61 Cygni

A visual binary system of 2 orange-red dwarf stars, this was one of the first stars to have its parallax measured.

In Hal Clement's Mission of Gravity, the home of Mesklin.

C.J. Cherryh locates Bryant's Star here. Alastair Reynolds' *Chasm City* is here.

Alpha Centauri

The nearest visible stars, this is a close binary in which one star is like Sol but somewhat brighter, and the other is a much dimmer orange dwarf.

Sometimes spoken of as a triple with Proxima Centauri, but the relationship is doubtful.

The crew of *Lost in Space* were headed here before they got lost.

In Star Trek, the home of Zephrem Cochrane, inventor of the Warp drive.

In Larry Niven's "Known Space", Wunderland is here. A.E. van Vogt, Far Centaurus, The Weapon Makers

Leigh Brackett, *Alpha Centauri – or Die!* Robert Silverberg, *Revolt on Alpha Centauri*

Poul Anderson, *The Long Way Home* Brad Ferguson, *Crisis at Centaurus*

Ben Bova, Flight of Exiles

M.K. Wren, *Phoenix Legacy* Trilogy

There are really too many references to list: Asimov, Dickson, Heinlein, Clement, and almost every other SF writer have left footprints on Alpha Centauri.

Altair

An observer's landmark in the Summer Triangle, Altair is an unusually bright yellow star with about $1.7\ x$ the sun's mass, but over $10\ x$ its luminosity. It's one of only two early type massive stars within 5 parsecs of Sol (the other is Sirius). The scale of this map was chosen especially to include this star.

The Forbidden Planet orbits Altair. Hal Clement, Close to Critical

In Gordon Dickson's Dorsai series, Dunnin's World is here.

Ben Bova, The Winds of Altair

Barnard's Star

(V2500 Ophiuchi) The next nearest after Alpha and Proxima Centauri, this dim, variable dwarf has the fastest proper motion of all known stars: it's not only close by, but also actually moving fast. A very old star that formed before the galaxy gained many metals.

Robert Forward, The Flight of the Dragonfly

A brief mention in Douglas Adams' *Hitchhiker's Guide to the Galaxy*: the Vogon ship is bound for this star.

Jack Williamson, The Legion of Space

Charles Harnes, Redworld John Boyd, Barnard's Planet

Epsilon Eridani

(Ross 128) Somewhat smaller and cooler than the sun, this star is thought to have a Jupiterlike planet. This star was one of the first SETI targets.

In Star Trek, a strong candidate for the location of Vulcan.

C.J. Cherryh's Viking Station is here.

Asimov's Foundation series places Baleyworld (Camporellon) here.

Alastair Reynolds, *Redemption Ark* Poul Anderson, *Orbit Unlimited*

The Star Map Crystal

STAR KEY & BIBLIOGRAPHY

Epsilon Indi An orange-red naked-eye star with two brown dwarf companions, making it a

triple system. These are the nearest brown dwarfs known.

In Larry Niven's "Known Space", the planet Home is here.

GJ1 A variable red dwarf.

GJ54.1 (YZ Ceti) A small dim dwarf that is also a flare star.

GJ83.1 (TZ Ari) Another variable red dwarf.

GJ139 (82 Eridani) A yellow-orange dwarf quite close to Sol's size, though with low

metal content and fast real velocity that suggest it may be very old.

GJ234 A pair of dwarfs with high proper motion. The larger, and maybe the smaller

too, is a flare star.

GJ251 (Wolf 294) Another red dwarf.
GJ388 (AD Leonis) A variable red dwarf.

GJ440 A moderately bright white dwarf, as white dwarfs go.

GJ570 (HR 5568) A triple system with a fairly bright primary that's a bright star in

our sky. The companions are small and smaller red dwarfs, and there is also a

substellar brown dwarf orbiting widely around the triple.

GJ581 A variable red dwarf.

GJ588 Another variable red dwarf.

GJ628 (Wolf 1061) Two red dwarfs, the larger is variable.

GJ661 (Kuiper 79) Another pair of red dwarfs.

GJ674 A red dwarf.

GJ682 Yet another red dwarf.

GJ687 A red dwarf, thought to be a spectroscopic binary.

GJ783 (J. Herschel 5173) A binary with one star rather smaller than Sol and the

other a red dwarf.

GJ784 A hotter-than-average dwarf.

GJ829 A pair of red dwarfs.

