

**Site Report 1: Lennon**  
**Written on 3 April 2018**  
**Andrew Reinhard**

Archaeological reconnaissance of Drogradur (Lennon) in *No Man's Sky* commenced on March 28, 2018. This report documents the planet's location, size, ecology, climate, and basic archaeology in preparation for a full survey of the planet and its vacated habitations and monuments to desertion. I chose this planet for my PhD case study because it is one of the first instances (if not the first) of a shared synthetic world that was [evacuated](#) because of code-created climate change. I will attempt to document the exodus through recording what was left behind (as well as the current state of the planet, which was completely changed through the release of *NMS* v1.3, aka Atlas Rises). After completing a survey of Lennon, I broadened the project to investigate other Legacy Hub settlements.

### **Location**

**Current Name:** Drogradur NO425 (planet), aka HUB-G-211 Lennon

**Original name:** Saharakasa-Uihua (My base's original name: Sahara-Miq)

**Region:** Rentocnijik Expanse, Euclid (galaxy)

**Area:** Legacy Hub (formerly Galactic Hub)

**Planet Coordinates:** 0469:0081:0D6D:0211

**Portal Coordinates (glyph address):**

bird, face, bird, bird, sunset, face, balloon, boat, tree, tent, boat, voxel

**Portal Coordinates (from my signal booster):** YACAJ:0469:0081:0D6D:0211

### **Size**

**Circumference:** ca. 8 minutes (480 seconds) flying time just above the atmosphere at 4756u/s = 2,282,880u or ca. 2,282ku (1u = 1 Earth meter; 1ku = 1 Earth kilometer)

**Diameter:** ca. 726ku

**Volume:**  $2 \times 10^8 u = 200,358,829u$

**Compare:** The Earth's moon has a circumference of 10,921km (or nearly 5x that of Drogradur).

**Note:** To calculate the size of Drogradur, I timed my flight around the planet's equator using my beacon placed at the portal to maintain a straight line, keeping a constant cruising speed at the edge of the atmosphere at 4756u/s, then using the basic formula of  $d=rt$  (distance = rate x time).

**Distance from the *NMS* Archaeology Dig House to the portal:** ca. 1.25ku/0.78mi (15 mins. @ 5ku/hr pace)

### **Landscape**

Heterogeneous across the entire planet: modest, smooth (not craggy) mountains and valleys dotted with shallow caves. All is snow-covered. Valleys contain occasional scrub and small, pine-like trees. The mountains are largely bare of cover and are smooth, dotted with occasional rocks and boulders. Shelter is limited to caves as mountains leave one exposed. PCG-placed structures are rare and require a spaceship or exocraft to reach safely without exposure to storms that bring extreme cold.

### **From the Planet Info Panel (lower-left corner of display)**

Weather: Snowy (outbreaks of frozen rain)

Sentinels: Minimal

Flora: Average

Fauna: Full

### **Resources (special)**

- Star bulb (purple): Used to craft poly fibre and star bramble
- Cymatygen (purple): Used to craft atlas seed and state phasure
- Copper (green): Called for in a wide number of technical blueprints
- Heridium (blue): Called for in dozens of technology blueprints

### **Resources (standard)**

- Iron
- Titanium
- Carbon
- Thamium9
- Plutonium
- Platinum
- Gold
- Cave marrow

### **Climate**

**Interiors:** +66.2° F (19 C)

**Exteriors:** Varies between -85° F (-29 C) and -80° F (-26 C), 1–1.5 Rad, 16–17 Tox. Gets warmer at night.

**Exteriors (storm):** -136.9° F (-58 C), 0.7 Rad, 16.4 Tox

**Storm duration:** ca. 4 real-time minutes (suit protection exhausted in 90 seconds)

**Time between storms:** ca. 15 real-time minutes

**Length of day (sunrise-to-sunrise):** 1 real-time minute = 45 Drogradur minutes

32 real-time minutes = 1 24-hour Drogradur day

**Dawn:** 0400 local time

**Dusk:** 1800 local time

### **Life**

#### **Fauna (discovered by me): 7/11 species found so far (all vegetarian)**

- Unquilavicae Nepla (rare)
- Sanceumis Dacrec (common)
- Kunoea Donosta (uncommon)
- Eamentiaea Hodagia (common, volatile temperament = will attack)

- Ussosiumera Kamiti (common)
- Miarosae Kamiti (common)
- Sikyviae Donosta (common)
- Rigatoricae Nepla (rare)

#### **Flora (discovered by me so far):**

- Methae Ayushae (common)
- Cettortosa Abeatii (common)
- Uimprea Yemstea (common)
- Ziamera Derangii (common)
- Xasarea Xesequoe (common)
- Arpaccica Nehindoe (common)
- Thumae Yidrounima (common)

#### **Waypoints**

31 Waypoints discovered (by several people total—screenshots taken).

Waypoints were all logged between Sept. 2, 2017 and Feb. 18, 2018 (Atlas Rises update was released on March 10, 2017), so none remain from the original settlement of Drogradur.

