REAL SOLSPACE

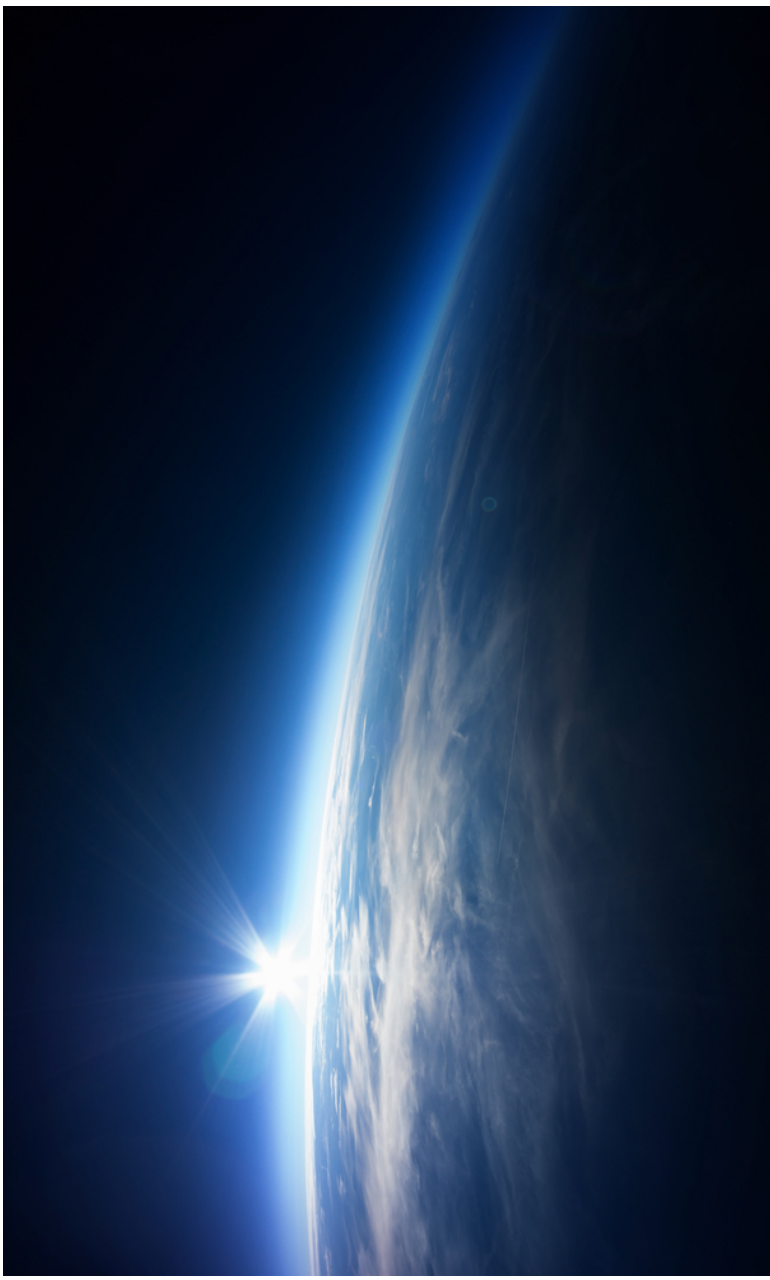
A guide to our stellar neighborhood

Sol. Mankind's home star system. Whether it's the center of a stellar empire, or whether humans are making their first tremulous steps out into the stars, our home system and its stellar neighborhood features frequently in science fiction game settings.

This article is designed as a worldbuilding tool. It provides a map of our region of space, based on real astronomical data. You can populate the star systems shown in any way you wish; you can even rename them (many of them feature in popular sci-fi TV shows and novels under different names). The map is presented on a hex grid where one hex represents one parsec, making it fully compatible with the *WOIN* space travel rules (see *N.E.W. The Science Fiction Roleplaying Game* or *WOIN Space*).

To populate these systems, you will need the star system and civilization creation tables found in *N.E.W. The Science Fiction Roleplaying Game* and *WOIN Building A Universe*. In essence, this document performs steps 1 and 2 for you (Determine System Type and Determine Star Types), leaving you to continue with generating or choosing the associated planets and civilizations.

