

Wolf's Lair

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"The world is my home, it's just that some rooms are draftier than others"

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Announcements

07/1/2002 - PAWS version 1.4 now available! TkinterIO Full color graphical terminal for all major platforms!.

Greetings!

Everybody's got to have a home page--This one's mine.

The lair is finally getting that comfy home feel. The carpet is down and there are some tapestries hiding the bare dirt walls. :) The lair currently contains:

1. SpellJammer and regular AD&D material.
2. A Text Adventure authoring system called PAWS. (Version 1.3 now available!)

Current Projects

SAGE

Now that I've just completed the PAWS text adventure system, I'm going to concentrate on getting SAGE out of development and into beta on this site. SAGE is an object database system to aid DM's track various parts of their campaign world.

Once the basic system is done I'm going to concentrate on adding a Module-creation system using MS Word as the output of choice. That basically means you'll be able to set up a module in Sage,

then hit a button and create a Word document with it.

Household Steward

Also, an old favorite, the Household Steward kitchen management system has been resurrected from the catacombs of 1995! Much more than a simple recipe database HHS lets you do all sorts of interesting things: automatic coupon management, kitchen tool inventory, and a host of other really nice features including a pantry system suited for long-term food storage management like the Church Of the Latter Day Saints (Mormons) and survivalists recommend. (Not that I'm equating the two! :))

As soon as it's converted from from Access 2.0 to Access 2000 and a new runtime package put together it'll be free for the downloading (I used to sell it for \$30 a pop).

Future Projects

In the future I'm going to add a *bunch* more AD&D material, including the monsters from the Dragon back issues (assuming it isn't copyright infringement)).

Email Link

If you have any questions about either PAWS or SAGE progress, or would like to submit a feature wish list or have other feedback, [feel free to email me!](#)

This page was last updated on Tuesday August 10, 2004.



P.A.W.S.

You are visitor #

VERSION 1.4 NOW AVAILABLE FULL COLOR CROSS-PLATFORM!

After a bout with illness that left me flat, I'm back, and so is PAWS! Here's version 1.4. I urge everyone to provide feedback. Speak now or forever hold your peace...at least until the next version! :) I welcome any and all feedback concerning bugs, missing features, missing documentation, etc. **By all means feel free to email me!**

PAWS is the Python Adventure Writing System. It consists of the game engine, world library, and play module. It also has two MS Word 2000 (Word 97 readable) documents that explain how to use it, the first a technical manual for hard-core code-heads :) and the second a tutorial for new game authors to create games with. RTF versions of the manuals are included in the primary ZIP file.

The manuals are also available in Adobe Acrobat PDF format.

You'll need Python as well, just follow the Python link below and choose the version of Python for your operating system (over 20 supported!) When asked if you want to install Tcl/Tkinter support, answer yes.

Two sample games are included. The first is Roger Firth's *Cloak Of Darkness*, text adventure's version of the Rosetta stone. Thanks to Neil Cerutti for the implementation and Roger Firth for the original game. I've taken the liberty of updating *COD* to handle the *Terminal* and *P* (parser) objects in version 1.3.

COD allows you to compare the PAWS version against versions in other languages, to see if PAWS fits your writing style. A dozen versions of *COD* in different languages are available [Roger Firth's site](#). Check it out! :)

The second sample game *Thief's Quest* is much larger, but alas currently incomplete. As time permits I intend to finish this game and release it, so if you like TQ don't despair! It *will* be finished!

IMPORTANT NOTE - What's New in Version 1.4?

First, some older news. PAWS is now being developed with Python 2.2. It is still fully compatible with all these earlier Python versions: 1.5.2, 1.6, 2.0, and 2.1. Python 2.2 is much wider spread than earlier versions, certainly Windows, Mac OS, OS/X and Redhat Linux users can find version 2.2 installers/RPM's for their platforms. Other platforms require a tar-ball compilation. If you have a compiled version of Python 2.2 available for BeOS, Unix (any flavor), or other platforms [email me](#) so I can link to your site.

If you can't find a 2.2 version for your platform, don't despair. PAWS is backwardly compatible with every version of Python from 1.5.2 onward.

Now for the really new. There's a lot to like in 1.4

Bug Fixes

1. The "again" verb was broken in 1.3, this now works.
2. A syntax error in Universe that only caused problems in the Unix version of Python 2.2 has been fixed.
3. Background gray now works in WConio terminal.
4. Terminal now has a `Terminate()` method which allows graceful exit from the *Curses Terminal* under Unix/Linux. This method is called automatically by PAWS, you don't have to do anything.

Enhancements

1. PAWS now has a limited "oops" ability. You may type an incomplete command like "Get" and when the parser complains "get what?" you can simply type "rock" or whatever and the parser will put the pieces together.
2. Minor cosmetic changes to the game banner, primarily intended to support the Title font size in the *TkinterIO Terminal*.
3. A minor change to the parser message about missing direct objects.
4. Adverbs now have an *Applies()* method that makes them simple to test for, even in a CBE.
5. Game logging to <game>.LOG by using the *Transcribe* command. Transcribe is a toggle, the first use turns it on, the second turns it off. Very useful for beta testing. If debugging is active debug information is placed in <game>.DBG.

6. Thanks to Nathan Barnes, PAWS now has a new terminal that uses the cross-platform *Tkinter* GUI to create a GUI based window. The *TkinterIO Terminal* allows you to change font sizes in 2 point increments, very nice! *TkinterIO* supports 16 foreground and background colors, underlining, bold, and italic. There's also a special mode called *Title* (~title) that gives you a bold white sans serif font 4 points larger than the regular text font. By default Title is used in the game name and room names. Best of all, *TkinterIO* is cross platform, it will work on any platform that Tcl has been ported to--which is just about every platform supported by Python. This includes Windows, Unix, Linux, BeOS, Mac OS/X (Cocoa only), and Mac OS!

If you have any complaints, bugs, or wish list items [email me](#)

Licensing For Commercial Use

Someone asked me about licensing PAWS for commercial usage. In other words they wanted to know if they could use PAWS to create a game or other program and then sell it, and what my licensing terms would be.

Basically my licensing terms are the same for any usage of PAWS/Universe, commercial or not. They boil down to these points:

1. Anyone can use PAWS and Universe for any purpose they deem fit, without paying me any royalties or other financial considerations. In other words, do what you like--using PAWS/Universe won't cost you a dime. HOWEVER, there are a few (minor) restrictions for *commercial* usage.
2. You can't claim you wrote PAWS, Universe, or the documentation for them. For the privilege of using PAWS/Universe all I ask is that you credit me as the creator of PAWS/Universe and its documentation somewhere in your own documentation. A mention in your introduction would be sufficient.
3. You must include a copy of the *unmodified* PAWS system with your commercial product. A copy of the PAWS ZIP file you downloaded is acceptable. If you want to modify PAWS or Universe for your game/program/product feel free. Likewise if you want to distribute only the compiled PYC versions of your modified copy of PAWS/Universe go ahead. However you must *also* include a complete *unmodified* copy of PAWS so anyone buying your product gets a free copy of PAWS/Universe as well.
4. You may not sell PAWS/Universe ITSELF, nor charge a fee for media, although you are free to sell any software you develop yourself that runs under PAWS/Universe. In other words, you can't charge for a CD containing PAWS *alone*, but you *can* sell a CD containing PAWS *and* your own program(s). You may *also* place PAWS on a CD containing a compilation of different programs and charge for that. Again, it must be an *unmodified* copy of the PAWS system, containing everything that came in the original ZIP file.
5. Game authors who have no intention of selling their games (placing them in the IF-Fiction archive for example) are encouraged to include a copy of PAWS.py, play, and Universe.py

with their game. This makes running games using different version levels of PAWS as painless for the player as possible. Game authors do NOT have to include a copy of the entire PAWS system with their game, that would be silly.

My intent is not to profit from PAWS/Universe nor even to prevent others from profiting from it. I merely want to receive credit for having created PAWS/Universe and to keep PAWS/Universe itself completely free to anyone who wants to use it--for whatever purpose they want to use it for!

So if you want to develop and sell a commercial product with PAWS be my guest. Use of PAWS for ANY purpose is royalty free and except for the conditions listed above otherwise unrestricted.

PAWS Files

[PAWS 1.4 \(651K\)](#) (Includes Documentation in both Word format *and* RTF)

[Python Web Site](#) (To get Python version 1.5.2, 1.6, or 2.0)

[PAWS Documentation In PDF \(Acrobat\) Format \(737K\)](#)

[ScopeEdit Editor Highlight Definition File for PAWS \(10K\)](#) Enhanced for PAWS version 1.1.
(Obsolete)

[Interspector Editor Highlight Definition File for PAWS \(10K\)](#) Enhanced for PAWS version 1.4

Curses For Windows Python 1.5.2 (Obsolete Terminal)

[Curses \(35K\)](#) (Copy into Python's DLL folder)

WConio Terminal Files For Windows 95 or later (Obsolete Terminal)

If you have Windows 95 or later and would like PAWS to run in full color you'll need to download an additional package and install it *after* you install Python. The download is quite small (~50k) and makes running PAWS on Windows 95 or later much nicer. Thanks to [Chris Gonnerman](#) for developing WConio for Python. Choose which version of WConio you need for your version of Python. Note that WConio is not available for Python 1.6. Also note, that thanks to Nathan Barnes *TkinterIO Terminal*, WConio is now obsolete

[WConio For Python 1.5.2](#) (Copy into Python's DLL folder)

[WConio For Python 2.0](#) (installer included)

[WConio For Python 2.1](#) (installer included)

[WConio For Python 2.2](#) (installer included)

Interspector Site

Click here to go to the [Interspector Web Site](#)

Roger Firth's Site

This site contains links to both the *Cloak Of Darkness* comparison game and his *Parsifal* page, a massive set of useful links to all kinds of IF resources!

[Roger Firth's Home Page](#)

Text Adventure Archive

Here's a link to the Interactive Fiction archive containing a huge array of text adventure games and other adventure development tools.

[Interactive Fiction Archive](#)

Email [Wolf](#) about PAWS

This page last updated 07/07/2002

AD&D Stuff

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[Spelljammer](#)

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This page contains a lot of AD&D related goodies, including Spelljammer ships, a crystal sphere, various monsters and a lot more. Have fun, and feel free to use any of this material in your own games!

Articles

[Cosmological Topology Of The Multiverse](#) covers a replacement model to the one found in *The Manual Of The Planes* and *Planescape*.

Spelljammer

New crystal spheres, equipment, and ships created for my campaign.

Monsters

Athasian

[Plant, Dangerous, Sun Flower](#)

[Scarab, Flame](#)

Photo Album

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Dusty

Dusty passed away in his sleep from a splenic tumor hemorrhage on April 28, 2001. The veterinarian assures us Dusty's passing was as painless and easy as death could ever be. Dusty was about 10 1/2 when he died.

We will miss you, Dusty... Don't chase too many of Heaven's gazelles, you'll make the other dogs jealous!

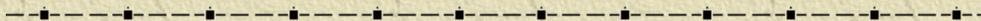
Below are pictures taken when Dusty was 9 and 10. We obtained Dusty (Dustin) from Saluki rescue. Supposedly Dusty was a finished show champion but we don't have much hard evidence of his past. :) Forgive the glowing eyes (camera flash...) but on second thought they are appropriate for him! He always was full of mischief.

To potential saluki owners who aren't familiar with the breed--be aware salukis are EXCEPTIONALLY intelligent (equal to a 5 year old human), quite large (28" at shoulder, 65 pounds, 6 feet tall when standing on hind legs) and unbelievably quick. A saluki's lunge is nearly as fast as a snake's strike and looks remarkably similar.

Dusty showed amazing powers of forethought, observation, memory and planning in his relentless siege of the kitchen pantry, momentarily unguarded pizza, and trespassing bunny rabbits. One of his few faults was being an unrepentant food thief! Otherwise Dusty's manners were exemplary, he was quiet, well-mannered (except where food was concerned) and a wonderful companion to share our home with. He was ever graceful and beautiful even in repose, and when running full out could take your breath away

In their prime salukis can run five miles at 40 miles per hour, and at full speed leap 7 feet in the air (a trick called *sproinking*). New potential owners should also be aware young dogs (<4 years) can be very hyperactive, a trait which they thankfully outgrow in later years. Dusty, for instance, was a confirmed couch potato. He claimed our living room couch as his own, and did ever since he arrived!

A final note about neutered salukis: doing so has the side effect of making the saluki's normally short coat grow "fuzzies". The feathering on the ears is normal for "feathered" salukis, but the longer hair on shoulders and chest is a result of neutering, un-neutered dogs and bitches have extremely short hair like a greyhound or whippet.



Francis

Francis was put to sleep on October 9, 2002. He was over 15 years old and had been paralyzed from the mid-back for about a year before that. He developed a sore which would not heal, one that eventually

caused his right rear femur to become exposed. Since the diagnosis was that he would live only another 2-4 weeks, we sadly agreed to euthanasia, as there was no hope he would recover. Up until he became unable he was always playful and eager to go for walks, even in his doggy wheelchair. No matter how often we walked him, he would be wildly enthusiastic, barking and pulling hard against the leash.

Francis was the ultimate "good dog", and we're going to miss him terribly. But he's been released from his prison of unresponsive flesh, and can now run and leap in heaven with our other dogs who have passed on. I know we'll see him again, someday.

The picture was taken when Francis was 13 and still able to walk. Francis was a Blenheim Cavalier King Charles Spaniel (CKCS) who's full name was Sir Francis Of Killing Hall (Francis for short!), obtained from CKCS Rescue when he was 8. At 13 he was (we thought) deaf but otherwise surprisingly healthy for an old-timer, although he was getting arthritic in his rear hips. It turned out the deafness was caused by hair growth in the ear canal, and once trimmed out, his hearing returned to normal.

CKCS's range in height from 12-15 inches and weigh from 13 to 25 pounds. They range from knee to thigh-high on a human when they stand on their hind legs to beg for petting (which they do a *lot*. :))

Cavaliers are fairly sturdy dogs, which is good because they generally like rough and tumble play. They also get underfoot a great deal so tend to get stepped on...

