

## **L21 LongClaws' Redoubt (former Andro Colony)**

*1x Small Mining Station, 1x Small Science Station; 1 each on 2 moons orbiting a Gas Giant*

The local Star here is a Binary: a Type G Yellow Dwarf named Ahran's Mince and a hotter, larger bluish Type A (twice the size of Mince) named The Spectre. They are about 1.5 Earth-AU from each other and technically Ahran's Mince orbits The Spectre (roughly every 3 months), but their common center lies just outside of the latter. These two names come from a not unlike David-and-Goliath bit of Kzin folklore, and lie quite far from the Colony: their common orbital point is at least 12 Earth-AU away. The Gas Giant (5th orbit out from binary centerpoint) which the two Small Moons comprising the Colony orbit is named Upback (one of only 4 planets (all Gas Giants) +3 Asteroid belts in this system), per a Kzin combat move emphasizing use of a solid/safe object one can spring from. Upback is 11 hexes across including 2 hexes of atmosphere, and has no rings but at least 30 moons (for each, roll 1d6 for starting hexline, and 1d6 for # of hexes along clockwise from starting hexline): the Kzin have not bothered to name any but the innermost (and largest) 5, just numbering the rest. The Science Station lies on Churrah, a Small Moon orbiting 2 hexes above Upback's atmospheric surface (range 7 from center) and tidally locked to the planet. Moving outward, 2 Large Asteroids lie at range 8 and 10 from planetary center, named Springhone and The Stalk. The Mining Station lies on Agikha, a Small Moon orbiting at range 11 and not tidally locked (roll 1d6 for current Station facing): this is the only moon with an atmosphere. The last named moon is Hrottah, a Large Asteroid orbiting at range 13. The remaining 25 moons are in the less-than-1/4 mile range and orbit at ranges 12 to 50, roughly every other. Study of the deep atmosphere of Upback, which is resemblant of metallic hydrogen starting at a considerably shallower depth than usual for most planets of its size, has yielded insights into improving navigation in The Masters' pocket universe (or whatever it is). The Mining station produces simple raw materials used primarily for hull plating.

## **L23 Cry Havoc (former Andro Colony)**

*1x Small Mining Station, 1x Small Science Station; 1 each on 2 moons orbiting a Gas Giant*

The local Star is Brightlord, a Type O Hot Blue Giant about 10x the size of Sol. The Planet this colony orbits, at approx. 25 Earth AU (11th orbital position), is named The Shade: a huge Gas Giant, 27 hexes across including 4 hexes of atmosphere, with no rings, and only 7 moons. All but the outermost moons are very small (less than 1/4 mile in size), and orbit between 17 and 28 hexes from the The Shade's center hex: for each moon, roll 1d6 for starting hexline, and 1d6 for # of hexes along clockwise from starting hexline. The last and largest moon, named The Stump, is a full-hex-sized ice shell/sub-surface ocean world (~190 miles deep) 37 hexes from The Shade's center. Due to its size and distance from The Shade it could be considered a Planet on its own, but its frozen surface is not thick enough or stable/evenly surfaced enough to mount useful ground facilities on (SC 6 units could land on it temporarily) but presumably would be if The Stump were a smaller body. Two Small Moons orbit The Stump: the first, at 3 hexes, is called Howl's Glare and bears the Science Station. The second, at 4 hexes, is called Underrun and bears the Mining station. None of these moons has an atmosphere, and none are tidally locked to anything. Roll 1d6 for current Station facing, 1d6 for current hexline, and 1d3 for # of hexes along from starting hexline. The Mining installation produces high-quality raw materials needing little additional processing, but Underrun has a fragile sub-surface makeup and a negative energy coruscation that makes locating new deposits both dangerous and unreliable. As it happens, the makeup of this little trio is chemically complementary such that the Science Station on Howl's Glare can use properties of the The Stump's deep hydrosphere (as its strata progressively eclipse Underrun during occultations) as a differential fluid lens for inter-satellite prospecting. It's not a perfect method, but can screen out enough of the sensor-scattering effects of Underrun's lithosphere to more precisely direct mining operations more safely toward just the premium deposits, minimizing crust disturbance.

## **M03 Helvetia Tavern**

*1x Small Science Station, 1x Small Science Station; 1 each on moon and planet*

Helvetia Tavern is a class N planet with 1 moon, that orbits the yellow class G star West Union which is slightly warmer than the Sun. Helvetia Tavern is much like Earth, but oceans cover 90% of the surface and humidity is high. Helvetia Tavern has no real continents, but does have a plethora of volcanic island chains- and normal planetary rules apply. The one moon (North Plains) is 23 hexes

from Helvetia Tavern (roll randomly for direction). Helvetia Tavern and North Plains can each have appropriate installations on them.

## M07 Scapa Flow

*Two small Civilian Planetary Operations Bases (R1.73) on the class M planet (Mainland)*

Scapa Flow is a small anchorage in the asteroid belt of the Orkneys system, located within the habitable zone of the host stars, Caledonia A and B. Caledonia A is a main sequence star of class K0, with a size of .777 solar masses; its companion Caledonia B is a main sequence star of class M4 with a size of .307 solar masses. The two orbit each other at a distance of .717 AU.

Most notable about Scapa Flow is that there is a small planet inside the belt, Mainland. Mainland's presence within the belt is something of a mystery since it couldn't have formed here. Astronomers speculate that the planet arrived here from somewhere else eons ago, either from elsewhere within the Caledonia system or from interstellar space, as a result of gravitational perturbation from a passing star or one of the three large gas giants which also inhabit the Orkneys system. Mainland is about the size of Mars, and is a class L world. It has a meager, struggling biosphere which has been subject to repeated impacts and associated extinction-level climate effects. Ironically, the arrival of star-faring species and related colony and defense activity may prove to be a serious boon to the development of the indigenous biosphere, since the frequency of large impacts has been eliminated by the presence of defensive systems which can destroy incoming threats.

While Mainland has no moons, there are half a dozen large asteroids in the vicinity. They all orbit Mainland, as do many of the other nearby asteroids. This is why there is something of a squashed spiral effect to the asteroid distribution, and why the easiest access to Mainland is through several narrow, twisting channels through the arms and clusters of asteroids.

Scapa Flow is created using a #4 Asteroid Belt map from Module B, modified as described below. Mainland itself is placed in hex 2116. Additional asteroids are added using templates as described below. Refer to photos when placing these. The templates have relevant hex numbers on the back to aid in proper placement and orientation.

Asteroids #1: Place in 0410, 0511, 0611, and 0711. End of curl should be in 0707 and 0708.

Asteroids #2: Place in 1610, 1710, and 1809. Extends to 1701/1801 and out to 1005 and 0909.

Asteroids #3: Place in 2409, extending to 2008 and 2109. End of tail in 2304.

Asteroids #4: Place in 2708, 2709, and 2710. Extends through 3005 and ends in 3204.

Asteroids #5: Place in 3606, 3505, and 3405. Extends to 3604, 3504, and 3403.

Asteroids #6: Place in 1323 and 1424. Extends through 1021-1024, 0925, 0723, and out to 0424.

Asteroids #7: Place in 1727, 1626, and 1526. Extends to 1427.

Asteroids #8: Place in 2026, 2127, and 2128. Extends through 1729/30, 1529, 1429, 1330, and 1229.

Asteroids #9: Place in 2529. Extends through 2429, 2329, 2229, and 2130.

Asteroids #10: Place in 3127/3128. Extends through 3426, 3636, and 3826, ends in 3930, 3829, 3729.

Six Large Asteroids are placed in hexes 1011, 1225, 2109, 2224, 3218, 3308. In hex number order these are Hoy, Flotta, Fara, Burray, Graemsay, and Ronaldsay.

Additional maps added on the short sides are standard #4 Asteroid Belt Maps. Roll randomly to see if they are placed in the same orientation as the Scapa Flow map or are inverted. Additional maps on the long sides are clear space.

Mainland may be colonized and fortified normally. The six Large Asteroids each may have a single Ground Base.

