

William W. Connors

BAYERN

**GDW**

\$ 800

Man's monumental voyage to the Pleiades

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2300AD

GDW

The designer of this book wishes to extend his thanks to the Nashua Game Snobs and especially to Peter J. Lawson, Victor P. Haerinck, Jr., Douglas M. Leach, and J. Adam Bailey for their assistance in the development of **Bayern**.

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2300 AD™ -is GDW's trademark for its science-fiction role-playing game set in the 24th century.

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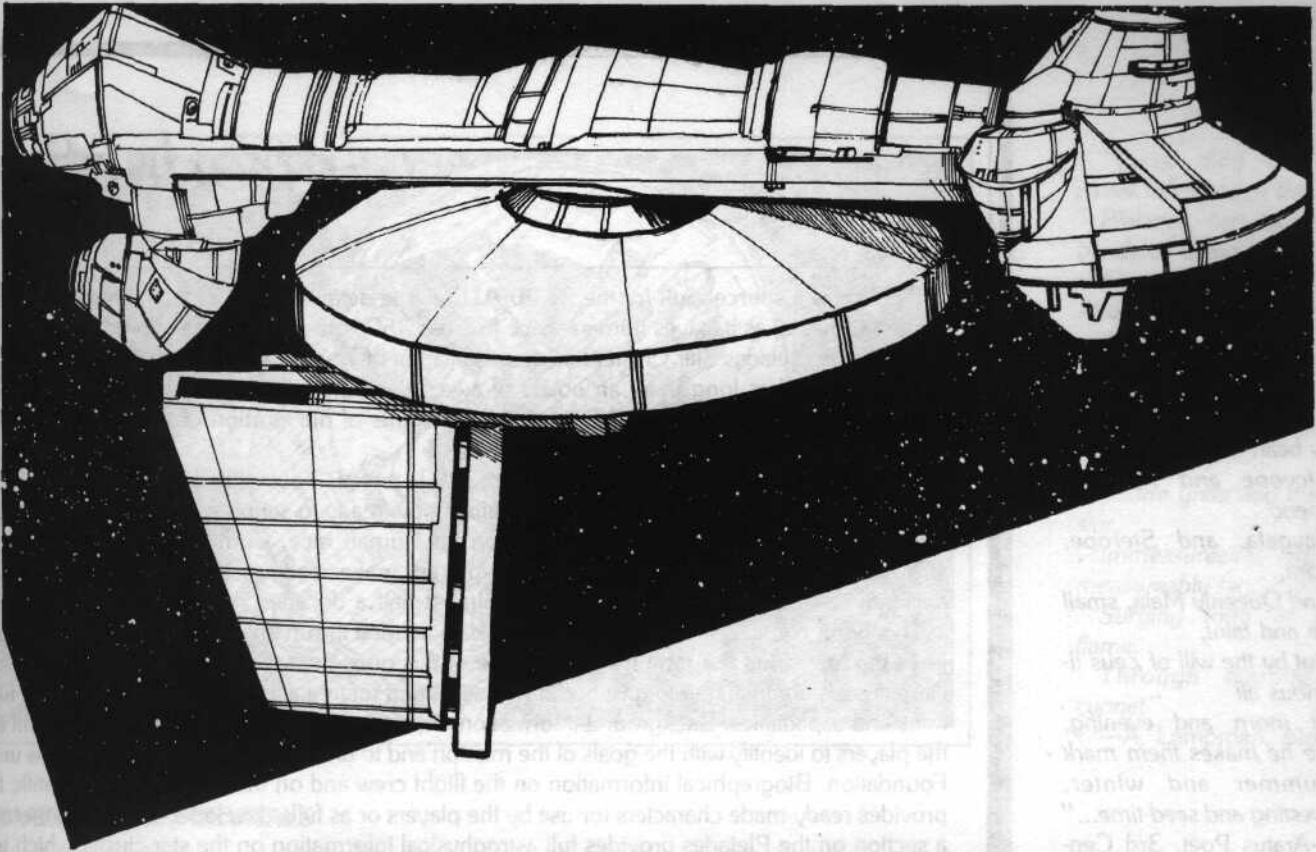


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Introduction

"...These the seven names
they bear:

Alcyone and Merope,
Celaeno,

Taygeta, and Sterope,
Electra,

And Queenly Maia, small
alike and faint,

But by the will of Zeus il-
lustrious all

At morn and evening,
since he makes them mark

Summer and winter,
harvesting and seed-time..."

—Aratus Poet, 3rd Cen-
tury BC

"Many a night from
yonder ivied casement,
ere I went to rest,

Did I look on great Orion,
sloping slowly
to the west.

Many a night I saw the
Pleiades,
rising thro' the mellow
shade,

Glitter like a swarm of
fireflies

tangled in a silver braid."

—Lord Alfred Tennyson,
Poet, 19th Century AD

Bayern is a Sourcebook for the **2300 AD** referee detailing the historic flight of the starship *Bayern* (Bavaria) as it leaves human space to cross 350 light-years of unexplored territory before reaching the Pleiades Star Cluster in the constellation of Taurus. Also known as M45, this group of young stars has long been an object of awe, worship, and inspiration for human cultures. As such, it stands out among the astronomical sights of our portion of the galaxy as a target for investigation.

After *Bayern's* aborted launch attempt in 2297, the AR-I completed repair and redesign on its vital stutterwarp drive system, and the ship is now ready to set off again for the haunting star group. Now, as the 24th century dawns on the human race, Commander Leopold Schmidt and his international crew of 110 brave explorers make ready to bid farewell to their friends and families for a journey which will last almost half a decade.

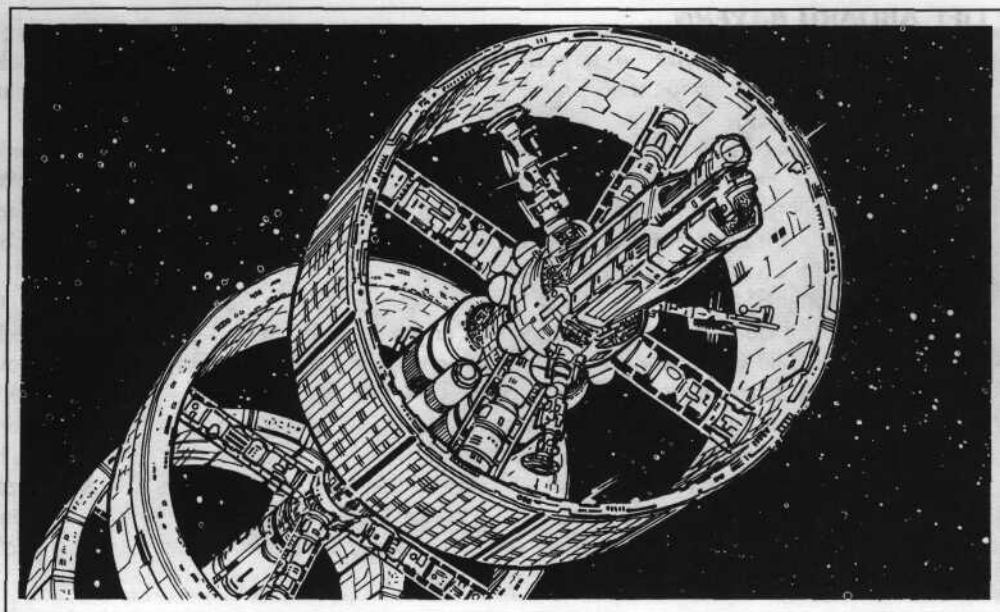
This book contains all of the background data needed to run an ongoing campaign of adventures based around the monumental voyage of this great craft. Details on the ship and its auxiliary vessels are included to give both the players and referee a full understanding of their limitations and capabilities. Background information on the Astronomischen Rechen-Institut will allow the players to identify with the goals of the mission and to understand more completely this unique Foundation. Biographical information on the flight crew and on the heads of the scientific team provides ready-made characters for use by the players or as fully developed NPCs. Furthermore, a section on the Pleiades provides full astrophysical information on the star cluster which is the destination of *Bayern*.

To provide inspiration for referees in the establishment of a **Bayern** campaign, two sample adventures have been included. One of these, *The Daughters of Atlas*, deals with the arrival of *Bayern* at her destination, while the other can be set either en route to the Pleiades or during the return leg of the mission.

WORDS OF THANKS

This book is not the product of a single mind. In a way, it began with the publication of **Traveller: 2300** by GDW. When Rob Caswell and Tim Brown provided overviews of both the AR-I and **Bayern in Challenge**, it became clear to me that a book of this nature would be interesting to many people. With the additional help of Gary Thomas, Deb Zeigler, and (especially) William Keith, **Bayern** was put together piece by piece. I hope that it will provide you with an interesting, exciting, and educational campaign.

WARNING: IN ORDER TO PRESERVE SUSPENSE, ONLY
REFEREES SHOULD READ BEYOND THIS POINT



ADVENTURE OVERVIEWS

In addition to the source material which **Bayern** provides for the establishment of an ongoing campaign based around the voyage to the Pleiades, a brace of sample adventures have been included to help the referee get started.

It is important to remember that *Bayern* is not only nonmilitary in nature, it is totally unarmed. Thus, an adventure in which the crew was confronted with a violently hostile alien race who opened fire on them at once and would not listen to negotiations would probably be very short and somewhat frustrating for the players. *Bayern* adventures should stress scientific problems and investigations of the unknown as their primary focus.

For those who find this constraint to be too limiting, *Bayern* can easily be modified to include a light offensive and defensive capability, although this is somewhat out of character for AR-I missions and may take away from the "feel" of the campaign.

DEATH THROES

Written by Timothy B. Brown, the first adventure presented in **Bayern** takes place during the terribly long and uncharted voyage to the Pleiades—far from *Bayern's* origin as well as its destination. Routine investigation of a system indicates that there is, or at least was, intelligent life present. Closer examination reveals that a mechanistic civilization on a garden world in the system has nearly bombed itself out of existence. The best bet for investigating the race further is for *Bayern* to travel to one of the moon bases, where the crew will find a stranded colony of aliens at odds against their own war machines. Some difficult decisions will have to be made by the crew of the *Bayern*—especially by the captain—when mission directives interfere with aid to the struggling colony.

THE DAUGHTERS OF ATLAS

This adventure, which was scripted by William H. Keith, Jr., takes place in the Pleiades itself and is intended as the climax of the mission. The Astronomischen Rechen-Institut has discovered evidence of very unusual goings-on amid the stars of the M45 cluster. It is this aspect which has been at the heart of planning for the *Bayern* mission, although that fact is known only to a very few characters at the start of the game. As the scientific crew of the starship makes their routine surveys of the Pleiades area, they will eventually come to the conclusion that the unusual happenings here are guided by an alien intelligence far beyond our understanding. Further investigation in the area will result in limited contact with very alien beings which are vastly superior to humanity.

"Canst thou bind the
sweet influence of the
Pleiades, or loose the
bands of Orion?

Canst thou bring forth
Mazzaroth in his season?

Or canst thou guide Arc-
turus with his sons?"

-Job 38: 31-32

"...the great and burning
star,

Immeasurably old, im-
measurably far,

Surging forth its silver
flame,

Through eternity...Al-
cyone!"

—A. Lampman, Alcyone

SUBTLE HINTS

The referee should endeavor to drop subtle hints during the course of the campaign, especially if the player characters do not at first know about AGRA. Cosmologists aboard ship might be overheard discussing anomalies in the spectra of the brightest Pleiades, or changes in the nebulosity surrounding Maia and Me-ropo. Since, in one respect, travelling towards the Pleiades is like travelling 400 years into the future, changes occurring during those four centuries will be compressed into the length of the voyage in a manner similar to time-lapse photography. Thus, changes in spectra or anomalous activities with nebulosities will be more apparent as the voyage continues, and these changes will become the subject of talk among the expedition scientists.

If the player characters know about AGRA from the beginning, of course, such hints are not necessary for unfolding the story. However, the players might be characters charged with keeping the anomalies secret...and that could lead to trouble as they try to stop the mission scientists from discussing the strange things they are discovering!

LIFE ABOARD BAYERN

Although the designers of *Bayern* have done what they can to make the crew as comfortable as possible during their trip to the Pleiades, it is impossible to wholly escape the problems inherent in such a voyage.

Perhaps the most difficult aspect of life aboard a starship is the lack of free space. When only the flight crew is active, *Bayern* is spacious enough. But when the ship is engaged in scientific studies, and the entire crew has been revived from cryogenic suspension, it is quite crowded. Areas that once were open and seldom used will become packed with people, and it will be difficult indeed for anyone to find a place of total solitude.

Another important aspect to consider is the fact that there will be no shore leaves for quite some time. Only if *Bayern* were to come across an environment which seemed to be totally free of hazards would Commander Schmidt even consider allowing nonessential crew to join a landing team. As such, those aboard *Bayern* are certain to develop a sense of "cabin fever."

Bayern's computer has a complete library of entertainment software and is constantly at work creating new and better versions of favorite programs while eliminating older, unused ones. In a sense, it might be thought of as a constantly revised video arcade which has a steady supply of original and unusual games. In addition, the crew of *Bayern* has several professional and amateur artists who try to keep up morale with shows and exhibitions. A number of the ship's company even plan on forming a small theater group to stage shows for everyone.

It has been estimated that an average crewmember who spent his or her entire off-duty time engaged in reading (and never slept) would be able to travel to the Core of the Milky Way galaxy and back again before running out of material.

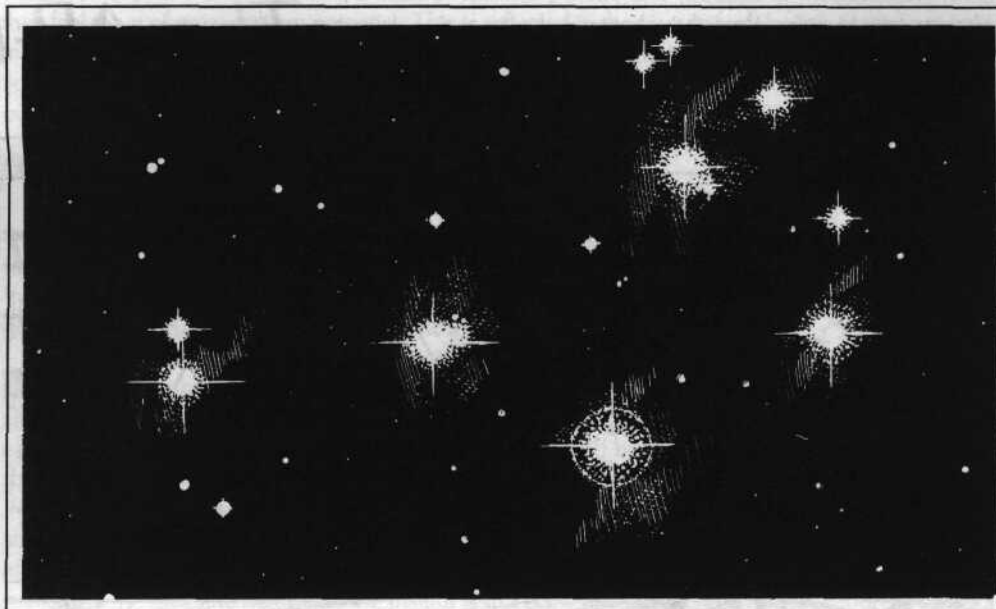
Continuing education is also considered important by the sponsors of the mission. Throughout the entire voyage, classes in various subjects ranging from astrophysics to Zen will be taught either by the computer or by ship's personnel.

Bayern's computer also has a wide variety of books available. In fact, it has as much reading material available as the Grossebibliothek in Heidelberg or the Library of Congress in America. It has been estimated that an average crewmember who spent his or her entire off-duty time engaged in reading (and never slept) would be able to travel to the Core of the Milky Way galaxy and back again before running out of material. When confronted with this fact, Commander Schmidt stated that reading would be a required option of their physical maintenance programs.

In addition to mental development, every member of the crew has a regular program of physical fitness which has been tailored to their specific physical and psychological (exercise relieves stress) needs by Dr. Bernhardt, the ship's chief medical officer. Lack of adherence to the prescribed program is a serious violation of standing orders (and contract) and can result in disciplinary action. After all, the AR-I doesn't want the crew of her finest starship to return in dreadful physical condition. It would look bad in the press.

In order to promote physical exercise and development, *Bayern's* aft spin habitat is equipped with a complete gymnasium and exercise facility. For zero-gravity athletes, there is a similar area located in the central core adjacent to the pylons which support the central ring. *Bayern's* chief computer officer, Nichole St. Nicholas, has agreed to teach a special class in zero-gravity combat and acrobatics for interested members of the crew. Registration among the male members of the flight team has been high, but it is unclear whether that is due to an interest in the subject matter or in the instructor.

Referees and players who are trying to get a feel for what life aboard the starship *Bayern* is like are advised to think of it in terms of an oceangoing vessel. While as much space as possible has been devoted to crew recreation, it is still quite cramped. Although the analogy is somewhat loose and *Bayern* is slightly roomier, it should serve to get the picture across.



WHY GO?

The sponsors of the *Bayern* expedition have several motives for exploring the Pleiades, and most of these reasons will be known to the player characters before they embark on their mission. Actually, the reasons for the mission are less clear to the general public; it is important to the AR-1 to encourage public support without boring them with details. These reasons are summarized below.

Because It's There: The Pleiades represent an easily described and easily popularized goal: the centerpiece for an expedition which will gain widespread media exposure for the *Bayern* and the various corporate groups and industries which built her. This is similar in concept to a sports equipment company paying an athlete to compete in a widely broadcast event while wearing or using that company's equipment replete with highly-visible corporate logos. "First carried aboard the *Bayern* in her epic voyage to the Pleiades" is likely to be a popular and powerful sales pitch to the near purveyors of *Kenntnis* landers and orange-flavored, reconstituted breakfast drink.

Because It's a Long Way: 410 light-years is a much longer voyage than any made by man heretofore. With the Pleiades as a target, *Bayern's* newly designed stutterwarp drive system will get a thorough testing. Success will popularize the concept of long-range, deep galactic exploration, as well as provide the drive manufacturers with the invaluable advertising of their product as described above.

Because It's Young: M45 is the closest open galactic cluster which is in an extremely early stage of its evolutionary development. The Hyades are closer (130 light-years) but at least four times older, with few B-class giants and numerous white dwarfs. Cosmologists interested in the evolution of stars, the creation and aging of clusters, and related galactic processes would like a close look at a number of the Pleiades members. It is expected that numerous stars within the cluster are in the process of accreting planetary systems of their own, giving scientists a close look at planetary genesis. Also, astronomers would like a close look at, and precise measurements of, the nebulosities surrounding the cluster's central stars, as well as observations of the magnetic fields which are shaping them.

Because It's About to Explode: The youngest, hottest members of the Pleiades have reached the point in their evolution where they will begin throwing off large amounts of mass either in successive outbursts or as supernovae. (Indeed, Pleione may already have begun this process.) Cosmologists interested in how stars evolve and die are anxious to observe the process close up. Instruments placed in orbit around several of the brightest stars, coupled with close-range observations of those stars, will tell us much about stellar evolution.

CODE AGRA

There is a top secret motive for voyaging to the Pleiades. This motive is expounded on in the section of this module entitled Code: AGRA. It is left to the referee's discretion whether the player characters know about AGRA before the mission departs Earth, whether they are informed about AGRA en route, or whether they learn of AGRA on their own later in the mission.

While en route to the star cluster, a number of minor mysteries will come to the attention of Bayern's cosmologists. These include unusual shifts in the spectra of Alcyone, Maia, and Pleione, gravitational anomalies in the form of unusual gravitational waves apparently emanating from Merope, Maia, Alcyone, and Electra, and, possibly, inexplicable bursts of radiation at radio and infrared wavelengths.