Finally, CKCS's are love sponges. These are the *original* lap dogs, bred for King Charles of England back in late 1600's. Over the centuries they've gotten *really good* at jumping in laps to absorb their fair share of affection.

One interesting historical note, *by law* CKCS's can't be barred from any public building in England.



Dewey

Dewey passed away at 7:28 PM on January 24, 2004. She died in my wife's arms on the way to the veterinarian after not eating her dinner the night before and having trouble breathing on the 24th. Dewey's passing was peaceful, for which we are grateful. Be well, Dewey, you earned your place in heaven for your sweetness. We love you.

Dewey was 14 years old, a tri-color CKCS. Her full name was Excalibur's Tullamore Dew (call name Dewey). When she first arrived from CKCS Rescue Dewey was extremely timid and submissive. By the time she died she had improved to the point she was merely shy and retiring, especially around strangers.

Dewey was still quite agile up to the end, despite dysplastic hips. She tended to scurry from place to place in short bursts of speed. She also loved to lair under our massive 1920's dining room table where she was difficult to extract if she was in one of her Gandhi resistance moods...

Dewey has surprised us more than once by backing Dusty off with fierce growls when he got too close to her food or chew treats. Francis also growled at Dusty, but the saluki pretended to ignore Francis--

but not Dewey!

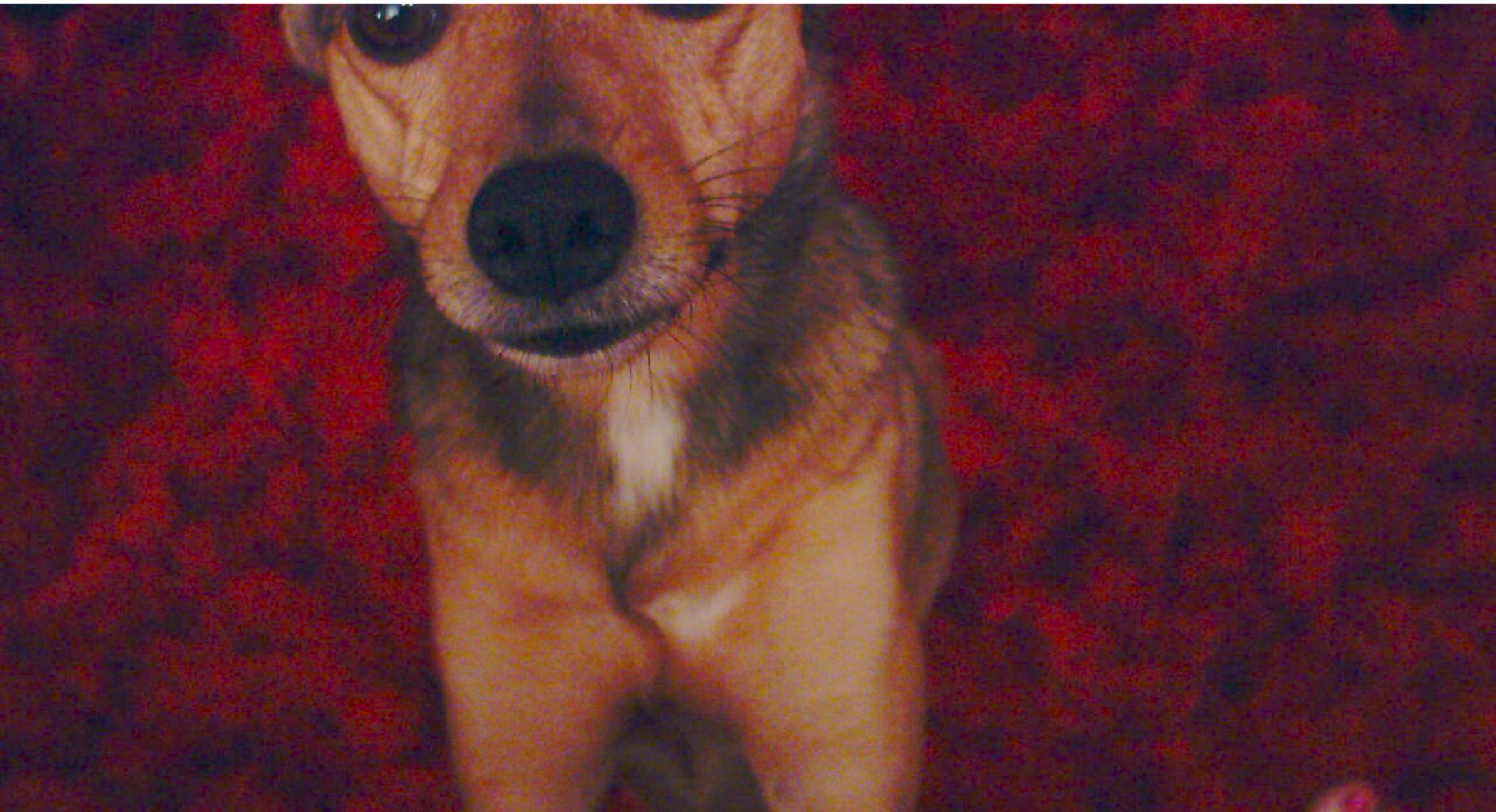
For some reason she also loved to sleep in Dusty's (huge) crate. Another favorite napping spot at night was at the base of our bed on my wife's side where she'll be sure to be stepped on...



Barley

The newest member of our little family, Barely is 15 pounds, sweet natured and the perfect little lady.





Topology

Cosmological Topology Of The Multiverse Don't Try Dunking *This* Doughnut!

Legal Notes

Given the old TSR's propensity for flinging lawsuit threats left, right, and center when their material was used for derivative works this notice hereby declares that I in no manner challenge the trademarks and copyrights held by TSR, Wizards of the Coast (who bought TSR) or Hasbro (who bought Wizards Of The Coast).

For brevity's sake, let's understand that any time I mention "TSR" I also mean WOTC and Hasbro, ok? Which means all trademarks, copyrights, and all the other legal mumbo jumbo really belongs to Hasbro, but TSR is more familiar (and easier to type!) so I'll use TSR when talking about materials created by any of the three entities.

Every *place* mentioned in this article was created by TSR, for example the *Prime Material Plane*, *Astral Plane*, etc. Worlds like *Greyhawk*, *Toril*, and *Krynn* are also TSR's. The various concepts of the *planes of existence* were also created by TSR, and any books mentioned here, unless otherwise specified were also written by TSR. Oh, yes, the AD&D game was created by TSR.

There, that should satisfy the legal beagles.

Introduction

Players of the AD&D game have a vast canvas on which to paint their fantasy adventures. Beginning characters start by adventuring around a small town or village, but soon expand their operations to other countries, other continents, even to the bottom of the seas between those continents.

Then there's the *Spelljammer* campaign setting, that lets players expand beyond a single planet to explore other planets within their star system, indeed to expand to *other* star systems and explore *them*.

You'd think with the entire universe to play in players would be happy, wouldn't you? But sometimes, they aren't. So TSR came up with the idea of *planes of existence*. Basically a plane of

existence is an entire infinite universe. However (and here's the attraction) in these different universes (coexistent with our own) the very laws of nature are different in bizarre and interesting ways. Travel is possible between these other universes by use of spells like *plane shift*, planar gates, and other DM provided toys.

We're not talking about alternate realities like the television show *Sliders* or the multitude of alternate-history novels. (At least not yet, but that too is available to AD&D players!). Instead think in terms of Heaven and Hell. For political/religious reasons TSR doesn't call them that, of course. Or call them angels, demons, or devils. But it's the same idea. The realms of the gods, the places the population goes when they die, for good or ill.

And that's *not* all. There are planes of transition (like the *Ethereal* and *Astral*) that are universes unto themselves. There are the inner planes, infinite universes of elemental matter used to construct all the other planes.

And finally, there's the city of *Sigil*, a unique and special place that has its own unique position among the planes that make it worthy of special attention.

Oh, and then there are *demiplanes*, sort of wannabe planes that drift within the *Ethereal* plane. TSR's *Ravenloft*, *The Demiplane Of Dread* is one example. *Really* powerful wizards can also create small demiplanes for their own use.

All these planes of existence are detailed in TSR books like *Manual of the Planes*, and the *Planescape* campaign setting. Like the *Spelljammer* campaign that has many books and modules, there are *lots* of books that describe the various planes in great detail.

Still feeling crowded? Ok, how about time travel to give you some more elbowroom? There's TSR's *Chronomancer* supplement to allow players to roam the Demiplane of Time. Basically it's your typical time traveler plot. And let's not forget alternate history timelines (sort of sideways time travel).

All this marvelous space to play in, but there's just one small problem: bringing it all together in one logical, consistent whole that makes sense and lets you picture the whole thing in your mind.

Cosmology, Quantum Physics and the Multiverse

You might be thinking that the *Planescape* campaign and the *Manual of the Planes* already offer a cosmological model of the planes—and you'd be correct. There are however, a number of problems with the model that bug me. The biggest one is that it can't be visualized as a single entity; it requires two separate models to accommodate the inner and outer planes. Further it doesn't take advantage of topology to explain the peculiar nature of the *Astral* plane in regards to portable holes and bags of holding. Finally, it doesn't properly describe the relationship of the

outer planes to their elemental correspondences on the inner planes.

In another vein, it makes no attempt to explain the nature of the city of Sigil or the peculiar nature of the Outlands, also known as Concordat Opposition, nor does it try to combine the Demiplane of Time into the model. (A misnomer, time isn't a demiplane, but no matter).

The new model I propose is based on some cosmological speculations about our own universe, and its peculiarities as found at the sub-atomic level, known as *quantum effects*. I also stole some hyper-spatial theory from physics as well.

Then I threw it all into the black cauldron of my fevered imagination, stirred vigorously, left to simmer, and found—doughnuts!

A Whirlwind Tour of the Planes

Broadly speaking you can divide the planes of existence into two categories: the inner planes and the outer planes. The inner planes are also called the *physical* planes and the outer planes are also called the *spiritual* planes. However, don't make the mistake of thinking that the outer planes are immaterial; a person traveling there would find rocks just as hard and water just as wet (well, *generally*, the laws of nature being somewhat creative in the outer planes). The labels *physical* and *spiritual* have more to do with the planes essential essence than their physical nature, we'll cover this a bit more thoroughly later.

AD&D's Quantum Physics

Our universe has several laws that describe behavior at the ultra-microscopic level of quantum physics, the most famous of which is probably the *Heisenberg Uncertainty Principle*.

The AD&D multiverse has its own fundamental laws upon which everything else is built, its version of quantum physics. There are two so well known they're quoted in the *Planescape* setting, these are the *Rule of Threes* and the *Rule of Opposites*. A third law (speaking of the *Rule of Threes*) was one I discovered in creating this topological model, the *Rule of Centricity*.

The Rule of Centricity

The *Rule of Centricity* says that everything will tend toward a center point. Gravity is a perfect physical example of this effect. In AD&D cosmology this concept is repeated over and over again, it is perhaps *the* fundamental law of the multiverse. This law provides the multiverse with inertial resistance, order, and static balance.

In terms of hyper-spatial theory this law corresponds to a 0 dimensional point.

Because we refer to this rule constantly, in this article we'll abbreviate it *ROC*.

The Rule of Opposites

The Rule Of Opposites says that everything has an opposite. You can't have down without up, good without evil, and so on. This law provides the universe with dynamic balance, symmetry, and potential energy. It corresponds to a 1 dimensional line in hyper-spatial theory.

Because we refer to this rule constantly, in this article we'll abbreviate it *ROO*.

The Rule of Threes

The Rule of Threes says that the "natural" (rest state) of groups is in multiples of three. There are, for instance three dimensions in physical space. This law provides the multiverse with motive force, chaos, and hyper-spatiality. It corresponds to a 2 dimensional plane in hyper-spatial theory. It *also* lays the implication for hyper-spatiality itself.

Because we refer to this rule constantly; in this article we'll abbreviate it *ROT*.

The *Prime Material Plane*

This is the player's home universe. When you think of most AD&D campaigns, this is the plane they're located in. Doesn't matter if you're talking about a DM's home grown campaign or a TSR setting like *Greyhawk* or the *Forgotten Realms*, or even a *Spelljammer* campaign, they all take place on the *Prime Material*.

The prime can be thought of as an inner plane, although most would consider it a separate category in itself. Cosmological theory accepts either view; the former is in accordance with the *Rule Of Opposites*, the latter with the *Rule Of Threes*. However further examination of the model would seem to indicate the Prime should be considered a separate category.

The Ethereal Plane

The *Ethereal* plane is another specialized plane. It serves as a buffer plane between the *Prime Material* and true inner planes. In this respect the *Prime*, *Ethereal*, and *Inner* planes satisfy the *Rule of Threes*. As a group of three, these planes satisfy the *Rule of Opposites* when the *Outer* planes are considered.

The *Ethereal* plane is divided into the *Border Ethereal* and *Deep Ethereal*. The *Border Ethereal* surrounds each plane the *Ethereal* touches, and is a "border effect" where the *Deep Ethereal* mixes with the planes it touches. The *Border Ethereal* that surrounds the *Prime Material* plane is where

effects such as *Oil of Etherealness* work. Ghosts also exist in the *Border Ethereal*, as well as creatures that can “phase” like phase spiders. Generally, any creature that exists on both planes, or can affect creatures on the other, operates in the *Border Ethereal*.

The *Deep Ethereal* can be thought of as the “true” or “pure” *Ethereal* plane. This is where the demiplanes are found. Demiplanes are sort of planes that never quite made the big time.

The Inner Planes

The inner planes can be thought of as the ultimate in physical reality. The four planes mentioned most often are the planes of *Earth*, *Air*, *Fire*, and *Water*. As you can see, in accordance with the Rule of Opposites, they come in opposite pairs: Earth/Air, and Fire/Water. These planes provide all the material to build the rest of the Multiverse.