## M08 Aquarius

*Two small Civilian Planetary Operations Bases (R1.73) on the class M planet (Mainland)*

Aquarius is a water world that orbits a rather volatile star that exhibits constant sunspot and solar flare activity. Aquarius is a Class N ocean world 14,279 kilometers in diameter, with two small continents (each about 70% the size of Australia) named Ragni and Rado, a dozen very large islands (about the size of New Guinea), and numerous smaller islands and island chains. The planet is volcanically and seismically very active, humid, and quite warm since it orbits at the inner edge of the star's habitable zone. A thriving biosphere has developed on Aquarius, with considerable jungle growth on the islands and coastal areas of the continents. Tectonic activity has

pushed up two young mountain ranges on Ragni and one on Rado, with peaks reaching 8500 meters above sea level. The continents exhibit virtually every kind of climatic environment from tropical to arctic; so too do the islands depending on their size and location. The most northerly and southerly islands have arctic climates, though there is almost no permanent sea ice at the poles. Very salty oceans (about 7% salinity, double that of Earth's oceans) cover 84% of the surface area of the planet.

Native life in the oceans can be dangerous; creatures vaguely resembling Mosasaurs and Plesiosaurs are the top predators...but they are twice as large and have a limited ability to survive and move on land for short periods. They have been spotted several kilometers inland from oceans and rivers, and can easily survive the period between tides out of water. Normal atmospheric pressure at sea level on Aquarius is 1.069 times that of Earth, or 1083 millibars.

Aquarius has four moons, one of which is nearly the size of Luna. The other three are smaller and about the size of very large asteroids. Aquarius is located in hex 2215 of a standard SFB blank map. The entire map is a Sunspot zone (P11.0) and a Radiation zone (P15.0) due to the violent outbursts of the host star. The large moon is located in hex 4201. The three small moons are located in hexes 1318, 2212, and 3225. The map may float, but the effects of the solar disturbances extend over a thousand hexes beyond the map edge in all directions.

The oceans of Aquarius will allow any unit capable of landing on a planet to hide beneath the surface. Those units may utilize Hidden Deployment (D20.0). Military Ground Bases may also use Hidden Deployment; they are beneath the ocean. For the purposes of Hidden Deployment, any weapons base(s) with Power Stations and/or Ground Warning stations on a hex facing and which form a Power Grid may deploy hidden together. Such bases may deploy hidden on facings A and D (neither Ragni nor Rado cover the entire area of the facing) but may not form a Power Grid with the civilian base(s). Units may land on the planet but may not gain hidden status during a scenario. Ground bases (hidden or not) deployed in the ocean always receive a +2 natural ECM bonus, which may be countered by ECCM. This is an exception to P2.524 and is a function of the very strong wave action on Aquarius.

Aquarius may be colonized but with the following restrictions: Civilian bases may only be placed on the continents, which are on facings A and D. Colonial bases are never hidden. There are two Small Civilian Operations Bases, on facings A & D (1 ea.). Minefields and DefSats may be deployed normally; their movement will not cause them to collide with the moon in 2212 if a three hex orbital radius is chosen.

Ground combat (euphemistic as that seems) on Aquarius presents some unusual challenges. The planet has all the usual GCL's and defense stations on each hex facing immediately upon colonization. Prior to colonization there are no defense stations. The commotion of combat attracts and enrages the sea monsters. For any ground combat lasting more than one turn, there is a chance that a sea monster attack will occur. At the start of every turn following the first, roll 2D6. On a roll of 2, 3, 11, or 12 a sea monster attacks forces on the hex facing which are outside of ground bases. If both players have forces outside ground bases, including in remote areas, each player rolls 1D6. High die roll wins, re-roll ties. The winner executes a sea monster attack on enemy forces at the GCLs or in a remote area. The sea monster will inflict 6 casualty points on the force it attacks; the player being attacked decides how to apportion the casualty points. Roll again on all subsequent turns to determine which side the sea monster attacks. The sea monster will attack until it is destroyed. It takes ten casualty points to destroy a sea monster. A sea monster will not attack Control Stations, Defense Stations, or Ground Bases (Control Stations and Defense Stations are there specifically to defend against sea monsters and the creatures have figured that out; supersonic homing torpedoes with twenty-ton equivalent neutron bomb warheads are used). Sea monster attacks will occur on the two facings with continents; not all the important places or remote areas are inland.

## **M09 Reedville Reach**

*2x Ag Stations on a class I planet*

Reedville Reach is a small moonless class I planet that orbits the class D star Aloha. Aloha is a white dwarf star- it is no longer undergoing nuclear fusion and has shrunk to planetary size, slowly cooling down. Reedville Reach itself is a very hot, rocky planet (470°K- not hot enough to melt lead, such as Mercury- but still very, very hot) which is cooling 1°K per century. The atmosphere is quite thin and there is no recognizable biosphere. With appropriate shelter and domed agricultural

stations, the planet's Dilithium deposits can be (barely) economically exploited. Reedville Reach is a small moon-sized planet and can have appropriate installations on it. For any scenario played in the vicinity of Reedville Reach place a single hex planet counter representing the white dwarf Aloha 25 hexes from Reedville Reach. Per P10.5 all maps are in a heat zone. Additionally the effects of a black hole P4.1 emanate 15 hexes out from Aloha (per 10.5). Minefield deployment around Reedville Reach is prohibited.

## **M20 Crux March (former Andro Colony) (updated)**

*1x Small Mining Station, 1x Small Science Station; 1 each on 2 moons orbiting a Gas Giant*

This System is centered on Raha, a cool K-type Red Orange star just a little under Sol-sized. Only 5 planets are present: all roughly Neptune-sized small Gas Giants, and all fairly close-in orbit-wise. Sirish-keh, where the Colony is based, is the innermost at only 4 Earth-AU from Raha: a 7 hex Gas Giant including 2 hexes of atmosphere with no rings and 10 moons, none of which have an atmosphere: for each, roll 1d6 for starting hexline, and 1d6 for # of hexes along clockwise from starting hexline. The Kzin have only named two (where the Stations are) so far: these are, closest-in first:

-Shakryhes: Small Moon at 5 hexes from Siriskeh's center hex bearing the Science Station, facing toward the planet (tidally locked).

-3 Large Asteroids at 6,7 and 8 hexes from center.

-Aysekh, a Small Moon at 9 hexes from center, bearing the Mining station (not tidally locked, roll 1d6 for current station facing).

-5 more Large Asteroid-sized moons at 10, 11, 12, 15 and 17 hexes from center.

The Star, Planet and both moons are named for heroes from a particularly bloody Kzin saga. The colony's facilities produce mostly refined crystals used in Transporter components.

## **M21 Luck's Edge**

*Class M planet. 2x Small Operations Bases (CSOB, R1.73) on a class M planet.*

The local primary, Urrurak, is a G-type Yellow star of noticeably advanced age, spectrum- and stratum-wise. There are many planets in this system, but only one of any size or note. Gekha, the second from Urrurak, is an M-type planet orbiting approx. 2 Earth-AU from Urrurak (between two asteroid belts which lie about 100 maps from the planet each) and is currently in an Ice Age. Its orbit appears to have been adjusted from a mostly circular to a more elliptical, and its surface deeply marred, by a series of major impacts a few millenia ago in its southern hemisphere, which also seems to have altered its tilt. From the layout of craters (discernable even under a quarter mile of ice sheet, in places), it was likely one impactor breaking up due to gravity differential in a final approach orbit or even atmospheric friction, but most of it seems to have made it to the ground. Gekha's marginally habitable surface area is limited to well inside its Tropics, and that range is pretty slim as its axial inclination is currently only 11 degrees with a still-slowng polar precession unlikely to widen back out for another 20,000+ years. It has no rings but 1 Small Moon orbiting at 37 hexes but not of any material/scientific use and too far away to be included in any defense of the system. Roll 1d6 for starting hexline, then 4d6 for # of hexes along clockwise from starting hexline. This moon has no atmosphere and is not tidally locked, and the Kzin have not even named it, as yet. The colony was named for twice having almost been overlooked in surveys. It is fortuitously placed for the Kzin, strategically and (following on that) for the only facilities this constrained biosphere could support: there is little to no worthwhile mining or agriculture that could be pursued here.

## **M22 The Crouch**

*1x Science Station on a Large Asteroid in the system's asteroid field (asteroid map)*

This is a somewhat diffuse Asteroid field, except for some intriguing variance-of-density phenomena. No star, planetary body or moon lies anywhere close to this Colony (as in, within 3 light years).

