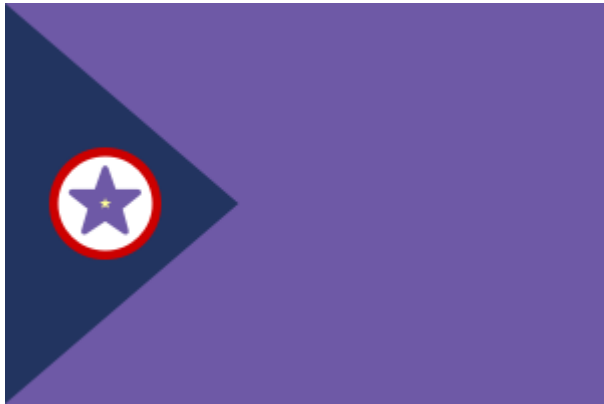


Yamatai Star System

The Yamatai Star System is the central solar body of the [Yamatai Star Empire](#), containing the [planet Yamatai](#) and its moons. This system is also still called the “Kikyo Star System,” which was its name until [YE 27](#).



Communications support is provided by a networks of [Emrys Satellites](#) put into orbit off *all* planets in the Yamatai system during [YE 36](#).

Basics

The Yamatai Star System's first recorded name was the Kikyo Solar System. Human colonists inhabited the system decades before [YE 01](#) as part of the habitation of the nearby Nepleslian Star System. The colonists, after about one year of surveying the system, deemed the second planet from the star habitable for carbon-based life. Other celestial bodies contained valuable resources, according to the survey, and those bodies later formed the base of the YSE's mineral reserves.

The survey pointed out a catch, however: the system's only stellar object was a 🌌 [F1V-class](#), larger and hotter than the typical star found in systems with planets that support life. The star also has no secondary stellar object typical to F-type stars.

Yamatai's atmosphere handily filters much of the powerful radiation coming from the star, which scientists estimate is about 40 million years into its lifespan. As well, the color of the star appears mostly white, considered to be an effect of the planet's atmosphere. Exactly how that is produced is not known, but Yamatai's ecosystem has suffered no known ill side-effects.

The star shares its name with its only habitable planet, renamed in at the beginning of the Yamatai Star Empire. Astronomers and researchers variably call it Star Yamatai or stellar Yamatai for clarity's sake. In the beginning, however, the scientists called the star Kikyo, and it retains that name on a number of older star charts.

The system has six celestial bodies that can be considered fully formed planets.

- Hikari, a bare, cratered rock

- Yamatai the garden world (formerly *Geshrintall*)
- Odin, a yellow-white gas giant with a thick, silvery series of debris rings
- Freya, a green gas giant, smaller than Odin
- Aoyama, a blue-and-white gas giant
- Heimdall, a navy blue gas giant

Other celestial objects include the moons of Odin, Freya, Aoyama and Heimdall, the minor planet Hachiman, and two comets, Izanagi and Izanami. After the orbits of the comets, the nearest celestial object is a large asteroid — about a lightyear away.

Creation

Every astronomer who has surveyed and studied the Yamatai Star System has come to the same conclusion: it is not natural.

Each celestial body has an oddity or outright improbability that should not be. Geshrintall is a garden planet that shouldn't exist; Aoyama has a surface pressure far lighter than mathematically predicted; Heimdall has a chemical composition that is uniquely perfect for many types of robotic mining; Freya has too many moons while Odin has too few. Even Hikari raises suspicions with its seeming blandness, nevermind the minimal presence of other celestial objects and the the absence of an intrastellar or extrastellar asteroid belt.

Scientists are relatively sure they know the source of the system's creation — [AvaNet](#) is the only species known to even have the potential to create its own star system. What confounds is the how, and the why: AvaNet provided no direct answers, and with their banning in YE 21, further information became impossible.

With the Yamataian government constantly pitched in wars, people have devoted little time and few resources to coming up with answers. Nepleslian and Yamataian scientists are confident there is more to the system worth exploring, but have been at odds on where to start. Yamatai's independent researchers have focused on attempting to explore the surface of Aoyama, while Nepleslian astronomers — who have a longer research record of the system — have narrowed on Freya's moon Gersemi.

Curiously, the three native races of Yamatai — [Trolls](#), [Elves](#) and [Elysians](#) — have no knowledge regarding the system's formation.