In accordance with the Rule Of Threes however there are two more planes, making a total of six. The extra planes are the *Positive Material* and the *Negative Material*, which are also opposites. These planes provide all the energy needed by the Multiverse, the *Positive Material* supplies light, life, and goodness, the *Negative Material* supplies death, entropy, and evil.

Where these six planes “meet” (more on this later) you have *Para-Elemental* and *Quasi-Elemental* planes, which also come in opposing pairs. For the purposes of this model these additional 16 planes are not really important. Note that there are a total of 24 inner planes (8 groups of 3).

The Astral Plane

This odd duck of a plane is the outer plane equivalent of the inner plane’s *Ethereal* plane. In this plane dimensions don’t work quite the way they should, *portable holes* and *bags of holding* are non-functional here. This plane (like the *Ethereal*) is a buffer zone, in this case between the *Prime Material* and the Outer Planes.

The Outer Planes

The outer planes are also called the *spiritual* planes, although anyone traveling to them would discover rocks in the Outer Planes are just as hard as on the Prime Material.

While the Outer Planes have a real, physical existence they also have a *spiritual* existence—in other words they have moral and ethical alignment, good versus evil, law versus chaos. This is why they are called the spiritual planes.

The City Of Sigil

The city of Sigil occupies a special place in the Multiverse—it's right in the very heart of it all. The city is a nexus point, containing portals to literally *everywhere*. We'll cover Sigil a bit later; all you really need to know is that Sigil (unlike the inner and outer planes) acts in accordance to the Rule Of Centricity, not the Rule Of Opposites or the Rule Of Threes.

The Demiplane Of Time

We haven't forgotten this plane, but as you'll see in a moment the plane of Time isn't really a plane in the sense that the others are. Be patient, all will be revealed.

Hyper-Spatial Theory Explained

Ok, now that you have a (rough) idea what planes are, it's time to start putting our model together.

What Exactly Is Hyperspace?

Hyperspace is any space that needs more than 3 coordinates to locate a particular point in it. For example, assume our real universe is a sphere. You can then locate any point in space by describing that point's distance from the center using 3 measurements: how far above/below center it is, how far left/right of center it is, and how far in front/behind center it is. This is why our universe is described as three-dimensional.

What's A Dimension?

A *dimension* can be thought of as a pair of opposite directions, for example up/down. In addition, dimensions must always cross at 90 degrees to each other. Consider: up/down, left/right, and forward/back. Each dimension crosses the others at right angles. You can't have a fourth dimension in physical space because it wouldn't be able to cross the other three at 90 degrees.

Time As The Fourth Dimension

You may have heard that scientists call time the fourth dimension. They do, and it is—sort of.

What they mean is that it really takes four coordinates to define any point in our universe. In addition to the standard up/down, left/right, forward/back you also have to specify future/past. Just because the ship was docked in New York *yesterday* doesn't mean it will be docked there *tomorrow*, right?

Thus our own universe is hyper-spatial, it requires more than 3 dimensions to completely describe the location of any point in space-time.

Hyperspace Applied To The Multiverse

As you may have guessed by now, the Multiverse is also hyper-spatial in nature. But instead of 4 dimensions, it has *nine* (three groups of three, in accordance with the ROT).

Why nine? Let's consider each group of dimensions and why they're needed.

The Lower Three Dimensions

Ok, we already know that you can locate any point in (a) universe by specifying 3 dimensions. Each plane in the Multiverse is a complete universe in itself, so you need 3 dimensions to locate a point within the plane.

The Middle Three Dimensions

We have a *lot* of planes to arrange in some kind of organized model. As it turns out, the planes have a spatial relationship to each other that can be described in three dimensions. You can easily picture the inner planes, for example, forming either a cube or a ball with the *Positive Material* on top, and the *Negative Material* on the bottom, with the other 4 major elemental planes forming the sides of the cube or ball. Think of a beach ball and you'll pretty much have the idea.

The Upper Three Dimensions

The upper three dimensions are actually for *time*. Picture a single river with the multiverse floating along in it. This gives a simple future/past dimension.

Now have an infinite number of rivers to the left and right of our river. These other rivers are "parallel timelines", places where history runs a little differently. The further left or right you go, the more changed history becomes.

Finally, add rivers above and below. This third dimension of time is predicted by the Rule Of Threes and so undoubtedly exists. Exactly what it is a dimension *of* is something of a mystery. Perhaps choices are more than a simple yes/no, or perhaps the third time dimension measures some as yet unsuspected aspect of existence.

The Cosmic Doughnut

Now that you know what planes are, that there are nine dimensions in the Multiverse, and that the planes actually have a spatial relationship to one another it's time to put it all together.

Concentrate On The Middle Dimensions

Our model is supposed to describe what the Multiverse “looks like”. To do that we’re not going to need the lower three dimensions since we aren’t locating a point inside any of the planes. Likewise we’re only dealing with a single copy of the Multiverse, so we needn’t consider alternate histories nor the past or future, so we can ignore the upper three dimensions.

Which conveniently leaves us with only three dimensions, letting us visualize the multiverse model like we might a model airplane.

So What Does The Multiverse Look Like?

It looks like a lumpy doughnut. Ok, ok, if you want a more scientific term it’s a torus, the shape you get when you take a round tube and join the open ends together.

Remember, we’re talking about the middle three-dimensional view, which is the only place you can see what the Multiverse looks like.

The Skin Of The Doughnut

The skin of our torus is the entire *Astral plane*. In the middle three dimensions the astral plane is actually something of a two-dimensional space, it has “width” and “breadth” but no “depth”. This gives the Astral much of its bizarre nature when dealing with extra dimensional magic. The sixth dimension of the Astral plane is “in use” for another purpose.

The Sixth Dimension And The Astral Plane

The purpose of the sixth dimension in the Astral is to “twist” the dimensional orientation of the outer planes like a hyperspace Möbius Strip. Here’s a bit of mental contortionism for you, the outer planes actually switch the position of the lower and middle set of dimensions!

In other words, in the inner planes (and the Astral itself) the lower three dimensions are used to move physically within a single plane, and the middle three dimensions are used to travel between the planes.

In the outer planes the middle three dimensions are used to move physically within a single plane, while the lower three are used to travel between the planes.

It is this dimensional displacement that allows the use of spell keys and many of the other unique properties of the outer planes. While creatures may not be hampered by this juxtaposition of dimensions, there are subtle effects, such as the outer planes being “more”. Prime travelers always note that mountains are bigger, seas vaster, water wetter, and so on.

This has to do with the fact that the middle dimensions are higher energy states than the lower

three dimensions. The fact that the outer planes contain matter constructed entirely within these higher energy dimensions gives them “more”—of everything. This is why material from the outer planes is so valuable in magic items.

The Insides Of The Doughnut

Everything inside the doughnut can be considered the Inner Planes, just as everything on the outside of the doughnut can be considered the Outer Planes. But it's the arrangement of the insides that are so vital.

To understand the relationship of the inner planes to one another you're going to have to construct a mental model and change it.

Imagine that the Inner Planes are really a sphere for a moment; say a beach ball. The *Manual Of The Planes* pictures this ball with the *Positive Material* plane being the “north pole” of the sphere and the *Negative Material* plane being the “south pole”. Make your sphere hollow, filling the inside with the *Ethereal* plane like gray smoke. In the very center of the beach ball put a softball to represent the *Prime Material* plane.

This is the traditional view from the *Manual Of The Planes* but it's not quite right for our model. To fix it, turn the beach ball on its side, make the plane of *Fire* the North Pole and the plane of *Water* the South Pole. Got it? Good, now imagine you put one hand on each pole and start to squeeze the ball (imagine you're super strong!)

Squeeze the ball hard enough and what happens is the sphere will turn into a torus. The *Prime Material* plane will form the inner ring of the torus, with the elemental planes (still buffered by the *Ethereal* plane) are surrounding it everywhere else, making the outer rim of the torus consist of the *Positive Material*, the *Negative Material*, the plane of *Earth* and the plane of *Air*. This arrangement is vital to the moral and ethical alignments of the outer planes, as we'll see in a moment.

In this toroidal model the planes of *Fire* and *Water* form a ring around the top and bottom of the torus respectively. Notice that all planes still “touch” each other just as they did in the spherical model, all we've done is change the topology of the model, not the planar relationships to one another.

Ok, now wrap the *Astral* plane like a skin around the inner planes.

The Outer Planes

We're almost finished. The outer planes, of course, sit on the outer side of the torus, just as the inner planes are inside the torus. But here's where our model and the traditional model part company.

Have you ever wondered exactly *why* the outer planes have alignment? Good versus evil, law versus chaos? It's because of their "proximity" (in the sixth dimension) to the appropriate *inner planes*.

I bet you can guess what comes next, right? *Elysium* is the plane of neutral good, good without regard to law or chaos. As it turns out, the *Elysium* sits smack over the *Positive Material* plane, separated only by the *Astral* plane. This physical proximity in the sixth dimension means that the outer plane is most affected by energies from the *Positive Material*, which arrive via the Multiversal equivalent of *quantum tunneling*, where energy can "leak" through an insulating layer that's thin enough. And the *Astral Plane* is certainly thin enough because in the sixth dimension it's almost not even there! Of course the operative word is "almost". If it weren't there *at all* then *Elysium* would simply be the *Positive Material* instead.

Likewise, on the other side of the torus the *Gray Waste* sits directly on top of the *Negative Material* plane, which feeds the *Gray Waste* a great deal of negative energy. And, as you'd expect, the *Gray Waste* is a pretty nasty place.

Sitting on top of the plane of *Earth* we find *Mechanus*, the ultimate plane of Law, and across the torus from *Mechanus*, we find *Limbo*, directly on top of the plane of *Air*. These planes derive their alignment from the basic *physical* properties of the underlying inner planes, but because of the half-twist the sixth dimension provides in the *Astral*, physical properties become spiritual ones.

Planar Layers

Remember I said the Multiverse looks like a *lumpy* doughnut? The cause of the lumpiness is that (unlike the inner planes) the outer planes have multiple layers, each layer infinite in the lower three dimensions. In effect a layer can almost be considered a separate plane, with one crucial difference.

Planar layers, unlike planes, can be accessed directly from the lower three dimensions, in other words, you can *walk* from one layer to another, just as you would walk from one country to another.

Planar layers are an interesting phenomenon. Their formation depends on the mixture of lawfulness and raw energy. Too much (or too little) lawfulness (provided by the plane of *Earth*) prevents the layers from forming. On the other hand it doesn't matter what form of energy is used (positive or negative) to form additional layers.

Look at *Mechanus* and *Limbo*. Neither have multiple layers, because *Mechanus* simply has too much order and *Limbo* has too little. There are those who argue that *Limbo* has 4 layers but since there's no difference to the layers sages are in disagreement.

The “corner” planes (*The Seven Heavens, Nine Hells, Abyss, and Gladshiem*) tend to have more layers than the middle ones (*Elysium, Gehenna, Mechanus, and Limbo*) although there can be exceptions (like *Gladshiem*). Note that the *Abyss* has by far the most layers of all, perhaps the balance of chaos and negative energy is particularly well suited for layer formation.

Concordat Opposition

The final mystery of the outer planes lies in the neutral plane of *Concordat Opposition*, also known as the *Outlands*. This plane, like the *Prime Material* is neutral with regards to law, chaos, good, and evil.

Unlike every other plane it also has a center, a vast pillar stretching upward infinitely tall. As one approaches this pillar the laws of nature begin to fail, within 100 miles of the pillar life itself can't exist, magic fails long before this point.

Yet floating above the top of this infinitely long pillar is another torus—the city of Sigil. Our cosmological model needs to account for this aberration if it's to become complete.

The *Outlands* lie along the inner rim of our lumpy doughnut, just above the *Prime Material* plane, separated in the sixth dimension by the merest wisp of the *Astral* plane.

And like the *Astral* plane itself the *Outlands* have a dimensional anomaly, this time involving not just the sixth dimension, but *all six lower dimensions*. In the exact middle of the inner rim these six dimensions knot upon themselves to form the “hole” in the torus, the force that forces the “sphere” into a doughnut shape.

It is this collusion of dimensional forces that not only form the Multiverse into a torus, but also cause the laws of the Multiverse to start breaking down in proximity to the very inner edge of the torus. Think of this dimensional anomaly the same way you would a singularity (black hole) in our universe. The closer you get to it, the less the laws of the Multiverse apply.

Higher dimensional activity is affected first (magic), and then lower dimensional activity is also affected (chemistry). Even closer and the laws of gravity and optics start to break down.

In other words, the “infinitely tall pillar” is an illusion caused by the unimaginably powerful dimensional warp around the inner edge of the torus. At the inner edge itself *nothing* can exist, not even raw matter or energy. The dimensional warp creates a singularity; a 0 dimensional point, a hole into which the Multiverse pulls itself and then pulls the hole in after it.

The City Of Sigil

Inside the center hole created by the dimensional warp lies another torus at right angles to the first, balanced in the dimensional “eye of the storm”. This torus is the city of Sigil.

Unlike the planes of the multiverse the city of Sigil (while quite large as cities go) is nowhere near infinite. In fact, the city's toroid is fixed in size by the size of the Multiverse's center hole, the city can neither grow nor shrink, it is exactly the size it must be to maintain its delicate balancing act inside the dimensional singularity formed around the middle of the Multiverse's torus.

Sigil's torus maintains a reasonably habitable environment, keeping the dimensional forces outside the boundaries of its own ring. Unlike the closed Multiversal torus, Sigil's torus is open along the inner rim; the city is built inside the torus, with "gravity" actually being supplied by the spinning of the torus. In other words, anyone falling from the torus's center point would strike the inside surface of the outer rim of the torus.

The walls of Sigil's torus are actually formed by *buildings*, built to form one solid surface. These buildings can be up to 10 stories high, although this isn't uniform across the entire torus, nowhere are the buildings less than 3 stories high.