Map setup: Large Asteroid with Science Station is in 2115 (dead center), it is the only such rock within several maps of here. All hexes on-map are considered to be Rings hexes, except as follows: start at the upper left hand corner hex of the map, and roll 2d6. At that number of hexes in direction

C, a 1 hex wide line of “triple-thickness” Asteroid hexes is present all the way across the map (and beyond) in direction B-E orientation. Repeat this process until you reach the lower right hand corner. These are completely parallel ripples or possibly waves in space which move very slowly (1 hex every couple weeks) but do not seem to have an origin/emanation point or to project beyond the Asteroid field (all edges are quite far from the Colony). Such hexes are made up of completely normal ring/asteroid material which is not, itself, in motion: the ripples just cause local expansion and contraction, a sharp delta in density. They don't seem related to Gravity Waves.

Tactical adjustments: these hexes provide 3 pts ECM per P3.33, damage due to movement into/through them is tripled, the P3.2 table speed 1-6 column reads 0-0-0-1-3-5, and “clearing a path” fire is 1/3 as effective as usual (round fractions down). Follow-through by other units is not completely possible: apply normal Asteroid damage, except for the 1-6 column as noted above.

It is unknown where this colony got its name, perhaps due to the strategic situation at the time the Kzin established it. This location was chosen as one of only two places in this entire Asteroid field where a regular 'gap' forms AND this one had a suitable Asteroid to set up on. When a ripple approaches the hex of this Large Asteroid, it parts or ceases to exist (reverting to Rings density) in just 1 hex's length roughly 3 hexes ahead and then does not enter or affect the Asteroid's hex, and then closes after another roughly 3 hexes of travel. Other, temporary and seemingly random gaps of 1 to 3 hexes' length have been observed, but none so far have lasted even 3 hexes of travel. The other such persistently appearing gap is on the far side of the field, and does not open where there happens to be such a rock 'causing' it (is one theory) or even nearby. The Science Station is quite busy studying the density ripples, which seem related to a natural sub-space warp (or weft) field resonance. Some Staff at the station have ventured that there could be a pattern to the ripples and possibly to the resonance of the fields generating them (or which they generate, perhaps), and even to the gaps' behavior, which could as a whole be likened to a musical notation if the scope of the Scale were known. The Kzin telepaths feel there could be something bigger to this place, for certain. Analysis of the ripples currently traversing the field, and their energies, is ongoing.

## **M24 Akkashik**

*2x Science Stations, 1 ea. on a class M planet and on a moon orbiting that planet.*

This system is a Tertiary, of two notably bright G-type yellow stars orbiting a common centerpoint approx. 3 Earth-AU apart with a 17 month 'year', plus a very small M-type red dwarf on an elliptical and nearly 90-degree-inclined orbit that only brings it close (swinging through well inside all planetary orbits but still outside the G-types' paths) every 4.5 years. These stars are named Rowll, Hurra-cheh and The Watcher, respectively. This system is, in regard to the stars' types, orbital arrangement and duration, strangely close to that of one less than 30 light years from the Kzin capital planet in Alpha Quadrant. So they gave those stars' names to these, and named the Colony planet after the system.

Akkashik lies roughly 6 AU (2nd orbital position) from the G-type stars' centerpoint, an unremarkable M-type planet with a thriving, if primitive, biosphere. The atmosphere is extremely rich and the local parasitic biopresence (i.e. insect-equivalents) is such that Kzin who venture out to hunt need breathing aids and/or basically a space suit, so such jaunts can't be as claws-on as they'd like. There is plenty to hunt, though: some local fauna would not be out of place on a Mesozoic Earth, and many flying beasts here are roughly Interceptor-sized. Akkashik has no rings and only 1 satellite, a Small moon (Kehlar) orbiting at 7 hexes (roll 1d6 for current hex line, and 1d6 for hexes clockwise along from that point), not tidally locked (roll 1d6 to determine current facing of any single station placed upon it, to determine all others') and with no atmosphere.

The colony mostly studies The Watcher, sending probes and shuttles and the occasional visiting freighter out to sit on-station nearby for closer observation: this star differs sharply from its Alpha Quadrant namesake in two ways: (1) it is about 9x as active, flare-frequency-wise (one could even say it's so constant that the star looks... angry?) though even at the system-closest point of its orbit, these flares never reach any of the local planets. And (2) the flares are startlingly predictable in that over 96% of them emerge 'aimed' directly at Rowll, one of the two G-type primaries, regardless of distance. Even more unusually, in light of (2), while Rowll and Hurrah-cheh are quite close spin-wise/equatorially speaking, and stable in that relationship more-or-less matching the dominant planetary orbital plane, The Watcher's polar orientation slowly tumbles in an equatorial-rotation-to-polar-rotation ratio of approximately 22 to 1. Not in a wobble-related way, but an end-over-end fashion consistently flat to its orbital plane. Yet the flares overwhelmingly emanate as noted above,

rather than mostly from equatorial regions as most normal Red Dwarf flare activity hews to. Its polar flares especially, are awe-inspiring in their intensity. Every dozen or so orbits for The Watcher, it draws as close as its path allows to Rowll, which has its own respectable flare activity. The Kzin can't wait to see what THAT looks like, as models predict that this event, while obviously not damaging to planets (or the stars) in this system, may release enough energy into the local space-time fabric to cause a rift which may be briefly exploitable to gain insight as to the Masters' behind-the-scenes machinations in this little Pocket Universe.

## **N01 Slushball**

*2x mining stations on planet*

Slushball is a small world about three-quarters as large as Mars, with a diameter of 5100 kilometers. It is comprised mostly of frozen methane, either pure or in other chemical forms, above a rocky core. For this reason, the world is of interest to the Hydrans in particular since it can be mined for gases vital to the atmosphere that they breathe. It is located in what amounts to the Oort Cloud of its host star, an area of numerous small worlds and asteroids at the edge of the system. Slushball is placed in hex 2115 of Asteroid Field Map #3 from Captain's Module B. The map is modified as described below using four counters for individual Large Asteroids and twenty-nine irregular hex templates which represent open space. The result is an asteroid field considerably more open than the printed map. The map is not fixed, it may move. Adjacent maps on all sides are identical to the Slushball map with the exception of the planet, which does not exist on adjacent maps. Beyond the first adjacent maps, all maps on the short axis continue the asteroid field. Along one long axis (roll randomly to determine which one, top or bottom), the second and subsequent extension maps are open space. Along the other long axis, more asteroids...use map #3 in unmodified form for the second and subsequent extension maps.

Large Asteroids exist in the four single-hex asteroid patches printed on the map in hexes 1515, 2424, 2712, and 2814. These exist inside the printed asteroid hexes.

Open-space templates are placed on the map as listed: #1: 0108, 0207, 0208, 0307, 0308. #2: 0419, 0420, 0421, 0422. #3: 0523, 0622, 0623, 0722, 0723, 0822. #4: 0725, 0726. #5: 1104, 1203, 1304. #6: 1109, 1208, 1207. #7: 0915, 0914, 1014, 1013, 1114. #8: 1019, 1120, 1121, 1122, 1221. #9: 1802, 1902, 1903, 1904, 2002. #10: 1507, 1606, 1607, 1706, 1707, 1806, 1807. #11: 1810, 1811, 1911. #12: 1618, 1718, 1719, 1818. #13: 1623, 1624, 1724, 1823, 1923. #14: 1926, 2026, 2027. #15: 2508, 2509, 2605, 2606, 2607, 2608. #16: 2214, 2314, 2414. #17: 2318, 2418, 2518, 2519. #18: 2522, 2620, 2621, 2622, 2722. #19: 2429, 2529, 2628. #20: 3203, 3304, 3404. #21: 3108, 3206, 3207, 3208, 3308. #22: 3017, 3117, 3118, 3119. #23: 2824, 2924, 3023, 3024, 3123. #24: 3508, 3607, 3608, 3707, 3708, 3807, 3808, 3908. #25: 3613, 3714, 3813. #26: 3817, 3819, 3918, 4017, 4018. #27: 3322, 3420, 3421, 3422. #28: 3228, 3329, 3428, 3427. #29: 3828, 3829, 3928, 3929, 4028. Slushball may be colonized normally & may be fortified normally, and each Large Asteroid may have one ground base.