Star System Data

Yamatai (Formerly Kikyo)

- Type: 🌌 [F1V-class](#)
- Radius: 1.2 Solar Radii
- Mass: 1.4 Solar Masses
- Luminosity: 3.33 Sol
- Surface Temperature: About 7,100 Kelvin

Planetary Data

- Number of Planets: 6
- Number of Dwarf Planets: 1
- Number of Natural Satellites: 27
- Number of Minor Planets: 3

Planetary Overview				
Order	Type	Distance from star	Mass	Radius
Hikari	Rocky	6E+007 km (0.398  au)	9.5E+023 kg (0.159  M \oplus)	3487.3 km (0.55  R \oplus)
Yamatai	Garden	2.5E+008 Km (1.696 au)	8.7E+024 Kg (1.448 M \oplus)	5,205.815 5m (0.816 R \oplus)
Odin	Gas giant	4.9E+008 Km (3.304 au)	3.4E+027 Kg (574.476 M \oplus)	71011.0 Km (11 R \oplus)
Freya	Gas giant	1.3E+009 Km (8.612 au)	7.1E+027 Kg (1186.686 M \oplus)	95038.2 Km (15 R \oplus)
Aoyama	Gas giant	3.2E+009 Km (21.207 au)	1.2E+027 Kg (207.925 M \oplus)	61643.3 Km (9.675 R \oplus)
Heimdall	Gas giant	7.1E+009 Km (47.165 au)	6.5E+024 Kg (1.090 M \oplus)	14245.4 Km (2.2 R \oplus)

Major Planets

Hikari



SEE: [Hikari](#)

- Type: Rocky
- Life: None
- Period: 80.78 Standard Days
- Gravity: 522.8 cm/sec^2 (0.53G)
- Population: 107
- Facilities:
 - [Yamataian Scientific Studies Service Tansaku-class](#) Research Vessel YSS XXXXXXX

Notes

Hikari has no atmosphere, leading to its pockmarked surface of craters. Its molten core takes up at least 45 percent of its volume. Its composition is at least 75 percent metallic, with silicates fulfilling the remainder. Iron is the most common solid element, before oxygen and nickel. Hikari has been a proving ground for some [Star Army](#) technologies, notably panels and insulation used for space stations.

Observers and scientists have seen what appear to be small mining scars on Hikari's surface. The holes seem to bore deep into the surface, but probes have been unable to penetrate far enough through the planet's mantle to see if the scars touch the core.

Hikari's name comes from its appearance in the night sky over Yamatai, where it is the brightest object outside of Yamatai's satellites.

Hikari has no moons.

Yamatai (Geshrintall)



SEE: [Yamatai \(Planet\)](#)

- Type: Terrestrial (Garden)
- Life: Carbon- and/or silicone-based, found in all environments
- Period: 315 Standard Days
- Gravity: 9.29 m/sec² (0.95 G)
- Planetary System Population: See planet page

Notes

Yamatai is the only inhabited celestial object in the star system. It is a varied terrestrial world with a

stable climate, a calm planetary crust, seas rich with life, vast stretches of land ripe for growing food, seasons, wildlife ... a paradise by any measure.

Like its home system, Yamatai is not a natural occurrence. Neither are its two moons, [Midori No Umi](#) and [Luna Bianca](#), though they are reasonably sized for the planet's gravitational pull. The populations who have enjoyed Yamatai's "natural" bounty, from Elysians to humans (artificial and otherwise), continue to thrive, even after several wars, one of which brought the fight home.

[Midori No Umi](#), when seen from Yamatai or from space, has a slightly green hue, hence its name.

Odin

SEE: [Odin](#)

- Type: Gas giant (mostly hydrogen)
- Life: None
- Period: 1931.14 Standard Days
- Planetary System Population: None
- Facilities:
 - None that are operational.

Notes

Odin has a mostly hydrogen-helium atmosphere, with an unstable core thousands of kilometers below lower atmospheres of other gases and liquid hydrogen. The rings have a silvery white color, and are composed of ice and icy rock. Trace evidence of gas mining by previous occupants is everywhere in its exosphere and its rings, though much of the debris is beyond identification except as unnatural. The powerful storms, sometimes hundreds of kilometers cubed, make sub-exosphere exploration dangerous.

Yamatai's government maintains no facilities near Odin, though independent researchers continue to study the planet.

Odin's name comes from its appearance in the night sky over Yamatai, where the rings appear to be a straight line through the planet. Scientists among Yamatai's early settlers imagined the line to look like the spear of Odin, 🏹 [Gungnir](#).

Odin, despite its type, has just one moon, Tyr, which has no atmosphere.

Freya

SEE: [Freya](#)

- Type: Gas giant (Hydrogen/Helium/Ammonia/Methane)
- Life: None
- Period: 8123.27 Standard Days

- Planetary System Population: About 900
- Facilities:
 - [Star Army Research Administration](#) scientific hot labs on Hnoss
 - SARA development center on Tenjin
 - SARA development center on Suijin
 - SARA labs and survey station above Gersemi
 - [Star Army Intelligence](#) research center on Ryujin

Notes

Freya is the largest planet in the star system, and it has the vast majority of its satellites (20 of 27). The planet's deep, vibrant green comes from its methane-and-ammonia-heavy atmospheres. The planet's core is unusually stable, though only about 8 percent of the planet's mass; it mostly is metallic hydrogen, helium and iron.

Scientists, stunned by the planet's green color and her brood of moons, thought “Freya” was a good name, even before they settled on Odin's name. The planet generates sufficient heat and has enough gravity to act as a kind of second star for her moons, and several are capable of supporting life. Gersemi already is approaching garden-world status within the next few thousand years, absent any terraforming.

Freya's moons are listed on her [planetary page](#).