The AR-I

AR-I TIMELINE

2144: Official founding of the Astronomischen Rechen-Institut

2182: Detailed survey of Beta Canum system begins

2188: First Deep Penetration race among ESA members

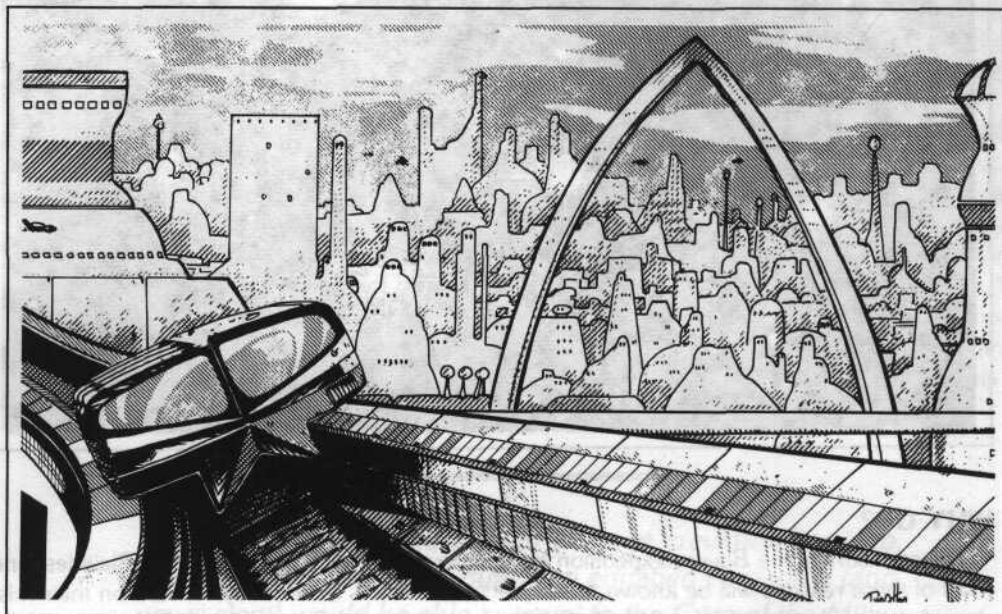
2189: First edition of *Das Nachschlagewerk der Sternen* published

2198: Second Deep Penetration race among ESA members

2202: Last survey mission of Beta Canum system

2205: Third Deep Penetration race among ESA members

(Continued.)



Although there is a great diversity of research foundations in human space, each has developed its own style or method of operation to accomplish its goals. The Royal Society is, as one might assume, known to be rather stuffy, conservative, and, to be blunt, downright British. The North American Research League, on the other hand, is vocal, radical, and, in the opinion of many corporate and political leaders, often obnoxious.

No other foundation, however, can even begin to compare itself to the Astronomischen Rechen-Institut when it comes to sheer showmanship and flamboyance. In the past, many groups which shared its dream of "pure research for its own sake" had found little or no public, corporate, or political support. In order to defeat this potential setback, the AR-I always works with two points in mind.

The first of these is simple economics. In short, the AR-I always considers the potential monetary gain which a venture might provide for the foundation itself. In cases where there is no direct commercial potential, such as the *Baade* mission to the pulsar CP 0950 + 08 in 2286, they consider possible spin-off projects. Using the *Baade* mission as an example, the project leaders knew that information acquired on the pulsar was unlikely to provide rapid monetary return, so they focused much of the public's attention on the newly designed aspects of the ship itself. These included the AR-I's most advanced stutterwarp drive systems and their highest level of computer technologies. Both of these fields proved to be big money-makers for the foundation.

The second of these concerns is showmanship. The AR-I is well-aware that the *average* media consumer in 2300 has seen a great deal of film footage on the "*Perils of Space Exploration*" and the "*Never-Ending Struggle of Life on the Frontier*", so they try to ensure that all of their programs have the highest profile possible in order to outshine the competition. Among the press, it is well-known that an AR-I briefing is certain to be a outstandingly entertaining affair, if nothing else. As such, they are always well-covered. As an example, the publicity films for the *Entferntest* mission to the Core always begin with a sweeping (and somewhat disturbing) high-speed race across the galactic disc and down into the Core for a spectacular scene of matter being annihilated by a magnificent black hole of unfathomable size.

There are few limits on the types of projects which interest the AR-I, but those that do exist are

rigidly enforced. For example, the Institut will not pursue any process of investigation which they feel to be of great military potential. This is reflected in the foundation's policy of total neutrality in all forms of conflict (whether military, social, or economic in nature). The degree of their dedication to this principle can be seen by the foundation's increasing independence even from its own roots in Germany.

HEADQUARTERS

Just as there are few groups in known space which are as eye-catching as the AR-I, there are few structures as majestic as the Great Arch which houses their main offices on Earth. It has been said, in fact, that it is far more impressive to stand beneath the Arch than to stand in the shadow of the majestic beanstalks on Earth or Beta Canum Venaticorum. The French government, it might be noted, says that this is not the case.

Located on a large plot of land donated to the fledgling AR-I just over a century ago by the German philanthropist Use Kristian, the towering structure of glass and alabaster stands in the shape of a mighty Gothic (pointed) arch almost half a kilometer high. There are 165 floors in each of the Arch's two towers and a dozen more located beneath the lush gardens which surround them.

Scattered around the main complex are dozens of administrative and research facilities which, although often spectacular in their own right, are dwarfed by the mammoth construct. Over half of the AR-I's 500,000 members live and work in and around the Great Arch.

Beyond the property owned by the Institut is the sprawling community of Heidelberg. Although this city was devastated in the limited nuclear exchanges which signalled the last phases of the Third World War at the close of the 20th century, it has been totally rebuilt. Superior planning and administrative regulations on the part of the city's governmental officials have enabled this metropolis to represent the perfect blend of traditional European charms and modern technological comforts and services.

Chief among the fringe benefits citizens of Heidelberg receive from the proximity of the Institut headquarters is an educational system tied to that great organization's vast wealth and knowledge. The primary and secondary schools located in the city are reputed to be among the finest in the world, drawing upon AR-I computer library information and the many skilled and knowledgeable lecturers who pass through the headquarters. The children of Heidelberg enjoy a superior education for these reasons, and often have a better grasp of the far reaching effects of interstellar exploration and colonization than their peers.

There are also several semi-independent universities in the Heidelberg area which similarly receive greater assets from the Institut. Grants and special educational plans are always in place to promote and encourage superior students, gearing them from their high school and college days to be vital members of the Institut's organization. Well over 20 percent of the AR-I's personnel receive their higher education in the Heidelberg area.

Many colleges and universities near the Heidelberg AR-I headquarters are respected world- and colony-wide. This is but a brief list.

Heidelberg Universitet: Specializing in all areas of study, Heidelberg Universitet was founded in the 14th century, destroyed in 1998, and rebuilt and opened in 2005. In all areas of the humanities, Heidelberg is a respected university.

Rhein Institut: The Rhein Institut specializes in social and political science, turning out such respected graduates as Alfred Goebel (2210-2278, political writer and activist) and Hiram P. Stringfellow (b. 2234, current speaker of the House of Representatives in America). The Rhein Institut also boasts of having the most complete library dealing with political and historical issues.

University of Illinois-Heidelberg Campus: One of the great computer sciences schools in human space, the University of Illinois has branched out to have over 12 campuses around the world. This facility at Heidelberg was constructed in 2238 with assistance and grant money from the AR-I, anxious to put high powered super computing technology to the tasks of interstellar exploration and learning.

Jürgen Zuhr Teknisches Schule: Named for the renowned Bavarian statesman of the 22nd century, the Jürgen Zuhr Teknisches Schule is an engineering college of the highest caliber. Graduates are in demand in all aspects of state of the art materials and engineering science. Most of Bayern's construction was originally theorized by the Schule, and its members supervised the many technical aspects of her construction.

2231: Construction on Kolonie Zwei begins (Hochbaden system)

2261: Entferntest probe launched to the galactic core

2262: Outpost established to study Eber ruins on Daikoku

2286: Starship Baade arrives at pulsar CP 0950 + 08

2287: Halogenic life discovered on Disea (Vogelheim system)

2291: First capture of quantum black hole for study

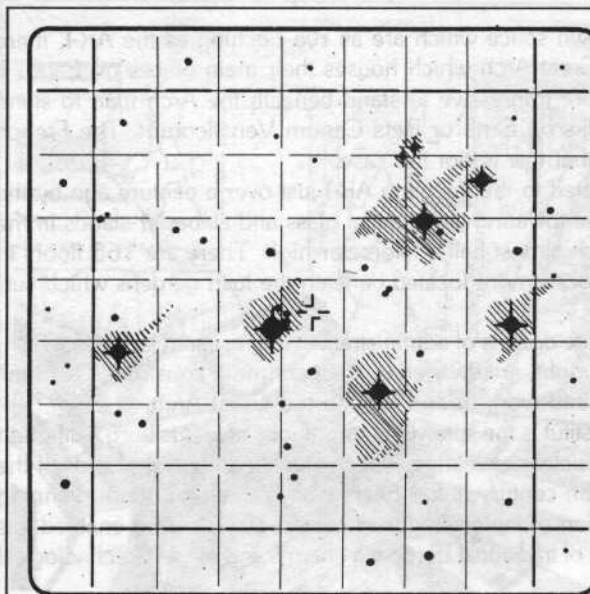
2297: Bayern's launch date postponed until 2301 following accident

NEBULOSITIES

Several of the brightest stars within the central cluster are embedded in swirls of nebulosity: hazy patches of dust which mark the remnants of the nebula from which the cluster condensed. The clouds glow a frosty blue-white by reflected light. Long, photographic time-exposures show strands and smudges of the nebula throughout the cluster's central regions. The clouds are most pronounced around Maia, Merope, and Electra.

Of particular interest is the fact that the nebulosities appear to be aligned in parallel, slightly curvy streaks, giving the appearance of high altitude cirrus clouds on Earth. The Merope cloud has an area of approximately 2x3 light-years and is catalogued as NGC 1435. It is not known what forces have acted to create the streak effect.

The Pleiades



SUBJECT: Pleiades Star Group
DISTANCE: 350 Lt. Years
DATE: January 3, 2301
TIME: 5:17 PM
ANGLE: 23° 7' 16" ASPCC.

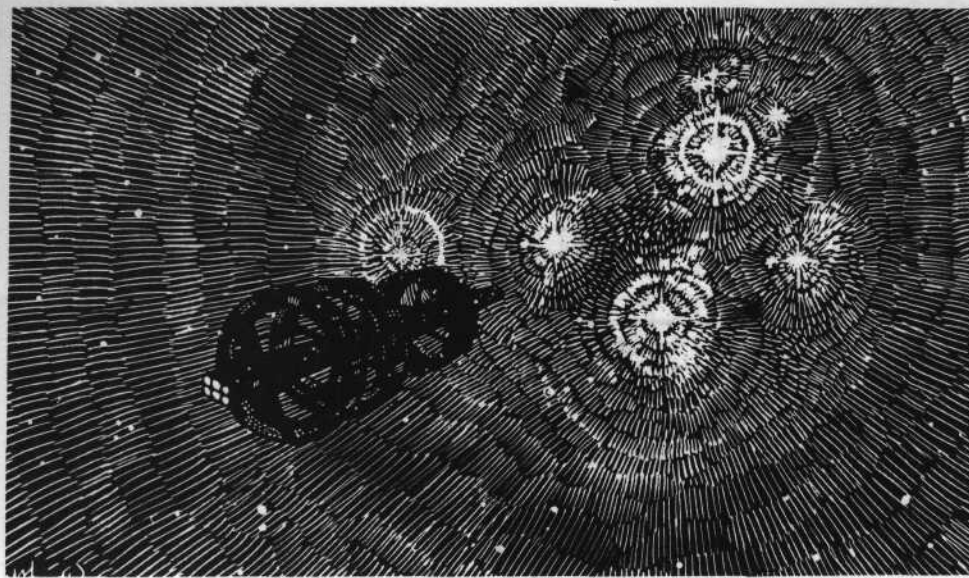
AR-I

The Pleiades have long been a source of wonder and inspiration to humans who observe them in the fall and winter skies of Earth. The name is probably derived from the Greek *pleios*, meaning "many," though a more romantic tradition holds that the name is derived from *pleie*, "to sail," an indication that the Pleiades' rising marked the beginning of the safe months for navigation in the ancient Mediterranean. They are visible as a fuzzy patch on the back of Taurus, the constellation of the bull. Individuals with sharp eyes can make them out as six, eight or more closely spaced stars arranged in a shape sometimes called "the Little Dipper," though that name is properly reserved for the stars of Ursa Minor. When Charles Messier assembled his catalogue of deep sky objects not to be confused with comets, the Pleiades were 45th on the list, and so are also known as M45.

Ancient myth and legend is rich with lore about the Pleiades. In Western tradition, they were the seven daughters of Atlas saved from the amorous pursuit of Orion by being transformed into a flock of pigeons by Zeus. One persistent tradition drawn from myths on both sides of the Atlantic links their midnight culmination in mid-November with the sinking of lost Atlantis.

The brightest of the Pleiades have been given the names of Atlas and his daughters. In order of brightness, they are Alcyone (pronounced "al-SIGH-oh-nee" and also known as Eta Tauri), Atlas, Electra, Maia (MY-uh), Merope (MER-oh-pee), Taygeta (Tay-IJ-eh-tuh), Pleione (PLE-oh-nee), Celaeno (Si-LEE-no), and Asterope (A-STER-oh-pee). The name Pleione does not figure in the original myth, but is probably drawn from the Greek word for "full" or "many."

The Pleiades have, since antiquity, been numbered at seven, which has given rise to a minor astronomical mystery. Earthbound observers can usually make out either six or eight stars in the group, due to the fact that eyes good enough to spot seven stars are good enough to see eight. This has given rise to the legend common among the astronomical lore of cultures all over the world, of the "lost" Pleiad—a member of the cluster which must once have been brighter than it is now. Greek myth suggests that the missing Pleiad is Electra, who fled when the city of Troy, built by her son Dardanus, was burned. A modern theory holds that Pleione, known to be a variable possessing a shell of gas thrown off by past eruptions of its surface, may once have



been slightly brighter and hence visible to human eyes unable to make out Celaeno, the next dimmer star of the cluster.

COSMOLOGY

The Pleiades comprise an extremely young star cluster. Unlike the huge, ancient and well-known globular star clusters (such as M13 in Hercules), M45 is an open star cluster—a family confined to the galaxy's spiral arms and representing some of the galaxy's youngest stars. The cluster's individual stars condensed out of the dust and gas of a stellar nebula beginning approximately 150 million years ago, while the brightest members of the cluster, those visible to the naked eye from Earth, are only about 20 million years old.

Though the unaided human eye can make out only a handful of the cluster's brightest members from Earth, even a small, wide-field telescope reveals hundreds of stars in a region nearly seven degrees across—14 times the apparent width of the Moon. About 500 stars are linked to the cluster's family by their shared motion throughout the galaxy, all occupying a sphere 35 to 40 light-years across. The nine brightest stars form the heart of the cluster. Embedded in vast clouds of dust illuminated from within, all lie within a region only seven light-years across.

Though the unaided human eye can make out only a handful of the cluster's brightest members from Earth, even a small, wide-field telescope reveals hundreds of stars... >

None of the brightest stars are expected to possess planets, of course. All are of spectral class B and far too big, too hot, and too young to have evolved planetary systems, though asteroids (chunks) and belts of dust and asteroidal debris are certainly possibilities.

The cluster contains other stars than B-class giants, including every main sequence spectral type down to class M red dwarfs, but none are old enough to have formed worlds with ecosystems of their own. The mission leaders are aware of the possibility that older star systems, possibly systems possessing Earthlike worlds, may exist within the boundaries of the cluster, but the discovery and surveying of such systems is not the primary objective of the *Bayern* expedition.

APPEARANCE

The view from anywhere within the cluster is spectacular. From within the central core of the cluster, all 10 of the brightest stars would appear brighter than Venus when at its brightest as seen from Earth. At least 50 other stars would be as bright as or brighter than Sirius, and the naked eye would be able to make out the streaked and filamentary tracteries of the nebulae.

The brightest stars rotate quite rapidly on their axes, and from close up, all would show distinct flattening at the poles. Pleione, especially, would offer a dramatic sight to explorers. Rotating 70 times more rapidly than Sol, it would appear almost saucer-shaped, embedded in a disk of hot gas thrown off in much the same way as water from a lawn sprinkler jet.

Many of the Pleiades are multiple stars. Asterope consists of two widely separated stars. Alcyone and Taygeta are extremely close spectroscopic binaries, and many of the lesser stars are double, triple, or even quadruple systems.

PLANETARY INFORMATION

Before they set off on their mission to the Pleiades, the player characters of the Bayern mission should all be aware that it is not expected that they will discover planets in the cluster. The stars of the Pleiades are too young (and the principal members too large and hot) for planets—much less for the evolution of the life forms required to convert a poisonous, pre-biotic world into a habitable, Earthlike world.

It is possible that older stars, some possessing Earthlike worlds, might exist within the boundaries of the cluster. The discovery and survey of such systems would be of additional value to the Bayern mission sponsors, and the possibility of discovering such worlds is one reason that the Bayern is equipped with a small flotilla of space planes and landers. However, the primary mission of the Bayern is to survey the cluster as a whole and to make astronomical observations of the cluster's stars—not to discover Earthlike worlds.

Star	Name	Spectrum	X	Y	Z
25	Eta Tauri, Alcyone	B7 III	0	0	0
27	Atlas	B8 III	-4	-3	-1
17	Electra	B6 III	6	3	-1
20	Maia	B7 III	5	6	2
23	Merope	B6 IV	3	-5	-2
19	Taygeta	B6 V	7	-4	4
28	Pleione	B8 var	-4	1	0
16	Celaeno	B7 IV	7	-1	1
21+22	Asterope	B8 V, B9 V	5	-2	4
18	—	B8 V	7	9	9

Each unit on the X, Y, or Z axes represents one-half of a light-year. The distance between any of these stars can be determined by using the formula:

$$D = C(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2$$

The final result should be divided by two to give the answer in light-years. For example, the distance between Atlas and Electra is:

$$C(-4 - 6)^2 + (-3 - 3)^2 + (-1 + 1)^2 = 100 + 36 + 0 = 11.66 \text{ units, or } 5.83 \text{ light-years.}$$

COSMOGRAPHY

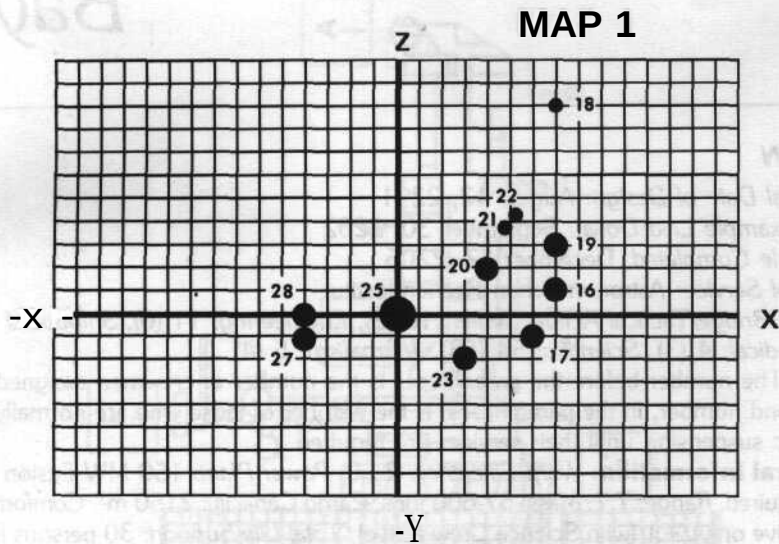
Two maps are presented to show the relationship of the principal Pleiades to one another. Map 1 presents the cluster as viewed from the direction of Earth and shows the familiar (if inaccurately identified) "Little Dipper" pattern. Map 2 shows the same area in the same scale, but viewed from an angle 90 degrees removed from that of Map 1, looking "down" on the central portion of the cluster from above the galactic plane. In terms of the X, Y, and Z axes, Map 2 shows the familiar presentation with the X-axis running left (negative) to right (positive), and the Y-axis running up (positive) and down (negative). Map 1 shows the X-axis running left to right, and the Z-axis running up (positive) and down (negative). In both views, Earth is in the direction of negative Y.