## **N08 Wigwam**

*2x agricultural stations on a 3-hex planet*

Wigwam is a large, moonless class E planet that closely orbits the class M red dwarf star Shute. Shute is a red dwarf star- and no longer radiates much heat. Wigwam itself is a "super-terrestrial" world, basically a larger-than-Earth planet with an atmosphere and biosphere that is at least marginally habitable. Wigwam is a large 3-hex planet and can have appropriate installations on it and normal planetary rules apply.

## **N20 Chunekht**

*1x Small Mining Station on a moon orbiting a Gas Giant.*

In the only such case anywhere in KzinSpace, the Colony here and the local Star were given the same name: the Kzin onomatopoeic term for 'sneeze' (humans might say 'achoo'), both due to the

system's makeup and the candid, unbidden response of the Science Officer who'd just been asked what she thought the system should be called. This system lies in a super-dense dust cloud (triple everything, per P13.5). The Star is a very small, cooler, M-type Red Dwarf, with only one planet: Sakrek, an 11 hex Gas Giant (incl. 2 hexes of atmosphere). Really this is a double-star system, as Sakrek is extremely active and bright in non-visible spectra and the orbital centerpoint between it and the star lies almost 15% away from the latter, at Sakrek's 2 Earth-AU distance and 117 day orbit. Local solar radiation pressure is insufficient to keep the dust cloud at a distance, excepting a roughly 50 map radius right around the star. Chunekht is subject to flare activity, but it never reaches the planet. It is also barely moving relative to other stars nearby, and has been in this cloud for a very long time. Sakrek has no rings and only 1 moon, Powder, orbiting at 14 hexes from planet center and not tidally locked (roll 1d6 for current station facing). It has no atmosphere, and is probably a captured body. Sakrek is also thought to be a captured body, but it might've been the other way around. Sakrek is slowly spiraling in toward Chunekht due mostly to friction with dust, in another few dozen millenia they will likely draw close enough to fling one or the other out.

Map Setup: place the planet probably toward one corner of a map, say in the 'upper right'. There is a shadow in the triple-dense dust cloud, caused by the planet's passing. Construct this by choosing a direction (probably D in this case), and make two lines of clearer hexes which will step in toward each other while continuing in direction D. Start at the 'corners' of the planet (at directions C and F from center, in this case), and every 5 hexes step the line in by one row as a "0 hex" like the planetary 'corner' start points, and continue the process. These hexes, and everything between them, are 'half-density' dust clouds: all units subtract 10 from their speed when determining damage due to movement, and non-ship units subtract 20. The reason an attacker might want to wait 'til Powder is in this shadow to approach, is that due to Sakrek's emissions all non-shadow hexes within 20 of the planet are not only a 3x Dust Cloud but also a Radiation Zone: emanating from a point, i.e. the center hex. The Kzin were drawn here during a shortcut maneuver skirting this dust cloud while surveying, not expecting to find anything but sensors picked up an unexpected density profile not too far into the cloud, standing out in the area: the moon is rich with veins of elements belonging to an island of stability beyond the 3 known by all starfaring races. Aside from their astonishing nature, these natural deposits can be crudely but readily dealloyed into coatings, electrochemical tinctures and other process aids. Strangely, Powder is NOT spiraling into Sakrek despite dust cloud friction: matter is added but also blown away by energies from Sakrek, which seems to about balance out orbital-speed-wise. These energies are slowly destroying the moon's inner structures (the main reason it's theorized to be a captured body) but it is these same energies, interacting with the dust and likely some innate properties of the moon, which marble it with exotic elements. The Mining station is in a small artificially filled-in crater, well-enough protected from dust and Sakrek's emissions to function. This limits its weapons etc. to a 60 degree arc, not 180 like normal ground stations.

## **N21 Turner Reach**

*2x Small Operations Bases (CSOB, R1.73) on a class M planet*

This Planet (Charrag) is a Rogue, not attached to a star, moving at an impressive speed and likely tossed out by an encounter between its sun (posited to be a smallish Sol-like star originally, there are likely candidates within a couple light years) and a neutron star or black hole swinging though (none seem nearby though, on a strategic-level scan). It has two very small moons, less than half a mile across, orbiting at 9 and 18 hexes: just captured rocks really, not yet named beyond #1 and #2. The Colony was named due to where this planet was discovered, at the far end of a very long, winding empty space filled with dust and asteroids (none are on-map) inside a Nebula (likewise). Or perhaps a gap between two nebulae: the nearest parts are about 1/10 light year away, and after a few thousand more years Charrag will likely drift into one side or the other. Charrag has no rings, and a (barely) breathable atmosphere. With no solar input now its entire still-working biosphere is based on geothermal emission, both undersea (this is what keeps them from freezing entirely) and on land. It has a highly radioactive core and much volcanic activity which produces mostly gases that still-surviving surface vegetation seem to be thriving on, for now. Not surprisingly, the few animals here are small, partly subterranean and not particularly edible. This whole biosphere adjustment took millenia to adjust into equilibrium, but in another 10K years or so it will certainly become unsustainable to more than the smallest multicellular forms and then, later, not even that .

The colony does not produce anything but bureaucracy and logistics, as (currently) a major Kzin strategic hub. The Battle Station orbits at 6 hexes from Charrag.

## O14 Mojave

*2x Science Station, 1 ea on the planet and on the moon*

Mojave is a large world with a diameter nearly three times that of Earth. It is somewhat less dense, exhibiting a gravity just 1.117 Earth normal. The lower density of this world is largely due to a near total lack of heavy metals in the crust. The planet is represented by a 7-hex (2 hex radius) planet counter placed in hex 2215.

This world is Class E/K, a super-Earth with a biosphere and breathable atmosphere somewhat thinner than Earth. Atmospheric pressure at “sea level” on Mohave is roughly equivalent to that at 1750-2200 meters elevation. The planet is mostly desert/savanna with small bodies of water, none larger than the combined Great Lakes on Earth (though there are several of those). The planet is currently being terraformed for further development. It has one large moon, itself nearly Earth sized, which orbits at a distance of 20 hexes from the planet. Roll 1D6 and use the compass rose to determine which axis to use to locate the moon (directions A-F). Once a direction is established, place the moon along that axis at the prescribed distance, then roll 2D6 and move the moon that many hexes counterclockwise, staying at the 20-hex distance. For purposes of LOS and collisions, consider the moon a planet (it fills the hex). For purposes of fortification, it is a moon.

The planet has a ring of what amounts to Asteroids surrounding it at a radius of 5 hexes from the planet surface. These are actually almost entirely made of ice. None of these are large Asteroids and no bases may be placed upon them. Units moving through the iceberg ring are affected as if they were entering an Asteroid hex.

The terraforming being accomplished involves corralling comets from the system’s Kuiper Belt and flinging them in towards the planet. At intervals, Harbor and Salvage Tugs are used to adjust their trajectory. Upon arrival in the inner solar system, the comets are tracted by Tugs which dock with them. They are slowed, and cut into smaller pieces with phaser fire. The smaller chunks are placed into orbit in the Ice Asteroid belt. From there, chunks are tracted and shoved into lower orbits where they will burn up in the atmosphere. Gradually this will increase the available water on this world, making it more suitable for agriculture.

Currently there are three Comets inbound to Mohave, Comets Hoover, Owens, and Mulholland. Hoover is 12 hexes from Mohave, Owens is 18 hexes from Mohave, and Mulholland is 24 hexes from Mohave. Use the same procedure for locating these comets as for locating the moon (they can be sent in-system from anywhere in the Kuiper Belt). The comets are all aimed (more or less) at Mohave, but do not move during a scenario.

Each Comet has a tail 100 hexes long, extending in direction A/D from the nucleus.

There is a special freighter at Mohave. It has been built specifically to manipulate the chunks of ice, cutting them to size, them in orbit around Mohave, and finally breaking them down into small pieces which burn up in the atmosphere. The **Ice Bucket** is a small phaser-armed freighter, with the cargo pod replaced by three Skids: Self-Defense Type 2, Construction, and General. The **Ice Bucket** has a BPV of 44.