One curious fact, there are no windows or doorways showing the "outside" beyond the rims of the torus. If anyone climbs to a roof they see absolutely nothing—literally. Anyone stupid enough to jump into the nothing is dumped randomly somewhere into the multiverse, with no way to control the plane, nor the point of entrance onto the plane. Considering much of the *Prime Material* is open airless space and that many of the other planes are inhospitable to life, this is almost certainly fatal.

There's also a good chance that anyone leaving the torus at the wrong point will end up falling into the dimensional singularity's "wall". This has roughly the same effect as falling into a black hole would in our universe—instant and utter annihilation, to the point it would take a wish or travel into the past to recover the individual.

Odds And Ends

The multiverse isn't perfect; there are flaws between the planar boundaries. In the astral these manifest as *conduits*, *color pools*, and *rifts*. In addition as we've pointed out quantum tunneling effects allow energy and matter from the inner planes to penetrate the sixth dimension of the *Astral* plane to give the outer planes their properties.

The *Ethereal* plane has ether cyclones, basically a tear between the *Ethereal* and *Astral* planes. Such rifts pass through the *Prime Material* in the middle three dimensions, so in theory it might be possible to dump yourself out of an ether cyclone back to the *Prime Material*, although it would probably be safer simply to pass on to either the *Astral* or *Ethereal*.

Spelljammer

[Shipyard](#)

[Crystal Spheres](#)

[Spelljammer Links](#)

Welcome To Wolf's Spelljamming Port!

You are visitor #

New Material!

06/11/2000 - Mirror ship added to Shipyard

Crystal Spheres

A new crystal sphere with a unique spelljamming society.

Shipyard

New ships and a new helm.

Spelljammer Links

Links to some sites that are still active.

Additional AD&D Stuff

Here's some additional AD&D material you may find useful.

Spelljamming Sites on the Web

Characteristics

CLIMATE/TERRAIN:	Any climate except Arctic Deserts
FREQUENCY:	Very Rare
ORGANIZATION:	Copse
ACTIVITY CYCLE:	Day
DIET:	Nil
INTELLIGENCE:	5-7 Low intelligence
TREASURE:	
ALIGNMENT:	Lawful Evil

Encounter Information

NO. APPEARING:	10-100
ARMOR CLASS:	0
MOVEMENT:	0
HIT DICE:	8
THAC0:	13
NO. OF ATTACKS:	1/person/round
DAMAGE/ATTACK:	10-1000
SPECIAL ATTACKS:	Heat Beam
SPECIAL DEFENSES:	Destroy missile weapons in flight
MAGIC RESISTANCE:	Nil
SIZE:	Large
MORALE:	Fearless (20)
XP VALUE:	9000

Description

Sun flowers are cones with a dish reflector set atop a turnable axle. They are found only in the midst of deserts that are very arid, having no cloud-cover to hinder the plants sunlight-focusing weapon. Athas is a particularly well-suited world for sun flowers, but any arid desert can host these evil plants

Combat

Sun flowers are exceptionally dangerous for three reasons. First, the range of their heat beam is 6,000 feet (over 1 mile)! Second, they grow in large copses of up to a hundred plants. During the daytime NOTHING can approach a sun flower copse and survive. Third, the plant can sweep the heat beam very rapidly, in effect hitting every target within a 30 degree arc. The temperature of the beam is 18,000 degrees centigrade, quite hot enough to totally vaporize a human. In this case, 1 structure point = 1 hit point. An overcast day or a clear moonlight night reduces damage to 1-20 without reducing the beam's range. However, even with only starlight (or the party's own light sources!) the plant can still fire the beam for 1-6 damage, although range is reduced to a mere 100 feet and missile weapons can't be burned out of the air. Assuming a Darkness or Continual Darkness can be cast on the plant (the plant gains a saving throw) the beam will be totally negated. However, casting darkness (even continual darkness) on one's self is little protection against a full strength beam. It gives 90% protection but that still leaves 1-100 points of damage per round! A slow spell cast successfully on the plant is quite effective, the plant loses the ability to burn missile weapons out of the air, and can only attack a single target per round. (Assuming it misses its saving throw). When the beam is at full strength armour is ignored as is defensive adjustment when calculating a victim's AC. Fire resistance is useless against a full power beam, although it will protect against the reduced beams. The plant is totally immune to heat, fire, and electricity due to a glass like outer coating. Cold affects it normally. A shatter spell or sonic weapons will leave it vulnerable to all the above effects, and in addition, lowers the armour class to 9. Petrification will reverse this effect. If the plant(s) have a full strength beam missile weapons will be burned out of the air before they strike, thus are totally useless. A moonlight/overcast beam can destroy wooden arrows fired from further than 100 yards away before they hit the plant.

Habitat/Society

Sun flowers have massively deep root systems that connect them to others in their copse. As the copses conquer the land they come closer together until their root systems encounter one another and merge. They communicate through their roots, becoming a massive community. What one plant says will eventually spread throughout the network. Sun flowers are very social plants and find the "speech" of their fellows a psychological necessity. Cutting them off from the community is equivalent to sensory deprivation in a human. It's difficult to believe plants can be xenophobic, but sun flowers tolerate NO other forms of life. They destroy anything and everything living within range. Not even flame scarabs can handle a copse of sun flowers in full sunlight. Needless to say this doesn't endear them to other creatures, especially sentient races. Sun flowers are a threat to every living creature in their reach. And sun flowers are incredibly determined to extend their reach as far as they can as quickly as they can. The only advantages the other races have is the length of time a sun flower requires to reach reproductive maturity, and the fact they are reasonably weak at night. That, and the fact that flame scarabs consider sun flowers an irresistible delicacy. Flame scarabs can shrug off the moonlight strength heat beams of a small copse of mature plants or a larger copse of younger plants, although a massive copse (more than 100 plants) is too much for even flame scarabs to handle. Their lasers are capable of cutting through the axles that support the reflector, or slicing through the reflector itself. (The laser is too much light for the sun flower to handle, it causes the reflector to shatter). Once the plants are defenseless the scarab simply bulls through the copse, gorging itself. A scarab will

smash every single plant, even though the scarab can't eat more than one or two a night. Often a pair or trio of scarabs will come upon a single copse and (accidentally) cooperate in the copse's destruction, spending up to two weeks eating their windfall. Sunflowers do have one class of enemy they're completely helpless against--anything that attacks from underground, and doesn't come to the surface. Sun flowers can't use full strength heat beams to penetrate the ground near them because this would destroy their roots, leaving them unable to communicate to their fellows and (if the damage were severe enough) certainly kill the plant itself.

Ecology

Sun flowers are the plantlife equivalent of army ants. Sun flowers will completely destroy any animal life within their range, and all non-sun flower plant life as well. Their purpose in life is to spread over every square inch of land they can, spreading desert conditions where ever they grow in order to spread themselves. The plants reproduce by spewing a fine mist of seed material and heating it with gentle (non-damaging) touches of their heat beams. This causes the mist to rise high in the air (thousands of feet), thus spreading the seeds where ever the prevailing winds blow. The mist gradually coalesces into viable seeds and fall to earth. Such a mist can travel hundreds of miles, falling to contaminate huge areas of land downwind. Random effects of atmosphere and the parents instinctive slight changes in heat output cause the mist to travel at different altitudes, which means it can catch winds travelling in different directions. Sometimes even a single spawning mist can travel in 3 or more directions simultaneously! Sun flowers are hermaphroditic, the mist contains both male and female components, which cross pollinate during the flight, allowing the exchange of genetic material between widely seperated parent plants A plant takes one year to mature, gaining a heat beam after two months. The plant grows steadily throughout the year, so it's easy to calculate the plant's hit points and damage as 10% per month of age over two months. Thus a 3 month old plant has 10% of its mature hit points and 10% of the beam damage (1-100). It's also 3' tall, gaining one foot in height per month. The axle and reflector add up to 10% to a plant's height. Plants do not gain their full protective covering until a year old. They start as AC 9, subtracting 1 AC for each month of growth after the second (a 3 month old plant is AC 8). Plants can't reproduce for at least 10 years, this is one of the few weaknesses that sentient races can exploit to hinder the horror's spread. It is well documented that sun flowers have acute senses of some kind, they can spot motion of large creatures well outside the range of their heat beams, and small creatures within a couple of hundred yards. They can even spot incoming arrows and slingstones far enough away to burn them out of the air within a second of being launched. However their senses extend beyond mere motion sensing, since they can burn out other plantlife from around their bases with surgical precision, or blast trees at the limit of their heat beam's range.

Insect, Scarab, Flame

Characteristics

CLIMATE/TERRAIN:	Any climate except Arctic / Sub-Arctic Deserts / Grasslands / Scrub Plains / Rough/Hills / Steppes / Tundras
FREQUENCY:	1%
ORGANIZATION:	Solitary
ACTIVITY CYCLE:	Any
DIET:	Herbivores
INTELLIGENCE:	0 Nonintelligent or not ratable
TREASURE:	
ALIGNMENT:	True Neutral

Encounter Information

NO. APPEARING:	1
ARMOR CLASS:	-6
MOVEMENT:	3
HIT DICE:	7+7
THAC0:	13
NO. OF ATTACKS:	3
DAMAGE/ATTACK:	2-24 (x2 lasers)/1-10 (bite)
SPECIAL ATTACKS:	See below
SPECIAL DEFENSES:	Self-contained systems make it immune to just about everything.
MAGIC RESISTANCE:	Nil
SIZE:	Large
MORALE:	Fearless (20)
XP VALUE:	8000

Description

This gigantic insect appears to be a machine--it looks very much like a chrome plated spoon fishing lure with six legs. The turret is a low dome in the middle of the back. Flame scarabs are walking dreadnaughts, armoured above and below with mirror-bright, glass smooth armour. Normally placid scavengers that don't bother animate beings, they will aggressively destroy attackers. They have, though non intelligent, an extremely large brain case which is used to coordinate the insect's various senses. Obviously this creature is not native to this world, having been brought here by some mad wizard from a deadly world of formidable beasts (Gamma World perhaps?). They have 4 "guiding" eyes on the underside of their carapace front, spaced to give 180 degree vision. These have 300' ultravision, as well as triple normal human vision (treat as Eyes Of The Eagle).

Combat

The 2 "aiming" eyes are mounted on the laser turret atop the middle of the scarab's back. These have the same normal vision as the guiding eyes, and 150' infravision. Hearing is 500% human normal, with 6" sonar. Under the various guidance systems, the scarab has the following ranges and bonuses:

Tracks with	Range	Bonus
Aiming eyes (Normal-vision)	150"	+6
Aiming eyes (Infra-vision)15"	+4	
Guiding eyes (Normal Vision)	150"	+2
Guiding eyes (Ultra-vision)	30"	0
Sonar	6"	-2

If the first beam hits the target, the second is computed at +2 to hit. Note invisibility cuts damage by 50%, darkness by 25%/5' thickness, and fire resistance gives a -5 to AC and a save for half or no damage. Furthermore, AC is calculated as 10-defensive adjustment-magic bonuses.

Needless to say, a flame scarab is immune to heat, light, or fire based attacks. It is also immune to acid, cold, electricity, poison, blunt weapons of any kind, or edged weapons under +4, and surprise.

If aiming for a specific target use the following table:

Target	AC	Chance to hit
Body	-6	01-50
Turret	-6	51-90
Joints in legs	0	91-95
Guiding eyes	2	96-99
Aiming eyes	2	00

Eye hits will knock out 1 eye/hit. The turret has 1/4 of the total hit points. Half this amount will knock out 1 laser.

They can fire the turret 1/person/round as fast as once per second. If a creature gets too close for the scarab to use laser fire (within 1') it will bite for 1-10 points simultaneously with its laser fire.

Should a creature get under it, or if it is under attack from the air, or by more attackers than it can hit in a single round, it will collapse, crushing anything under it for 10d6 of damage, while still continuing laser fire.

Habitat/Society

Not much is known about flame scarabs except they are solitary, almost never found close together. It has been observed that when two scarabs come in proximity they ignore one another.

Ecology

The scarab has enough stored energy for 100 dual laser blasts (both lasers can fire 100 times or 1 laser can fire 200 times). Once the laser energy is exhausted the scarab will need to eat and rest, it recharges its lasers 10 dual shots per hour. Eye damage can be healed in a week, a destroyed laser can be regenerated in a month. Observers have noted that scarabs can regenerate lost legs, although it can take up to a year to do so. For this reason anyone attacking a scarab's legs will almost certainly cause the insect to collapse, shielding the vulnerable leg joints--and perhaps crushing the attacker under the massive weight of the scarab.

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Shipyard

[AngelShip](#)[Stingray](#)[Petty Helm](#)[Mirror Ship](#)

Equipment

[Petty Helm](#) A tactical-only helm that isn't as expensive (or durable) as a minor helm. Just perfect for puddle-jumpers and fighters...

Ships

[AngelShip, Saruthillion](#) A modification of and improvement on a standard kobold Angelship, used almost exclusively for atmospheric travel on Aloth.

[Mirror Ship](#) A capital ship designed to carry petty helm equipped stingrays over spelljamming distances and deploy them in battle. The ship is incredibly expensive, heavily armed, and designed to operate as the heart of a battle fleet. Currently there are only two of these ships in existence, with a third under construction.

[Stingray](#) Standard 2 ton fighter used widely in Sarospace.

Crystal Spheres

[Sarospace Overview](#)

[Saruthillion](#)

[Calithorn](#)

[Farithom](#)

[Durgoth](#)

[Aloth](#)

[Bara duithin](#)

[Marannuir](#)

[Bomryn](#)

[Belemir Belt](#)

Sarospace Overview

Sarospace is an isolated sphere that's difficult to reach since it's off the standard flow lanes, and has a flow river that's not there part of the time. Because of the isolation the sphere has evolved a unique spelljamming culture all its own.

It's a fairly normal stellar system, with a fire body primary orbited by earth and air bodies. However most of the system is uninhabitable to normal life forms, see the planetary entries for details.

Planets

Here's a list of the planets in order of distance from the primary. Planetary moons are listed under the planet they circle.