It is possible that older stars, some possessing Earthlike worlds, might exist within the boundaries of the cluster. The discovery and survey of such systems would be of additional value to the Bayern mission sponsors, and the possibility of discovering such worlds is one reason that the Bayern is equipped with a small flotilla of space planes and landers.

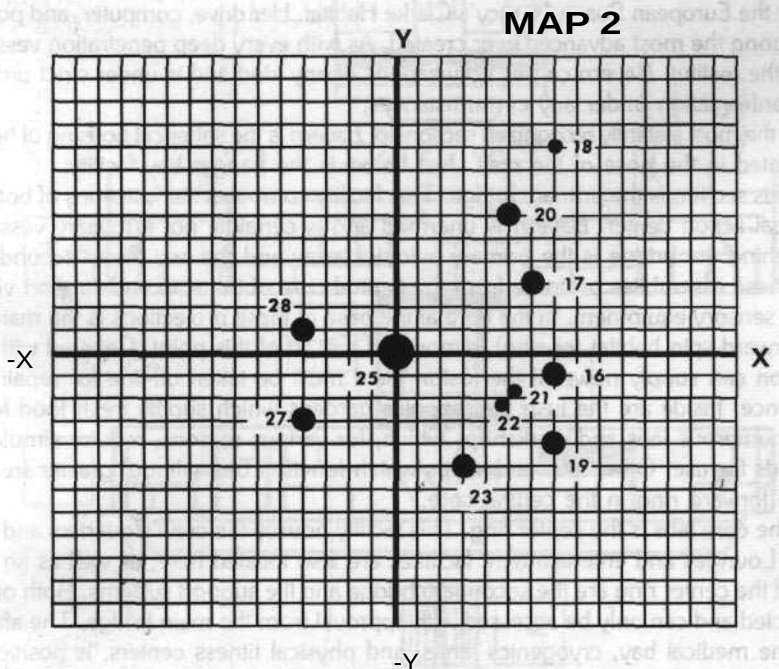
Neither map shows all of the approximately 500 stars associated with the cluster. Those stars included on the maps are the brightest, hottest members of the cluster, and consequently, those of special interest to the Bayern expedition.

The other stars of the cluster can be mapped by either the referee or the players, using tables and rules presented in the section of this module entitled Star Mapping. Part of Bayern's mission is the discovery and mapping of all of the stars within the cluster. This, obviously, does not mean the Bayern must visit each system, though many will be stutterwarp stops along her journey.

The principal stars of the Pleiades are listed below, together with their spectral types and X, Y, and Z coordinates on a three-dimensional map centered on Alcyone.



**Pleiades as viewed from direction
of Earth**



**Pleiades as viewed from above
Galactic plane**



Bayern

FALSE START

Bayern was scheduled to begin her trek in 2297. While making a brief shake-down cruise prior to departure, an accident disabled the craft. A faulty umbilical line failed to detach from the ship, and Bayern's computer system registered the mass of the orbital facility to which the craft was docked as being a part of the ship itself. When the main drive was engaged, it tried to move both objects. Consequently, the overloaded stutterwarp suffered a critical failure and exploded, destroying itself and doing severe damage to one of the other units in the process.

After minor repairs, Bayern limped back to Earth and returned for repair by the team which had built her at the orbital Clarke Habitat. While she was being repaired, the designers at Polarstern Architekten reexamined various aspects of the ship's design and instituted some additional changes.

Fully repaired and partially redesigned, Bayern once again makes ready to boldly head off into the mysterious cosmos.

BAYERN

Original Date of Design: August 12, 2291

First Example Laid Down: September 30, 2202

Example Completed: December 12, 2206

Fleet of Service: Astronomischen Rechen-Institut

Crew: Bridge/Tactical Action Center: 18 (2), Engineering: 11 (0), Shipboard Vessels: 18 (18), Medical: 4 (3), Scientific: 54 (53), Journalism: 5 (4)

Note: The number before the parentheses is the number of crewmen assigned to Bayern. The second number, in the parentheses, is the number of those who are normally retained in cryogenic suspension until their services are required.

General Information: *Warp Efficiency:* 2.50, *Power Plant:* 150 MW Fusion Plant, *Fuel:* None required, *Range:* 7.7, *Mass:* 57,600 tons, *Cargo Capacity:* 2150 m³, *Comfort:* + 1 (Flight Crew active only)— 1 (with Science Crew active), *Total Life Support:* 30 persons for five years plus 80 persons for three years, *Price:* Lv854,763,000.

Additional Information: *Accommodations:* 30 at 50 m³ plus 80 at 25 m³ (in spin habitats), *Sensors:* Navigational radar, deep system scanner, gravitational scanner, advanced cartographic sensors, advanced life sensors, active sensors (range=16, cross section = 0), passive sensors (range=12, cross section = 10), *Auxiliary Craft:* Two landers, two space planes, five EVA bugs, five remote surface probes, 10 interstellar probes, 12 message torpedos, *Hull Hits:* 15/30/60, *Power Plant Hits:* 20/100, *Armor Value:* 0, *Weapons:* None, *Screens:* None.

BACKGROUND

Bayern was constructed by Polarstern Architekten, the AR-I's shipbuilding division, in Earth orbit near the European Space Agency's Clarke Habitat. Her drive, computer, and power systems are all among the most advanced ever created. As with every deep penetration vessel manufactured by the Institut, Bayern carries no weapons of any kind and is under strict orders to avoid hostile confrontation under any circumstances.

One of the most instantly recognized sections of Bayern is the spherical housing of her navigation radar located in the nose of the craft. Just below is the hangar bay facility.

Aft of this section is the primary bridge. This facility combines the functions of both the bridge and tactical action center. Bayern is unarmed and is certainly not a military vessel.

Just behind the bridge is the primary avionics array and the two lesser secondary avionics arrays. These assemblies protrude from the central core of the ship and support virtually all of Bayern's sensory equipment. In the core at the base of these projections is the main computer.

The forward spin habitat (or ring) is mounted just aft of this point. Covered with solar cells, this section can supply power if the fusion plant must be taken off-line for repairs or routine maintenance. Inside are the lush hydroponics gardens which supply fresh food for the crew, and the numerous labs and workshops which, for various reasons, require simulated gravitational fields for use. Other labs and shops which function best without gravity are located just aft of the forward ring in the central core.

Aft of the core labs is the center ring. This facility houses the crew's quarters and recreational facilities. Lounges and entertainment facilities are also located here, as well as an auditorium.

Behind the center ring are the secondary bridge and life support systems. Both of these areas are restricted and can only be accessed with approval from the main bridge. The aft ring, which houses the medical bay, cryogenics tanks, and physical fitness centers, is positioned around the next section of the core. Like life support, access to the cryogenic tanks is restricted.

Bayern's fusion plant, thermal radiator fins, and four stutterwarp drive units make up the tail end of the ship. The purpose for multiple stutterwarps is twofold. First, it prevents the failure of a single unit from crippling the ship. Second, it allows the ship to make a single run of up to 15.4 light-years between stars on the outbound and inbound legs of its voyage.

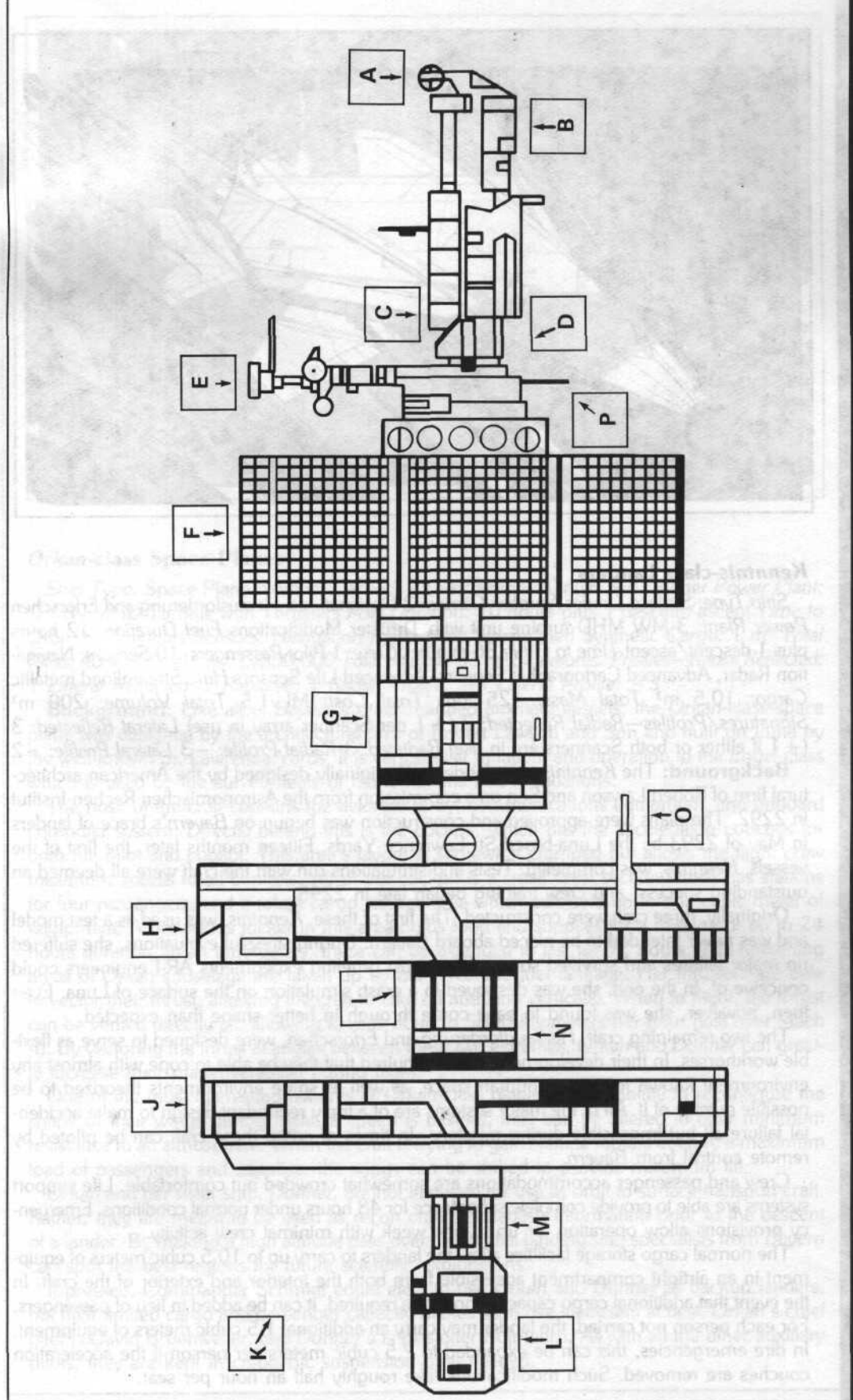


ILLUSTRATION KEY

A: Navigational Radar
Housing

B: Hangar Bay

C: Primary Bridge

D: Computer Core

E: Main Avionics Array

F: Forward Spin Habitat

G: Zero-G Labs and
Workshops

H: Central Spin Habitat

I: Life Support Equipment

J: Aft Spin Habitat

K: Thermal Radiators (4)

L: Drive Section

M: Nuclear Fusion Plant

N: Secondary Bridge

O: Tertiary Avionics Array

P: Secondary Avionics Ar-
rays (2)

ROBERT PERCY

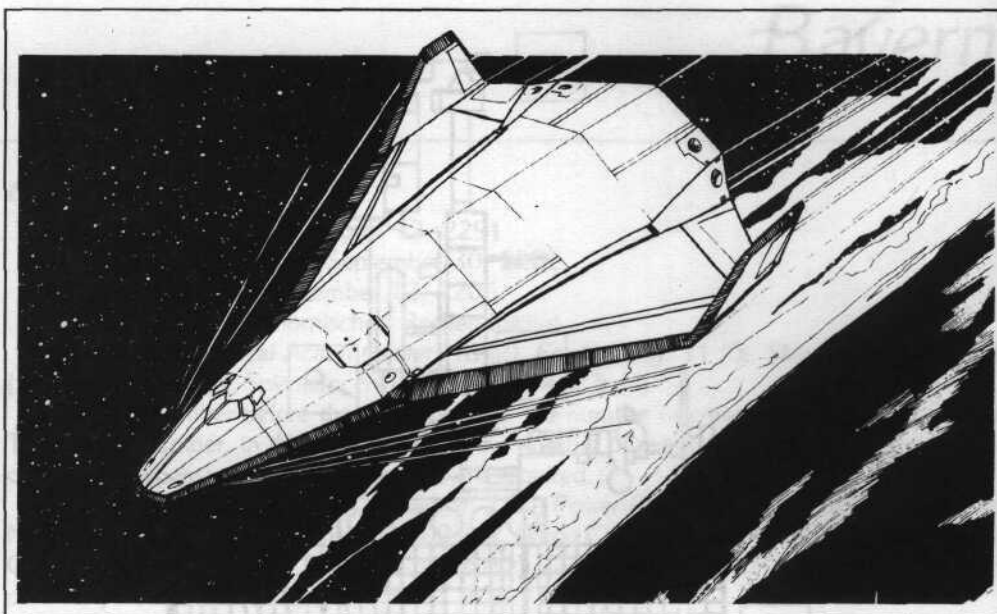
Percy is a good-looking Englishman in his late thirties. He has always proven himself to be a reliable crewmember and skilled lander pilot. He has no desire to pilot starships—after all, "It's not proper flying—you can't fall."

Motivations: Middle Spade and Club Jack: Percy is determined to succeed and eager to assume dangerous assignments which will prove his skill and devotion. When things do not go the way he wants, however, he has been known to suffer from fits of rage.

YVONNE VANESSA ROURKE

Yvonne Rourke is a former lander pilot for a French *Rapide Descente Peloton*. These elite military teams are trained for very swift drops from orbit to the surface of a world. To this day, she retains a taste for getting her craft down as fast as possible, no matter what the effect is on the nerves of her passengers.

Motivations: Club Ace and Black Joker: Rourke is a masterful military strategist. Unfortunately, she is also quite insane. Rourke has a death wish which is certain to claim her life one day. She takes extreme chances and has so far been very lucky.



Kenntnis-class Landers

Ship Type: Surface Lander **Number Carried:** 2 **Designations:** Herausforderung and Erforschen **Power Plant:** 3 MW MHD turbine unit with Thruster Modifications **Fuel Duration:** 12 hours plus 1 descent/ascent **Time to Orbit:** 36 minutes **Crew:** 1 Pilot **Passengers:** 10 **Sensors:** Navigation Radar, Advanced Cartographic Sensors, Advanced Life Sensors **Hull:** Streamlined metallic **Cargo:** 10.5 m³ **Total Mass:** 125 tons **Total Cost:** MLv1.5 **Total Volume:** 200 m³ **Signatures/Profiles—Radial Reflected:** 2 (+ 1 per Scanner array in use) **Lateral Reflected:** 3 (+ 1 if either or both Scanners are in use) **Radiated:** 3 **Radial Profile:** -3 **Lateral Profile:** -2

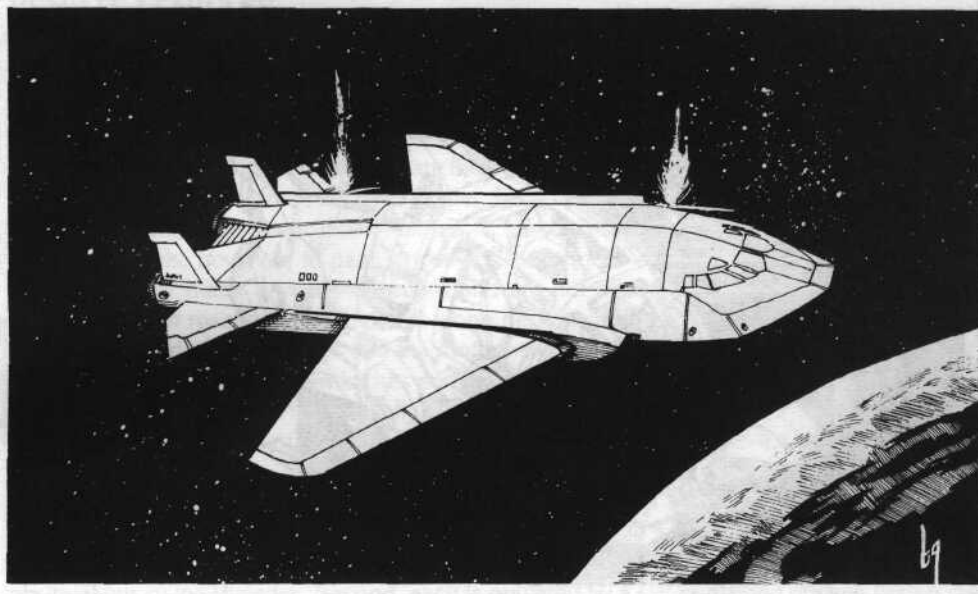
Background: The Kenntnis-class lander was originally designed by the American architectural firm of Robert Lawson and Son on a commission from the Astronomischen Rechen-Institut in 2292. The plans were approved and construction was begun on Bayern's brace of landers in May of 2293 by the Luna-based St. Lawrence Yards. Fifteen months later, the first of the vessels, *Kenntnis*, was completed. Tests and simulations run with the craft were all deemed an outstanding success, and crew training began late in 2295.

Originally, three craft were constructed. The first of these, *Kenntnis*, was used as a test model and was never intended to be placed aboard *Bayern*. During stressful evaluations, she suffered no major failures and survived some of the most grueling experiments AR-I engineers could conceive of. In the end, she was destroyed in a crash simulation on the surface of Luna. Even then, however, she was found to have come through in better shape than expected.

The two remaining craft, *Herausforderung* and *Erforschen*, were designed to serve as flexible workhorses. In their development, it was required that they be able to cope with almost any environment known to exist in human space, as well as some environments theorized to be possible outside of it. All of the major systems are of a triply redundant design to make accidental failure all but impossible during missions. In times of crisis, these craft can be piloted by remote control from *Bayern*.

Crew and passenger accommodations are somewhat crowded but comfortable. Life support systems are able to provide complete subsistence for 48 hours under normal conditions. Emergency provisions allow operation for up to one week with minimal crew activity.

The normal cargo storage facilities allow the landers to carry up to 10.5 cubic meters of equipment in an airtight compartment accessible from both the interior and exterior of the craft. In the event that additional cargo capacity should be required, it can be added in lieu of passengers. For each person not carried, the lander may carry an additional 1.5 cubic meters of equipment. In dire emergencies, this can be expanded to 2.5 cubic meters per person if the acceleration couches are removed. Such modifications take roughly half an hour per seat.



Orkan-class Space Planes

Ship Type: Space Plane *Number Carried:* 2 *Designations:* Orkan and Donner *Power Plant:* .7 MW MHD Turbine with Thrusters *Fuel Duration:* 10 hours plus 1 descent/ascent *Time to Orbit:* 8.4 minutes *Sensors:* Navigation Radar *Hull:* Streamlined Synthetic *Cargo:* 1 m³ *Total Mass:* 40 tons *Total Cost:* Lv350,000 *Total volume:* 53 m³ *Signatures/Profiles—Radial Reflected:* 1 *Lateral Reflected:* 2 *Radiated:* 1 *Radial Profile:* -3 *Lateral Profile:* -3

Background: Like all of Bayern's other manned auxiliary vessels, the Orkan-class space plane was designed by the architectural firm of Robert Lawson and Son and built on Luna by the well-known St. Lawrence Yards. It is very similar in layout and operation to the Engel class which is used by the survey fleets of many nations and foundations.