GJ832 A red dwarf on the hot side.

GJ866 (EZ Aquarii) A triple of three dim red dwarfs, of which the largest is a variable

star.

GJ873 (EV Lacertae) An M dwarf flare star with a suspected companion dwarf.

GJ876 (Ross 780) An M dwarf that would be unremarkable except that it has two

known planets, with orbital periods of 30 and 60 days.

GJ1002 A very dim red dwarf.

GJ1061 (LHS 1565) A dwarf very like Proxima Centauri.
GJ1111 (DX Cancri) A tiny, cool dwarf, also a flare star.
GJ1245 (V1581 Cygni) A triple of very small dwarfs.

GJ3522 (LHS 6158) A red dwarf flare star.

GJ3618 (LHS 288) A red dwarf with high proper motion.

GJ3622 (LHS 292) A very dim red dwarf flare star.

The Star Map Crystal

STAR KEY & BIBLIOGRAPHY

Groombridge 34 A pair of dwarfs, though one is an almost respectable red-orange star. The

system has quite large proper motion.

C.J. Cherryh locates Olympus Station here.

Groombridge 1618 An unusually hot and metallic orange-red dwarf that is also a flare star,

In Joe Haldeman's *Mindbridge*, the home of a telepathic organism.

Kapteyn's Star Notable for its high proper motion, the second fastest after Barnard's Star, this

is a very low-metallicity dwarf. The closest known "halo star", it is very old

and does not rotate along with the rest of the galaxy.

Kruger 60 (DO Cephei) A red dwarf double, the smaller is an eruptive flare star.

Lacaille 8760 (AX Microscopii) The brightest red dwarf in Earth's sky, almost bright enough

to be a naked-eye star.

Lacaille 9352 (GJ887) With the fourth fastest proper motion known, this red dwarf is a

binocular object.

Lalande 21185 (GJ 411) A bright red dwarf that's an odd object: orbiting at a slant to the

galaxy like a halo star, but unusually iron-rich for that class of star. It is suspected of having one or more planets, but nothing is definite yet.

In Hal Clement's Starlight, Dhrann is here.

LP 816-60 (Hipparcos 103039) A variable dwarf.

Luyten's Star A red dwarf with high proper motion.

Omicron Eridani (Keid) A triple system that was discovered not to be single by Sir William

Herschel, in 1783. A respectably large orange-red dwarf is the primary, while the companions are a white dwarf and a very dim red one which is a flare star.

Procyon A young and very bright star that's an observing landmark in the winter sky of

the northern hemisphere. A white dwarf companion orbits it closely. Procyon A is unusually metal-rich, and may be so because the companion dwarf created and released large quantities of heavy elements during its previous

red giant phase.

In Larry Niven's "Known Space", the planet We Made It is here.

James Tiptree's story, "And I Awoke and Found Me Here on the Cold Hill's

Side" features inhabitants of Procyon.

In Gordon Dickson's Dorsai series, the Exotics and St. Marie are here.

Proxima Centauri The nearest star to the sun, but so small – an M-class dwarf not much bigger

than Jupiter – that it is invisible in the sky. Proxima is an active flare star that varies hour by hour. It's often spoken of as a triple star with Alpha Centauri,

but it may not be gravitationally bound to that system.

Murray Leinster, "Proxima Centauri".

Origin of the Proximen in Alan Moores Ballad of Halo Jones.

Ross 128 (FI Virginis) Another red dwarf flare star, dimmer than some, about 1/10 the

mass of Sol.

Ross 154 This cool red dwarf is quite nearby, but too faint to be visible; like many

dwarfs it is a flare star.

Ross 248 Another faint variable dwarf. This is the star that Pioneer 10 will approach

most closely, about 30,000 years in the future.

The Star Map Crystal

STAR KEY & BIBLIOGRAPHY

Sirius

The Dog Star, a giant blue star that is brightest in our sky. Its companion is the nearest known white dwarf, whose discovery in the early 20th century was a milestone of physics. Sirius is one of only two early type massive stars within 5 parsecs of Sol (the other is Altair).

In Larry Niven's "Known Space", the planet Jinx orbits Sirius A. In Gordon Dickson's Dorsai series, New Earth and Freiland are here. James Tiptree's story, "And I Awoke and Found Me Here on the Cold Hill's Side" features Sirians.