Aoyama

SEE: [Aoyama](#)

- Type: Gas giant
- Life: Spacy jellyfish-like organism that feeds off atmosphere
- Period: 31423.14 Standard Days
- Planetary System Population: About 160
- Facilities:
 - SARA development centers on Raijin and Fujin

Notes

Aoyama is the only planet besides Yamatai with a great abundance of water, though it is in the form of gas and ice. Starships headed out of the system have skimmed Aoyama's surface for this water since the planet's discovery. It has a solid core of rock, but the surface pressures are far lighter than a planet of its type should have, with surface exploration possible with the right vessel. The highest layer of the atmosphere is rocked by powerful winds, some reaching speeds of more than 500 km/h.

Aoyama's one lifeform, which only can be described as a kind of jellyfish of a light blue color, float throughout its atmosphere. They are nonviolent, or have been so far when encountered by unpiloted probes. They appear to subsist on ice, as no other substance is available for them to consume. Probes

also have seen them eat chunks of it.

Heimdall

SEE: [Heimdall](#)

- Type: Gas giant
- Life: None
- Period: 104247.90 Standard Days
- Planetary System Population: 1,045
- Facilities:
 - Star Army/[Ketsurui Samurai](#) Training Facility on Iðunn
 - SAINT Deep Space Observation Post on Ull

Notes

Heimdall has the most stable, if dense, atmosphere of all the planets in terms of storms. This could be in part because it has an atmosphere almost entirely made of poisonous gases — especially carbon dioxide, though the planet itself is wrapped in a blanket of swirling ammonia. The strange collection of gaseous material, along with the planet's high surface temperature (a result of intense geologic activity), inhibits attempts to explore the planet outside of probes or robotic starships. Researchers have discovered several fascinating geological features, including mountain ranges, huge volcanos, rolling hills and vast cliff faces amid acidic oceans. Were there not easier mining opportunities among Freya's moons, Heimdall would be a mining paradise.

Heimdall has two moons in Iðunn and Ull. Iðunn is ripe with life, with a rich nitrogen-oxygen atmosphere and huge oceans, but it has not yet developed beyond plants and many insects. Its ecosystem, however, has turned it into a dazzling garden world, full of natural orchards of edible fruits and wild vegetables. Special care is taken by Samurai and Star Army personnel who use the planet for training. Ull, by contrast, is similar to its parent planet, minus the ammonia.

Minor and Dwarf Planets

Hachiman

- Type: Rocky, Minor
- Life: None
- Orbital Radius: 13.03E+009 km (87.1 au)
- Mass: 0.448 M \oplus
- Radius: 2,786 km (0.43 R \oplus)
- Period: 196163.50 Standard Days
- Planetary System Population: None
- Facilities:
 - None.

Hachiman is a differentiated planetoid, with a rocky core completely enveloped by a mantle of ice and a weak atmosphere. It has a stable orbit, but it is at a 60-degree angle from even the most extreme variances of the other planets' orbits. It received its name because of how it functioned with its outlier status — Hachiman is covered by craters of all sizes, the result of it intercepting an unusual majority of space objects. Scientists early on concluded the function was not naturally occurring, but so far there are only theories as to how Hachiman performs its role.

Izanagi and Izanami

- Type: Rocky, Comet-type
- Life: None
- Orbital Radius: 13,463,808,363 km (90 au) at their apogees from stellar Yamatai
- Mass: Each about 1.67442764e-20 M \oplus
- Radius: Each about 500 km
- Period: About 1,200 Standard Days (About 3.1 million m/s, or 0.01 c)
- Planetary System Population: None
- Facilities:
 - None.

Izanagi and Izanami are the two comets that swing around the star, though they travel in opposite directions. The speed at which they travel cannot be explained by the star's gravity alone, but they appear to have no engine or motor pushing them along. Also unexplainable, so far, are their near-matching characteristics. They are the only two such objects in stellar Yamatai's space, and somehow can survive coming within one light-minute of the star and come out with no loss of mass or speed. Starships have not yet attempted to get close to the comets, but probes shot at the surface have found it to be made of smooth, light blue [zesuaium](#).

Other Celestial Objects


Hoshi no Iori

A former [circumstellar ring](#) around the Yamatai Star System, Hoshi no Iori was destroyed in [YE 33](#) at the peak of the [Second Mishhuvurthyar War](#). The ring's fragmented remains around the system at about 10 degrees from “stellar zero.” The Star Army regularly patrols the remains, but undesirables continue to mine and scavenge from its corpse.

OOC Notes

This page was originally created on 2013/10/17 11:27 by Arieg and [Doshii Jun](#), with mathematics assistance from [Khasidel](#) and stellar classification help by [BionicSamurai](#).

Map Locations	
Map to Use	Kikyo Sector

Map Locations	
Map Display Name	Yamatai
Map Coordinates	1501,1501
Map Importance	Landmark
Map Marker	
Map Tooltip Content	Capital of the Yamatai Star Empire
Show label?	yes
Marker Anchor	Bottom Center
Places of the SARPiverse	
Opened/Settled (YE)	Pre-History - Before YE 01
Place Categories	star system

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