Mohave and its moon may be colonized and fortified normally, but there is risk involved with active terraforming. Usually the icebergs flung into the atmosphere are sized so that they vaporize completely, or are aimed to impact in an uninhabited area. Occasionally this goes wrong (**Ice Bucket** can’t be everywhere at once...). Every turn, roll 2D6 in the Energy Allocation Phase. On a roll of 2 or 12, an iceberg is detected at “danger-close” range, falling from the iceberg ring directly towards an inhabited area. Place an asteroid counter five hexes away from any planetary base (that is, in the iceberg ring itself). On impulse 32 of that turn, and each turn thereafter until impact, it will move one hex towards the planet. On the turn of impact, it will hit the vicinity of the base doing 100 points of damage on impulse 32. If more than one base form a power grid together on a

hex facing, their shields are combined when absorbing iceberg damage. This is an exception to R1.28P; the iceberg is essentially an area weapon affecting the entire complex. The iceberg may be damaged or destroyed by weapons fire; every two points of damage inflicted reduces the “warhead” strength by one point. It is possible (though unlikely) for more than one iceberg to be on a collision course at one time. If there are bases on several facings, roll randomly to see which facing will be impacted for each iceberg that is generated. The iceberg gains the benefit of the single point of ECM generated by asteroids on the turn it is created (it is still in the ring), until impulse 32 when it moves out of the ring.

**Note: A single phaser-4 will inflict around 70-80 points of damage to an iceberg over five turns, reducing the damage potential by 35-40 points. Multiple phaser bases and fire from ships, DefSats, and the like will almost certainly be sufficient to destroy an iceberg before it impacts the surface.**

**Variation: Add 2x Harbor Tug and 1x Salvage Tug to the system. These three may be placed anywhere on the map, and may begin hidden and docked/tractored to a comet nucleus if desired.**

The BPV of **Ice Bucket** and the Harbor & Salvage Tugs (if used) are added to the BPV of the player’s fleet but do not count against command limits. While they have some marginal utility, their intent is to either stay hidden or attempt to disengage. The Tugs may only disengage by distance (good luck with that...) or by sublight evasion if they drop their warp engines. **Ice Bucket** may disengage by acceleration.

## P18 Bounty (updated)

*1x Small Mining Station, 1x Small Science Station; 1 each on 2 moons orbiting a Gas Giant.*

This planet is a fuzzball, barely a gas giant, more like a small Neptune: its core fills one hex (from which all following distances are measured), surrounded by 2 hexes of atmosphere. The core is a hyper-dense remnant of a much larger gas giant that something else collided with long ago, shattering it. Other bits of that core also still orbit this system’s primary (which the Kzin have not bothered to name yet, beyond Local Star), but Bounty is the closest-in. The primary is a D-type high-output white dwarf (P10.5) only 5 hexes wide itself and ~600 hexes from Bounty (which has an 11 day 'year): roll 1d6 for the direction to the star, within 30 hexes of it apply Black Hole rules. Bounty orbits about mid-point of a Radiation (not Heat) Zone around the primary, which extends another 600 hexes from Bounty system-outward. It is not considered to be emanating from a point.

Bounty has only two Small Moons, just called Moon 1 and Moon 2 by the Kzin, and many much smaller non-navigationally hazardous ones farther out: the closest, a large asteroid, is at ~25 hexes. The inner Moon (1) is at a range of 5 hexes in a circular orbit (roll 1d6 for starting hex line position), the outer one (Moon 2) has a slightly elliptical orbit varying from 7 to 8 hexes. Both have non-breathable atmospheres, likely borrowed from Bounty’s: every few weeks this system experiences Sunspot and Solar Flare activity for a few hours, which leaches bits of atmosphere away into space.

These moons have a unique relationship, orbitally speaking. Both are tidally locked facing Bounty, but due to stark differences in density and an additional, exploitable energy exchange, are also always near each other in their orbits. To reflect this, wherever Moon 1 is, Moon 2 will be at range 7 or 8 and more-or-less directly outward from Moon 1: Roll 1d6 at scenario start: 1-2 = 1 hex behind. 3-4 = straight out, 5-6 = 1 hex ahead: this positioning takes a few local weeks to change, and so will not vary during a scenario.

Installations: Moon 1 has the Small Science station, mounted facing away from Bounty. Moon 2 has the Small Mining station, facing inward. Both have 3xGBDP, in opposite configurations: Moon 1 has 1 GBDP facing directly away from the planet and the other two alternately relative, Moon 2 is the opposite.

The DefSats orbit at a range of 4 (range 2 from the surface of the atmosphere), in a rough star pattern, at 1 hex per turn.

The Base sits at a range of 6 in a careful orbit between the two moons’ paths, never crossing either and always trailing Moon 1 by 3 hexes if Moon 2 is at range 7, or by 4 hexes if Moon 2 is at range 8. This is sort of a Lagrange-point surfing setup, though there are times when the positional stabilizers have to work a little harder to maintain it.

The mining operation on Moon 2 produces compounds in the trillithinide salts family which can be refined into a castable dilithium solution, eliminating waste in production and much of the periodic replacement/re-setting into machinery necessary with the more finicky natural crystalline form. The nature of these salts seems to have to do with the constituent elements of this planetary system and the cyclical proximity between the moons, drawing and releasing energies between them in a natural distilling process. This colony was named by the first Kzin scientist to realize the potential, here: for a short while, based on the name, KzinHome bureaucrats thought this might be an agricultural colony.

## **P20 Khehiakh point**

*1x Small Mining Station on a moon orbiting a Gas Giant*

The local star, called Ember, is an M-type Red Dwarf with a notably strong gravitational profile and strangely cyclically variable visible-spectrum output, such that it is posited that the star may have swallowed a very small and much denser body that now lies at or closely orbits its core: aside from any given Red Dwarf being subject to Flares anyway, this could explain why they're especially intense here. Solar Flares (P11.4) occur here on a roll of 1, on 1d6, every 5 turns (roll during EA, Ion Storms step), and are considered double-strength (double crew loss under P15.11), lasting for 1d3 turns and coming from a 'point' per P15.14: unit facing and planetary shadows apply.

Ember has 5 planets, mostly tiny and close-in tidally locked rocky bodies with orbits measured in hours. The only important planet is its farthest-out (6 Earth AU), named Khekiakh, whose year is a more respectable 6.5 Earth-months. Khekiakh is enormous, more of a half-ignited brown dwarf, somewhat larger than Ember and nearly 1/8 the size of Sol: their mid-point of common orbit is over 10% outside of Ember in Khekiakh's direction, so this could be considered a binary star system.

The Small Moon (Khekiakh Point) orbits Khekiakh entirely inside its first ring complex; two much wider/more spectacular rings lie several maps farther out (direction B, on the attached map), as well as several smaller gas giant and planet-sized rocky moons mostly beyond those additional rings. The innermost rings begin JUST outside this planet/failed star's Heat Zone. Khekiakh Point is also inside a small, long-ish asteroid field, really a thick spot in the rings. There are at least 11 other asteroid fields similar to but smaller than this, only in this first ring, some at predictable L spots as if this one were a planet but others lying at non-L-related but somehow still resonant positions. Perhaps because of these spots, and the outlier chemical makeup of this system (which a Mining station is necessary to exploit), the rings somehow persist as-is due to a near negligible shear between inner and outer edges' material, orbital speed-wise, except for a couple thousand miles on its innermost edge. This asteroid field happens to have the single largest entirely solid body (few others, in other such fields, are larger than 10-20 miles wide), travelling with the asteroids and not clearing its own path. For practical purposes, even this innermost ring doesn't perceptively curve within a length of less than 2 or 3 maps, so it is represented as a straight field 7 hexes wide running from top left to lower right, on a standard map.

Hexline references, all F/C direction:

0112-3830 is the outermost edge of the planet's heat zone, and including all hexes "southwest" of that. The 'surface' of the planet is approximately 7 maps in that direction.

0102-4228 is the outermost edge of the rings, 0108-4222 the innermost edge. All these hexes and all those between are rings hexes, except as follows:

1811-2615, 1511-1812, 2516-2817, 1009-1612, 2617-3220, 1412-1714, 2417-2719, 1614-2418: asteroid hexes.

1913-2415, 1713-2517, and 1814-2317 are "double-thick" asteroid hexes, made up most generally of planetesimal chunks up to 1/4 mile wide: too small to mount defense phasers on, or for a unit larger than sc4 to safely 'land' on per P3.42. These hexes provide 2 pts ECM if fired between/through, damage due to movement into/through them is doubled, the P3.2 table speed 1-6 column reads 0-0-0-1-3-5, and "clearing a path" fire is half as effective as usual (round fractions up).

Follow-through can only take place with same-hex units, not those trailing by one hex.