0. [Saruthillion](#) The primary of the system, a fire body around which the rest of the system revolves.
1. [Calithorn](#) An earth body orbiting close enough to the sun to have daytime temperatures of 900 degrees!
2. [Farithom](#) A void world with caverns filled with atmosphere, and a mean temperature of 630 degrees, home to fire-dwellers such as efreeti and salamanders. There is a thriving trade between Farithom and Aloth.
3. [Durgoth](#) The deadliest world in the system, perhaps in the universe. No normal life forms could

exist here, even using every known magic.

4. **Aloth** A normal world like Oerth or Toril, very rich in natural resources. Aloth uses trade goods from its moons Legomir and Narzog to trade with Farithom. It also maintains trade with the Belemir belt, and maintains the space platform in orbit around Cirvir.
5. **Baraduithin** A deadly world, with an atmosphere of methane. There's an orbital beacon warning space farers not to try and refresh their air envelopes here.
6. **Maranuir** Another deadly world, but this one at least has its uses. There's a massive space platform circling the planet, and the military harvest the hydrogen to make special ballista warheads. Maranuir has 3 moons.
7. **Bomryn** Sister world to Maranuir, the planet is a heat sink and magic Sargasso, making it even deadlier than its sibling. Bomryn has one moon, Cirvir.
8. **Belemir Belt** A standard asteroid belt, and the one part of the sphere likely to be familiar to outsiders. The Belt sees a lot of outsiders, even though travel to the sphere is difficult it isn't impossible, nor is the sphere completely unknown.

Spelljammer Links

Many of the listed Spelljammer pages are dead, they give only a "page not found" error. Sigh. The links below were active as of the last time this site was updated, I try and keep this page maintained regularly.

[Spelljammer: Beyond The Moons](#) Here's the site that Wizard's own site links to. I guess that makes this site *the* official site. It contains a wealth of really good Spelljammer related material.

[Spelljammer Web Ring List](#) Here's the page listing all members of the Spelljammer web ring. Be warned, a couple of links on this page are dead, but most of them still work. Lots of good stuff here, including flow maps.

[Shattered Fracture](#) This site helps you convert 2'nd Edition Spelljamming rules to 3'rd Edition.

[Spelljammer 3E - Return To The Void](#) Home of all things Spelljammer 3'rd Edition...

[Flit's Fantasy And Fiction](#) Contains a story on the origin of the Witchlight Marauder

AngelShip

Cost	20,000
Built By	Humans
Used Primarily By:	Humans
Tonnage:	33 Tons
Hull Points:	33
Crew Complement:	4/33
Maneuver Class:	C
Landing - Land:	Yes
Landing - Water:	No*
Armor Rating:	6
Saves As:	Thick Wood
Power Type:	Petty Helm, possibly Minor Helm
Ships Rating:	As helmsman
STD Armament:	Generally unarmed except for blunt ram
Cargo:	24 Tons
Keel Length:	130'
Beam Length:	135'

* Unless specially modified, see below.

Original Source

The original Angelship appeared in the TSR Spelljammer supplement *Lost Ships*. I have taken the original and modified it to use in my own campaign. My presentation here is not intended to challenge any copyrights held by TSR, Wizards Of The Coast, or Hasbro, and I freely acknowledge the derivative nature of this document.

Description

Rarely seen in most spheres nowadays, these basic, but versatile ships were the backbone of the kobold space presence until they were all but wiped from the void by the elven armada. Outmaneuvered, outgunned and outnumbered; most angelships were destroyed.

Named for a kobold legend of winged humans who healed fallen warriors (dubbed *angels* by human tale-spinners), these ships have distinctive flaring wings, making them well suited for movement in planetary atmospheres (i.e. taking off and landing on worlds).

However, in Saruspace angelships have survived, even though their original crews seemingly have not. The sturdy design has flourished in fact, due to Aloth's peculiar need for an atmospheric trader that can touch down anywhere a landing space can be hacked out of the wilderness.

The Saruthillion angelship has been improved over the original kobold design in a number of ways. Most importantly, unlike the original angelships, which aligned their wings along the hull's midline, modern angelships align their wings along the bottom of the hull. This architecture lowers the gravity plane to just below the wing's bottom, giving the cargo deck the same orientation as the two decks above. This increases the ship's tactical maneuverability to the point only half a normal crew is required to retain maneuverability class C.

Lowering the gravity plane also prevents a potentially disastrous shifting of cargo when the angelship enters a larger craft's gravity plane, or when the helm is shut down. It also makes loading and unloading cargo much simpler, especially on planetary surfaces, which is where the modern angelships spend much of their time.

Most traders also have incorporated folding derricks to aid unloading the middle deck's aft hold; these derricks (when present) are located where the aft catapult would have been on a kobold angelship.

Modern angelships also incorporate a rather elaborate set of landing skids on cunning springs that let them set down on fairly uneven terrain while still supporting the ship's weight evenly.

Crew

The crew sizes given are for humans. For kobolds and other S-sized creatures, the minimum crew is 12, and the maximum is 66.

An angelship's helm and command chamber (bridge) lie on the middle deck above where the wings join the hull. Crew quarters are located forward, in the ship's bow between the bridge and the ram. The galley, mess, and other chambers lie aft, before the cargo holds. Some angelships are stripped to a single, huge cargo hold nearly filling the entire length.

Most shipboard kobolds sleep in cubbies' in the wings, reached by a web-work of crawl-tunnels filling the wings, also used to repair the wings and for gunnery. A kobold ship taking off from a world usually does so with all hatches open, to force fresh air into these tunnels.

Modern angelships replace the winding tunnels with a more open construction, allowing better reinforcement of the wings, better air circulation, and easier access for the larger human build. Hatches are scattered across the wings to allow easier access to the wing surfaces.

Most of the wings have 3-foot clearance to move around in, but toward the edges of the wings these spaces narrow to two feet. Heavy cargo is never stored in the wings because of their relative fragility, but lighter goods, and personal effects often are.

Unfortunately, if used for sleeping quarters even this more open construction means the wings are only really comfortable for human children or halflings. Adult humans can quarter there, but find the cramped ceilings very uncomfortable.

Ship Uses

Wildspace Trading: Its ability to easily take off and land on worlds makes the angelship ideal for its main use in the hands of both kobolds and later owners: a hardworking, utilitarian trader. Angelships preceded the Trader (fish ship) of today as the most popular, versatile, merchant vessel in space, and are widely regarded as the greatest kobold spaceship design (though some question exists whether kobold could have actually designed it).

The angelships that survived the Great Hunt still fly today as much patched traders, displaying a wide variety of weaponry and outfitting. Experienced space captains are wary of angelships. One never knows what race or weaponry one is facing: anything is possible.

In Saruspace angelships are typically fitted with petty helms and used for atmospheric flights only, but a few have been fitted with minor helms to trade with Legomir and Narzog. These moon ships are closer to the original design: they retain their weapons (2 forward ballista, 1 aft catapult), and usually fly in convoy because of the uncommon (but deadly) danger posed by pirates. Those from the larger city-states often carry Stingray type ballista bolts.

The vast distances between Aloth and the Belemir Belt require the use of large ships towing cargo barges to make trading profitable. Angelships are considered too small to merit the major helm required to haul barges, so they generally won't be found in belt convoys.

Bulk Cargo Carrying: Many angelships have seen service (both before and after the Great Hunt) as stripped-down, utilitarian cargo ships. Removing most weaponry, the crew quarters, and hollowing out the interior as described above resulted in a creaking but space worthy bulk carrier with up to 26 tons of cargo space. Some angelships see service in such roles still and the crashed wrecks of more litter planetoids, abandoned bases, the sargassos and asteroid belts.

Bulk cargo angelships are rare in Saraspace, larger purpose built ships are considered a better choice.

Naval Fleet: The angelship is too small to see much practical use in the space navies of today.

Atmospheric Trading: Most angelships in use on Aloth are fitted with a petty helm and are also unarmed, the weapons being removed to make room for more cargo. These ships are capable of carrying 24 tons of cargo. The crew is often a single extended family who treats the ship as home. These ships are perfectly suited to the petty helm, and Alothians fly literally thousands of these utilitarian workhorses about the planet every day.

Colonial Transport: Their crews often use angelships to shuttle people and livestock from one village to another; or to new village sites. Their ability to land anywhere there's a large enough clearing is invaluable. Colonial transports generally fly alone but retain their weaponry in case they have to deal with dangerous fauna and are thus limited to 21 tons of cargo. The aft catapult is always replaced by a ballista on these ships.

Prospecting: Although considered too small to make the Aloth/Belemir run profitably, prospectors in the Belt itself use many. Their ability to land on planetoids, and the fact a petty helm can easily power them make them attractive choices. The fact they can haul a respectable amount of cargo is an added bonus.

To protect themselves in case of attack some prospectors use Stingray style ballistae mounted on top of the angelship's wings. These modifications are often scarier to look at than to face in battle, however, since prospectors can't afford the special warheads Stingrays carry, nor can the ballistae on angelships remain tensioned for long periods. This means that a prospecting ship caught flatfooted by a pirate has no time to arm the ballistae, making them a bluff at best. More than one prospecting vessel owes its escape to this bluff. Prospectors often say, "It'll only work once, but once is all you need!"

Of course, prospectors retain the angelship's typical weapons, usually replacing the aft catapult with a jettison.

Other Configurations

Night Angel: To the few kobolds still in space converted angelships formed the backbone of their navies. Painted flat black, they were cloaked with magical darkness and invisibility spells raised by circles of kobold shamans. The kobolds also used a now lost Darklight spell, which allowed full vision within the created darkness to beings touching the caster during casting. These enchanted craft were known as night angels.

A night angel was heavily armed, its cargo space reduced to a mere seven tons. Usually plated

with metal and slate, a night angel bristled with ballistae, and had two piercing rams mounted on the leading edges of its wings (a dismal failure; the wing usually gave way before the rammed ship did!). A few crashed night angel wrecks have been repaired and refitted, often by pirates. Still, there are persistent rumors of kobold night angels lurking far from the known spheres, flitting about in the flow, striking at those who blunder into their new territories.

In Saruspace there are always rumors that one of the city-states has managed to recreate night angels, but for obvious reasons these rumors are impossible to confirm, and highly unlikely in the first place.

Sea Angel: There are only a relative handful of these ships flying around Aloth. A sea angel has had its landing skids replaced with pontoons. This allows the ship to land on calm water without fear of sinking, or on smooth surfaces such as a beach, flat grassy field, or specially prepared landing area.

Sea angels are far less maneuverable because the weight of the pontoons unbalances them (Maneuverability class D). A full crew of 8 is required to properly handle the unwieldy craft. However, they can take off and land in areas that a regular angelship can't, and so are used as scouts for locating new village sites along rivers and lakeshores where clearings don't yet exist.

Sea angels are armed the same way as colonial transports (and often serve in that capacity as well).

Stingray

Cost	30,000
Built By	Humans
Used Primarily By:	Humans
Tonnage:	2 Tons
Hull Points:	2
Crew Complement:	1/2
Maneuver Class:	B
Landing - Land:	Yes
Landing - Water:	No
Armor Rating:	3
Saves As:	Metal
Power Type:	Petty Helm
Ships Rating:	As pilot, 1 SR/level
STD Armament:	4 one-shot ballistae, 2 glide bombs
Cargo:	None
Keel Length:	30'
Beam Length:	25'

Description

These deadly craft are purely a military machine, intended for attacking and destroying other spelljamming vessels. By their nature they require a host vessel to operate from, and a ground crew of no less than 5 to prepare them for battle, although one ground crew can handle up to 4 stingrays given 1 turn per stingray.

They resemble the animal after which they are named, although they have no tail, unlike the actual animal. These fighters are intended purely as a tactical-range strike craft, similar (but far

superior) to an elven flitter.

Always powered by a petty helm, the stingray is armed with 4 light ballistae. However, these are in fixed forward facing positions on top of the wings and once fired can't be reset by the pilot in flight. Aiming is a simple matter of pointing the stingray at the target.

The ballistae "bolts" for these weapons are very special indeed. Large conical heads are filled with a compressed mixture of hydrogen and normal air. Upon impact a small amount of sodium mixes with water, producing a flame, which ignites the main charge. The resulting explosion equals a 6d6 *Fireball* spell in all respects. Since these weapons don't require an open flame they *can* be used in the phlogiston, although extreme caution must be exercised by the pilot, since the resulting blast will be 18d6 *each*, and also 3 times the normal size! Of course the one bright side is the explosion prevents the target from catching fire in the flow...

Of course no one likes to carry such warheads into the flow, because they're almost as dangerous to carry as they are to use, any critical hit is likely to set them off, destroying the carrying ship completely. Ships that do carry such bolts into the flow pack them in individual airtight cases, which triples the storage space required.

In addition to these 4 "missiles", the stingray also carries two large "glide bombs". These bombs are filled with enough Greek fire to equal 5 hits from a Greek fire projector. Glide bombs are *not* carried into the flow!

Successful deployment of the glide bomb requires the pilot to dive at his target, release the bomb, and pull away sharply to avoid his own weapon's back blast. Against an unsuspecting target (or one that can't get out of the way) a skilled pilot can release the bomb well outside the target's air envelope with little danger to himself.

Crew

Stingrays are strictly single pilot craft; there is no "crew space" inside the heavily armored fighter (the cockpit is enclosed, with just enough room for the petty helm). In an emergency a second person could squeeze in with the pilot, but not comfortably.

Ship Uses

This ship can only be used as military strike craft; it is simply too specialized to be converted to other uses. It is barely conceivable that a Stingray could be used as a courier, since they can land and take off on planets, but even a lowly Mosquito is better suited to that task, since it can be fitted with a regular spell jamming helm.

Other Configurations

An array of alternative armaments exists for both ballistae and glide bombs. One popular choice is lining the inside of the missile warhead with needles; these are thrown with lethal force well outside the 20' radius of the fireball itself. Targets up to 100' away must make a save versus paralyzation or suffer 3d6 damage. Those that save take no damage.