The nose of the craft contains the avionics array, communications equipment, and onboard computer system. Directly behind this is the cockpit, which has the acceleration couches for both the pilot and copilot. This area's layout is somewhat cramped but allows the flight crew maximum access to all controls. Aft of the cockpit is a small crew section which has stations for four passengers, and a token cargo storage area which can hold up to one cubic meter of equipment. A provisions locker in this area holds food and supplies for a mission of up to 24 hours duration. In an emergency, these can be extended to last for 72 hours. The remaining areas of Orkan's fuselage are taken up by her drive and fuel tankage. Her thrusters are able to vector their thrust, allowing the craft to take off and land vertically. When in flight, the thrust can be vented directly aft, allowing speeds of up to 5000 kilometers per hour (just over Mach 4). By vectoring the thrust at angles between these two extremes, Orkan and Donner can greatly increase their maneuverability during flight.

One of the most interesting features of Orkan-class planes is their ability to reconfigure the shape of their wings during flight. If speed is desired, they can be altered to offer minimum resistance to an atmosphere. When the craft is trying to gain altitude rapidly or carry a maximum load of passengers and supplies, the wings can be shifted to provide maximum lift.

Orkan and her sister ship, Donner, are not intended for use as orbit-to-surface transport craft. Rather, they are meant to be used as recon craft to establish information prior to the descent of a lander. By making a high altitude pass over a potential landing site, specialists from Bayern can spot the best regions for future scientific explorations.

If pressed, Commander Schmidt could elect to use Orkan and Donner as backup landers, but their limited cargo and passenger capacity makes such use inefficient at best. Orkan's chief pilot is David Bruenweller, and Donner's is Kristoffer Kulmehrn. As with all the other auxiliary pilots, they are kept in cryogenic suspension until needed.

DAVID BRUENWELLER

Bruenweller is a former fighter pilot who served for many years with the Raumwaffe of Frie Haven. He has never served with Commander Schmidt before but has always looked up to him as something of a hero. As such, he considers himself quite lucky to be serving aboard Bayern.

Motivations: Middle Heart and Club Ace: Bruenweller has a great sense of loyalty and fellowship for those aboard Bayern. He thinks of himself as a great pioneer and feels a sense of kinship with others of his ilk. In addition, his military experience and natural combat sense make him very able to respond to hazards without panic or overwhelming fear.

KRISTOFFER KULMEHRN

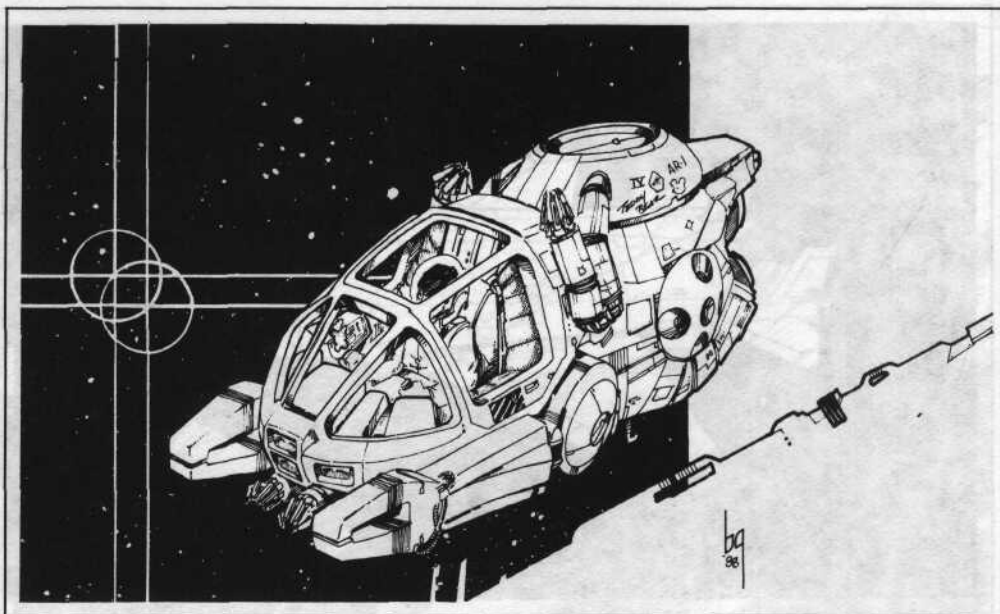
Kulmehrn has served aboard only one previous AR-I mission but has years of experience in aircraft piloting as an employee of the Trilon Corporation. He earned his position aboard Bayern strictly on the basis of his skills with Engel-class craft and his outstanding success in the simulation tests.

Motivations: High Spade and Low Spade: Kulmehrn is confident in his own potential and skills. As such, he is constantly manipulating others to attain his own goals. He is also a braggart who feels far more important than those around him.

ANGELICA MENDOZZA

Mendozza is a citizen of Mexico who once worked as a technician for the Instituto Nacional de Astronomía Práctica (INAP). The military nature of their research, however, was against her strong religious beliefs, and she opted to leave them in favor of the foreign, but far more peaceful, AR-I.

Motivations: Low Heart and High Heart: Mendozza is a charming and polite, if somewhat rugged, individual. Although she is deeply religious, she is anything but a "holy roller" and respects the privacy of others' theological views. Due to her beliefs, she always tries to live an honest and charitable lifestyle, helping others whenever she can.



Gremlin-class EVA Bugs

Ship Type: EVA Bug *Number Carried:* 5 *Designations:* Roman numerals I through V *Power Plant:* 0.02 MW Fuel Cell *Fuel Duration:* 2 hours *Time to Orbit:* Not possible *Crew:* 1 Operator *Passengers:* None *Sensors:* None *Hull:* Metallic *Cargo:* None *Total Mass:* 30.5 tons *Total Cost:* Lv600,000 *Signatures/Profiles—Radial Reflected:* 1 *Lateral Reflected:* 2 *Radiated:* 1 *Radial Profile:* -4 *Lateral Profile:* -3

Background: Unlike Bayern's other auxiliary craft, the five EVA pods which she carries were not designed specifically for this mission. Instead, when the time came to outfit the ship, a decision was made to purchase modified versions of the very popular (and reliable) Midwest Technologies Cargo Devil freight handlers.

Although a number of minor alterations have been made to these craft, they remain much the same as those which MidTech makes for numerous other foundations and nations. The first change was the elimination of the very heavy manipulator arm which, although vital in the routine transport of cargo modules, was considered to be unnecessary for Bayern's mission. Further modifications involved the addition of very minute manipulators which allowed the craft to be used for delicate repair work or minor adjustments of external equipment. Under the guidance of a skilled operator, these are roughly equal to human hands in their manual dexterity.

In addition to their various manipulatory arms, each EVA bug has the ability to mount assorted tools for use in the repair or maintenance of Bayern during her voyage to the Pleiades. For instance, a laser welding torch can be easily affixed to trim replacement hull plates to fit over minor punctures, or to cut off vacuum-frozen hardware on external assemblies.

As with the Interstellar probes which Bayern carries, the EVA bugs are not officially named. However, the crews who service and maintain them have given each of them a nickname and decorated them with "nose art" to individualize them. Each of the craft is also painted a different, but always bright and visible, color.

In most cases, the EVA Bugs are guided by an operator who is seated within the craft during flight. In unusual circumstances, however, they can be piloted by remote control from aboard Bayern. This would not be done due to the inaccuracies of such control methods. However, if an operator were injured or unable to pilot the craft for some reason, this would prevent him from becoming lost or possibly damaging the ship in some manner. The remote pilot's station on either bridge can assume control of an EVA Bug in less than 15 seconds, and the operator of the craft is powerless to prevent such an action. Standard operating procedures require that a remote pilot be on duty at all times when one or more of the EVA Bugs is in use outside of Bayern.

REMOTE VEHICLES

In addition to the various types of manned auxiliary craft which *Bayern* carries, she also has a small fleet of remotely piloted vehicles available for use during her mission to the Pleiades.

REISENDE-CLASS INTERSTELLAR PROBES

Perhaps the most important of these are the 10 Reische-class interstellar probes which *Bayern* will use to explore the stars of the M45 cluster. Each of these is designated with a Roman numeral 1 through X and is not individually named. It has become traditional among crews of Institut research vessels, however, to paint "nose-art" on remote craft and give them nicknames, but these are never made a matter of record and are not officially sanctioned.

When *Bayern* reaches specific points along her transit of the Pleiades, one or more of these craft will be fired off to visit stars that the mother ship will be unable to (due to time constraints). In addition, Commander Schmidt has complete authority to deploy one or more of the probes at anytime as he sees fit. They are fully automated and will voyage to their destination star, perform a fly-by of the system, and return to a rendezvous point to await the arrival of *Bayern* for recovery.

These probes are big. Each of them is roughly cylindrical in shape and runs 10 meters in length by nine meters in diameter. The reasons for their size are simple and twofold. First, they are packed with a great assortment of avionics equipment and recording devices for use in their observations of the Pleiades. Second, each is powered by a self-contained nuclear fission power plant which will supply the energy needed by its drives and sensors for many years.

SUCHE-CLASS REMOTE LANDERS

For the exploration of planetary surfaces both prior to and in lieu of manned landings, *Bayern* carries five Suche-class probes. Each of these crafts is made up of two sections: an orbital module and a surface lander.

A Suche is guided into its desired orbit from aboard *Bayern* and begins to make a high altitude cartographic scan. While that is being done, the forward section of the craft detaches and descends into the atmosphere. After a swift and fiery reentry, it completes its drop from orbit on a large parachute assembly.

Once on the ground, various manipulators unfold, and a wide variety of sensory devices begin to operate. Almost at once, scientists aboard *Bayern* will begin to receive a wide variety of data about the environment on the planetary surface.

Analysis will determine the composition and pressure of the atmosphere found at the landing site. In addition, *Bayern* can fire a fine laser beam to the probe for a distortion examination in order to provide information on the upper layers of the atmosphere.

Sensors will measure local gravitational, magnetic, and radioactive fields for transmission to *Bayern*, while physical manipulators will permit the probe to take samples of the environment around the probe for return to the main craft.

In less than 24 hours, the orbital section and surface portion of the probe can assemble a fairly complete picture of the region around the lander as well as a somewhat less exact one on the planet as a whole.

When it has done its work, the Suche will be recalled by its operator aboard *Bayern*. Making use of its powerful thrusters, it will lift off and rendezvous with the orbiter in just under 20 minutes. After docking procedures, which average around half an hour in duration, the craft will return to *Bayern* for analysis of its samples.

TELEGRAFIEREN-CLASS MESSAGE DRONES

Bayern carries a dozen of these vital craft, which are used to keep the AR-I scientists on Earth up-to-date on the progress of the mission. From time to time, Commander Schmidt is required to order one of these devices fired toward human space. At a minimum, one drone is to be returned every six months.

Prior to its departure, all of the information which has been acquired since the firing of the previous drone is loaded into its onboard computer storage systems. In addition, each crewmember who has been or currently is out of cryogenic suspension is permitted to record a brief communication which will be delivered to their loved ones back home.

TASHI MATSIKA

Formerly a member of the Japanese Space Force, Matsika is one of the best remote pilots in known space. She left the military after an accident killed several of her best friends, and she eventually drifted into the service of the *Astronomischen Rechen-Institut* some time ago. Her accuracy and precision at the controls of unmanned craft have earned her a solid reputation throughout the AR-I.

Motivations: Middle Club and Low Club: Matsika is a strong believer in the doctrine of "peace through superiority." The fact that *Bayern* and many AR-I vessels carry no heavy weapons is a tragic mistake in her opinion. Although she has campaigned heavily in favor of armed survey craft, the AR-I seems solidly against any such changes in policy.

SCHLAMMBALL

It is a common, if not universal, practice among the crew of AR-I starships to maintain a pet or mascot aboard ship. Usually, the mascot is "smuggled" aboard by the most junior member of the crew and "discovered" by the commander only after the ship has left port. At this point, he or she demands to know who has brought the stow-away onboard and of course, no one confesses. The commander then takes action against the entire crew by ordering extra desserts, or, on more liberal ships, rations of alcohol to be handed out to all.

Bayern's mascot is Schlammball, a five-kilogram mass of brownish protoplasm known as a Brunlimon that came from the colony world of Kie-Yuma. Schlammball is well behaved and crawls slowly around the rings or floats about in the core. It lives off table scraps which it engulfs and then slowly metabolizes.

Schlammball is cold and sticky to the touch and, if held in one's hand, it will slowly ooze through the fingers and dribble to the floor.

THE SHIP'S COMPUTER

One of the most unusual members of Bayern's crew is Aristotle, the ship's main computer. Affectionately known as "Ace" by the crew, this machine is one of the most advanced data processing devices ever built by humanity.

Aristotle is fully voice-activated, but it can also receive data and instructions via video cameras (located in almost every compartment), keyboard, or radio transmission. In order to activate or query the computer, ship's personnel need only address the computer by name and give their instructions or ask their questions. Aristotle's command of English, German, and French is quite complete, and it seldom (if ever) requires clarification.

In addition, Aristotle is able to analyze the emotions of the person speaking to it and thus, can usually detect jokes and the like. In a similar fashion, by monitoring the microtremors in a person's voice, it is normally able to tell when someone is lying to it or giving true, but misleading, information. Aristotle is instantly able to identify the person speaking to it, even if the person attempts to change or disguise his voice.

Aristotle is not actually self-aware, but it puts on an incredible simulation. The French Intelligence Simulateur division of L'Crouix Renseignement Systemes went to great lengths to make it impossible for unaware users to tell whether they are speaking with a machine or an actual person. Of course, if one were to ask it, Aristotle would instantly admit that it is only an electronic device.

Aristotle's personality is rather bland. Although it does have a mild sense of humor and can hold its own in light conversation, it is fairly boring in long exchanges. Its lack of creative thought also limits it in this aspect. While humans can "free associate" ideas and thus drift from subject to subject when talking, Aristotle remains on a given topic until the human speaker changes the subject. In this respect, talking with Aristotle can become very one-sided and rather dull in short order. It is certainly no substitute for human companionship.

When Aristotle speaks, its voice is not mechanical at all.

When Aristotle speaks, its voice is not mechanical at all. Instead, it has diction which is, if anything, too perfect. Every sound is exactly pronounced and very clearly enunciated. Nichole St. Nicholas, Bayern's chief computer officer, claims to be unable to determine why Aristotle seems to have acquired a slight French accent when speaking English or German. The majority of the crew is somewhat suspicious of her innocence in this matter.

It is possible for Aristotle to assume control over Bayern in a crisis, but it must have a direct verbal order from the Commander or First Officer. Aristotle's lack of "hunches" and true creativity, however, would make an extended period under its control fairly unrewarding scientifically. In simulation tests, Aristotle scored consistently lower than Bayern's human crew in crisis evaluations.

When Aristotle is called upon to assume the functions of a human crewmember, it is assumed to have a level 3 in the job skills employed at that station. For instance, if Commander Schmidt were to order Aristotle to bring the ship closer to an object for examination, any task rolls required would be resolved as if Aristotle had a skill of Pilot-3. Aristotle receives no modifiers for attributes when attempting tasks.

In addition, it is able to quickly access vast amounts of information from the ship's library. Its lack of creative thought, however, prevents it from offering data on topics which it is not specifically questioned about. For example, if Commander Schmidt were to request information about the chemical composition of a planet's atmosphere, Aristotle might not include the fact that it is explosive when combined with oxygen unless specifically asked about possible reactivity. Aristotle is able to sift through data in its memory banks far faster than a human being could. In fact, it is this property that makes the voice-activated computer so vital aboard a starship like Bayern. In lieu of drafting a complex program to pull up various related pieces of information, one need only say something like, "Aristotle, give me a graph which contrasts those anomalies in the spectrum of Alcyone with its predicted behavior."

The Ship's Complement

The next several pages of this book are taken up by descriptions of *Bayern's* most important crewmembers. For referees establishing a campaign around the flight of *Bayern*, these may be used either as player characters or NPCs. It is also perfectly permissible to replace any character listed in this section with already existing ones from the established campaign.

It is important to remember, however, that there are no rookies aboard *Bayern*. Every member of the crew was selected because of his or her extensive experience and high qualifications. Once initial applications for positions aboard *Bayern* were received and candidates were selected, extensive testing of all sorts was administered. The vast majority of applicants were found unsuitable for the mission and were rejected. Those that remain are considered, for one reason or another, the best of the best.

Bayern carries a total of 110 crewmembers. Roughly half of these are scientists who are not required for the operation of the vessel from day to day. When the ship reaches the Pleiades, or at other points along the voyage when their particular skills are needed, the scientists are revived from suspended animation. For example, Jaqueline Bohranian (the ship's senior xenobiologist) would not be awakened while *Bayern* investigated an unusual stellar formation. All told, 80 of *Bayern's* crew are normally retained in cryogenic sleep during the voyage to and from the Pleiades.

Perhaps the most important section of the ship's complement is the bridge crew. Without them, *Bayern* would be unable to operate, and the mission could not even begin. There are 12 crewmembers assigned to this section, ranging from the ship's commander and executive officer to the flight controller and remote pilot. The latter two crewmembers are normally kept in cryogenic tanks until auxiliary crafts are to be employed.

Of potentially equal importance is the engineering crew. These 17 individuals, directed by the chief helmsman and chief engineer on the bridge, maintain and monitor the conditions of *Bayern's* fusion power plant and stutterwarp engines. In addition, the engineering crew is charged with the overall maintenance and upkeep of all the equipment aboard *Bayern*.

The vessel support crew consists of 18 highly skilled and well-trained individuals who are responsible for the maintenance and repair of *Bayern's* fleet of auxiliary craft. Ranging from small surface landers to huge interstellar probes, these craft are vital to the scientific success of the entire mission. However, as the auxiliary vessels are not constantly in use and thus are usually stowed away, those assigned to vessel support will spend much of the voyage in cryogenic suspension.

The media section aboard *Bayern* is considered by the AR-I to be of vital importance to the public popularity of missions such as this. As such, they are revived whenever *Bayern* comes across something of potential interest. There are five persons in this section. One of their number, Chief Journalist Christopher Bentley, is awake at all times. There are five persons in this section. When not in suspension, the members of the media unit will almost always be taking pictures and asking questions. It is certain that sooner or later they will begin to get on someone's nerves.

The medical section of *Bayern's* crew is made up of four of the AR-I's finest physicians. Each of them has served as the senior medical officer on another survey vessel for at least six months and is more than qualified for a position aboard *Bayern*. The health of the entire crew is of utmost concern to the AR-I, and they have spared no expense in provisioning the medical bay to cope with almost any situation. During normal conditions, only Chief Medical Officer Bernhardt is out of cryogenics.

The scientific crew, which makes up roughly half of the ship's total complement, is of absolute importance to the scientific success of the *Bayern* mission. Without them, the trip to Alcyone and back would be little more than a sightseeing tour for the rest of the crew. The 54 members of this team have been drawn from all corners of the Institut. Their fields of expertise range from astrophysics, botany, and chemistry, to xenobiology and zoology. Except for Deiter Bohl, who is chief astrophysicist and senior member of the science team, members of this group are kept in suspended animation until conditions merit their revival.

TO: All AR-I employees

FROM: Prof. D. Anna Zeigler, Chief Administrator

The members of the Crew Selection Committee (CSC) for Mission M45-A to the Pleiades Star Cluster have been decided upon. Any AR-I employee or volunteer who wishes to be considered for a position aboard the starship Bayern should transmit a copy of their resume to the AR-I Foundation Headquarters on Earth.

Requests for membership must be received no later than December 30th, 2294. After a review by the CSC, initial selections will be made and qualified applicants will be transferred to Earth for testing and further evaluation.

For further information, contact any AR-I Primary Office.

*Sincerely,
Professor D. Anna Zeigler*

Today, after months of work in simulators, I went aboard my ship for the first time. Although she is far from completed, I could wait no longer. In the future, I will visit her more often until I know every facet of her design. But nothing will be as exciting for me as this first encounter with her.

I seemed to be drawn to the bridge. The entire room was dark, illuminated only by the faint glow of the equipment being used to run checks on the circuitry, and I was alone.

In the center of the room was my station. When we are operational, I will have an excellent view of all that transpires on my bridge.

