	4.22	
STUEMEAE GG-Y C4601	STUEMEAE GG-Y C8204	2.35	3.506666667
STUEMEAE JM-W C1-5825	STUEMEAE GG-Y C8204	3.95	