Wil McCarthy, *The Fall of Sirius* Gordon Dickson, *Necromancer* Ben Bova, *As on a Darkling Plain*

So1

This yellow star is known to have several planets of various sizes, and is the only one in our sky normally visible in daylight. At least one planet harbors organic life.

Struve 2398

(GJ 725) An eccentric pair of red dwarfs, of which the smaller is a flare star.

Tau Ceti

Widely considered the most likely nearby star to have a human-habitable planet, and one of the first SETI project targets. Somewhat dimmer than the sun.

Another well-trodden destination of science fiction, Tau Ceti has far too many references to list.

Asimov's Foundation series locates Aurora at this star. In Larry Niven's "Known Space", the planet Plateau is here.

Barbarella's mission took place here.

Ursula Le Guin's Cetian races (The Dispossessed and other novels in the

Hainish universe) are here. Samuel R. Delany, *Empire Star* Poul Anderson, *After Doomsday*

The "Race" invaders in Harry Turtledove's Worldwar series.

In Gordon Dickson's Dorsai series, Ceta is here.

C. J. Cherryh, *Downbelow Station* Lois Bujold, the *Vorkosigan* books

UV Ceti

(Luyten 726-8) A double of two small, dim red dwarfs. The smaller, UV Ceti B, is an extreme flare star that can raise its brightness by 5x in less than a minute.

Van Maanen's Star A very cool, old white dwarf, the closest white dwarf to Sol without a companion. Named for the discoverer of its very high proper motion.

C.J. Cherryh's Mariner Station is located here.

Wolf 359 (Gliese 406, CN Leonis) A very small and dim flare star

In Star Trek, the location of the battle between the Federation and the Borg.

Carey Rockwell, Danger in Deep Space

Wolf 424 Two of Sol's dimmest neighbors, this pair of dwarfs orbits very closely. The

smaller is a very active flare star.

If your favorite book or star fact isn't listed here, we'd like to add it. Please drop us a line at key@starmapcrystal.com.

Thanks!

Naming stars is a complex subject, because there are so many names. People have been listing stars since the dawn of history, and most reasonably bright stars have been named and numbered many times in different catalogs. It's pure chance which designations have become popular and stayed in use through history, and in this map we've tried to choose the most common names as they're used now. Some small invisible stars have no popular names at all, especially those that are so dim they were only discovered recently, and there we've made the best choices we could.

Ancient Names

Some bright stars have Arabic, Latin, or Greek names that date from antiquity and are still used today. These are the 'one name' celebrity stars like Sirius, Altair and Procyon.

By Constellation

Three of the best-known schemes for naming stars by constellation are used in this map:

Bayer letters: Around 1600 Johannes Bayer assigned Greek letters to the stars in each constellation, mostly according to their brightness, but sometimes also by position. Some of these names have stayed in common use, giving us stars like Alpha Centauri – the brightest star in the Centaur – and Epsilon Eridani.

Flamsteed Numbers: Another constellation-based scheme was created by John Flamsteed in the 17th century, in which stars were numbered from west to east within each constellation. This is responsible for names like 61 Cygni.

Variable stars: Names like UV Ceti refer to variable stars, whose brightness changes over time. These were mostly catalogued in modern times, and they have two-letter identifiers within their constellations. Many red dwarfs are variable, and have this type of name in addition to their Gliese numbers.

Catalogs

Names begining with GJ refer to the most widely used catalog of stars in our local neighborhood, the *Catalogue of Nearby Stars*. This 20th-century listing was compiled by Wilhelm Gliese and extended by Hartmut Jahreiss, and is known as Gliese or Gliese-Jahreiss. Some stars that I've designated with GJ are often written as GI, especially numbers 1 through 965. We've kept to the GJ notation in this map, on the grounds that it's equally valid and much easier to read.

The Ross and Wolf catalogs list stars with high "proper motion", i.e. they seem to be moving fast against the background of more distant stars. Most of them don't really have very high velocities; their apparent motion is a perspective effect caused by their being so near to us.

Several other catalogs mentioned in this map – Lacaille, Groombridge, Struve, Kruger – are historically interesting, but have fallen out of current scientific use. They are remembered mostly in the common names of a few nearby or unusual stars.

Stars Named for People

Barnard's Star, Kapteyn's Star, Luyten's Star, and Van Maanen's Star are all noted for their fast proper motion, and their common names come from the astronomers who first detected this motion. These stars were distinguished in the early 20th century, by comparing successive photographs of the sky.

Acknowledgment

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