#### **Archaeology (discovered as of March 28, 2018)**

There are dozens of communications terminals to document. These were left by other players and contain brief messages. Drogradur also supports several habitable bases, most of which seem to have been abandoned after being stripped of their resources. I did locate one monolith (as well as Drogradur's portal). *NMS* uses procedural generation (PCG or ProcGen to create and place other structures including observatories, factories, monoliths, plaques, and ruins, as well as broken machinery, rubbish, and crashed ships (including freighters).

Gek **Monolith** (found March 28, 2018): "Legacy of Kevera-Loqu" (no results found for this name in a Google search).

**Signal Booster Coordinates:** NOREP:0469:0081:0D6D:0211

#### **Three Knowledge Stones:**

1. Rear of monolith. Gek word for "today"
2. Front, to the left of the stairs. Gek word for "encounter"
3. Front, to the right of the stairs. Gek word for "refresher"

#### **Activation text and options:**

"My reality inverts. I am chained to the monolith, my arms are in manacles above my head and my feet are dangling several feet from the ground. A creature, its beak showing through the blackened animal hide mask, approaches on stilts. It wields a red hot metal rod.

“It pecks at my eyes, then pecks at my tongue. I must choose my punishment.”

Choose eyes

Choose tongue

Beg for mercy

Locate a portal (1 Gek Relic)

Gek Text in lower-left (some text is in English because I have already learned these words through prior exploration): advancement rakninal ervot! vuus sal knowledge. tongue sal language.

Note: Choosing a monolith answer prior to locating a portal will wipe out the chance of using this option once the monolith answer choice is made (regardless if the chosen answer is right or wrong).

**[NOTE: Different text on April 2, 2018]:** "Legacy of Kevera-Loqu" (same name)

Lower-left text = “First Spawn friend receive mapakkingu mem nitr executed. murder fat trader, or murder rich miner?”

“I see a strange vision. Time is reverted. I am sat on a platform looking down on an execution. Two small beaked traders are kneeling before me. One is small and wiry, the other is obese with jowls that brush the wooden stage. Another lifeform, who wears a green cloth mask, readies an axe behind them.

“The traders beg me for mercy. The familiar dry, croaky voice of an ancient tribe whispers encouragement into my ear...”

Execute fat lifeform

Execute thin lifeform

Show mercy (Gek Rank: Client or above)

Locate a portal (1 Gek Relic)

**Portal location given:** Paid a Gek Relic and got leyline coordinates on my HUD. The leyline brought me to the main portal on Drogradur.

**Correct answer given:** [I chose mercy]. Received 646 units.

### To Do on Drogradur

- Create a grid for the map of communication terminals left at the portal.
- Number and record data for each of the communication terminals.
- Visit and map other communication terminals.
- Discover and visit other habitable bases.
- Find and use at least one other monolith on Drogradur.
- Run searches on the names of the things I find to see if these names have changed pre- and post-v1.3.

**Lapidibus Memoriae in *No Man's Sky***  
**Written 5 April 2018**  
**Andrew Reinhard**

*Lapidibus memoriae* is Latin for "stones of memory." This is how I describe the communications stations left behind by players in *No Man's Sky*. While most of *NMS* is the product of procedural generation of entire worlds (including material culture), players are able to create their own communication stations wherever they visit, leaving behind a custom message tied to their gamertag (name). This is not unlike pilgrims to holy sites who leave stones, or people on the Grand Tour who left graffiti on ancient monuments. It is a personal statement and proof of having been somewhere. Comm stations are cheap to build (not with currency, but instead with natural resources, in this case 20 iron, iron being the most widely distributed element in the *NMS* universe) and are conceivably left for all eternity for others to find and read. Eternity can be brief for these memorials, however, as will be explained at the end of this report.

Part of my archaeological investigation of Drogradur in what is now the Legacy Hub is the documentation of comm stations left at that planet's portal (and elsewhere in the landscape). On August 11, 2017, the Atlas Rises update (v1.3) disrupted all of the planets in the *NMS* universe and, in the case of the Galactic Hub and its capital of Drogradur, forced a mass migration to more habitable climes. I wanted to see what was left behind, and comm stations form a major part of documenting that abandonment, although what I found does not support abandonment, but rather rediscovery by players visiting the abandoned Drogradur as tourists. What did people write for others to find? I present here my preliminary findings.