My eyes roamed freely across the equipment which reflected the green and orange lights from the technicians' gear. Never have I seen a more pleasant sight. I am certain that she will make me proud.

(Continued.)



LEOPOLD SCHMIDT

Position: Mission Commander **Nationality:** German
Homeworld: Tirane **Gravity:** Normal **Frontier/Core:** Core
Gender: Male **Birthdate:** 2257 **Mass:** 88 kg **Eyesight:** Average
Hearing: Average **Body Type:** Normal **Throw Range:** 88 meters
Coolness Under Fire: 8 **Encumbrance:** 44 kg **Native Language:** German
Other Languages: English **Size:** 11 **Strength:** 11 **Dexterity:** 12
Endurance: 11 **Determination:** 15 **Intelligence:** 14
Eloquence: 15 **Education:** 20 **Consciousness:** 4 **Life Level:** 8
Careers: Space Military, Scouts **Skills:** Vacc Suit—4, Starship Drive Engineering—3, Pilot—3, Bureaucracy—3, Computer—2, Information Gathering—2, Combat Rifleman—2, Sidearm—2, Melee—2, Electronics—2, Mechanic—2

Motivations: Heart King and Club Queen: Commander Schmidt is scrupulously honest. In all matters, he considers his word to be his bond, and he would never willingly break a promise. Schmidt abhors all forms of deceit and would never employ such tactics, no matter how desperate his condition.

Additionally, he is very dedicated to his duty and wholly self-confident. Once his mind is made up on a matter, he sticks to his guns. In a lesser man, this might be taken as stubbornness, but Commander Schmidt's record with the AR-I is such that he is loyally followed by all who serve under him.

Background: Leopold Schmidt was born on Tirane, in Hauptstadt (the capital of Freihaven), in 2258. His early childhood was unremarkable, although he did demonstrate a very high intelligence level and quickly began to advance to the top of his various classes. When he was 16 years of age, he graduated from high school and then spent the next several years of his life in the Stern Akademie (a military school for future officers of Freihaven's Raumwaffe).

After initial training and service in the engineering section, he transferred to the line and became a qualified pilot. After only seven years in the Raumwaffe, he was given command of the *Rache*, a small patrol cruiser with a crew of 15.

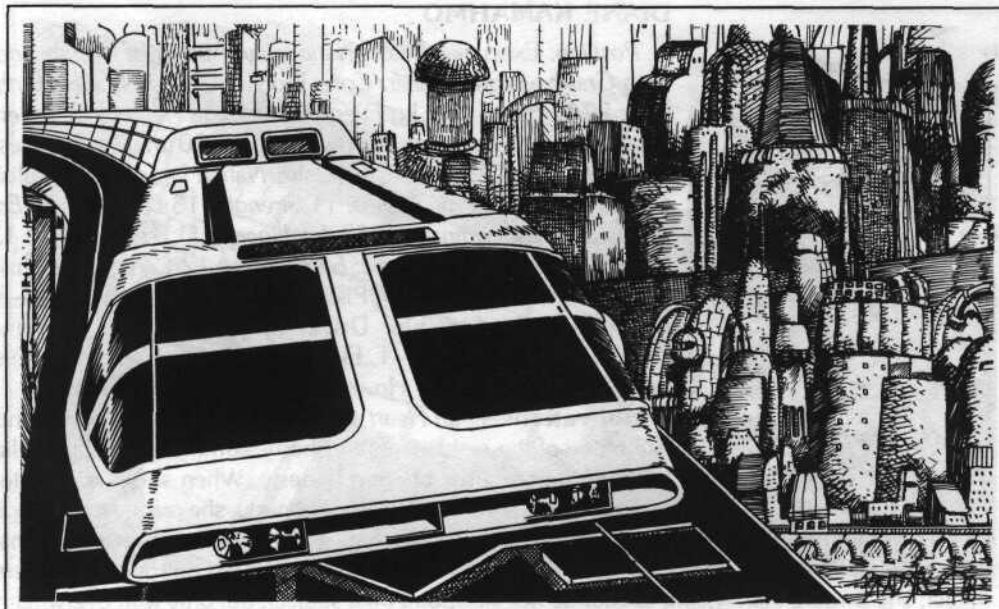
His command was largely uneventful for several months. Then, on a routine courier run between Tirane and an ESA station near Proxima Centauri, his avionics chief reported an object of unknown origin at the extreme edge of sensor range. It was, so far as they could tell at that distance, dead in space.

However, closer contact proved that was not to be the case. As Schmidt brought *Rache* closer, it became clear that the object was a small starship which had been damaged by an explosion in her power systems. Further, the engines were rapidly overheating and would soon be the source of a second, far more destructive blast.

Despite protests from his executive officer, Schmidt continued to close in on the ship, and it was identified as *Schatten*, an AR-I research vessel. Against all hope, faint life signs were found aboard the wreck, and Schmidt ordered his crew to form a rescue party.

As Schmidt brought Rache closer, it became clear that the object was a small starship which had been damaged by an explosion in her power systems.

Rache pulled alongside, and rescue operations were begun. All the while, sensors indicated that the threat of a second explosion was increasing rapidly. For half an hour, Schmidt waited nervously while his men located and brought aboard five survivors. (One of these, Dominique Raymond, is currently assigned to *Bayern* as chief biochemist.)



When everyone had returned to the ship, *Rache* made ready to depart at maximum speed. Just before the stutterwarp unit was engaged, however, *Schatten* exploded in a tremendous fireball. Caught in the blast, *Rache* was badly damaged and sent tumbling away out of control. Although most of the injuries aboard her were minor, and nobody was slain, Schmidt's vessel was now wholly inoperable. Her power systems were destroyed, as was her avionics array, and the life support equipment was operating at bare minimum levels.

It seemed to all aboard *Rache* that they would soon be dead. Some even suggested that a brace of warheads from the ship's complement of missiles should be detonated so that death would not come slowly but quickly and mercifully to the crews of both vessels. Schmidt would hear nothing of such a suggestion.

After hours of discussion with his pilot and navigator, Schmidt settled on a bold plan. He ordered the same pair of missiles dismounted and placed in precise positions outside the hull. While everyone took shelter on the bridge, the missiles were detonated, and *Rache* was hit by nearly the full force of their combined blast.

Although the ship was now beyond any hope of repair, it had taken on a new course. Less than two weeks later, as the last of the life support systems was about to fail, *Rache* drifted near enough to one of the regularly travelled routes in the Alpha Centauri system to be spotted by the sensors of a French merchant ship and rescued.

On Earth, the story of *Rache*'s encounter with *Schatten* was greatly publicized, and it even spawned the writing of a novel and the composition of a full-length holofilm. Schmidt insisted that both versions of his story were greatly "enhanced for dramatic effect." Whether or not that was the case, Schmidt was decorated and promoted for his resourcefulness.

During his time with the AR-I scientists, however, Schmidt had become infected with their interest in the unknown. He found that the routine command of a starship seemed pale in comparison to the stories which the young scientists had told him of their voyages beyond the realms of man. When his next term of service came to an end, he resigned from the Raumwaffe and joined the ranks of the AR-I.

In the years since, Schmidt has proven his talent as both a commander and an administrator. He has served aboard a half dozen AR-I vessels, four of which he commanded, and he has always escaped any crisis with his skills and cunning, traits most desirable in a captain whose command is reaching out beyond assistance.

When the question of a commander for the *Bayern* mission arose, Leopold Schmidt was chosen for the position over the second candidate, an Australian from King named Diane Kamahmo. Kamahmo had less experience so he was assigned as Schmidt's executive officer for the mission.

I heard the distant sounds of the construction crew moving toward me and decided that it was time to go. I had been allowed a few moments of peace and contemplation while they were away, and for that I was thankful. As I kicked around to leave, I caught sight of something which had previously escaped my notice.

Although the main view screen was not yet functional, one of the workers had secured a poster of the M45 star cluster to it with tape. For some reason, a shiver swept up my spine and gooseflesh raced across my limbs.

Were we truly going to travel all the way to the Pleiades and back again?

The very thought seemed to me insane.

Big ship.

Big deal.

I've been on a lot of big ships and a lot of small ships. To me, they're all the same. I don't think the hardware matters half as much as the software: the crew.

When *Vogelperspektive* was on her first run, they told us that we had the finest of everything. They took great pride in showing us around her engine room, guiding us through the science labs, and waltzing us around the bridge. I have to admit, she was almost as impressive as *Bayern* is, but it didn't faze me in the least.

All the hardware in the universe won't help you in the least if your team doesn't think and act like one when things hit the fan. There were a couple of times when a lesser crew would have lost *Vogel* and gone the way of the *Carolina Dream*: Missing, Presumed Destroyed.

Only after I had held my first review did I feel more confident. We had a good ship and a good crew; there was nothing more to know.

We made it in *Vogelperspektive*; we'll make it in *Bayern*.



DIANE KAMAHO

Position: Executive Officer *Nationality:* Australian *Homeworld:* King *Gravity:* High *Frontier/Core:* Frontier *Gender:* Female *Birth-date:* 2265 *Mass:* 118 kg *Eyesight:* Average *Hearing:* Excellent *Body Type:* Mesomorph *Throw Range:* 120 meters *Coolness Under Fire:* 6 *Encumbrance:* 52 kg *Native Language:* English *Other Languages:* French *Size:* 11 *Strength:* 15 *Dexterity:* 10 *Endurance:* 9 *Determination:* 12 *Intelligence:* 11 *Eloquence:* 13 *Education:* 17 *Consciousness:* 6 *Life Level:* 12 *Careers:* Colonist, Ship Crew Skills: Melee—5, Pilot—3, Vacc Suit—3, Survival—3, Computer—2, Starship Drive Engineering—2, Ground Vehicle—2, Prospecting—1, Electronic—1, Sea Vehicle—1, First Aid—1, Swimming—1, Hover Vehicle—1, Aircraft Pilot—1

Motivations: *High Heart* and *Club Queen:* Diane Kamahmo, like many of the residents of her homeworld, has a strong belief in the value of hard work and honesty. When she is confronted with or is a witness to cruelty or dishonesty, she reacts very strongly (often with some degree of violence). Furthermore, her high determination and strong sense of devotion to her work makes her seem very stubborn and unbending in controversial matters. In fact, she is more than willing to change her viewpoint on a subject, but only with overwhelming proof that she is in the wrong.

Background: Diane is one of only a few thousand colonists on King who are descended from native Australians. As such, she felt like something of an outsider when she was growing up. Wherever she was, Diane was constantly striving to earn the respect of those around her. In school, she did this with her outstanding academic achievements and generous participation in many volunteer programs.

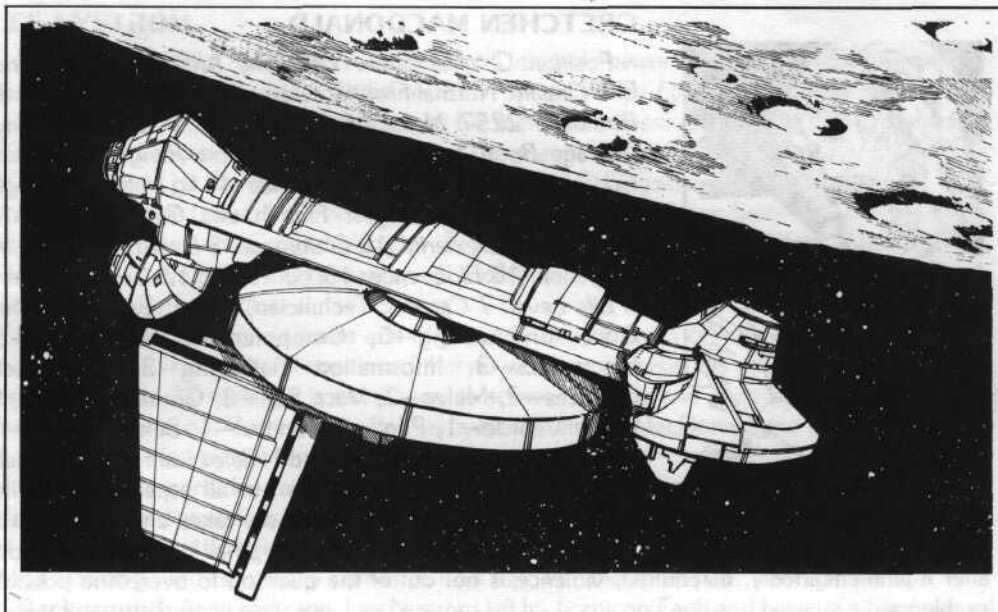
Diane is one of only a few thousand colonists on King who are descended from native Australians.

When she graduated from college, she went on to work for many years with the various mining concerns that are as abundant on King as the minerals which they exploit. Here, she drifted from job to job, never seeming to find a career which she could devote her full attention to. In the end, she gave up her pursuits among this sector and set about to look for a purpose in her life.

Almost at once, she found herself signing up with the AR-I and, within a few months, she was assigned to a small science team aboard the American survey vessel, *Captain William Mossburg*.

Over the next few years, she proved herself to be one of the most talented starship crewmembers in the AR-I. Over and over again, she faced danger and seemingly certain death from hazardous exploration missions, only to escape unharmed. In record time, she was given command of the famous *Vogelperspektive* during its one-year shakedown mission to explore several previously uncharted star systems along the French Arm.

Her career had been brief but glorious, and she was seriously considered as the mission commander for the *Bayern*. She was not overly disappointed to learn that she would only be the second in command of the ship, for she has the greatest respect for Commander Schmidt. She recognizes that Schmidt is more experienced both as an administrator and a commander and feels honored to serve under him. Her duties as second in command will certainly keep her busy for the entire voyage, challenging her skills and experience on a daily basis. Also, there is no shame in being second in command on the greatest exploratory mission ever undertaken—her contribution will no doubt be recognized.



WERNER KESSLER

Position: Chief Navigator **Nationality:** German **Homeworld:** Kie-Yuma **Gravity:** High **Frontier/Core:** Frontier **Gender:** Male **Birthdate:** 2269 **Mass:** 121 kg **Eyesight:** Average **Hearing:** Exceptional **Body Type:** Endomorph **Throw Range:** 96 meters **Coolness Under Fire:** 8 **Encumbrance:** 50 kg **Native Language:** German **Other Languages:** English **Size:** 12 **Strength:** 13 **Dexterity:** 12 **Endurance:** 16 **Determination:** 10 **Intelligence:** 11 **Eloquence:** 13 **Education:** 16 **Consciousness:** 6 **Life Level:** 12 **Careers:** Space Military, Scout **Skills:** Vacc Suit—5, Sensors—3, Electronics—3, Mechanic—3, Combat Rifleman—2, Sidearm—2, Melee—2, First Aid—1, Computer—1, Remote Pilot—1, Gunner—0

Motivations: *Low Diamond and High Heart:* Kessler is interested in money. He sees the *Bayern* mission as a chance to gain the fame and wealth that often comes with such missions. When he talks about his plans for the future, he often begins with the statement, "The first thing I'm going to do when we get back is write a book." His fondness for cash and his eye for a profit-making venture have not made him greedy, however. In fact, it has made him appreciate the struggles of poorer individuals all the more. He has been known to react very strongly when he feels that he or someone else is being cheated out of their just rewards for service done.

Background: Kessler's family is one of the richest in the French Arm, and he was born into a life of comfort and luxury. It was something of a shock to his parents when, at the age of 17, he announced his intention to join the German Navy and "see the frontiers." Despite their attempts to dissuade him, Kessler entered the service less than a year later. To the even greater dismay of his family, he could not even be convinced to join the Academy and use his father's influence to become, at least, an officer.

After only four years, he decided that life in the Navy was not living up to the glorious style which had been promised him by the recruiters. After careful thought, he left the service and joined the AR-I as an engineering assistant on the survey ship, *Enseigne Henri LeCroix*.

Over the next three years, his duties on *LeCroix* became greater, and his rank increased. At the end of that time, he found himself transferred to the science vessel, *Ferdinand Braun*, where his long-standing interest in avionics was rewarded with duty as the ship's junior navigator. When, nearly six months later, *Braun's* senior navigator was killed in an accident, Kessler took over his duties and proved to be more than competent. On the request of *Braun's* commander, Captain Lily Matsuko, Kessler was promoted and officially assigned as the ship's primary avionics officer. When word of the *Bayern* mission circulated among the AR-I and the search for volunteers began, Matsuko advised Kessler to try out for the chief navigator's position. His test and simulation scores were so good that all other candidates paled in comparison, and Kessler was selected.



WERNER KESSLER

The first thing I'm going to do when I get back is write a book. Of course, the AR-I will get a portion of the profit. God knows they deserve it. If there's any group anywhere that's doing so much good, I have yet to hear about them.

Three generations ago, my great-grandmother just happened to stumble across an alloy which makes great starship hulls and get rich. Since then, what have we done with the money? Nothing much, I can tell you that.

I'm not blind though. Just because I'm from a rich family doesn't mean that I don't think about those that aren't. Just the opposite. What good is being wealthy if you just hoard it and don't use it to help out others?

In my opinion, every new scientific breakthrough helps to raise everyone's standard of living by a small margin. Folks like the AR-I are helping out everyone alive every day, and I want to be a part of that for a long time to come.

Mom and Dad,

I've only got a few seconds to record this letter, so I'll try to stick to the point and not get too mushy. I just got back the results of my testing and simulations scores and confirmation of my assignment to Bayern.

I can't tell you how excited I am! Just imagine, a simple country girl like me going off to visit the Pleiades. It'll be tough, I'm sure, but what an adventure! You know I'll miss all of you, but there will be message drones sent back every six months or so, and we'll all get to record letters to our families on them.

Tell the gang not to worry too much—their big sister knows how to take care of herself on the frontier.

I just hope we find some nice-looking men out there. God knows they're few and far between on the frontiers (and even rarer in the Core)!

My love to everybody!

Gretch



GRETCHEN MACDONALD

Position: Chief Engineer *Nationality:* American *Homeworld:* Ellis *Gravity:* Normal *Frontier/Core:* Frontier *Gender:* Female *Birthdate:* 2257 *Mass:* 66 kg *Eyesight:* Average *Hearing:* Average *Body Type:* Ectomorph *Throw Range:* 96 meters *Coolness Under Fire:* 5 *Encumbrance:* 44 kg *Native Language:* English *Other Languages:* French and German *Size:* 12 *Strength:* 10 *Dexterity:* 19 *Endurance:* 8 *Determination:* 8 *Intelligence:* 10 *Eloquence:* 13 *Education:* 12 *Consciousness:* 4 *Life Level:* 1 *Careers:* Technician, Ship Crews *Skills:* Ship Drive Engineering—5, Computer—4, Mechanical—3, Electronics—3, Information Gathering—2, Theoretical Sciences—2, Melee—2, Vacc Suit—2, Ground Vehicle—1, Hover Vehicle—1, Pilot—1, Survival—1, Sensors—1

Motivations: *Middle Club* and *Middle Heart:* Gretchen MacDonald is an aggressive woman. In all aspects of her life, from her professional career to her often stormy romantic affairs, she takes charge whenever possible. When she decides on a goal, no matter how great or how small it may be, she goes after it wholeheartedly. If required, violence is not out of the question to overcome possible problems.

A stunningly attractive woman with bright red hair, MacDonald has a reputation as a flirt and a heartbreaker when not on duty. She takes pride in her history of romantic conquests and is generally (and correctly) believed to have a man in every port.

Thus it was that she became a technician aboard the Deep Space Orbital Mining Station, Joseph Whitworth, and began a very successful tour of duty with the Trilon Corporation.

Despite her forceful and sometimes overly dominant nature, Gretchen feels only respect for her shipmates. In a sense, she looks at them as family and would do anything she could to keep one of them from coming to harm.

Background: MacDonald's parents moved to Ellis two years before she was born in hopes of finding their fortunes on the rapidly evolving colony there. They were able to attain a homesteading grant and set to work developing a farm along a newly opened length of canals. In a matter of months, they were a solid part of the thriving agricultural economy of America's first extraterrestrial state.