Another choice is the "meteor swarm" missile, which is basically loading the ballista with small sharp poisoned fragments. Any one struck by a fragment must save versus poison or die. This type of warhead is frowned upon in Saruspace, but pirates have been known to use it to capture ships intact with little risk to themselves.

Glide bombs can also be packed with the air/hydrogen mix used in missiles instead of Greek fire. Such bombs produce a 10 dice fireball with a 30' radius. Placing needles in the casing generates 4d6 to anyone within a 100' of the blast, a save versus paralyzation negates.

Although rare and expensive, a glide bomb can also be filled with strong acid. Such a bomb can inflict 3d6 hull points of damage, although the acid costs nearly 20,000 gold pieces and is difficult to transport safely.

Finally, there are iron bombs. These are just 200 pound tear-drop shaped pieces of solid iron. How much damage they do depends on the speed of the Stingray when the bombs are released. A bomb does 1d6 hull points of damage per 2 SR points. For example if a Stingray were traveling at SR 6 then each bomb striking the target would do 3d6 points of damage to the hull.

Stingrays delivering iron bombs always dive perpendicular to the target's gravity plane to allow the target's own gravity to give an extra boost to the bomb. Failure to do so subtracts 1d6 in damage.

Stingrays can carry up to 5 iron bombs in place of a glide bomb, but it must carry either 2 glide bombs or 10 iron bombs because trying to mix 5 iron bombs with a single glide bomb unbalances the Stingray and makes controlling it next to impossible. For the same reason all ten bombs are released in a single volley. Any ship struck with a volley of iron bombs must make a critical hit check once *per volley*, not per bomb.

Petty Helm

Weight: 150 pounds

G.P. Value: 10,000

X.P. Value: n/a

Called a "puddle jumper" helm by those fortunate enough to possess a minor or major helm, the petty helm allows an SR of 1 PER LEVEL of the user! However, unlike a minor or major helm, the petty helm does NOT allow spell-jamming speed for interplanetary or interstellar flight. In other words a petty helm is limited to tactical speed (17 mph per SR).

While this makes a petty helm useless for most spell-jamming work the cost of the helm is 1/10 that of a minor helm (10,000 g.p.). In addition, a petty helm can lift a ship of up to 35 tons, making them suitable for installation in a trader hull. They can also be installed in small craft like elven flitters, making a deadly and swift fighter. Look for the Arcane to sell these helms outside Saruspace very soon.

One special note, petty helms, while sturdy, do not enjoy the near-artifact like durability of a minor or major helm, they can be destroyed as easily as any other magical item of thick wood.

Mirror Ship

Cost:	2,000,000
Built By:	Humans
Used Primarily By:	Humans
Tonnage:	100
Hull Points:	100
Crew Complement:	100/100
Maneuver Class:	F
Landing - Land:	No
Landing - Water:	No
Armor Rating:	3
Saves As:	Metal
Power Type:	Major Helm
Ships Rating:	As Helmsman
Std Armament:	16 Accelerators
Cargo:	50 Tons
Keel Length:	200'
Beam Length:	65' (130' including side masts)

Description

A massive ship constructed entirely from steel, there are only two of these lumbering behemoths currently in existence, the *Mirror* and the *Looking Glass*. A third, the *Reflection*, is under construction in orbit around Aloth right now.

These ships are purely military vessels. Two hundred feet long, 65' wide, and 20' tall these ships cost over 2 million gold pieces to construct, not counting another 250,000 gold pieces for the major helm required to move these 100 ton monsters.

Resembling nothing more than a flat box with 3 masts sticking out each side what these ships lack in grace and style they make up for in sheer firepower. Each mirror ship is home to 32 stingray fighters, their pilots and maintenance crews along with the crew of the mirror ship itself.

Worse (from its enemy's point of view) each massive ship is armed with a staggering 16 accelerators, giving the ship itself an unbelievable lethality, quite apart from the squadron of stingrays it carries.

In this ship the gravity plane runs straight through the middle of the double decked vessel, making each side a mirror image of the other. The interior of the ship is given over to ammunition storage of the stingray ballista bolts, the accelerator shot, and the facilities needed to care for the stingrays.

Crew

The crew of a mirror ship is not coddled. Since so much of the ship's volume is given over to servicing the 32 stingrays that stud the upper and lower flight deck (16 on each) the crew accommodations are spartan. There are only enough hammocks for 1/3 of the crew at any given time!

The ships foodstuffs and other crew necessities are actually stuffed wherever there's room left over, so at the start of a voyage it's not uncommon to see supplies lashed to the two flight decks between the stingrays.

64 of the mirror ship's crew belong to the stingrays--32 pilots and 32 maintenance crewmen.

Of the actual mirror ship crew, 10 are needed to main the rigging, 16 more man the accelerators and 10 officers run the ship.

The ships officers are:

Captain
1st Mate
Navigator
Helmsman (3, one per watch)
Sail Master

Stingray Commander
Armaments Mate
Quartermaster

The navigator on a mirror ship is the master navigator, each of the helmsmen has also been trained in navigation, so as to have a navigator available on each watch.

The sail master runs the rigging crew, and is responsible for overseeing all aspects of the ship's rigging. The stingray commander is responsible for overseeing the pilots, and planning strike missions.

The armaments mate is responsible for maintaining the stingray and accelerator ammunition, including glide bombs, fire bolts, and making sure nothing goes boom beforehand. A mirror ship armaments mate has about the same job as the smoke powder mate on a Giff vessel. The warheads on the fire bolts are just as dangerous as smoke powder if mishandled!

The quartermaster is responsible for supplying the ship and maintaining logistical support. He consults with the armaments mate to make sure enough ammunition has been requisitioned.

Ship Uses

The mirror ship is the heart of a battle fleet. Its one goal in life is to deliver its stingray fighters to strike against enemy vessels. In Saruspace one mirror ship is stationed at the Cirvir Orbital Platform at all times while the other is in transit between Aloth and the COP. Each mirror ship spends two months on patrol and two more months in transit between Aloth and Cirvir, with only the briefest layover at Aloth to recharge its air envelope and exchange crew.

Mirror ships can't land, they are space vessels in the truest sense, with their gravity plane bisecting the ship down the middle of the two decks. They require both upper and lower flight decks to house the fighters they carry.

In Saruspace the mirror ship will always be escorted by no less than 5 heavy hammerships while in transit, and 23 heavy hammerships when on station, usually 25.

Other Configurations

The ship is too new to have other configurations, both the *Mirror* and the *Looking Glass* have been in service less than 5 years, and neither ship has actually been in battle, leaving the pirate hunting to the hammerships of the Cirvir Orbital Platform.

Tests, however, have shown that even stripped of their stingrays, the mirror ship is a deadly enemy. Under ideal conditions it can deliver a withering broadside of 32 hull points of damage per round! No other ship except perhaps a Tsunami or the Spelljammer itself is more deadly.

When the 32 stingrays the mirror ship carries are added to the equation, only the Spelljammer could stand up to a mirror ship, especially when her escort of 5 heavy hammerships is considered.

Saruspace Overview

Saruspace Crystal Sphere

Overview

The Saruspace crystal sphere is huge, over 18 billion miles in diameter. It floats in the Phlogiston off the main currents, and so is very isolated from the normal spelljamming lanes.

On occasion there is a flow river moving from Saruspace to Red Eyes but this flow river is unreliable, often disappearing for days or weeks at a time. When present the river is a pale emerald green. There is only an 80% chance the river will be present when sought, and a 1% chance per day traveling the river that it will vanish, leaving the ship in the open flow. This will multiply remaining travel times by 5, always assuming the navigator can then find their way. There is a 5% (cumulative) chance per day of the river returning.

Travel time is approximately 60 days to the sphere, depending on the strength of the current, and 45 days back. This may vary +/- by as much as a factor of 3 if the flow river remains, or 5 if the flow river vanishes. There are no other spheres between Saruspace and Red Eyes, and no other known currents leading toward or away from Saruspace.

Spelljamming within the crystal sphere is common--even for groundlings. Most adventuring (and habitation) is on Aloth, the 4'th planet circling the yellow-white star Sarthilion.

The rest of the sphere is remarkably leathal to humanoid life, the planets generally are either way too hot (fire elemental territory) or way too cold (-100 to -350 degrees below 0), not to mention having toxic atmospheres or no air at all.

Many of the moons are mineral rich but have no air to speak of. This is extremely unusual for a crystal sphere, and may have something to do with the sphere's odd location in the phlogiston.

Hazards

Most of the hazards of Saruspace come from the planets and moons of Saruspace, not wildspace itself.

Saruspace is noted for the scarcity of wildspace fauna, most life is located on Aloth, with some

truly bizarre lifeforms on a few of the inner worlds. This doesn't mean wildspace is uninhabited, it simply means there are far fewer beasties roaming space than in other spheres.

Saruspace seems to have developed a unique wildspace species or two on its own, but for the most part fauna attacking wildspace travelers isn't really a problem.

History

The sphere's been settled for a long time, the Arcane have of course made their presence felt, as have many other species.

Because of Saruspace's unusual position in the Rainbow ocean, it has seen a slow and steady growth in species count, avoiding many of the invasions and interstellar wars other spheres are prone to. Saruspace is simply too difficult to get to for it to make much sense to invade, and has a negligible strategic value.

Saruspace is very isolated, and like most isolated and protected areas the history has been one of peaceful coexistence rather than conflict. There have been a few small wars but the nature of the population distribution makes warfare somewhat difficult.

Politics

There are a few mining colonies on Aloth's moons, a few more in the Belemir belt, but for the most part Aloth is home to most of the sphere's population--such as there is.

Aloth is sparsely populated, the cities widely scattered. *Very* widely scattered, generally spelljammers are used in the atmosphere as trade vessels because of their speed.

There are some that hold the opinion that Aloth's population is widely scattered precisely because spelljamming is common.

Sphere wide politics are unknown, most inter-settlement politics deal with trade agreements. As a rule the largest cities are considered monarchies although ruled by princes rather than kings. Smaller settlements are ruled by village councils. Few take politics very seriously, the small population has enough to do without concerning themselves with meddling in the concerns of others.

Population

The population of Saruspace is widely scattered in settlements largely consisting of single species, although because of the small population there are often tradesmen of all species to be found.

Major Products

Aloth produces much of the resources used in Saruspace, from food to wood to gems and other valuable minerals and metals. Because of the importance of spell jamming there are a number of shipyards, mainly producing a modified version of the Angelship for atmospheric trading, although a few yards specialize in true space vessels. There's even a yard in orbit to produce designs that can not land on a planet, although given the nature of the sphere such designs aren't as numerous as they would be in other spheres.

However, important mining colonies do exist on Legomir and Narzog, and a number also exist in the Belemir belt.

Legomir contains rich deposits of rhenium (used to create metal alloys that are strong at high temperatures). Rhenium is a valuable trading resource that the inner planets desire.

Narzog has almost pure deposits of nickel, used in steel alloys for magical weapons, and scandium ores used in magical processes dealing with electricity. Because of the difficulty of manufacture scandium is quite expensive, and valuable to the right buyers.

Other sentients that can exist on the inner planets (such as salamanders and efreeti) often trade with Aloth for both rhenium and nickel, since these metals are very scarce (but vital) on the inner planets.

The Belemir Belt mines produce other materials, see the entry on the belt for details.

Armed Forces

Saruspace is a peaceful place, armaments do exist of course, but there are few armed forces as such. The majority of ships (Aloth atmospheric traders) are unarmed.

The Elven Imperial Navy is almost unknown in the sphere, having bigger fish to fry elsewhere. They maintain only a small outpost in the Belemir belt, with a couple of man-o-wars and their attendant flitters.

Armed ships are usually ones that either come in from outside the sphere, are owned by some of the larger city-states on Aloth, or spend most of their time in the Belemir Belt.

The only Saruspace ships that are armed as a matter of course are convoy ships that travel to and from the Belemir belt, supplying the mining colonies with food and carrying ore and refined metals back to Aloth.

Pirates aren't generally a problem because there are few trade routes in Saruspace, the mining

colonies on Legomir and Narzog (Aloth's moons) are so close to Aloth that piracy is difficult, and the ships that travel to the Belemir belt do so in large convoys--and are armed against pirates, out-Sphere opportunists, and the rare wildspace predator. Convoys are also escorted by purpose built hammerships, making a convoy unattractive to would-be attackers.

Religions

Saruspace has few gods, some believe this is the reason much of the sphere is uninhabitable. As with everything else Aloth has the lion's share of gods and temples, the inner planets have their own dieties of course, since fire-dwellers and races inhabiting cooler areas have little contact (other than some trading).

Magic Use

Wide spread magic-use, even if only low level, is essential in a spell-jamming culture such as Saruspace.

Without the ability to man a spell-jamming helm Aloth's many widely scattered small settlements would be cut off from one another, and would eventually evolve into the kind of country-based political system found on other planets where spell-jamming is unknown.

Therefore a large portion of the population (compared to other worlds!) knows how to cast cantrips. There are a number of spells unique to Saruspace designed specifically for folk who otherwise can't cast magic. These spells allow anyone who can learn them (minimum intelligence 11) to man a petty helm, but not a minor or major helm.

The Arcane have developed a new type of helm they sell primarily in Saruspace. Called a PETTY HELM by the Arcane, and a "puddle jumper" helm by everyone else, the petty helm is limited to tactical speed, but allows an SR of 1 PER LEVEL of the user.

This is an important feature since most folks flying petty helms are very low level. This means most traders will be limited to no more than SR 3 at best, the majority are lucky to reach SR 2.

While this makes a petty helm useless for most spell-jamming work the cost of the helm is 1/10 that of a minor helm. In addition, a petty helm can lift a ship of up to 35 tons, making them suitable for installation in a trader hull. They can also be installed in small craft like elven flitters, making a deadly and swift fighter. Look for the Arcane to sell these helms outside Saruspace very soon.

Illegal Activities

Piracy isn't popular. On Aloth there will be the occasional bandits with a petty-helm equipped

Angelship but for the most part real piracy is limited to the Belemir belt, other parts of the system are usually unlivable, making pirate bases untenable for the most part.