### Method

In order to document the portal-centered comm stations, I first took a top-down photo from my ship using the game's Photo Mode, and then overlaid it with a Cartesian grid in order to assign relative coordinates to the stations below. I then numbered these for record-keeping in a spreadsheet.

In all, I recorded 67 comm stations, 49 of which were quite near the portal, the remaining 17 on the periphery within sight when standing at the portal itself. When visitors arrive at the portal from another planet, they walk from north to south, exiting the portal on the left of the grid as shown above. When players wish to use the portal to go someplace else, they enter the active portal from the northern opening. Note that roughly two-thirds (42) of the comm stations are placed at (or near) the portal's exit with a near-even distribution to the east and west. The comm stations do not currently display placement date as part of their metadata, although some players have included dates in their messages.

### Findings

The table below shows the preliminary data collected from each of the comm stations as recorded on April 3–4, 2018, including the in-game names of players, which also appear in online platforms such as the *No Man's Sky* Galactic Hub wiki and reddit group:

No.	Location (x, y)	Color <sup>1</sup>	Placed By <sup>2</sup>	Content
1	-12,-3	Orange	LFCSTE88	Am I too late?
2	-10,-5	Orange	LordMarkov	Greetings from Lord Markov (TSG)
3	-11,0	Orange	Olut_poika	Lazarus .Is.Real.
4	-9,0	Orange	JakeTheRak	Do you know the way
5	-8,-5	Orange	Hamletsbigtoe	Behind you
6	-8,-2	Orange	WashedZebra	Greetings from Auckland, New Zealand
7	-8,-1	Blue	pictmatrix	Have I missed ANOTHER party? :/
8*	-7,-3			
9	-7,-2	Yellow	TOUCH-death	So am I cool now?
10	-6,-7	Orange	finnigonis007	What up
11	-7,0	Orange	PixelLevi	Call 911
12	-7,0	Red	DiamondThief_TDT	Did u tuch my spagat
13	-6,0	Orange	Whyudra	Dark Souls is to easy
14	-7,-5	Orange	Klunk234	Would you kindly? 27/3/18
15	-6,-2	Orange	annusatronchi	They know you are here
16	-5,-3	Orange	trdnugit11	BTS
17	-4,-7	Orange	LORDBEN2010	Greetings from Canada, fellow travelers :)
18	-2,-5	Orange	Dahjiit	Update on Easter day? April 1st?
19	-1,-5	Orange	ChemicalLust	Melissa says greetings, Travelers!
20	-11,1	Orange	Tendani2006	Welcome to the Galactic Hub.
21	-11,0	Orange	vh191	Crap my ship keys. Hi from Norway
22	-9,3	Orange	cch156	Hi from h***
23	-9,2	Orange	TheLarssons555	Fullow da queen
24*	-9,7			
25	-8,1	orange	HyperPhlex	Hi from Dallas, TX USA 2018/03/05
26*	-8,3			
27	-8,1	Blue	TNT_MUSICIAN	Hi:) from TNT_Musician.
28	-8,3			
29	-6,0	Blue	MrSager77	2-4-18
30	-6,2	orange	sharpmapper	Welcome, Traveller, to the Galactic Hub
31	-6,1	orange	Wild__Flowers_	We and kardian like you
32	-4,2	orange	grizzly1964888	Pokemon go rules
33	-4,3	orange	broncojim30	You have found de way my brudda

<sup>1</sup> Players can customize the colors of their comm stations, the rarer the color combination, the easier they are to identify by sight. The default color is orange.

<sup>2</sup> Gamertags are publicly visible identifiers created by players when signing up for online services such as PlayStation Plus Network, which is required for games such as *NMS*. Player identities (given and surnames, addressed) remain hidden.