As of the time of writing, astronomers have discovered close to 3,500 exoplanets. However, there are many more to be found. Indeed, a possible rocky planet orbiting Proxima Centauri, our nearest neighbor, has recently been detected. For this reason, this document does not attempt to include planetary data - it tells you about the nearby stars, but the rest is up to you.



Stellar Classifications

N.E.W. The Science Fiction Roleplaying Game and *WOIN Space* both describe star types in detail. Below is a recap of the pertinent information.

Spectral Classification

Stars are classified based on their temperature. The classification system, originally devised in the 20th Century by Morgan and Keenan, uses a system of letters and numbers. The letters indicate a broad **spectral classification** in descending order of temperature, with numbers from 0-9 subdividing them further (with 0 being the hottest and 9 being the coolest).

Additionally, a **luminosity class** is represented by Roman Numerals.

Sol, for example, is a G2V star - a yellow main sequence star with a temperature of about 5,800K.

Spectral	Description
O	Blue; hot, extremely luminous
B	Blue-white; luminous
A	White; common
F	Yellow-white; common
G	Yellow; common
K	Orange; common
M	Red; red dwarfs and red giants

Luminosity	Description
I	Supergiant
II	Bright giant
III	Giant
IV	Sub-giant
V	Main-sequence or dwarf
VI	Sub-dwarf

The star listings table refers to two other star types - WD (white dwarfs, otherwise known as "degenerate" stars, and are spectral classification D), and BD (brown dwarfs and methane dwarfs, which are spectral classifications T and Y).