Smuggling, on the other hand, is a different matter. Both Legomir and Narzog are plagued by smugglers in their rare refined metals and the Belt is rife with smuggling of Precursor artifacts, drugs, and other offically frowned upon substances.

Of course in Saruspace finding something that **REQUIRES** smuggling is difficult, there are few laws, and law enforcement is something of a joke because of the distances involved, but where there are sentients there will be smugglers.

Points Of Interest

Stars: The stars in Saruspace mark portals to the Flow, they are transparent sections of the sphere wall approximately 1,000 miles across. Ships still need to open the portals, they are transparent but not open. Like many spheres, the stars of Saruspace form constellations and can thus be used for both wildspace navigation and Flow exit point calculation. The stars are fixed in Saruspace making navigation here somewhat easier than in other spheres with more exotic stars.

Baraduithin Beacon: A large elaborate beacon is maintained in orbit around Baraduithin to warn incoming ships about the dangers the world (and others within the system) pose to ships. This beacon is the first to show up on a planetary locator and has the ability to display common text on the locator, saying: **Deadly World, AVOID!** It also is about 3 times brighter than other beacons, making it stand out strongly in a planetary locatator.

Belemir Belt: The belt contains only a few class C asteroids, they are: Tolgrin, Losnuir, Arrophor, Athom, Mival, and Huvir, in order of size. Tolgrin and Losnuir are open ports and maintain beacons.

Cirvir: The Cirvir Orbital Platform (COP) is one of the largest human constructions in known space, at least 3,000 spatial tons. This military base is maintained by the Alothian city-states at huge expense to protect the Cirvir mithril and iron mines which produce metals with astounding magical properties.

Saruthillion

Planetary Statistics

Size: Size H (100K-1M Miles)

Shape: Spherical

Type: Fire Body

Overview

Saruthillion is the primary of Saruspace, around which everything else rotates. It is yellow-white in color and average in size for a star, being about a third larger than Sol.

Hazards

At 6,711 degrees Kelvin (11,620 degrees Fahrenheit) the hazard should be obvious! Only fire elementals and other fire dwellers would have any chance to survive here. As with most fire bodies there is a gate to the elemental plane of Fire in the core of the star.

Population

A few fire elementals, perhaps. Most fire dwellers prefer the (relatively) cooler inner planets.

Magic Use

Fire resistance will only go so far to protect a user. In effect magical fire resistance subtracts 5d6 damage per round. This means a user can approach to within the fifth zone of a star (of 30). Any closer subtracts 5 dice of damage. So at the 6'th zone the user takes 1d6 damage per round.

Calithorn

Planetary Statistics

Size: Size E (4K-10K Miles)

Shape: Spherical

Type: Earth Body

Overview

Calithorn is the innermost planet and orbits at .2 AU (18.6 million miles) from the star. It is an airless earth body with a surface gravity of 1.25. Not even fire-dwellers live on Calithorn, although there are rumored to be bizarre living crystals inhabiting the plains. If this is true they're doing so in 900 degree temperatures, more than hot enough to melt most metals.

Hazards

Extreme heat, no air, no water. 'Nuff said.

Population

Only a bizarre living crystal life form, which may or may not be alive as we understand the term. More like a plant than an animal, and non-sentient.

Major Products

Calithorn is singularly lacking in any mineral resources, perhaps one day someone may find a use for the living crystals, but to date no one has cared to tempt fate by traveling there.

Magic Use

Fire resistance (such as a ring) would protect the user from the heat, although a necklace of adaptation or similar means would be required to breath.

DM Notes

The living crystals actually form a complete (if very bizarre) ecosystem. Many uses can be garnered from the crystals, from (rare) gemstones to strange medicinal powers for fire dwelling creatures to other more exotic uses.

Rule Adjustments

The heavier gravity will increase all weight and encumbrance by 25%, and shorten missile ranges by 25%. Because there is no air treat the long range penalty as -4 instead of -5.

Farithom

Planetary Statistics

Size: Size D (1K-4K Miles)

Shape: Spherical

Type: Earth Body

Overview

Farithom is the second planet, it orbits at .3 AU (about 28 million miles). Like Calithorn it too is airless--at least on the surface. However the planet is honeycombed with caverns that do contain a breathable atmosphere--but the temperature of 630+ degrees would require all but fire-dwellers to have fire resistance magic.

Also, unlike Calithorn the planet's gravity is 1/4 normal.

Hazards

630 degree heat, traces of methane in the air of the caverns (chance of explosion, cave-in, or poisoning), potentially hostile native life-forms (fire dwellers and heat-adapted species).

Politics

Fire dwellers are dominant politically. The planet is extremely important to Aloth as a trading partner because of the rich deposits of rare metals, many of which can only be smelted by fire-dwellers.

In return, the fire-dwellers crave many things only Aloth and the Belemir belt can provide, especially the rhenium from Legomir.

Population

Fire dwellers, heat-adapted fauna, heat-adapted fungi & other subterranean plant life.

Major Products

The following items are extremely common on Farithom:

Molybdenum, used for alloying steel, in certain enamels and dyes, and in certain alchemical reagents.

Zirconium, used to line furnaces, smelters, etc. Also used in fire-resistant magical items.

Tungsten (called Wolfram by natives) useful for creating structural materials with high heat resistance. Unworkable except by fire-dwellers or spells designed specifically for this metal.

Lead.

The following materials are uncommon, but not rare: Platinum (and iridium), Mithril, Adamantine.

Armed Forces

By its nature Farithom is impregnable to non-fire dwellers. The salamanders and efreet that make their home here are well armed against intrusions from the elemental plane of fire, however. They thus possess one of the few standing armed forces in Saruspace.

Magic Use

Fire resistance is a must for anyone visiting this world, and special protective shielding (such as non-conductive ceramics) are essential to protect any ship that lands.

Rule Adjustments

All encumbrance and weight are cut by 3/4. Missile ranges are multiplied by 4, however any extended range is in the Long Range category.

Durgoth

Planetary Statistics

Size: Size F (10K-40K Miles)

Shape: Spherical

Type: Earth Body

Overview

Durgoth is instant death by ANY species standard. The third planet of the system is completely and totally uninhabitable.

The 350 degree temperature would be borderline comfortable to fire-dwellers but the triple normal gravity would not be--nor is the air of Durgoth breathable by anything other than plants. Not to mention that the air contains high concentrations of sulphuric and hydrochloric acids, and has a pressure of 78 atmospheres!

Hazards

Any ship entering the atmosphere will instantly foul its air envelope. Any ship so suicidal as to try and land will be crushed by atmospheric pressure miles above the actual surface.

Even with fire resistance and adaptation magic no-one could survive the incredible pressures on Durgoth's surface without special dispensation from the gods.

Population

Despite the unbelievable conditions, certain lifeforms do exist. They consist mainly of lichens, fungi, and bizarre slimes and jellies that would die instantly outside Durgoth's pressure-cooker environment. All life forms that do exist are non-intelligent.

Major Products

It is possible truly incredible drugs and other poisons are obtainable from the life forms of Durgoth, but so far no one has even attempted to explore this world of a million deaths.

Magic Use

No known magic would allow a caster to survive the pressures at Durgoth's surface.

Rule Adjustments

Should anyone manage to survive the surface more than an instant, triple all weights and encumbrance, cut all missile ranges by $2/3$, treat ALL ranges as long.

Aloth

Legomir

Narzog

Planetary Statistics

Size: Size E (4K-10K Miles)

Shape: Spherical

Type: Earth Body

Overview

Aloth is a normal world, very much like Oerth, Toril, or Krynn. Sentient settlements are few and far between, the average population density is 4 persons per square mile.

This means the areas between the settlements are wilderness, with the occasional road to connect the rare nearby settlements.

There are two moons in close proximity, [Legomir](#) (the inner moon) and [Narzog](#) (the outer).

Hazards

The normal hazards of any world that consists mostly of wilderness, Aloth contains *many* new species unknown in other spheres.

History

Aloth is an old world, settled by early spelljamming vessels. Aloth is just about the only world in the system that can support life without elaborate magical and mundane protections.

Histories in certain city states go back 3 millennia, there are indications that earlier settlements existed as long as a thousand years before that.

Politics

The primary unit of government is the city-state or village. Politics are fairly loose, anyone who doesn't like one settlement just goes off and settles somewhere else.

Inter-settlement politics deal mainly with trade agreements, Aloth is so sparsely populated and so rich that wars are uncommon, and usually short.

In fact, there is so much work going begging that most Alothians are more interested in trade and craft than politics.

Population

Aloth is settled by many common spelljamming species. Neogi are not unknown, but little tolerated. Mind flayers are likewise rare and almost universally mistrusted.

Elves are common, Aloth approaches the elven ideal world. Humans, dwarves, and halflings are also extremely common.

Major Products

Aloth has all the major products of any rich fertile world, ranging from livestock and timber to gems, precious metals, common metals, and other such. A healthy trade exists between Aloth and Farithom, the fire-dwellers and Alothians each having common trade goods unobtainable on the other world.

Armed Forces

Except for the major city states (which operate both city defenses and armed spelljammers) standing armies are unknown on Aloth.

The majority of settlements have militia, but these deal with local hostile fauna more often than raiders of sentient species.

Religions

Aloth has few gods, generally one or two per sentient species. Alothians are generally too busy to pay much attention to the gods, and the gods tend to return the favor.

Magic Use

Aloth is *extremely* well endowed with magic users because of the high level of spelljamming activity. Every settlement has at least one flitter with a petty helm, generally the larger towns

often have a small fleet of trading vessels with petty helms. Most of the populace could operate petty helms at a pinch, although minor or major helms would be beyond their abilities.

The larger city states operate trading fleets with minor helms and a (relatively) few ships with major helms to operate from Aloth to the Belemir belt.

About half the population (except for dwarves, of course) have some form of minor spell casting ability, generally cantrips. However even first level spell casters are 20 times more common in Saruspace than elsewhere. Outsiders believe this is because Saruspace has a higher background magical field than other spheres.

Whatever the reason Alothians put their magical abilities to good use (mainly in puddle-jumpers).

Baraduithin

Planetary Statistics

Size: Size F (10K-40K Miles)

Shape: Spherical

Type: Earth Body

Overview

The fifth planet is almost as deadly as Durgoth. The atmosphere is cold, over a hundred degrees below 0! In addition it's composed almost entirely of methane--with about 5% ammonia for flavor. The surface gravity is five times normal, and the atmospheric pressure is 36 times normal.

Baraduithin orbits at 3 AU from Saruthillion, about 280 million miles. It has no moons and nothing worth trying to extract. There are no life forms on this world, it's far too cold and the gravity is too strong. Not to mention the deadly atmosphere

Hazards

Let's see. Quintuple gravity, methane atmosphere (with ammonia chaser), 36 times normal atmospheric pressure, and a hundred degrees below 0. Enough said?

Oh, of course any spelljammer unlucky enough to try and refresh their air envelope is instant freeze-dried history. This happens more often than you might think because Baraduithin's air looks just like normal air.

History

Legend has it that this planet was named after a dwarven captain who was the first one to try and replenish his air envelope from this beautiful but deadly world. His air envelope instantly and completely fouled with methane, his helmsman overcome without warning, the ship plunged to its doom. Part of a small fleet his ghastly mistake was forever immortalized.

Magic Use

Same problems as with Durgoth, except you have to deal with numbing cold and the atmosphere's roughly half as dense.

Points Of Interest

Aloth and the Arcane maintain a beacon orbiting Baraduithin. Anyone approaching the the beacon immediately discovers it is shaped into an enormous skull and crossbones, the light blazing from eye sockets, nose, and mouth. The beacon is particularly noticeable because it rotates, making the beacon light flash.

At the base of the beacon, in most space faring languages, is a warning about the planet's poisonous atmosphere. There are also warnings about the other, deadlier worlds (like Durgoth).

Aloth considers the beacon's expense well justified, since newcomers can't trade if they're dead!

Maranuir

[Barakigil](#)[Calabrant](#)[Ologorn](#)

Planetary Statistics

Size: Size F (10K-40K Miles)

Shape: Spherical

Type: Air Body

Overview

The sixth planet is 10.6 AU (986 million miles) from Saruthillion. It is an air body and has 3 moons, [Barakigil](#), [Calabrant](#), and [Ologorn](#).

Hazards

Like Baraduithin, Maranuir is deadly cold and just plain deadly. -275 degrees below 0, and almost pure hydrogen, with helium as a chaser.

The pressure at the center of the planet is almost 2,000 atmospheres! Gravity is 2.25 times normal. Any vessel entering the atmosphere will slowly gain a serious percentage of hydrogen, after 3 turns the atmosphere approximates that of the phlogiston. Any open flame has a chance to ignite the hydrogen, instantly destroying the vessel in a massive fireball.

As if that wasn't bad enough, treat the time spent in the atmosphere as spending time in an ice-storm. Rigging and decking will quickly gain a coating of ice, the temperature on board will plummet to well-below 0--and remain there long after the ship pulls free!

Major Products

Military forces take advantage of the explosive nature of Maranuir's atmosphere to fill special ballista bolt warheads for Stingrays and other war craft, however such work is extremely dangerous, requiring specialized spelljammers to harvest the atmosphere.

Magic Use

No known magic can protect a user from the effects deeper in the atmosphere than a spelljammer could escape from.

Bomryn

Cirvir

Planetary Statistics

Size: Size F (10K-40K Miles)

Shape: Spherical

Type: Air Body

Overview

The outermost world (excluding the Belemir belt) is a smaller sister to Maranuir, with one moon, [Cirvir](#).

In fact, except for the fact there's only one moon many explorers could mistake Bomryn for her larger sister world. The dangers are the same, except Bomryn's even colder at -350 degrees than Maranuir is.

Hazards

Crew on ships within the atmosphere of Bomryn actually take a d6 damage per turn exposed to the cold, the planet is a heat sink.

In fact, below an (easily reached) level of the atmosphere Bomryn is a Sargasso, a magical dead zone. Any ship entering the area loses power and (if it can't escape before power dies completely) instantly plunges to its doom.