34	-3,5	orange	FitzLC	Where TF my ship
35	1,-7	Blue	Airmailrelic7	Greetings from Brazil!
36	3,-6	orange	Rickachay	Late to the party
37	4,-2	orange	finn6193	Hello my friends I come from the USA
38	5,-2	purple	AlmondJoyattack	Disco 4 eva long live ABBA
39	5,-3	green	Obi-Won_1977	Greetings fellow traveller
40	6,-6	orange	scm1971	Ireland welcomes you.
41	6,0	orange	Ramialhilli98	Greeting from iraq
42	7,-1	orange	Munnelaus	Greetings from Virginia !
43	8,-1	orange	insidezout80	Outstanding Vacation!! 5*****
44	9,-7	red w green trim	aDanica	Hola!! Baja California, Mexico
45	11,-4	orange	JeepJones	This rocks!
46	2,7	Red	Azazel0681	Greetings from France - 04/01/18
47	5,5	orange	theFrozenGod	Welcome! Cinci, Ohio!
48	8,1	orange	Goodyman42	Hello from Wyoming, USA
49	9,3	orange	DJ_D-Original	Sup guy! Greetings from Boston! (^_^)
50	-9,-4	orange	LFCSTE88	Am I too late?
51	-8,-2	orange	StormNinjahd1	Hello
52	-9,0	orange	tdawg099	Tdawg099 wants to join
53	-3,5	orange	mat13242	No
54	-3,11	green	c112780	Dude. Your high.
55	-2,6	orange	HawknBaja	WOW !!! Looks like I'm not the first lol
56	-2,12	orange	its_a_cigaweed	Puff Puff Pass!!!!
57	3,-8	orange	SmeggyFox	I'll be back for breakfast
58	4,-6	purple	albi-six	Smoke me a kipper skipper
59	6,-3	orange	JessicaDaviesxx	Live long the NMSRebellion!
60	8,-8	green	bonski399	Anyone know new hub adress ???
61	1,4	orange	ataricat	Toronto, Ontario Canada says HI!
62	0,10	orange	ZRayTGZ	Greetings from Minot, ND
63	1,10	orange	TutorSecond55	I am TutorSecond55. I have many names.
64	4,8	yellow	KnightAlese	Hail from Alese (TSG)
65	8,5	Red	jaw43058	This is nice and quiet
66	-12,-5	orange	ToninGTA5	On senjaille

\* = False read. These are round shrubs, which look like comm stations from above.

Many of the comm stations' messages contain words of greeting not from the player's homeworld in *NMS*, but rather from the players' actual locations on Earth. The United States

holds the lion's share of location-themed stations from North Dakota to Ohio to Puerto Rico and elsewhere, with others from Canada, Mexico, Europe (France, Norway, UK), South America (Brazil), and Iraq, if the players are to be believed. Players are a mix of genders based on their gamertags. Those stations containing dates are a mix of 2017 and 2018, more trending towards March and April 2018.

Two players are tagged with "(TSG)", an abbreviation for The Spacing Guild, a group of players in the Federation tasked with helping other players find their way around the universe. Generic welcoming messages are frequent. One player asks for directions. Light humor is present ("where are my spaceship keys?" and "where is my ship?"), pointing to the fact that portal users are restricted to foot-travel until they build exocraft or import their ship/freighter. On occasion, comm stations are placed next to each other to simulate conversation. Station 56 makes a marijuana reference, and station 54 exclaims, "Dude. Your [sic] high." Both stations occupy a mountain overlooking the portal.

Contemporary meme references also occur. Comm station 12 asks, "did u tuch my spagat?" This refers to the "somebody toucha my spaghet" meme, which made its appearance on December 25, 2017, itself a reference to a 1939 Terry Toons cartoon of "Goldilocks and the Three Bears."<sup>3</sup> The Earth-world continues to blend with *NMS*, and the messages are not unlike graffiti left by citizens of ancient Pompeii, a mix of greetings, names, places, humor, but there is a distinct lack of profanity, likely because of the game's terms of service, or perhaps this is reflective of the nature of *NMS* players.

## Anomaly

After completing my survey of comm stations at the Drogradur portal, I remembered one message that greeted me during my first visit to the planet back on September 14, 2017. I recorded a video of it,<sup>4</sup> and the first message was "Yeet." This message and its comm station are no longer present at the portal. But this is not an isolated incident. The messages recorded from my first, informal visit, which are now lost are:

- Yeet
- Hello from Colorado!
- Non sei solo incontriamoci
- The game
- Yoo
- We're alive in here.
- Greetings from Puerto Rico
- Resist!

I do not know if other comm stations are now missing between September 2017 and April 2018. I counted the comm stations in the video (48), and then from March 28 (49) covering the same area, but these could reflect the removal of some stations and the replacement of others.

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<sup>3</sup> <http://knowyourmeme.com/memes/somebody-toucha-my-spaghet> (accessed 19 July 2018).

<sup>4</sup> [https://archaeogaming.files.wordpress.com/2017/09/no-mans-sky\\_20170914212729.mp4](https://archaeogaming.files.wordpress.com/2017/09/no-mans-sky_20170914212729.mp4) (accessed 19 July 2018).