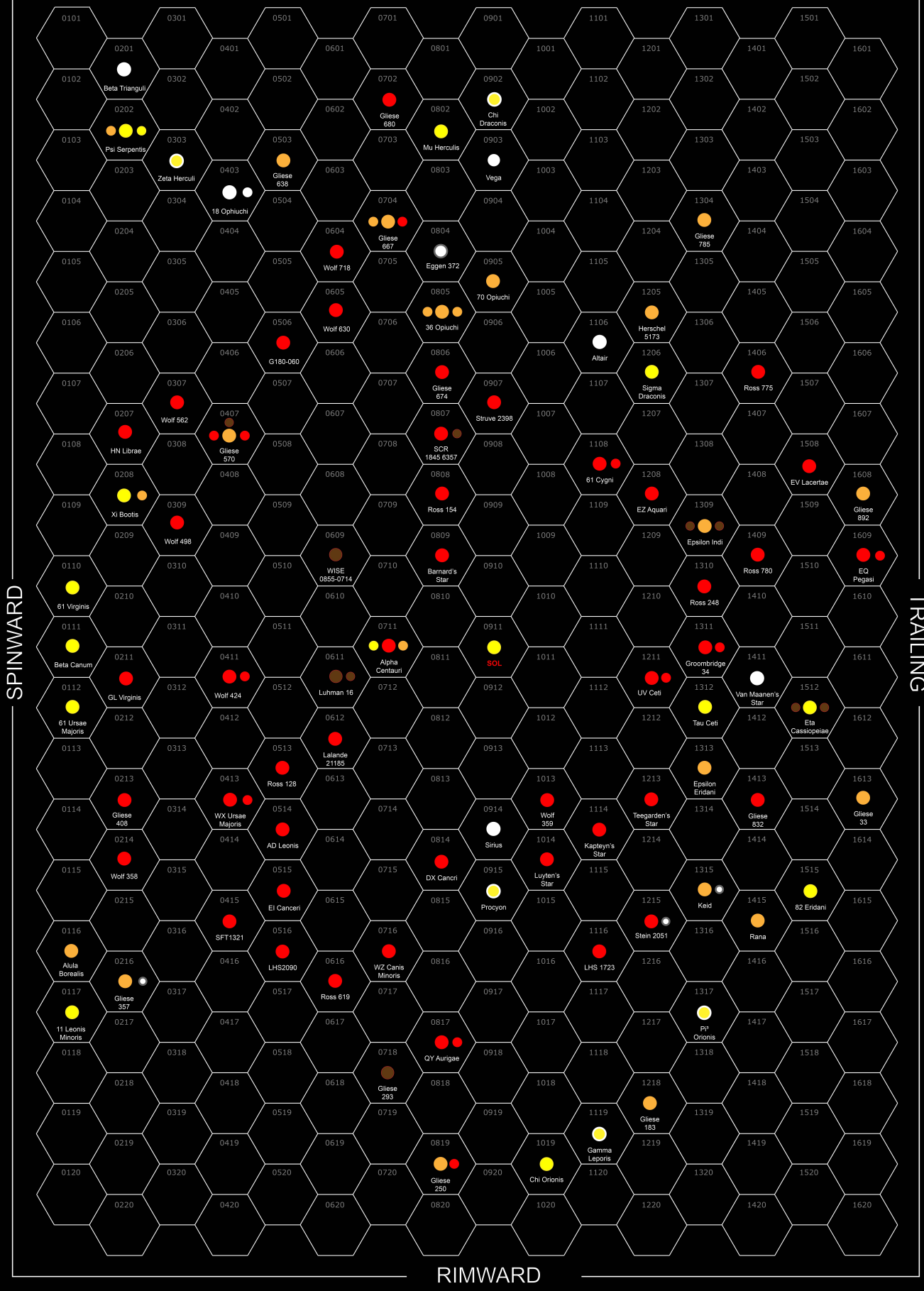
Other Nearby Objects

Most of the objects in our stellar neighborhood are star systems. *N.E.W.* and *WOIN Space* both list many other objects, along with their distances from Sol; these include star clusters, nebulae, pulsars, black holes, and more.

The nearest star cluster is the 3-parsec-wide Hyades Star Cluster, some 46 parsecs coreward from us. The nearest pulsar is the Geminga Pulsar, a neutron star 250 parsecs away, and the nearest known black hole is part of a binary system called Ao about 920 parsecs away. The closest nebula to Sol is the Helix Nebula, some 160 parsecs away. The center of the galaxy is about 8,589 parsecs distant.

The map in this document covers star systems within 10 parsecs (32.6 light years) or so of Sol. It takes roughly a month to travel across the map at FTL-7, about 10 days at FTL-11, and about 10 hours at FTL-30.

Writing Russ Morrissey
Cartography Ian Stead



Spectral Classification & Specials

O	Blue		G	Yellow	
B	Blue-white		K	Orange	
A	White		M	Red	
F	Yellow-white		BD	Brown Dwarf	
WD	White Dwarf		MD	Methane Dwarf	