There are two especially thick concentrations of asteroids in hexes 1914 and 2316, these appear to be kind of broken up but still roughly gravity-bound moon piles: they effectively, just like the center moon, block fire 50% of the time. Use the normal P2.231 Collision table, for units entering any of these 3 hexes.

Khehiakh Point has no atmosphere. The mining station produces unusual chemical compounds and crystals by bathing asteroid bits in enough (mostly phaser) energy until they sublime into one or the other plus some waste ash. There is no note of how this Colony was named.

### **Q13 Starvik Fjord**

*Science Station on class M planet and Science Station on moon.*

Class M planet and also a moon. Starvikfjord is an astrographical oddity. It is essentially a fjord, a narrow channel which extends more than three quarters of a million kilometers into a very dense asteroid field, terminating in two diverging arms. Each arm has a small protected orbit, kept clear by the gravitational influence of two planetary bodies- one is moon-sized asteroid, the other is a Class D planet (although an airless rock), slightly larger than earth. A third, smaller arm projects from Starvikfjord closer to the entrance which does not have a harbor at its end.

Starvikfjord is created using two maps, A and B. Map A is a standard open space map, modified as described below. Map B is the Blackfoot Pass map from Captain's Module B, also modified as described below. The two maps are joined along their short sides, map A on the left and map B on the right. Areas of dense asteroids as indicated below are all-asteroid areas with no clear spaces at all. (SEE SPECIAL MAP)

### **Q15 Kahless Blood (Kahless'lw)**

*Science Station and mining station on separate moons orbiting the brown dwarf*

Kahless'lw is a T-type Brown Dwarf massing roughly 77 times that of Jupiter, which has reached a stable size as a result of gravitational contraction being arrested by quantum electron degeneracy pressure. It does not have the mass required to overcome that pressure and reach the temperatures and pressures necessary to ignite hydrogen fusion and become a small red dwarf star. It does exhibit low-order burning of deuterium and lithium, and is old enough to have generated considerable methane in its outer atmosphere, which Hydrans can breathe without difficulty. It glows a bright magenta color which looks to Klingons much the same color of their own blood, hence the name of object. Kahless'lw is represented on the map by a gas giant 17 hexes in diameter centered on hex 2215. The outer two hexes of this near-stellar object are considered Atmosphere for all purposes. The inner of the two Atmosphere hexes is also a Heat Zone as this object radiates considerable energy in the infrared spectrum. Planetary bases with positional stabilizers may be placed in any inner or outer atmosphere hex of Kahless'lw.

Three large moons orbit Kahless'lw. Roll 1D6 to establish the direction for each moon, direction A-F. The moon will be the stated number of hexes from the outer atmosphere of Kahless'lw on a direct line from the center of the planet in 2215. One of these moons, at a distance of 40 hexes from the object, has an atmosphere and is nearly the size of Earth. It may have ground bases just as any other habitable planet, with 180-degree firing arcs. The other two moons orbit at a distance of 25 and 10 hexes from the object. The moon at 10 hexes may have one base on every other hex facing, and these bases will have a 300-degree firing arc. The moon at 25 hexes may have two bases on every hex facing, and these will have a 270-degree firing arc. These moons are rather unimaginatively named Kahless'lw wa' (Kahless' Blood One), Kahless'lw cha' (Kahless' Blood Two), and Kahless'lw wej (Kahless' Blood Three), numbered from innermost to outermost.

### **Q18 Chuft's Twixt**

*2 Agricultural stations on a Class M planet.*

The Local primary is a Neutron star, approximately 20 Earth-AU away from the map area and named The Hammer. Its only planet is a Gas Giant the Kzin have named Chrowl: 9 hexes wide including 2 hexes of atmosphere. It has no rings but many moons, the largest and closest-in to the planet is a full hex-sized 'moon' named First Sigil. The rest are Small Moon down to tiny rocks only a couple hundred yards across, but none will be within 1 map of First Sigil at any time, in their orbit. First Sigil is a stand-alone livable biosphere (think Pandora from Avatar), obviously quite dark (with

no sun nearby most of the vegetation is near-black, for instance) but receiving all the energy it needs from Chrowl's multispectrum output. It has no moons itself and is not tidally locked to Chrowl (roll 1d6 for one station's current facing, to orient both). Its oceans also receive their tidal input from the planet, which it orbits at 22 hexes' distance, clockwise. The Ag stations are on opposite sides of First Sigil from each other, roll 1d6 for current direction of one to place both. This colony's activities were initially quite destructive to the local biosphere, as a great deal of lowish-energy vegetation needed to be harvested to support the animal foodstuffs the Kzin found palatable and not poisonous. Since then though, innovative (and mostly pyramidal) 'blackhouses' have been setup near to their destination and husbandry practices have evolved to include shameless genetic manipulation to massively increase meat output. The Colony was named due to the 'flip a coin' manner in which it was found, as in the ship went THAT way down a string of stars rather than the other way, in a survey.

## Q20 Stone Forest

*1x Science Station on a Large Asteroid in the system's asteroid field (asteroid map).*

This is the first Colony the Kzin founded, and almost didn't happen. It reminds them of the life/predator/prey dynamic of forests back home, in the sense that one must creep stealthily through it. The unit that found it (CMF03) stumbled upon what appeared to be a ship's transponder/log buoy, damaged nearly beyond recognition, just outside of a decent-sized Asteroid field (3 AU across). Sensors indicated anomalies nearby, not far inside the field, so the ship proceeded in and was immediately... attacked? The Kzin are still not sure. After a retreat and examination of data, they carefully re-entered the field eventually coming to the skeletal remains of an enormous and ancient starship, seemingly made of an organic/fungus-like metallic substance just like the transponder and just as inscrutable. Origin unknown, no bodies or useful markings were apparent but unusual energies and tiny vacuum-based life forms still swarmed the find, so a Science station was set up on a usefully close Larger Asteroid to study and determine benefit.

The Science Station asteroid lies 75 hexes inside the field, it is called Clawpluck. There are several other such big rocks also nearby (within 30 hexes), but this one is closest (range 5) to the Derelict. That hex behaves as if it has a star or other source of gravity in it (none is apparent), so everything within 20 hexes essentially orbits this hex extremely slowly (no movement during a scenario) and is tidally locked to it. The Science Station was set down on the side always facing the Derelict hex. Entering that hex, or any within 2 hexes of it, has not so far been safely possible. There may be other gravitational anomalies like this one, in the area.

This is a unique and extremely dangerous asteroid field:

(1) at the center of it all (many hundreds of maps farther inward), asteroids appear to be 'birthed' from a small-star-sized zone so far opaque to all sensors. They simply appear at its edge, bathed in a 'stellar amniotic energy fluid', and proceed away at almost relativistic speeds (~1 hex/2 turns). By the range of the Derelict and Science Station, though, their movement is no longer apparent and it's unknown where most of them have gone (as there is no accumulation/cosmic pile-up going on). The energy fluid is still studyable at that range, though, and may have to do with the condition and apparent borderline edibility of the derelict- though why there is still any of it left after what could be hundreds of years, is unclear.

(2) the asteroids in this field (excepting those within 10 to 15 hexes of its edge) are embedded with highly unstable crystalline structures that react easily with other energies (though not with each other, even if such asteroids occasionally collide), such that for practical purposes it could be considered a minefield. Any unit performing any of the following must roll on the P3.2 Asteroid Collision field every impulse, adding 6d6 to all results, even on impulses where the unit does not move. Forbidden activities: moving faster than 1/4 impulse (1 hex/4 turns): raising shields or PA panels, arming or firing anything defined anywhere as a weapon, using active fire control, cloaks, scout functions, tractors, transporters or anything else that could be defined as 'broadcasting significant energy', or turning on Warp Engines/AWR (APR and Impulse are safe). Communication is even delayed, as old-style radio frequencies are the only safe method.

(3) Occasionally a sensor blip will appear, typically in the RA arc, indistinct and location-variable, and appear to shadow a ship or shuttle in a seemingly intelligent or even curious way. The Kzin telepaths swear there's something really there (though they approach brain lock trying to discern or describe exactly what), and that this entire asteroid field is Aware and/or Haunted, but you know how they get.... So far, nothing has come of this phenomenon.