When she left high school, however, Gretchen found that the farm life did not interest her as a possible career. Her parents had more than enough help from her four brothers and two sisters and encouraged her to seek her fortunes elsewhere, if that was what she truly desired.

Thus it was that she became a technician aboard the Deep Space Orbital Mining Station, *Joseph Whitworth*, and began a very successful tour of duty with the Trilon Corporation. For eight years she served aboard the *Whitworth*, greatly impressing those who worked with her.

After almost a decade of service with Trilon, however, Gretchen became interested in missions beyond the frontiers of human space. To that end, she applied for a position with Britain's Royal Society when they announced plans for a joint mission with the AR-1 to explore the Augereau system.

Although the mission was successful, Gretchen found that she did not care for the Royal Society's methods of operation and felt that her American citizenship would prevent her from rising to a better position. Encouraged by members of the AR-1 team, she left the Royal Society to join them and has enjoyed great success in her field ever since.

LEE NYSTROM

Position: Chief Pilot *Nationality:* Scandinavian Union *Homeworld:* Earth *Gravity:* Normal *Frontier/Core:* Core *Gender:* Male *Birthdate:* 2261 *Mass:* 74 kg *Eyesight:* Average *Hearing:* Excellent *Body Type:* Normal *Throw Range:* 64 meters *Coolness Under Fire:* 6 *Encumbrance:* 32 kg *Native Language:* Scandinavian *Other Languages:* English *Size:* 8 *Strength:* 8 *Dexterity:* 10 *Endurance:* 10 *Determination:* 14 *Intelligence:* 18 *Eloquence:* 12 *Education:* 16 *Consciousness:* 3 *Life Level:* 6 *Careers:* Ship Crews, Scouts *Skills:* Vacc Suit—5, Pilot—4, Hover Vehicle—3, Melee—3, Ground Vehicle—2, Sea Vehicle—2, Aircraft Pilot—2, Mechanic—2, Electronics—2, Ship Drive Engineering—1, Computer—1, Combat Rifleman—1, Survival—1, Sidearm—1, Remote Pilot—1

Motivations: *Diamond Queen* and *High Club:* Lee Nystrom considers himself to be quite the ladies' man. He is utterly convinced that no woman can resist his charms once he sets his sights on them. As such, he is often seen as somewhat rude and even obnoxious by female members of the crew. Currently, he has his eye on Gretchen MacDonald and is wholly unaware that she finds him fairly offensive.

Nystrom also considers himself to be a rough and rugged fighter and a two-fisted drinker. He looks forward to periods of shore leave and frequently seeks out rough parts of town in hopes of spawning a few bar fights. Once things start getting heavy, his high melee skill puts him in good standing, and he usually comes out on top. For the most part, Lee fights fairly.

Background: At an early age, Lee Nystrom left his home on Earth and became a hand aboard the American merchant vessel, *Barry N. Elliot*. Although he had always been interested in various types of vehicles, it was not until this point that he was actually encouraged to pursue his hobby seriously. On a ship like the *Elliot*, a crewman who was well-versed in the operation of almost any vehicle which might be available was a valuable asset.

GEORGE STAHL

Position: Communications Officer *Nationality:* Ukranian *Homeworld:* Aurore *Gravity:* Zero *Frontier/Core:* Frontier *Gender:* Male *Birthdate:* 2258 *Mass:* 83 kg *Eyesight:* Average *Hearing:* Excellent *Body Type:* Normal *Throw Range:* 88m *Coolness Under Fire:* 3 *Encumbrance:* 44 kg *Native Language:* Russian *Other Languages:* English, French, German, Japanese, and Manchurian *Size:* 11 *Strength:* 11 *Dexterity:* 13 *Endurance:* 11 *Determination:* 15 *Intelligence:* 10 *Eloquence:* 12 *Education:* 12 *Consciousness:* 4 *Life Level:* 8 *Careers:* Space Military, Contact *Skills:* Vacc Suit—5, Communications—4, Linguistics—3, Survival—3, Prospecting—2, Sidearm—2, Imaging—1, Mechanic—1, Electronics—1, Writing—1, History—1, Psychology—1, Anthropology—1, Melee—1, Combat Rifleman—1

Motivations: *Heart Queen* and *Club Jack:* Stahl's primary motivation during the mission is his devout loyalty to Commander Schmidt. They have served together several times in the past and are fast friends. In times of crisis, Stahl would willingly sacrifice himself in order to protect Schmidt. Stahl is also known for his temper. In the past, he has often become violent when things did not go his way. Needless to say, this has earned him several black marks on his service record with the AR-I. It is rumored that Schmidt's influence was the deciding factor which earned Stahl a place on the *Bayern's* roster.

Background: Stahl's parents were officers aboard a Ukranian transport vessel which made regular runs from the Aurore system to Hochbaden. At the time of their son's birth, they decided to remain aboard ship and raise him there. This choice has shaped Stahl's life and personality to a great extent.

As he grew, his interest in space travel and the diverse cultures which he came into contact with prompted him to take up the study of languages. He enlisted in the military for a brief time but received a ground assignment on Aurore instead of a ship's position. Unable to tolerate the tedious posting, he left the service and eventually joined the AR-I.

Recently, Stahl learned that his parents had been caught on Aurore during the Kafer attack there and were slain. Stahl became so upset that he even attempted to commit suicide. Schmidt found him on the brink of death and saved him. Aware that such a psychological collapse would destroy any chance Stahl had to serve on *Bayern* and that there could be no better treatment for him than to do so, Schmidt kept the incident a secret.

Starships are a lot like women. The faster they move and the sleeker they're built, the more I like 'em. And let me tell you, I've had more than my share of both.

I've had some real nice ones over the years, too. Both girls and ships. Two of my favorites were aboard Elliot. I served there for over a decade, and the whole time we had one shuttle that gave everyone but me trouble. The engineer never could figure it out and neither could I. It seemed to fly great for me, though. I guess it must be my magic touch.

We had a computer officer who was the same way. But I'll tell you, five minutes with the old master and she was melting like butter.

All of a sudden, I'm back home again. I'm aboard Galicia, and we're on Aurore. My parents are there, trying to get that old bug to work again. How many times have they asked Captain Van Helsing to buy a new one?

Suddenly, there's an explosion from the bulkhead behind them. I stare, unable to move, as a dozen Kafer swarm in. I keep thinking how much they look like men in bug suits. Then they start shooting.

My father gets hit before he even sees them. Why didn't he hear the explosion? Mother screams. She sees me and starts running to me.

I hold out my arms. If she can reach me she'll be safe. I can protect her from those monsters. There's another burst of gunfire and blood splashes across my face. I start screaming and realize it's just another dream.

All of a sudden, Ace dies. I switch to the backup system, but there's no response. The damned pulse from that last explosion has shut down the whole system. The Commander's shouting orders to half the bridge crew, but without Ace on line, they won't get too far, and that means this whole ship is going to become a fireball in about 10 seconds.

A complete shutdown to clear the garbage signals out of the system takes two seconds. One more second races by while I get everything set for reconfiguration. Another two while power flows back across the mains and all of my indicators light up crimson.

Then the screens flash to life around the bridge, and we have control again. Captain Schmidt gives the order to cut into stutterwarp and...click.

Another simulation test aced.

Dear Mister Al-San,

Thank you for coming to our school. Our whole class liked your talk about space a lot. Please come and see us again when you get back from outer space. Our favorite part was the pictures you showed from your trips. We thought they were really pretty. We want to go to new places and see things nobody else has seen before.

We hope you are safe and having fun in space. We will all be thinking about you when we look up at the stars at night.

The Children of Germain Adamson Elementary School

Raumhafen, Landeplatz—
Frederich Der Grosse

Joi, 61 Ursae Majoris

NICOLE ST. NICHOLAS

Position: Computer Officer *Nationality:* French *Homeworld:* Kimanjano *Gravity:* Normal *Frontier/Core:* Frontier *Gender:* Female *Birthdate:* 2264 *Mass:* 89 kg *Eyesight:* Exceptional *Hearing:* Exceptional *Body Type:* Normal *Throw Range:* 104 meters *Coolness Under Fire:* 4 *Encumbrance:* 52 kg *Native Language:* French *Other Languages:* English, German *Size:* 13 *Strength:* 13 *Dexterity:* 10 *Endurance:* 16 *Determination:* 10 *Intelligence:* 12 *Eloquence:* 16 *Education:* 10 *Consciousness:* 4 *Life Level:* 9 *Careers:* Academic, Ship Crew *Skills:* Computer—5, Information Gathering—3, Bureaucracy—3, Melee—3, Vacc Suit—2, Writing—1, Ship Drive Engineering—1, Pilot—1, Survival—1, Sidearm—1, First Aid—0

Motivations: *Club Queen* and *High Spade:* Nicole is very pro-French Empire and will take instant offense at any insult (real or imagined) which is aimed at it. To her, all that is French is good and all that is good is French. In addition, she is determined to see the *Bayern* mission through to a successful conclusion and thus elevate her own position in the AR-I. To this end, she often manipulates people and events to suit her needs or desires. Nicole is used to getting what she wants when she wants it. Although she has not admitted it to even herself yet, she has become very fond of Christopher Bentley, *Bayern's* chief journalist.

Background: Nicole St.Nicholas is an exceptionally beautiful woman of great stature. She stands well over six feet in height and has blonde hair which falls to well below her waist. When in freefall, she wears her hair up to avoid accidents. Many of her shipmates have pointed out, however, that the very distracting looks of this woman may have been responsible for far more mishaps than her locks could ever hope to be.

At an early age, Nicole St.Nicholas showed an aptitude for computer sciences, and all through her schooling, she excelled in their use. Unlike many in her field, however, she did not sacrifice any interest in physical development to further her intellectual advances. In fact, when she was 17, and again when she was 21, Nicole found herself on the French Olympic team where her skills in unarmed combat won her a bronze and a silver medal in the martial arts programs. One reason for her success over a number of more skillful opponents was her equal aptitude in both the normal and zero-gravity disciplines. Despite her relative lack of seniority among the ranks of Institut personnel, Nicole's outstanding skill with computer systems made her the only obvious choice for the computer officer's post on the *Bayern* mission.

ABU AL-SAN

Position: Chief Sensor Operator *Nationality:* United Arab Republic *Homeworld:* Earth *Gravity:* Normal *Frontier/Core:* Core *Gender:* Male *Birthdate:* 2261 *Mass:* 131 kg *Eyesight:* Excellent *Hearing:* Average *Body Type:* Mesomorph *Throw Range:* 110 meters *Coolness Under Fire:* 2 *Encumbrance:* 52 kg *Native Language:* Arabic *Other Languages:* English *Size:* 11 *Strength:* 15 *Dexterity:* 11 *Endurance:* 11 *Determination:* 10 *Intelligence:* 10 *Eloquence:* 8 *Education:* 12 *Consciousness:* 6 *Life Level:* 11 *Careers:* Scout *Skills:* Sensors—5, Information Gathering—3, Computer—2, Vacc Suit—2, Electrical—1, Mechanic—1, Remote Pilot—1, Melee—1, Sidearm—1, Combat Rifleman—1

Motivations: *Middle Spade* and *Diamond Ace:* Al-San is a determined man who sees his career with the AR-I as his entire life. Although very quiet and soft-spoken, he is eager to assume new responsibilities and to learn all that he can so that future promotions will be easily attained. His dedication to duty is almost unequalled among *Bayern's* complement.

Al-San is generous to a fault. He cannot bear to see others in need and does what he can to help them out. As his expenses for the trip aboard *Bayern* are covered wholly by the AR-I, and he will need no spending money on the voyage, he has arranged for his entire salary to be donated to various charities for the duration of the mission.

Background: Born on Earth in the Middle East, Abu Al-San has spent the most of his life as a scout in the service of AR-I. Shortly after his graduation from college, he contacted representatives of the Institut and signed on for a brief tour of duty aboard the *Hamid-dass* survey vessel *Geheimnis*. As is often the case with such recruits, he was instantly hooked. When he returned to Earth, his first stop was at the AR-I administration office where he signed up for an extended series of probes along the entire French Arm.

Although he has never served with Commander Schmidt before, Al-San was once assigned as a crewman aboard the famous *Vogelperspektive* under the command of Diane Kamahmo.

WILHELM BERNHARDT

Position: Chief Medical Officer *Nationality:* German *Homeworld:* Neubayern *Gravity:* Low *Frontier/Core:* Frontier *Gender:* Male *Birthdate:* 2262 *Mass:* 66 kg *Eyesight:* Excellent *Hearing:* Excellent *Body Type:* Ectomorph *Throw Range:* 80 meters *Coolness Under Fire:* 5 *Encumbrance:* 44 kg *Native Language:* German *Other Languages:* English *Size:* 12 *Strength:* 10 *Dexterity:* 19 *Endurance:* 13 *Determination:* 11 *Intelligence:* 11 *Eloquence:* 13 *Education:* 20 *Consciousness:* 3 *Life Level:* 7 *Careers:* *Academic Skills:* Medical—4, First Aid—2, Information Gathering—2, Computer—2, Biology—1, Psychology—1, Swimming—1, Writing—1, Bureaucracy—1, Ground Vehicle—1

Motivations: *Middle Diamond* and *Low Heart:* Dr. Bernhardt is from a very wealthy and established Bavarian family. His primary concern is money. If a long-range project like *Bayern's* flight to the stars does not seem to be valuable to him economically, then he is not prone to be interested in it. In his opinion, the potential benefits to be had upon return from the *Pleiades* are fantastic.

Despite his heritage, Bernhardt tries very hard not to come across as a snob. In fact, he is very friendly and cooperative, often willing to help out on short term projects without compensation. In the back of his mind, he considers such efforts to be wise investments that may pay off one day in the form of a needed favor.

Six months after he had assumed duties aboard her, Lutzow was badly damaged by a French missile in the Beta Canum system.

Despite his obvious qualifications for the mission, Bernhardt is the subject of rumors which indicate that he bought his way aboard *Bayern*. The same holds true for his sister, Kathryn, who is a member of the life sciences team.

Background: Doctor Wilhelm Bernhardt is a graduate of the renowned Eva May Chandler University at Grey Hill on Mu Herculis. There, he attained top marks in his medical studies and graduated at the head of his class. Although he often jokes about his time there, Doctor Bernhardt worked long and hard to attain his diploma. Despite the fact that many of his classmates were more intelligent than he, Bernhardt's outstanding efforts earned him the marks he needed to best them in the end.

Once out of school, he returned to Neubayern and joined the German navy as a medical officer. His first assignment was to the Gneisinau-class cruiser, *Lutzow*. Six months after he had assumed duties aboard her, *Lutzow* was badly damaged by a French missile in the Beta Canum system. *Lutzow* returned fire and destroyed the attacking vessel after scoring a direct hit with her main guns.

As soon as the threat to his own ship was overcome, *Lutzow's* captain sent out a distress signal that his own craft was no longer spaceworthy. Several hours later, the British military vessel, *Impressive*, came alongside and took *Lutzow's* survivors aboard.

In the hours between the attack and the rescue, however, Doctor Bernhardt had his hands full. Many of *Lutzow's* crew had been badly injured when the missile impacted the living areas of the ship, and his own medical facilities were now nothing more than a memory. Despite the conditions which he was forced to work under, Bernhardt was able to save the lives of many crewmen.

It was later determined that the attack had been a mistake on the part of the French captain, and the incident passed with only a minimum of international tension between the two powers. Dr. Bernhardt was decorated for his actions during the crisis.

Although still technically a member of the German Navy, Dr. Bernhardt has been on loan to the AR-I for over 10 years and enjoys his work with them far too much to request reassignment.



**WILHELM
BERNHARDT**

Sometimes you have to stop and reassemble your nerves. In combat or during crisis, you don't have much time to, but sometimes you just have to.

I remember when we went aboard that derelict Scandinavian transport. I was the first one to enter, and everything seemed perfectly normal. The crew was seated at their posts, and others were in the lounge or in their bunks. We even found one couple in each others' arms. They were all dead.

Somehow the life support system had failed and vented toxic gas through the entire ship. They never knew what hit them.

I still have nightmares about that ghost ship.

This is Christopher Bentley reporting for the Interstellar Press Association aboard the Astronomischen Rechen-Institut's starship, Bayern. Two days ago, we pulled away from the ESA's facilities above Terra and headed away from the inner system. As I begin this transmission, Captain Leopold Schmidt is about to order us into full stutterwarp drive.

When we go into faster-than-light travel, there will be a moment of signal loss as the computers at both ends work to maintain contact. Following that, we'll be on our way.

The sound you hear in the background is the signal to ready for transition to faster-than-light speeds. Human-kind's greatest voyage is about to...



CHRISTOPHER BENTLEY

Position: Senior Journalist **Nationality:** Texas **Homeworld:** Earth **Gravity:** Normal **Frontier/Core:** Core **Gender:** Male **Birth-date:** 2263 **Mass:** 109 kg **Eyesight:** Excellent **Hearing:** Excellent **Body Type:** Endomorph **Throw Range:** 112 meters **Coolness Under Fire:** 3 **Encumbrance:** 54 kg **Native Language:** English **Other Languages:** None **Size:** 13 **Strength:** 14 **Dexterity:** 11 **Endurance:** 16 **Determination:** 7 **Intelligence:** 13 **Eloquence:** 15 **Education:** 12 **Consciousness:** 5 **Life Level:** 11 **Careers:** Law Enforcement, Journalism **Skills:** Writing—4, Information Gathering—3, Sidearm—3, Melee—2, Streetwise—2, Stealth—1, Ground Vehicle—1

Motivations: *Spade Ace* and *High Club*: Christopher Bentley is a very charismatic individual who is liked at once by those around him. He is dynamic and convincing when speaking to large groups, yet understanding and witty on an individual basis.

Bentley leaves behind a small army of admirers on Earth.

Despite his professionalism in career matters, Bentley has something of a wild side. He enjoys boxing and wrestling as both spectator and participant. In fact, Nicole St. Nicholas, who competed in the Olympic Martial Arts competitions, is something of a hero to him, and he enjoys her company a great deal. She also seems to be somewhat attracted to him—despite the fact that he is not French—although she would never admit this in public.

Background: Christopher Bentley was born to a long line of public servants. His great-grandfather was a police officer, his grandfather was a school teacher, and his father was a disaster relief worker for the nonprofit French-founded Societe de Bienfaisance. Immediately after completing high school, Bentley naturally gravitated to similar work and joined the Texas National Ranger Academy.

He graduated with high marks and became a detective working primarily on Earth. Later in his career, however, he did receive assignments on both Austin's World and Heildelsheimat.

While on the latter assignment, he met Karen Harlacher, the famous journalist for the German periodical *Tagebuch von Stern*. They fell in love, and she persuaded him to use his natural charm and exceptional looks to enter broadcasting. In less than a year, Bentley had found a job as a reporter for the Global Broadcasting Service. His skill at police work allowed him to quickly assume the role of an investigative reporter.

By the time the AR-I announced that they were going to be sending a mission to the Pleiades cluster, Bentley was a star known across human space.

As the years passed, Bentley acquired a reputation for honesty and fairness in his reporting which in turn has earned him numerous awards from the broadcasting industries of both Texas and the entire community of humanity. Bentley is the only person ever to receive the prestigious Bishop Award for Broadcasting Excellence three years in a row.

By the time the AR-I announced that they were going to be sending a mission to the Pleiades, Bentley was a star known across human space. The five slots reserved for journalists were assigned by committee, and Christopher Bentley was the first of the volunteers to be selected. In the end, he was the only one who received the unanimous support of all 13 committee members.

It should be noted that Karen Harlacher was also selected to go on the *Bayern* mission, and that she is one of the four journalists being kept in suspended animation for the majority of the voyage to the Pleiades. If Bentley's relationship with Nicole develops as it may, this could lead to complications when the ship reaches its destination, and all of the sleepers are revived.



CHIEF GEOLOGIST HIYOTU CHUNG

Motivation: High Spade and Club Jack: Doctor Chung is very dedicated to his work and hopes to learn much about planetary formation during Bayern's voyage to the stars. In the past, he has been subject to fits of rage when experiments have failed or favorite theories have not been born out by test data.