What might have happened? Players could have dismantled their comm stations over the past six months. Another possibility is that an *NMS* update removed some/all original comm stations, and the ones that I see now were all placed at the portal within the past few months. My video is from 14 September 2017. On 15 September 2017, Hello Games released patch 1.37. Patch 1.38 was released on 3 October 2017. Either of these patches could have reset comm stations. If that's so, the comm stations that were placed as part of the old Galactic Hub's farewell party to the capital on 20 August 2017 are gone, replaced by those of more recent visitors who have arrived as tourists to this newly historic digital space.

Three months after recording the placement of communication stations at Lennon's portal, I returned to see if any had disappeared and if any new ones had been introduced. Change was immediately obvious, and roughly half of the comm stations I observed initially had vanished, replaced by other messages from other players. Pride of place was immediately at the end of the portal's ramp, greeting new arrivals with words of welcome.

One can observe human visitors in real-time as well. *No Man's Sky* also shows other players on the same planet as green icons on the head-up display, and as glowing spheres of light when meeting "in person." This changed on 24 July 2018 when the multiplayer add-on launched, which granted players customizable space suits.

Because of Lennon's status as one of the major landmarks of in-game heritage by the entire *NMS* player community (so much so that Hello Games retroactively incorporated the Galactic Hub and its community into the game itself), human visitors are frequent. The old Hub's capital is now one of a few stops on a Grand Tour of heritage sites created not by the game's developer, but instead by the player-community. The players leave their marks on the places they visit. In other digital games, players are unable to leave any kind of permanent example that they had ever passed through. In *NMS*, however, the synthetic world persists,<sup>5</sup> and the developers have allowed players a way to prove that they have visited. Because the most active player community uses reddit as a communication forum for the game generally, but also with a subreddit for the Hub, stories circulate about player "feats of strength" that quickly become legendary thereby motivating players to visit. The Hub's capital planet is one such place. Another is the so-called "Pilgrim Star" where a player documented his circumnavigation of a planet on foot, the first person in the game to do so.

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<sup>5</sup> A persistent virtual world is one that continues to exist and evolve on its own regardless if there are human players present.

<sup>6</sup> <https://www.reddit.com/r/NoMansSkyTheGame/>  
(Accessed 14 July 2019).

<sup>7</sup> <https://www.reddit.com/r/NMSGalacticHub>  
(Accessed 14 July 2019).

planet is one such place. Another is the so-called “Pilgrim Star” where player St3amB0t documented his circumnavigation of a planet on foot, the first person in the game to do so.<sup>8</sup>

This constant churn of player-created communication marks a fundamental problem for the digital archaeologist. Unless a player included a date in a message, it is impossible to know which comm stations were left at any given time. Because of the nature of games and the swiftness at which Hello Games releases updates, evidence of player-presence could change almost daily. While Lennon’s portal site is permanent, the human inscriptional evidence is in a constant state of flux. What remains in the site report is a snapshot of the site at a certain point in time reflective of that moment only and the archaeological remains present at that time.

### **Comments from Members of the Hub Community**

From Galactic123 on 26 April 2018

Currently in NMS only a max of one base (with stuff built) is visible per star system. I assume its a bug, as trolls have built pointless bases before to obfuscate interesting bases. And Drogradur’s neighbor planet? I think it was once called Neptune II if memory serves me well.

From gammaton32 on 8 May 2018

It seems there is a typo in the note for station 15d\*, you probably meant “4 comm stations near base” instead of 15. Also, players can’t leave more than one comm per planet, most likely to prevent spamming. If you build a second comm the first one is deleted

From mwillsonid on 30 July 2018

Hey there! I would be interested to see a mapping convention like this used in the game wiki(s). Seems to me the gamepedia.com one is the most commonly used, so maybe start there? Maybe ask the mods to create a section for planet pages called ‘map’ that has a map like this? Do you think it would be too much to ask of players to adhere to your mapping convention? Maybe you could start a thing called ‘the planetary mapping project’ which aims to create a tool that makes making maps like these really easy for players? Just spitballing some ideas here.

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[https://www.reddit.com/r/NoMansSkyTheGame/comments/529q84/im\\_walking\\_across\\_an\\_entire\\_planet\\_pt\\_12\\_all\\_good/](https://www.reddit.com/r/NoMansSkyTheGame/comments/529q84/im_walking_across_an_entire_planet_pt_12_all_good/)

(Accessed 14 July 2019).