## S08 Chuuk Lagoon

*Mining station on moon Fefan, & Science Station on moon Wonei*

Chuuk Lagoon is the name given to a fleet anchorage which is located inside the rings of gas giant Moen, which circles a blue giant, Caroline's Star. Caroline's Star is a Class B9 main sequence blue giant of 15 solar masses with a temperature of 11,000 K.

Moen is represented by the Gas Giant map #1 from Module B, but additional maps will have to be placed all around the printed Gas Giant map for playing room because the system is so large. The inner printed green ring is a standard ring as described in P2.223. The outer blue/purple rings are thicker, and are treated as Asteroids. Another standard ring zone encircles the planet at a distance of 13 to 15 hexes from the surface.

Moen has four satellites, the largest and closest of which is Fefan, a Class G planet, hot, dry desert planet with no oceans, similar to Mars with a thin atmosphere and tenuous biosphere. Roughly the size of Mercury, Fefan orbits Moen at a distance of 18 hexes from the planet, measured from the outer atmosphere.

Next in size is Tol, a lifeless moon that orbits at 26 hexes out.

Third is Wonei, slightly smaller than Tol, which orbits 38 hexes out from Moen

Last is Polle, the size of Callisto (Jupiter IV), which orbits at a distance of 45 hexes from Moen.

## S10 Castor & Pollux

*1 Science station (ea.) on Castor & Pollux*

Castor & Pollux are a pair of twin planets currently locked in orbit around each other in a newly-formed star system. Together they have carved out a clearing in one of the many asteroid belts surrounding this young star. Castor is Class K with an atmosphere marginally breathable by oxygen-breathing species (use of oxygen concentrators is required for extended activity outside domed or underground settlements) and a mass of 1.1 Earth normal. Pollux is Class G, also with a marginally breathable atmosphere, and a mass .93 Earth normal. Their densities are similar to Earth and they both exert an Earth-normal surface gravitational field. Colonial exploitation of the system is likely to include the capture of icy asteroids and bringing them to the immediate vicinity of the planets, where they can be broken down into smaller chunks guaranteed to burn up in the planetary atmospheres and thereby raising the percentage of available water without inflicting bombardment damage. As young worlds in a chaotic and evolving stellar system, both worlds are very volcanically active and have been subject to repeated heavy bombardment from asteroids. If left alone, the stable orbital condition of Castor and Pollux would eventually break down; random bombardment would eventually result in a sufficient mass imbalance between the two such that the smaller world would inevitably be drawn into a collision with the larger one. Colonization has arrested that dynamic, since most unwanted rocks can be destroyed before they impact the planets, keeping the two planets' mass ratios in balance while water is gradually added to both of them. Eventually both will be reclassified as their moisture levels improve and their atmospheres change. While there are currently no moons in this system, it is believed that accretion of asteroids drawn to the vicinity of Castor & Pollux will eventually result in several moons orbiting the pair.

Setting up this system requires a modified version of Asteroid Belt Map #4 from Captain's Module B. Hex 2215 is the center of the system. No asteroids exist within the area of an 11-hex diameter with 2215 at the center (that is, no asteroids for five hexes in any direction measured out from 2215).

Castor is located in hex 1814, Pollux in hex 2816. In map area A, a 7-hex cluster of asteroids is centered on hex 1108. In map area B, a seven-hex cluster is centered on hex 2309. In map area C, a 7-hex cluster of asteroids is centered on hex 3205. In map area D, a 19-hex (5 hexes diameter) cluster of asteroids is centered on hex 1135. There are no additional asteroid clusters in map areas E and F. The asteroid belt is considered to extend infinitely in directions F/E and B/C. When adding maps, turn the first one added to either end upside down, the second one right side up, and so on. These maps have the standard printed asteroids, plus the additional clusters enumerated above.

For colony fortification purposes, Castor is considered a planet and Pollux is considered a moon. Minefields may be laid normally around the pair. DefSats may orbit either planet normally; these

would routinely be used to blast asteroids approaching the planet and to clear their own orbital paths. As a partial exception to the campaign rules, this system may split a 5-satellite constellation between the two worlds, three around one and two around the other, at player's option.

## S16 Wyskoon (Saturn's twin)

*Mining station on moon orbiting gas giant*

Wyskoon is a huge class A "hot" gas giant with rings and 1 moon suitable for mining that orbits the class G star Hiyru. Hiyru is virtually identical to SOL. Wyskoon itself is a huge gas giant (11 hexes across) almost identical to Saturn, with a 27 hex wide ring structure functionally identical to Saturn's. Normal gas giant (and rings!) planetary rules apply. The moon (Flying Dragon) is 35 hexes respectfully from Wyskoon's surface (roll randomly for direction) and is the size of a small planet- Flying Dragon may have appropriate installations on it. Portions of Flying Dragon's minefield (if any) may be placed in the rings as geometry dictates. as the debris in the rings rotate around Wyskoon at functionally the same rate as Flying Dragon does.

## S22 First Colony (updated)

The Planet in the Kzin Home Sector has a Masters-given name, but the Kzin could not pronounce it so they just call it 'First Colony' in their language (The Hero's Tongue, which even during a calm chat sounds a bit like a catfight). It is mostly M-type but half again the size (a two-hex planet) of their Alpha Quadrant homeworld, with a good stiff gravity, a pleasantly dry climate, and vast equatorial hunting savannahs and low forests stocked with challenging game and inviting scents. Its local Star, Kittehmus Prime, is an unremarkable main sequence Yellow F/G type, on the cool side, about 2 Earth AU distant and the 4th from Kittehmus Prime. Five tiny but bright moons grace First Colony's night sky from 11 to 25 hexes distant, not big enough to be a navigation hazard but good for night vision. For this reason, they have been unofficially named by the colonists per prey types from a Kzin night-hunting 'nursery rhyme'. For each, roll 1d6 for starting hexline and 1d6 for # of hexes along clockwise from starting hexline. Additionally, there is one big and curiously dark Small Moon they even more curiously call The Eye, orbiting between 8 and 10 hexes from First Colony (roll 1d6 for starting hexline, 1d6 for range (1-2=8,3-4=9,5-6=10) and 1d6 for # of hexes along clockwise from starting hexline). None of these moons has an atmosphere and none are tidally locked, and there is no planetary ring. The Eye's size, proximity and semi-elliptical orbit cause some legendary tides on First Colony, but there is plenty of high ground. Kzin on Recreation Cycle vie for seats on the Ocean Hunts: some benthic denizens here approach the size of Space Monsters. The Starbase orbits between the Planet and moon at L4, equidistant from First Colony and The Eye. All Master-supplied defenses are in place with more planned, now the Kzin are loosed to mark and defend territory.

## T07 Hoplishka-II

*Science Station and mining station on moons orbiting a gas giant.*

Hoplishka-II is a big class B gas giant with 3 moons suitable for mining that orbits the yellow class G star Octigaul which is similar to SOL. Hoplishka-II is a "cold" gas giant (does not generate internal heat), and is far enough from the star to be outside the biosphere. Hoplishka-II has no surface and is a gas giant (7 hexes across) similar to Neptune or Uranus, and normal gas giant planetary rules apply. The three moons (HO-1, HO-2 & HO-3) are 7, 14, 21 hexes respectfully from Hoplishka-II (roll randomly for direction), all are moon-sized. The moons can each have appropriate installations on them. ***The entire sector is dominated by extensive sunspot activity. All maps in the sector of Hoplishka-II (to include any approach battles) will be fought with sun spot activity per P11.0. Prior to the beginning of any scenario in the sector players roll a die: on a 1-2 solar flare activity is also present.***

## T16 Leafaters Run

*2x Ag Station Class M planet.*

Class M planet. This is a Major Colony, but on a very small planet: on the large side of between Earth and Mars. In game terms, it blocks lock-ons 80% of the time similar to how a small moon blocks them 50% of the time. It's very close to its sun (~100 hexes), but there are no terrain effects for this proximity as it's a very small star, too. The planet is also considerably less dense than one might expect it to be, almost sponge-like at certain depths. It has an atmosphere thick enough to require atmospheric flight and to provide ECM to ground units, but it's only even barely breathable starting about half a mile below the average surface. There are no seas, but a great deal of liquid and frozen sub-surface water. There are no moons, but there is an extremely faint ring (no game effect) that might once have been a moon (or two).