Background: A graduate of the University of Tokyo, Dr. Chung is a well-known figure in the field of geology and planetology. His travels around human space have been the subject of numerous documentaries on television, including one which was produced by Christopher Bentley, Bayern's chief journalist.

DIETER BOHL



Position: Chief Astrophysicist, Senior Scientist **Nationality:** German **Homeworld:** Earth **Gravity:** Normal **Frontier/Core:** Normal **Gender:** Male **Birthdate:** 2248 **Mass:** 74 kg **Eyesight:** Average **Hearing:** Excellent **Body Type:** Ectomorph **Throw Range:** 44 m **Coolness Under Fire:** 5 **Encumbrance:** 28 kg **Native Language:** German **Other Languages:** English **Size:** 8 **Strength:** 6 **Dexterity:** 11 **Endurance:** 9 **Determination:** 9 **Intelligence:** 15 **Eloquence:** 8 **Education:** 20 **Consciousness:** 3 **Life Level:** 7 **Careers:** Academic **Skills:** Astronomy—5, Computer—4, Information Gathering—4, Chemistry—3, Physics—3, Writing—1, Hover Vehicle—1, Ground Vehicle—1

Motivations: Heart Jack and Red Joker: Dr. Bohl is wise, but he is absent-minded and forgetful about all matters which do not pertain to his profession, but in those that do, he is perfectly clear and lucid. Dr. Bohl is considered by his peers to be a genius and at the same time, a bit of a bumbler because, while his scientific work is always faultless and maintains the highest level of dependability, he is socially incompetent.

Dr. Bohl has no understanding or tolerance for administrative matters, social graces, or bureaucracy. His position as senior scientist on the *Bayern* mission is based wholly on his time with the AR-I and his past record of common sense in all matters of a scientific nature.

Background: While serving as the senior astrophysicist and head of the science staff at the AR-I's Augereau station, Dr. Bohl earned the nickname "Lochjager" ("Hole Hunter") for his single-minded dedication to the capture of a naturally occurring quantum black hole. When he succeeded, it came as a great shock to the many who thought his quest far too difficult for a seemingly absent-minded old man. Many critics have been silenced forever with events like these.

Dr. Bohl was also the scientific head of the AR-I's famous *Baade* mission to the pulsar CP 0950+08. Launched in 2295, *Baade* made the trek to this astronomical wonder and arrived there in 2296. After several months of research the *Baade* returned to human space with information which allowed Dr. Bohl to usher in a new generation of G-Wave sensory equipment.

Using *Baade's* data, the well-known Georgian physicist, Alexander Kutchenko, believes he will be able to make the final jump in humankind's understanding of supersymmetry. He hopes to be able to modify Bellman's Limited Unified Field Theorem, which was first postulated in 2213 (the basis of modern physics), and replace it with a theorem which links all known forces.

CHIEF SOCIOLOGIST BRIAN NOURY

Motivations: Low Club and Spade Jack: Dr. Noury is fearless and brave, as his past record clearly shows, and he has a great dedication to his work. However, he is very aware of his positive traits and often speaks of them in public. This being the case, Dr. Noury has become known as an arrogant braggart who is generally irritating to be around.

Background: Dr. Brian Noury, a native of Tirane, spent the duration of the Slaver War (2252-2255) on the Sung homeworld. During his time there, while he was officially a prisoner of war, he was able to acquire much information on that race and their Xiang "slaves."

JAQUELINE BOHRANIAN



Position: Chief Xenobiologist **Nationality:** French **Homeworld:** Earth **Gravity:** Normal **Frontier/Core:** Core **Gender:** Female **Birthdate:** 2228 **Mass:** 71 kg **Eyesight:** Average **Hearing:** Average **Body Type:** Normal **Throw Range:** 56 meters **Coolness Under Fire:** 4 **Encumbrance:** 56 **Native Language:** French **Other Languages:** English **Size:** 7 **Strength:** 7 **Dexterity:** 10 **Endurance:** 3 **Determination:** 14 **Intelligence:** 15 **Eloquence:** 13 **Education:** 20 **Consciousness:** 3 **Life Level:** 7 **Careers:** Academic **Skills:** Biology—5, Information Gathering—4, Psychology—3, Anthropology—3, Computer—3, Bureaucracy—2, Writing—1

Motivations: Heart Jack and Red Joker: Dr. Bohranian is a wise and thoughtful woman. Although she is well past her prime at 72 standard years of age, she has not lost even a fraction of her keen mind. Members of the crew in need of advice often seek out Dr. Bohranian, who is seen by many as a sort of surrogate grandmother. Part of her charm, it must be noted, comes from her somewhat eccentric personality. In others this might be taken as a possible indication of mental deterioration, but those who have known her for a long time insist that she has always been this way. The good Doctor never fails to be the life of any party.

Background: Dr. Bohranian graduated from the Universite de Paris in 2254 after spending several years there on a scholarship from the Institut des Etudes Exobiologiques. The only daughter of a fairly poor family from European France, she was more than grateful to the IEE for their support, without which she would never have been able to afford higher education.

After several years of work with the IEE, she was invited to join a special team which they were assembling to study the Sung. From the moment of their discovery in 2248, she had dreamed of such an opportunity but had never expected it to be realized. She spent three years on the Sung homeworld in the DM+ 4 123 system before the outbreak of the Slaver War in 2252 forced her to depart.

Almost as soon as the war ended, Dr. Bohranian returned to DM+4 123 for a brief time to study the system's other sentient race, the Xiang.

Almost as soon as the war ended, Dr. Bohranian returned to DM+ 4 123 for a brief time to study the system's other sentient race, the Xiang. For the next three years she remained, becoming one of humanity's greatest authorities on the Sung and Xiang races.

In the following years, she found time to do extensive studies of both the Pentapod and Eber races before leaving the IEE in 2260. Her decision to leave was purely personal, based on a desire to travel beyond the explored realms of human space in search of additional sapient life forms. In her opinion, the type of research which the French foundation was then engaged in was not only important—it was vital. However, she felt that she would be more satisfied working for the Astronomischen Rechen-Institut as a specialist on some of their deep space missions.

The present strain in relations between Germany and France has been keenly felt by countrymen of both nations. But one area where political rivalry has gone virtually unnoticed in academia. Though a French citizen working in Germany, Dr. Bohranian has never felt scorn from her colleagues. She cannot, however, say as much for the townspeople. More than once she has been accosted on the street for her obvious accent by German citizens driven by their own media and nationalistic passions.

She has become one of humanity's greatest authorities on extraterrestrial life as well as the pride of the AR-I's xenobiological department.

DOMINIQUE RAYMOND

Position: Chief Chemist *Nationality:* French *Homeworld:* Earth *Gravity:* Normal *Frontier/Core:* Core *Gender:* Female *Birthdate:* 2268 *Mass:* 86 kg *Eyesight:* Excellent *Hearing:* Average *Body Type:* Normal *Throw Range:* 96 meters *Coolness Under Fire:* 3 *Encumbrance:* 48 kg *Native Language:* French *Other Languages:* English *Size:* 12 *Strength:* 12 *Dexterity:* 14 *Endurance:* 10 *Determination:* 10 *Intelligence:* 12 *Eloquence:* 9 *Education:* 12 *Consciousness:* 4 *Life Level:* 8 *Careers:* Academic *Skills:* Geology—4, Information Gathering—2, Computer—1, Bureaucracy—1, First Aid—1, Ground Vehicle—1, Writing—1, Electronics—0, Mechanical—0

Motivations: *Middle Spade and Middle Diamond:* Dr. Raymond is dedicated to her career and to her brother, Alan. She spends much of her "free time" working on chemical experiments and reading technical journals, leaving her little time for a social life. Although quite attractive, she seldom dates and is a demure individual who seems to prefer spending time on her work to socializing. Dominique's conservative attitude is visible in all aspects of her life, from her political viewpoints (which she almost never discusses in public) to her financial affairs, which she maintains in meticulous order. Players and referees may think of Dr. Raymond as a stereotypical spinster-to-be.

Background: Dr. Dominique Raymond first became involved with the AR-I while attending the University of Heidelberg. Shortly after she graduated, she joined the foundation and travelled across much of human space as a specialist in chemistry. In that time she spent several months in an expedition on Aurore, studying tidal life forms as an associate to a biological mission there. The survey team left Aurore only a couple of months before the Kafers arrived and laid waste to some of the areas where her mission had done its work. The knowledge that she had come so close to being a victim of the Kafer War hit home with Dominique, and she has kept up an interest in happenings along the arm ever since. Privately, she worries about whether human space will even exist by the time *Bayern* arrives.

Dominique is very close to her brother, and the two are seldom apart for long. When they applied for positions as members of *Bayern's* scientific team, it was understood from the start that if either of them was rejected, the other would withdraw from consideration.

ALAN RAYMOND

Position: Chief Geologist *Nationality:* French *Homeworld:* Earth *Gravity:* Normal *Frontier/Core:* Core *Gender:* Male *Birthdate:* 2267 *Mass:* 74 kg *Eyesight:* Average *Hearing:* Average *Body Type:* Normal *Throw Range:* 64 meters *Coolness Under Fire:* 6 *Encumbrance:* 32 kg *Native Language:* French *Other Languages:* English *Size:* 8 *Strength:* 8 *Dexterity:* 12 *Endurance:* 10 *Determination:* 12 *Intelligence:* 14 *Eloquence:* 13 *Education:* 15 *Consciousness:* 3 *Life Level:* 7 *Careers:* Academic *Skills:* Geology—5, Prospecting—3, Chemistry—2, Information Gathering—2, Vacc Suit—1, Computer—1, Writing—1, Bureaucracy—1, Ground Vehicle—1

Motivations: *Middle Heart and Low Club:* Dr. Alan Raymond is very protective of his "little sister" (who is actually larger than her physically small brother) and would do anything to protect her from harm or unhappiness. He is brave and does not give in to threats or intimidation, so it is quite possible that, if he had to, he would be more than willing to sacrifice himself to save her. It should be noted, however, that the two are so close that the loss of one would almost certainly devastate the other completely.

Background: Like his sister, Alan Raymond became interested in membership with the AR-I while attending the University of Heidelberg. After his graduation, he worked in their Earth-based laboratory facilities for two years until Dominique graduated, and they both signed up for ship-board missions and survey team duties. He accompanied his sister to Aurore and counts himself lucky that the Kafers didn't arrive a little sooner. Other missions took him to Hochbaden, Vogelheim, and Beta Canum Venaticorum on the French Arm. Also, in a joint AR-I/Brazilian mission the two Raymonds travelled all the way to Procyon. In his time with the AR-I he has come to visit and live in many different human colonial cultures, and now wishes he had minored in social sciences when in school.

Over the years, Alan and his sister have risen through the ranks of AR-I hand-in-hand. At no point in their careers have they ever considered assignments which would separate them. They live together on Earth and share a cabin on *Bayern*.

CHIEF HISTORIAN DEBORAH H. CARTER

Motivation: *Middle Spade and Low Heart:* Dr. Carter is an amiable young woman who, although she takes her career very seriously, enjoys a good time and can often be found at the various social activities set up around *Bayern* to maintain morale.

Background: Although a quick inspection of the mission profile for *Bayern* may cast a shadow of doubt on the need for a historian, the AR-I stands firmly behind it. An expert in the chains of events which have shaped the developments of the various known alien races, Dr. Carter will certainly prove to be invaluable should the *Bayern* contact other sentient life forms in the course of her travels.

Death Throes

"Computer message for Commander Schmidt-Computer message for Commander Schmidt-Please go to (your quarters for computer message."

Security clearance granted. Greetings, Commander Schmidt. The following is a mandatory mission directive reminder. Please view and initial when finished.

Sentient Encounters

(Abridged)

You are directed to investigate all intelligences encountered, within the following limitations.

First, do not endanger the overall mission plan. Future investigations and contact will be made outside the context of this mission if necessary.

Second, do not leave human crewmembers behind at any point in the mission, regardless of circumstances.

Third, do not take alien sentient beings on board the Bayern or its attached vessels for any reason. They are not to leave their worlds or system under any circumstances within the context of this mission.

Fourth, in extreme circumstances where, in your judgment, the security of human space is in the balance, you are directed to do whatever is necessary to maintain that security, including the destruction of the Bayern itself.

All data on alien intelligences are to receive top priority computer security.

End of message.

Well away from the comfort of familiar stars, the *Bayern* will be continuing its mission from star to star, each visited by humans for the first time. The exact routing of the mission has always been indeterminate; this area is too far from Earth to have been accurately mapped by telescope. The *Bayern* will pick its way among the stars based on their proximity to the intended flight path and their possible worth to the mission. Each star system is, however briefly, receiving the very first ambassadors from the green planet Earth.

Standard operational procedure dictates a routine flyby of any interesting planetary systems for future reference. The planetary system in an unnamed G8 star system along the flight path will dictate one such obligatory investigation in order to seek for the inner worlds which might bear some kind of substantial life. When one of the worlds is found to be emanating unusual background radiation levels, an immediate conference of the senior officers will be called. Their decision to investigate further will lead the *Bayern* and its crew into one of its strangest encounters.

PLANET TWO

The second planet in the system, which lies just on the inner edge of what would be a "human toleration" life zone, shows excessive radiation in strange patterns across its surface. Training the scanners on the world and bringing them in closer will reveal the terrible true cause of this splotchy radiation: literally thousands of atomic strikes against the surface of the world.

The cratering and magnitude of devastation indicate that the strikes were made with hydrogen weapons, most ranging from five to 15 megatons in strength. Ruined stretches of urban area can be found on every major continent, as well as strikes against islands and other locations of some unknown importance. There is no evidence that these strikes were made from an outside entity, and the industrial civilization which is now reduced to rubble was almost certainly capable of constructing such weapons. The thriving civilization which once lived on this world has apparently all but extinguished itself.

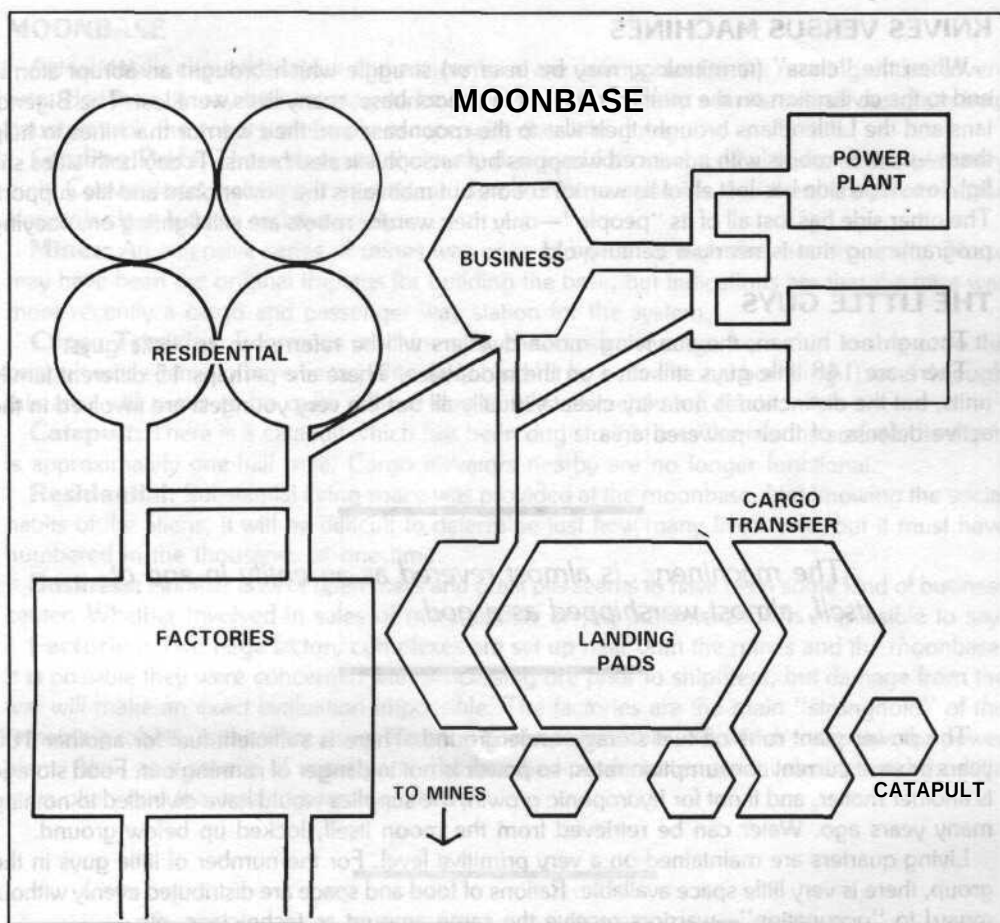
The race which once ruled this world had apparently commanded a significant technology. The extent of their civilization, indicated by the extent of rubble and near-rubble cities, suggests they were numerous and prosperous, generally speaking. Scanners also suggest that their cities were more three-dimensional than are human cities, extending well above and below ground level. Transportation nets, which virtually crisscross some continents, can be detected from orbit, and underground facilities almost certainly exist as well. Several sites nearer the equators, though thoroughly destroyed now, can clearly be seen to be space ports, possibly accommodating space planes, shuttles, or even true space vessels.

Turning the scanners away indicates that these were truly spacefaring creatures. Bases on both the inner and outer moons can be detected. Those on the inner moon have also been heavily damaged by nuclear strikes. However, the single base on the outer moon seems to be intact.

At any rate, this civilization seems to have been both industrial and spacefaring prior to the time of its own nuclear holocaust. To draw an Earth equivalent in years would be ludicrous with the information at hand. From the available information concerning the extent of urban areas, this civilization might correspond to Earth anywhere from 1800 to 2100. Its spacefaring technology corresponds to Earth between 2000 and 2100. Sufficient information for more accurate analysis is unavailable.

Simple calculations pinpoint the time of the nuclear disaster at a period lasting around five years nearly 100 years ago. The life scanners show that there are survivors probably numbering in the millions that are still alive on the planet. They are concentrated in small groups, isolated and restricted to the areas away from the devastated cities. Psychologically, they would probably be hostile to approaching aliens. Technologically, they are also probably heavily armed.

Tallying up the disadvantages, including possible paranoia, possible attack, possible disease, and possible radiation hazards, Commander Schmidt should decide not to journey to the surface to fulfill his mission directive orders. Instead, it is a much safer proposition to visit the intact base on the outer moon.



MOONBASE

The approach to the moonbase will be an uneventful one. If once spacefaring, this system's race isn't moving among its planet anymore. Close-up investigation of the base will confirm that there have been no nuclear strikes against that facility. However, it is heavily damaged from apparent conventional firepower. Three domed sections have been heavily bombed, perhaps from orbit. Other areas are most definitely breached and exposed to the vacuum surface of the moon. The scarred exterior of the base makes plain that this was once an important battlefield.

Scanners indicate, however, that the power plant is still functional. An area in a perimeter around the power plant is "powered up," complete with life support systems. Life scanners say there are life forms within that perimeter and nowhere else on the base.

Scanners also show considerable electrical activity outside the powered perimeter. The exact nature of that activity cannot be determined without further investigation.

WHAT WE KNOW AND WHAT WE NEED TO DO

It is a command directive that the crew investigate any sentient beings without endangering themselves. Sending an expedition to the moonbase seems to be the least dangerous option.

The individuals on the moonbase certainly have the technology for creating deadly weapons and a power source sophisticated enough to have survived being cut off from their mother world for some time. What is unknown is their psychological makeup, and what effect their isolation in this group has had on it. It is unknown whether this race has ever met an "extraterrestrial," and what their reaction might be. It is also unknown whether the conflicts which sparked worldwide destruction are finally laid to rest, or if they are still in force in these small groups of survivors.

The player characters must contact the alien race, establish some sort of communication if able, and learn as much as possible about them and what's left of their civilization.