SOLSPACE

One Hex = One Parsec

Star	Type	Hex	Spectral Type
11 Leonis Minoris	Single	0117	G8V
18 Ophiuchi	Binary	0403	A1V, A7V
36 Ophiuchi	Triple	0805	K2V, K1V, K5V
61 Cygni	Binary	1108	K5V, K7V
61 Ursae Majoris	Single	0112	G8V
61 Virginis	Single	0110	G7V
70 Ophiuchi	Binary	0905	K0V, K4V
82 Eridani	Single	1515	G8V
AD Leonis	Single	0514	M3V
Alula Borealis	Single	0116	K3III
Altair	Single	1106	A7V
Barnard's Star	Single	0809	M4V
Beta Canum	Single	0111	G0V
Beta Trianguli	Single	0201	A5IV
Chi Draconis	Binary	0902	F7V, K0V
Chi Orionis	Single	1019	G0V
DX Cancri	Single	0814	M6V
Eggen 372	Single	0804	WD
EI Canceri	Single	0515	M5V
Epsilon Eridani	Single	1313	K2V
Epsilon Indi	Triple	1309	K5V, BD, BD
Eta Cassiopeiae	Binary	1512	G0V, K7V
EQ Pegasi	Binary	1609	M3V, M4V
EV Lacertae	Single	1508	M3V
EZ Aquarii	Single	1208	M5V
G-180-060	Single	0506	M5V
Gamma Leporis	Single	1119	F6V
GL Virginis	Single	0211	M5V
Gliese 33	Single	1613	K2.5V
Gliese 183	Single	1218	K3V
Gliese 250	Binary	0819	K3V, MV
Gliese 293	Single	0718	BD
Gliese 357	Binary	0216	K0V, WD
Gliese 408	Single	0213	M4V
Gliese 570	Triple	0407	K4V, M1V, M3V, BD
Gliese 638	Single	0503	K7V
Gliese 667	Triple	0704	K3V, K5V, M3V
Gliese 674	Single	0806	M3V
Gliese 680	Single	0702	M3V
Gliese 785	Single	1304	K2V
Gliese 832	Single	1413	M2V
Gliese 892	Single	1608	K3V
Groombridge 34	Binary	1311	M1V, M4.V
Herschel 5173	Single	1205	K3V
HN Librae	Single	0207	M3V
Kapteyn's Star	Single	1114	M1V
Keid (40 Eridani)	Binary	1315	K1V, WD
Lalande 21185	Single	0612	M2V
LHS2090	Single	0516	M6V
Luhman 16	Binary	0611	BD, BD
LSH 1723	Single	1116	M4V
Luyten's Star	Single	1014	M3V
Mu Herculis	Single	0802	G5IV
Orionis	Single	1317	F6V
Procyon	Binary	0915	F5IV, WD
Proxima Centauri	Single	0711	M6V
Psi Serpentis	Binary	0202	G5V, K2V, G8III
Rana	Single	1415	K0IV

Ross 128	Single	0513	M4V
Ross 154	Single	0808	M3V
Ross 248	Single	1310	M6V
Ross 619	Single	0616	M4V
Ross 775	Single	1406	M3V
Ross 780	Single	1409	M3.5V
SCR 1845 6357	Binary	0807	M8.5, BD
SFT1321	Single	0415	M0V
Sigma Draconis	Single	1206	G9V
Sirius	Binary	0914	A1V, WD
Sol	**Single**	**0911**	**G2V**
Stein 2051	Binary	1215	M4.5V, WD
Struve 2398	Binary	0907	M3V, M3V
Teegarden's Star	Single	1213	M7V
Tau Ceti	Single	1312	G8.5V
QY Aurigae	Binary	0817	M5V, M5V
Van Maanen's Star	Single	1411	WD
Vega	Single	0903	A0V
UV Ceti	Binary	1211	M5V, M6V
WISE 0855-0714	Single	0609	BD
Wolf 358	Single	0214	M4V
Wolf 359	Single	1013	M6V
Wolf 424	Binary	0411	M6V, M6V
Wolf 498	Single	0309	M1V
Wolf 562	Single	0307	M3V
Wolf 630	Single	0605	M3V
Wolf 718	Single	0604	M1V
WX Ursae Majoris	Binary	0413	M2V, M6V
WZ Canis Minoris	Single	0716	M4V
Xi Bootis	Binary	0208	G8V, K4V
Zeta Herculi	Single	0303	F9IV

Alpha Centauri: Sol's Neighbor

The Alpha Centauri system is the closest star system to our own. **Proxima Centauri** is the closest of these stars to Sol, and may or may not be gravitationally bound to the other two, **Alpha Centauri A** (G2V) and **Alpha Centauri B** (K1V). **Proxima Centauri** is roughly 0.2 light years (15,000 AU) from the larger pair.

At the time of writing, an earth-sized exoplanet designated **Proxima b** has been detected in the habitable zone of **Proxima Centauri**. By the time you read this, more information may well be available!

To the naked eye, the entire Alpha Centauri system appears as a single star, visible only from Earth's southern hemisphere. It is the third brightest star in the night sky (the brightest is Sirius, the *Dog Star*).

Alpha Centauri sometimes goes by the names **Rigel Kent** and **Toliman**. The former is a variation of the Arabic *Rigil Kentaurus*, or *Foot of the Centaur*. Other names for the system include *Nán Mén* (Chinese, *Southern Gate*), and *Bermbermgle* (Australian Aboriginal).

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