The Kzin who settled here quickly realized two things: the planet was already inhabited by a species of (for want of a better term) telepathic algae, and (2) the soil was rich with compounds they could use. The Kzin telepaths served as ambassadors, allowing two large colonies to be set up in sub-surface areas least useful to the algae but useful enough to the Kzin. Despite the colony being mostly subterranean, its two Ag stations are on the surface like normal. Local-politics-wise, the Kzin installations (surface and below) were allowed in spots where the dominant algaic faction wouldn't mind the disruption and drastic changes in soil characteristics, but where lesser factions would suffer and have to relocate (which, when you're algae, takes considerable time and effort). Other installations such as GBDP are purely on the surface, where the algae do not live (the atmosphere and solar radiation are toxic to them, there).

The colony's name came from first contact: consumption of ancient algaic films (what we might call a graveyard or even fossils, from the algae's perspective) caused near-fatal metabolic changes in the Kzin telepath unlucky enough to have SOMEhow thought to try it: think licking a psychoactive toad that chills you out but also makes you nearly fatally hyper. No non-telepath has been able to consume even a tiny amount of it without going mad or just burning out metabolically, even if sitting perfectly still or even if sedated.

The colony produces two main materials: (1) a safer extract of those algaic films found to greatly slow the physical degeneration of Kzin telepaths due to use of their gifts, and (2) a metallo-spice of sorts that allows increased foodstuff production by (since the Kzin insist on mostly raw meat, even if nowhere near prey and even if artificially produced) removing the need or complexity of a couple of steps in production and storage in the process of supplying ships far afield.

Installations: the DefSats are in a standard 2-high/3 low arrangement, the base orbits (currently) at a range of 5.

## **U08 Hell's Front Porch**

*Mining Station on Hell's Front Porch*

Hell's Front Porch is a super-Earth rocky planet orbiting unusually close to a very hot, very radioactive White Dwarf star. The White Dwarf star, named White Fire, is located in hex 0115 of a standard map. Planet Hell's Front Porch, a 7-hex (3 hex diameter) super-Earth, orbits at a distance of 20 hexes from the star and is initially placed in hex 2110. It is thought that the planet is a rogue, captured by White Fire's strong gravitational field.

White Fire produces the standard gravitational effects; units within 15 hexes will be pulled towards it according to the chart in P4.1. Being a White Dwarf, the distances in column two are halved so there is no attraction for units beyond 15 hexes from the star. White Fire produces a Radiation Zone in all hexes within 15 hexes of the star. Any units within the Radiation Zone are subject to all of the effects of that terrain, effective immediately upon entering the zone. White Fire produces a Heat Zone in all hexes within 20 hexes of the star. A Shuttle will only take damage from the Heat Zone if it is in the zone on impulse 12 or 24 when damage would be scored. Shuttles can dip in and out of the Heat Zone with no ill effects so long as they are not in the zone when damage is scheduled to be scored. White Fire produces the effects of a Black Hole listed in P4.2; halve the distances for all Black Hole effects.

Hell's Front Porch is tidally locked to its star, and no planetary bases may be placed on any facing of the two hexes closest to the star, nor on hex facings E or F on the two hexes on the 20-hex line.

This unique planetary geography has spawned a Mining Station on the side of the planet away from White Fire. As a result of its location so close to White Fire, the planet moves during the course of a scenario. Every 5 turns, the planet moves one hex in direction A; it is considered in a standard orbit

around the star and will alter its direction of movement to maintain the 20-hex orbital distance. The planet rotates as it moves, so the hemisphere facing the star never changes. Bases placed on hex facings A through D will never face the star.

Minefields may be placed around Hell's Front Porch, though any mines placed within 15 hexes of the star will inevitably be pulled into it. This effectively limits the radius of any minefield. Orbital bases may be placed inside the affected zones for Heat and Radiation should a player desire, since objects with Positional Stabilizers are not affected by the gravitational pull of White Fire.

## U09 Olberon

*2x Ag stations on class M planet*

Olberon is a class L planet orbiting the class G star Hyxres-IV which is nearly identical to SOL. Olberon is a normal world similar to Earth (1 hex planet), but with far less water. Oceans cover less than a third of the surface; there is a breathable atmosphere and a working biosphere. Normal planetary rules apply. The entire sector is dominated by a massive dust cloud that extends 1.2 million AU's out from the star. **All maps in the sector of Olberon (to include any approach battles) will be fought in a normal dust cloud per P13.0.**

## V07 Tithonus & Aurore

*Civilian Planetary Operations Base (R1.72) on a class M planet*

Tithonus & Aurore are the dominant planetary bodies of a binary star system. The two primaries are a G-0 and a M-0, both small red dwarfs with luminosities of IV and V, respectively. They orbit each other at an average separation of 1.400 AUs and an orbital period of 481 days. Tithonus is a brown dwarf, 5.25 times the mass of Jupiter, orbiting at a distance of 5.75 AU from the primary pair. A small Class K planet, Aurore, orbits Tithonus. Aurore has a mean diameter of 9450 km and exhibits a surface gravity .75 that of Earth. Aurore orbits Tithonus over the latter's poles, and is tidally locked to its larger neighbor and thus has a hot pole and a cold pole. Aurore does rotate once every 60 hours. The daylight hours are suffused with a modest red glow from the primaries; the nighttime hours are never really dark because of the sullen glow of Tithonus directly overhead.

In SFB terms, Tithonus is a gas giant with a diameter of 21 hexes. Aurore is located 33 hexes from Tithonus. **Tithonus radiates a great deal of heat, so a Heat Zone exists out to 35 hexes from the outer hexes of Tithonus' atmosphere** (it is this heat which makes Aurore habitable in the first place). Roll to determine which direction the planet starts in. Aurore will move during a scenario. Every ten turns it moves one hex counterclockwise and will remain at a constant 33 hexes from Tithonus. Aurore casts a shadow in the hexes behind it which neutralizes the last two hexes of the heat zone (which allows a safe approach to the planet for small craft). There are two other moons which orbit Tithonus, rather unimaginatively named Moon One and Moon Two. Moon One orbits at twelve hexes from Tithonus, and moves counterclockwise one hex every four turns. Moon Two orbits at 21 hexes from Tithonus, and moves one hex every seven turns. Determine the starting positions of the two moons just as for Aurore.

All three terrestrial bodies may be fortified in accordance with the standard campaign rules. No ground bases may be placed in Tithonus' atmosphere; it is too hot. Minefields may not be placed around the terrestrial bodies; they orbit Tithonus too fast. Minefields may be placed around the entire Tithonus system, outside of the 33 hex orbital distance of Aurore, though any such field will necessarily be quite thin. DefSats may be placed in orbit around Aurore normally, and their positions will automatically shift according to the movement of Aurore itself.

## V08 Conquest's Gate

*1x Mining Station, 1x Science Station; 1 each on two moons orbiting a Gas Giant*

Conquest's Gate is a massive class A "hot" gas giant with 4 moons suitable for mining that orbits the class W star Hyronimus. Hyronimus is a dying supergiant with its hydrogen layers blown away by stellar winds, thereby directly exposing its hot helium shell. Conquest's Gate itself is an enormous gas giant (14 hexes across) similar to Jupiter, and normal gas giant planetary rules apply. The four

moons (CG-1, CG-2, CG-3 & CG-4) are 9, 16, 24, 30 hexes respectfully from Conquest's Gate (roll randomly for direction), CG-1, CG-2 & CG-3 are moon-sized while CG-4 is the size of a large asteroid. The moons can each have appropriate installations on them. **The entire sector is dominated by frequent ion storms (thought due to the unstable stellar activity). Prior to beginning any scenario in the sector players roll a die: on a 1-3 an ion storm is present in all maps of the battle; on a 4-6 no ion storm is present at start, but roll again every turn thereafter and if a 1 is rolled, an ion storm enters the map from a randomly determined direction per P14.0. All ion storms in the Conquest's Gate sector generate a weak gravity wave per P14.0.**

## Y07 Hyurdju's Lair

*1x Mining Station on large asteroid*

Hyurdju's Lair is a "large" class D moon-sized asteroid, which sits in the asteroid belt of the red giant class M star S-31. Hyurdju's Lair is a featureless, airless moon, remarkable only in the richness of it's mineral deposits. Normal asteroid and moon rules (to include eligibility for defenses and installations) apply. *In scenarios merely place Hyurdju's Lair in the center of standard asteroid map, adding 6 large asteroids 2d6 hexes away and random direction.*