Any ship descending more than 10 times the diameter (longest dimension) of it's air envelope enters the Sargasso.

Magic Use

Magic will not operate below a certain level of Bomryn's atmosphere, spelling swift death for any would-be explorers.



Belemir Belt

Planetary Statistics

Size: Size A (<10 Miles)

Shape: Belt

Type: Earth Body

Overview

The Belemir belt is the outermost ring, circling Saruthilion at a distance of 44 AU's, over 4.5 BILLION miles from the primary. The edge of the shell is thus 9 billion miles from the primary, that means that a spelljammer takes nearly 3 months to travel from the edge of the shell to the sun!

Fortunately, a month and a half from the shell is the Belemir belt. Unlike the other worlds (saving Aloth itself), the Belemir belt is a typical asteroid belt, and will be familiar to most space travelers.

Most of the asteroids are size A, with a sprinkling of size B, and about half a dozen size C.

Most have atmospheres, the size B asteroids have water and plant life almost without exception.

The only slight problem is the temperature, the average temperature of the Belemir belt is just above freezing. The handful of size C worldlets actually have enough mass to entertain geothermal activity, these asteroids are tropical in nature.

Naturally, all of the size C asteroids have already been claimed by one settlement or another. On the other hand, there are so many size B rocks that they're likely to go begging for eternity.

Hazards

Unlike many asteroid belts, hostile fauna is seldom a problem--at least in wildspace. There is believed to be one radiant dragon in Saruspace, this creature keeps to itself, avoiding contact with spelljamming vessels.

History

The belt was, interestingly enough, one of the first areas of the sphere to be settled. Sages are

confident in the fact that *all* of the sentient races in Saruspace are the result of space travelers settling the sphere, the limited contact with other spheres reinforces this notion, as does the peculiarity of the native species.

Politics

The belt is closer to the normal spelljamming culture than Aloth. That is to say that it is home to a number of outsiders, including some evil races like the neogi and illithids.

Since it *is* possible to travel to and from Saruspace (although it is neither easy nor reliable), the Belt sees more than its share of outsiders.

Four of the half dozen class C asteroids maintain beacons to pinpoint themselves to outsiders.

Population

The Belemir belt is home to the largest diversity of species in the sphere. The two largest class C asteroids, Tolgrin and Losnuir, are open ports that encourage all traders, as long as they don't cause trouble.

Even neogi are tolerated on Losnuir, although they are closely watched. There's no telling how many neogi are in the sphere, although it is a far smaller number than any other sphere "graced" by these evil creatures.

Mind flayers are also welcome at Tolgrin and Losnuir, one of the few places this is true.

Major Products

The Belemir belt, like most asteroid belts, is composed of the remains of a large planet. As such any metal, gem, or other mineral material may be found here.

Prospecting is a common occupation, made much easier by the common nature of petty helm craft and the density of the belt. The Arcane are active in the Belt, encouraging the prospectors with good deals on used petty helm equipped craft and more exotic gear like heavy metal detectors, becoming in effect, silent partners.

This policy has paid off handsomely, since the Arcane usually take half of the prospector's yield.

Armed Forces

Of course these asteroids are heavily defended with both fighter craft and larger spelljamming

vessels. Belemiri are friendly, not suicidal.

Magic Use

The Belt is a good place to find magical items left over from before the sphere was settled. The Arcane pay extremely well for these ancient magical items.

Such finds happen often enough to keep the rumors flying and the prospectors eager. There might be two or even three finds in an Alothian year (613 days, or about 1.7 standard years). The finders often retire, rich by Alothian standards, never having to work again.

It is thought these magical finds (not to mention solid-gold asteroids!) are why the Arcane are so generous in their dealings with Belt denizens. They know the more prospectors scouring the belt, the richer they will become.

Illegal Activities

The Belt is alive with pirates, claim jumpers, neogi, and worse. Those prospectors who can afford it use a minor helm to power their prospecting craft to outrun the opportunists.

A relatively new idea is cropping up in the Belt--prospecting coasters. Like the more traditional trading coaster, a group of prospectors will pool their resources and buy a Tradesman or Wasp, invest in a minor spelljamming helm, and travel in the company of other prospectors, making a "company", or sort of traveling settlement.

These coasters are much harder to attack successfully, and a rich strike will make every member well off. It's the lure of added safety that bring most coaster members into the fold.

Points Of Interest

Tolgrin, Losnuir, Arrophor, Athom, Mival, and Huvir (class C asteroids, in order of size).

Lore

The Belt is the oldest inhabited part of the sphere, and the legends are myriad. Wildspace tall tales that sometimes turn out to be true, but any tale told in a tavern is *usually* just a way to cage drinks.

The wise man listens and keeps his wits handy.

Legomir

Planetary Statistics

Size: Size D (1K-4K Miles)

Shape: Spherical

Type: Earth Body

Overview

Legomir is the inner moon of Aloth, it's extremely important since many of its resources are used to trade with Farithom's fire dwellers.

Gravity's one-third normal, the climate is arid and the air's fairly thin. Survival isn't really a problem--assuming you have a normal world as your primary and frequent supply runs from home!

Hazards

Legomir's no picnic. The air's about like a high mountain, people can adapt but hard work's no fun. Water is next to non-existent, plant life runs to the ultra-desert style.

Politics

Legomir enjoys a unique position, somewhere between a protectorate and a colony. The mines are too important (and the Legomir dwarves too irreplaceable) for Aloth's city-states to do more than treat them with kid gloves. So (like most settlements on Aloth itself) Legomir pretty much ignores politics, except for the trade and supply agreements.

Population

Almost exclusively dwarven, since they're the only ones hardy enough to be able to work in Legomir's mines.

Legomir's dwarves are born and bred on the moon, and they have a somewhat condescending attitude toward other species, even other dwarves.

Legomir dwarves are +3 on constitution roles and can deal with limited air more efficiently than other dwarves, they can survive on 1/3 the air a normal dwarf requires.

Major Products

Legomir contains rich deposits of rhenium (used to create metal alloys that are strong at high temperatures). Rhenium is a valuable resource that the inner planets trade for.

Armed Forces

Legomiri dwarves are dwarves, after all, they're more than capable of handling anything Legomir throws at them. In addition, because of the vital nature of the mines, they are well defended against spelljammer assault, Legomir can demand protection from any city-state on Aloth--and expect to get a massive response.

Religions

All dwarves in the sphere worship Dumathoin, keeper of secrets under the mountain. In this sphere the god also has responsibilities for dwarven craftsmen.

In keeping with the scarcity of gods in this sphere, Dumathoin is the *only* dwarven deity worshiped here.

Magic Use

No dwarf has much use for magic, the Legomir dwarves being no exception. However, they aren't pig-headed about it, freely using magical aid where required.

While dwarven citadels roam the Belemir belt, no such craft travel to Legomir, the dwarves rely on other races to bring supplies and other necessities.

Illegal Activities

Being lawful folk, even by dwarven standards, smuggling is almost unknown (except for non-dwarves) between Legomir and other worlds. It takes a great deal of hardiness, at any rate, to deal with natives of Farithom, and so the dwarves and their agents have little competition for the Fire-dweller trade.

Rule Adjustments

Triple all missile ranges (additional range is in the Long range category), and reduce all weight and encumbrance to 1/3 normal.

Narzog

Planetary Statistics

Size: Size D (1K-4K Miles)

Shape: Spherical

Type: Earth Body

Overview

The outer moon of Aloth is in many ways Legomir's twin, save the moon is rich in nickel and scandium instead of rhenium.

It has the same diameter, climate, and thin atmosphere, and like Legomir is home to many mining colonies, exclusively dwarven.

However, unlike Legomir Narzog is considered a poor cousin by Aloth. While the mining colonies are important they haven't got the economic impact that Legomir does.

Hazards

Identical to Legomir, Narzog's no picnic either. The air's about like a high mountain, people can adapt but hard work's no fun. Water is next to non-existent, plant life runs to the ultra-desert style.

History

The nickel mines on Narzog predate the rhenium mines by almost a thousand years. Narzogi dwarves like to think of themselves as the clan with higher status, this is hotly disputed by the Legomiri.

Politics

Narzog is definitely second in status to Legomir, where Legomir can demand and get instant fleets if attacked, Narzog isn't valued nearly as much.

Narzogi dwarves tend to resent this and typically have a sore spot when it comes to their treatment by Aloth vis-à-vis Legomir.

Population

Almost entirely dwarven, just like Legomir. In fact, the Narzogi are indistinguishable from Legomiri except from their dress, speech, and beard styles.

Major Products

Nickel, used in making alloys for tougher weapons, and magical ones.

Also scandium, used by mages and alchemists for magical processes dealing with electricity. While nickel forms the backbone of Narzog's economy, scandium per pound is the far more valuable metal.

Armed Forces

The Narzogi are dwarves first and foremost. Because they have more of a piracy and smuggling problem, their defenses against spelljammer attack are formidable.

Unlike Legomir, they can only count on limited assistance from Aloth, however.

Religions

Dumathoin, just like Legomir. It's interesting to note that both Legomiri and Narzogi priests of this god try and diffuse the rivalries, Legomiri by claiming Narzogi are just as good as they are, and Narzogi by claiming Legomiri arrogance is more a myth than reality.

Illegal Activities

Given Narzogi defenses, pirates tend to steer clear of the moon, but the lure of the valuable scandium is one that not all can resist.

More pressing, however, is the problem of smuggling. Since, ounce for ounce scandium is about twice the price of platinum to certain unscrupulous buyers, the temptation to bypass official channels is always there.

Rule Adjustments

Triple all missile ranges (additional range is in the Long range category), and reduce all weight and encumbrance to 1/3 normal.

Barakigil

Planetary Statistics

Size: Size E (4K-10K Miles)

Shape: Spherical

Type: Earth Body

Overview

The innermost moon of Maranuir, airless with half-normal gravity. The temperature is a relatively benign 10 degrees below 0.

Hazards

No air, but other than that the moon is no more dangerous than any asteroid.

Population

No life exists on this moon.

Magic Use

The only magic needed to survive here is a necklace of adaptation and a ring of warmth.

Calabrant

Planetary Statistics

Size: Size F (10K-40K Miles)

Shape: Spherical

Type: Earth Body

Overview

The middle moon of Maranuir, Calabrant is a slightly smaller (10k miles in diameter) somewhat colder (-80 degrees) version of Barakigil. There's no air and nothing of interest on this overgrown ball of rock.

Ologorn

Planetary Statistics

Size: Size E (4K-10K Miles)

Shape: Spherical

Type: Earth Body

Overview

The outermost moon of Maranuir is the smallest of the 3, and the coldest (-110 degrees below 0). It has no air and nothing of interest to explorers.



Cirvir

Planetary Statistics

Size: Size E (4K-10K Miles)

Shape: Spherical

Type: Earth Body

Overview

The moon of Bomryn is a cold (-275 degrees below 0) airless place. In that it resembles the moons of Bomryn's sister planet Maranuir.

However, Cirvir is home to some precious treasures, which are mined at great danger and expense by the more daring and magical adventurers that make the Belemir belt their base of operations. These adventurers are underwritten by the larger Alothian city-states.

Hazards

Cirvir is not survivable without special protective "space armor", magic, and other protections against the unbelievable cold. Living on Cirvir is very much like bathing naked in a white dragon's breath.

History

Cirvir is a rich prize, the special iron and mithril alone make it worth the huge expense Aloth's city states spend in defending it.

Pirates raid Cirvir to snatch a quick cargo. The rewards are worth the huge risk, and there are often out-sphere folk who can be tempted, especially evil races like the neogi or illithids.

The proximity of the Belemir belt offers a host of hiding places for such raiders, and the Cirvir patrol is on constant alert. Often two of the heavy hammerships take a wing of fighters into the belt to root out a pirate nest.

Politics

Cirvir, like Legomir, is a very important moon. Unlike, Legomir, however, the miners are either mindless golems or cold elementals who are hard to bribe, so politics is of little concern on Cirvir itself.

However, Alothian city-states have more than once found themselves coming to blows over the precious Cirvir mines.

Population

The actual mining operations are carried out by specially constructed golems and other constructs. Cold Para-elementals have been persuaded to live on Cirvir. No other species could even think about dwelling here. Curiously, the lack of air doesn't bother the elementals.

Major Products

Cirvir is host to mithril mines, the purity of which is unmatched anywhere else in the universe. The intense cold seems to purify the metal and make it particularly suited for accepting magical energies.

There are also, of all things, iron mines on the moon. The iron that comes from Cirvir, however, is highly magical in nature. Weapons made of this metal can--without any further enchantment, hit creatures needing a +3 or better weapon to hit them! No attack or damage bonuses accrue, however. Armor and shields made of Cirvir iron will prevent the passage of magical energy, including electrical attacks.

Needless to say Cirvir iron is worth the huge investments made to obtain it--and it costs like it!

Finally, chromium is found on this moon. No one is quite sure what the metal is good for, but many Alothian alchemists and mages have high hopes.

Armed Forces

Orbiting Cirvir is the only standing fleet of warships in Saruspace, consisting of 25 heavy Hammerships, each carrying maximum weapon allotments, a space platform the size of a large town (although garrisoned by less than 1,000 troops), armed to the teeth, and carrying a large flotilla of 200 Stingrays, fitted with petty helms.

The space platform is among the largest human constructions in all of known space, at least 3,000 tons!

The stingrays are armed with 4 single-shot ballista's carrying warheads with a mixture of compressed Maranuir atmosphere and air. The explosion of one such missile is equivalent to a six

dice fireball, which can easily set wood or rigging aflame.

In addition, each fighter carries a pair of "glide bombs" (torpedos) filled with enough Greek fire to equal 5 hits from a Greek fire projector.

Magic Use

The Cirvir Orbital Platform (COP) is home to a rotating cadre of high-level mages, each at least 12'th level. Each soldier is also capable of flying a petty helm (but not a minor helm) and in a pinch could use a Stingray to strike at large, slow moving ships (like death-spiders, men o' war's, dwarven citadels, etc.)