A ONCE GREAT CIVILIZATION

Computer Log Entry

After further scanning of the system, it has become clear that the intelligent race which evolved here was heavily involved in the exploitation of their system. Substantial orbital bases, now slag and rubble, existed that could handle dozens of ships at a time, most likely on cargo or exploratory missions to the outer system.

If in the future AR-1 decides to revisit this system, investigating the facilities in the outer system would prove to be very a interesting study. This life form's innovations would no doubt give us a new perspective with which to view system-wide exploitation.

There are no indications that the race had ever developed a faster-than-light means of travel.

GENERATIONS UNDERSIEGE

Computer Log Entry

The 15-year average generation length of the native race means that in excess of five generations have been under siege around the power plant area of this moonbase. In that time, some interesting forces have been at work altering their psyches. I have come up with the following hypotheses, all of which will hopefully be checked against the norm upon future investigation of the mother world.

First, the reliance on the power plant has elevated its engineers and maintainers socially within the group.

Second, the continuous enemy presence has developed something of a martial philosophy among the group.

Third, being cut off from the mother world has made it something of a revered place in the heavens, unattainable at present.

KNIVES VERSUS MACHINES

When the "class" (terminology may be in error) struggle which brought an abrupt atomic end to the civilization on the mother world hit this moonbase, many lives were lost. The Bigendians and the Littlendians brought their war to the moonbase and their warrior machines to help them—warrior robots with advanced weapons but unsophisticated brains. Today both sides still fight on. One side has lost all of its warrior robots but maintains the power plant and life support. The other side has lost all of its "people"—only their warrior robots are still fighting on, obeying programming that is nearly a century old.

THE LITTLE GUYS

Though not human, the surviving moon dwellers will be referred to as "little guys."

There are 148 little guys still alive on the moonbase. There are perhaps 15 different family units, but the distinction is not very clear. Virtually all but the very youngest are involved in the active defense of their powered area.

The machinery...is almost revered as an entity in and of itself, almost worshipped as a god.

The power plant runs off fuel storage underground. There is sufficient fuel for another 100 years or so at current consumption rates, so power is not in danger of running out. Food storage is another matter, and if not for hydroponic growth, the supplies would have dwindled to nothing many years ago. Water can be retrieved from the moon itself, locked up below ground.

Living quarters are maintained on a very primitive level. For the number of little guys in the group, there is very little space available. Rations of food and space are distributed evenly without regard to "occupation"—warriors receive the same amount as technicians, etc.

Slug-throwing weapons were originally used against the robot attackers, but ammunition for those ran out years ago. They have a dozen lasers, cobbled together out of available parts. These operate as Mueller-Rivera P-3s for game purposes. Otherwise combat is done hand-to-hand, with spears, clubs, swords, or knives. Being moonbase operators and not soldiers, they don't have any armor to speak of, nor do they have explosives which might come in handy. Fighting with attacking robots is tooth-and-nail barricaded perimeter to keep the robots at bay.

Their society seems to be one of intense mechanization. The machinery which they maintain for their livelihood is almost revered as an entity in and of itself, almost worshipped as a god. Whether this is indicative of the mother world society or is a manifestation of the group's lengthy isolation is unknown. The war with robots has actually posed something of a moral dilemma—machines are naturally good and necessary in their minds. To kill them is to go against a higher order. Fortunately, the will to survive has won out over the desire to serve machines.

THE WARRIOR ROBOTS

There are 15 warrior robots left on the outside of the powered perimeter. They are neither very mobile nor very intelligent, so the barricades the little guys have erected are tremendous obstacles to them. They depend on power stolen from the power plant (see Tactics, below).

Without redirected programming, the warrior robots will keep up their assault on the little guys until they either run out of power or are destroyed. The robots have no means to repair themselves—damaged robots traditionally seize up and stop working eventually. The remains of dozens of robots can be found around the complex, alongside the suited remains of little guys who died for the lack of moon atmosphere.

By the standards of modern Earth, these robots are antiques. They are unsophisticated, slow, unintelligent, and no match for superior weaponry. In actuality, the little guys will probably win out over them in a few years without the assistance of the *Bayern* and its crew. The far more dangerous issues of eventual starvation and fuel shortages will soon be insurmountable.

MOONBASE

Actual details about the layout of the moonbase are unimportant to the running of this adventure. However, it may be necessary to have a working familiarity with its overall design to help counterattack the robots or simply escape with the little guys.

Landing Pads: These pads are obviously designed for rather typical types of interplanetary craft. Conventional weaponry has rendered some of them unusable, but there are plenty for the *Kenntnis-dass* landers to land safely.

Mines: An extensive series of mines was once in operation near the moonbase site. These may have been the original impetus for building the base, but indications are that the base was more recently a cargo and passenger way station for the system.

Cargo Transfer: Enormous machinery for the transfer of cargo from ship to ship or to the catapult area seems to have been particularly hard-hit by conventional bombing. Travel through this area will prove to be quite difficult due to twisted metal and debris.

Catapult: There is a catapult which has been dug straight into the moons surface. Its depth is approximately one-half mile. Cargo elevators nearby are no longer functional.

Residential: Substantial living space was provided at the moonbase. Not knowing the social habits of the aliens, it will be difficult to determine just how many lived here, but it must have numbered in the thousands at one time.

Business: Another area of open malls and great pits seems to have been some kind of business center. Whether involved in sales of merchandise or just administration is impossible to say.

Factories: Two large factory complexes are set up near both the mines and the moonbase. It is possible they were concerned with processing ore prior to shipment, but damage from the war will make an exact evaluation impossible. The factories are the main "stronghold" of the remaining robots, as there are many electrical hookups available with which to tap into the power plant. Also, as a source of spare parts, the bombed-out factories are invaluable, and the little guys often raid the area in search of them.

*In the long term, the war can be described best as follows:
"They deprive us of air, so we deprive them of power."*

Power Plant: Though of unique design, the power plant is a simple fuel cell of perhaps 50 MW maximum output. It now runs at considerably less than maximum efficiency and output, though. Since the little guys have no means of creating solar panels, they have no means of reusing their fuel, so they must rely on stored fuel. The little guys have their stronghold in this area and have barricaded it off from the other areas. These barricades consist of all sorts of metal debris, often welded in place. For purposes of explosives, they are the equivalent of 10 centimeters of construction steel.

TACTICS

For the past 20 years or so, the conflict between the little guys and the robots has degenerated into a war of attrition. The robots can rarely mount an attack through the formidable barriers around the power plant. The little guys must occasionally sortie out of their perimeter to search for spare parts into areas where most of the combat takes place. The little guys are secure. The robots are running down.

In the long term, the war can be described best as follows: "They deprive us of air, so we deprive them of power." The little guys depend on their life support systems, so these are often targeted by the robots (programmed to do so long ago—remember, the robots are not intelligent). The robots depend upon a power source, which the little guys control. The robots have the ability to tap into power using the old power grid of the moonbase, while the little guy engineers attempt to cut these sources off. Many of the robots spend their time "powered down" to conserve their precious energy.

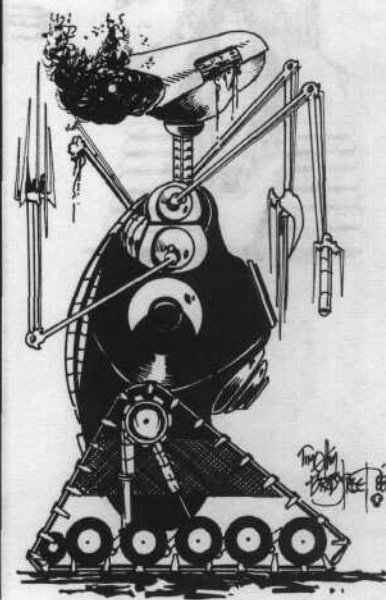
WARRIOR ROBOTS

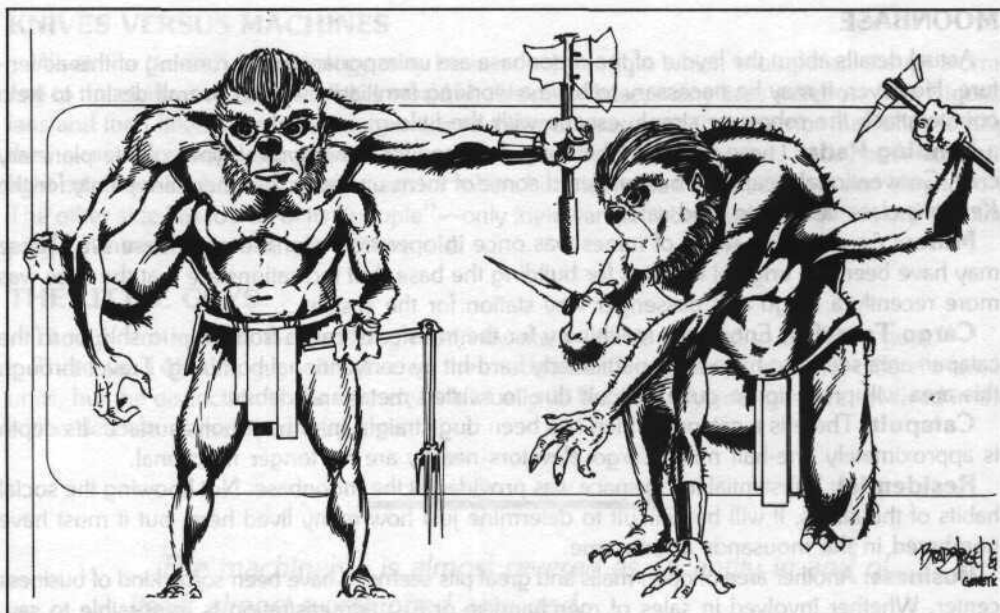
The warrior robots are in terrible disrepair and are dwindling in numbers simply due to lack of maintenance. As such, they really aren't much of a match for the player characters with their modern weapons.

Damage: Roll for damage on the robots as if they were bipeds. Any hit to the right arm (roll 9) destroys the robot's laser. Robots have no consciousness level. They have a live level of 10. A robot that is knocked down cannot get back up, but it can still fire.

Firepower: Each robot has a single laser which has identical characteristics to the Mueller-Rivera F-7.

Mobility: Robots always move as if trotting. They are considered experienced NPCs and have an initiative level of 6.





LITTLE GUYS

For lack of a better term, the alien race encountered in this system has been named the "little guys." They are somewhat smaller than human beings, but have evolved a civilization and society not too different from that which spawned the *Bayern* itself. Their study will probably be left up to future generations of AR-I ships and personnel, but the *Bayern* and her crew will perform the initial work on which they will build.

PHYSIOLOGY

Little guys are laterally symmetrical bipeds, standing roughly three feet in height. The fact that they have four long, narrow arms coming out of the torso in addition to powerful stubby legs suggests an evolutionary history calling for both tree and surface activities. The head rests on a very thick neck close to the torso.

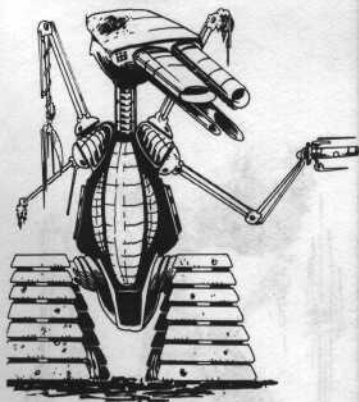
There appear to be two sexes, and the species reproduces in a manner similar to Earthly marsupials, though the young crawl from a nearby hatching egg to the mother's "pouch." The young grow there for about three weeks before reemerging as free-standing individuals. The lifespan of a little guy appears to be only about 40 years. The little guys have no sleep cycle to speak of, but they do have an irregular habit of energy saving meditation in a semiconscious state.

For combat purposes, they have a life level of 6 and a consciousness level of 3. Use the biped hit diagram, but for 9 and 10, determine at random which arm is hit.

PSYCHOLOGY

Judging from the size of the reference group, the artifacts still left behind, and the physical similarities between little guys and human beings, their thinking must be similar on many separate levels. They obviously have a need for cooperation within as well as without the family group, since cooperation is the driving force behind cultural and psychological safeguards that work against violent confrontations. Of course, judging from the nuclear devastation of the mother world, these safeguards were apparently insufficient.

The mechanistic culture evolved by the little guys has apparently done much to shape their thinking. Their regard for mechanical devices can almost be described as reverent. This may be slightly amplified in this group whose very livelihood depends on the proper maintenance of the power plant and life support systems. Little guys that are encountered will hold the player characters in awe due to their great weapons and devices. It will be easy to gain their trust with a few demonstrations of the gosh-wow science of the 24th century.



MISSION OF MERCY

With assistance from the human crew of the *Bayern*, the little guys will certainly overcome their enemies in short order. It is likely that they would have won their battle against their mechanical foes in the long run anyway, but the player characters will help them along and save some lives in the process.

The real dangers to the little guys at this point are long-term. The food supplies, though supplemented with new growth from hydroponic gardens, are steadily on the decline. An increasing population is complicating that problem. Also, the amount of fuel, in the form of hydrogen and oxygen, left available for the fuel cells is dwindling. In the absence of another power source to break down water, the fuel will run out fairly soon. This moonbase has supported a colony of displaced little guys for nearly a century, but that colony's days are numbered in the face of looming shortages of fuel and food.

COMMUNICATION

The key to helping the little guys out of their troubles lies in communicating with them. There are experts among the *Bayern's* crew for that purpose, and the ship's computers will help crack their combination hand-signal and voice language in short order.

The real question is time. The mission should not waste a great deal of time trying to learn the entire language of the little guys. Since only a few key ideas must be dealt with, it will be sufficient to translate those ideas and leave further communication for the next mission which comes this way.

Any number of attempts may be made, but continuous badgering of the little guys will bore them after a few hours, and they will go into their period of deep concentration. Examples of phrases which will help enormously are "we are taking you back to the mother world," "we are friends from far away," "others like us will return another time," "we will help you defeat your enemies," "which way to the lavatory," or "your supplies will run out soon."

TO A HOME THEY'VE NEVER SEEN

In the face of these overwhelming facts, the commander will be forced to make a very difficult decision. The little guys will not be able to survive on this moon, and without direct intervention by the *Bayern*, there is no way they will be able to leave. Doctrine demands that the aliens not be transported on the *Bayern* or her attached vessels for any reason. Should the commander ignore regulations and carry the little guy colony back to its mother world, or should he play it by the book and leave the colony to a certain extinction within another hundred years?

This adventure assumes the commander will take matters into his own hands and opt for the compassionate approach.

Transport: The *Bayern* will be able to accommodate the entire colony in one passage to the mother world. The *Kenntnis-dass* ships will be able to lift the little guys out of the moonbase complex one group at a time. They will no doubt feel some regret at leaving their home, but with the proper encouragement from the human crew, will gladly leave it for their true home. Once at the mother world, the colony can be taken down using the *Orkan* space planes.

Transplant: Though devastated and in some places too radioactively "hot" for habitation, there are vast tracts of land on the mother world which are fruitful and are deserted. Any one of these locations will do nicely for transplanting the colony. Remember, none of these little guys have ever set foot on the surface of a world, so the wide open expanses, the greenery, and the fresh air will no doubt trouble them at first. Many will wish to return to their moonbase and will have to be discouraged by the human crew.

A Bit of Education: These little guys know next to nothing about survival on the surface of the world. The human crew will be obligated to stay with the new colony for a week or so to teach them the basics, e.g., agriculture, preparing meals, dealing with native life, dealing with other little guy groups, and protection from weather, which are all foreign to them. The humans will be lifesavers to the colony in more ways than one.

However, though education may help the new colony along, leaving behind essential equipment should be discouraged. For instance, though this is an extreme example, just because they are in danger, do not leave behind high-powered weaponry. Wisest would be to leave nothing, beyond simple food, which they didn't make themselves on the moonbase.

Task: To unlock a single phrase in little people language: Routine. Linguistics. One hour.

COMMANDER'S LOG

Under extreme pressure from the rest of the command crew and due to my own personal feelings on the matter, I have chosen to ignore prohibitions against transport of sentients aboard under my own authority as commander of the Bayern. I do not take this action lightly, and do recognize the danger of transporting certain sentients, but a blanket rule against it seems unfair. In my judgment these beings present no danger and require our assistance. I am prepared to give them that assistance as a fellow citizen of this galaxy.

The Daughters Of Atlas

Star glory spread before us, radiant beacons entangled by the thin and misty filaments of the cluster nebula. From close up, it was easy to make out the streaky detail of the brightest nebulas, as though unfelt winds had tugged and tattered at those light-year-broad cloud masses, drawing them out into eerie alignments of dust like cirrus clouds back on Earth, etched in silver against velvet black.

"My Cod, how beautiful," someone in the viewing lounge muttered, and the sound of words tarnished a near-holy reverence.

After another long silence, it was the Captain who spoke: "If there are worlds in there, think what the night skies must be like!"

INTO THE PLEIADES

Whatever adventures have befallen the crew of the *Bayern* during their voyage thus far, this point marks the beginning of the true working phase of the expedition. Scientists and crewmembers still in hibernation will be awakened, and a council involving both ships' officers and scientists will be called to determine which of several possible options should be followed.

The player characters, depending on their positions within the crew, may be called upon to take part in the council. Unless *Bayern* has suffered severe damage or numerous casualties, however, the consensus will almost certainly be for *Bayern* to begin carrying out her planned series of observations within the cluster.

MAPPING STARS

The maps included in the section of this module entitled The Pleiades Star Group show only the brightest and most important stars in the cluster. There are approximately 500 more stars, scattered across a spherical region of space 35 to 40 light-years across.

The referee is responsible for determining the locations of the other stars as they are needed. Obviously, *Bayern* does not possess the resources or personnel to visit every star. The Pleiades possesses a full range of stellar types and classes, from the BIII giants listed, to the far more common G, K, and M-class type Vs.

Basically, the referee is free to make up the location of stars within the cluster as he goes along, subject only to the following rules:

- All stars properly belonging to the cluster are quite young. They are either planetless or possess families of barren, airless, and meteor-impacted masses similar to the Earth's moon, and orbit within flat disks of dust and meteoric debris. Very few stars encountered will not be cluster members, but will happen to occupy the region through which the cluster is now passing. These stars are as likely to possess planetary families as are other, noncluster stars. It is possible to determine from as far as 50 light-years away whether a star is young and probably lacking planets, or old, with its own planetary family.
- Cluster stars will be relatively few and far between at the outer edge of the cluster and quite thickly strewn at the inner heart. On the average, stars at the outer boundaries will be seven light-years apart. In the inner core of the cluster, among Alcyone, Maia, and the other B giants, stars will average one light-year apart. There will always be a selection of stars of various spectral types within stuttermarp range of any point within the cluster.
- Stars which *Bayern* or her probes visit can be mapped at the referee's discretion, allowing the characters to return to sites visited earlier. Use X, Y, and Z coordinates, basing new star coordinates on the map provided for the inner cluster, with Alcyone at 0, 0, 0. These coordinates will allow the players to determine distances between cluster stars.

THE MISSION

Bayern's mission profile calls for a series of scientific observations and measurements to be made at various points within the cluster. It is neither necessary nor desirable for the referee to role-play each experiment. Basically, the expedition's 53 scientists will be working in shifts, making spectroscopic measurements, establishing baseline measurements of stellar motion, taking photographs, and dispatching unmanned robot probes to various locations to gather data.

In order to determine the final success of the mission, the table in the following section can be used to simulate the acquisition of data. Various activities will yield points, called Science Points, which represent new data. The referee should keep track of Science Points gained, and should not discuss the idea of Science Points with the players. Scientists, after all, rarely sit down at the lunch table and discuss with one another how many points they won that morning! Instead, the referee should weave results into day-to-day conversations with the player characters, and the results should be vague. "We had a really great run that time," is one possibility. "The

damned computer went down just when the data was coming in. We'll have to rerun the whole series," is another.

Various observations possible for the *Bayern* scientists are described below. Those designated by an asterisk (*) are observations related to Code: AGRA.

SCIENTIFIC TESTS, OBSERVATIONS, AND MISSIONS

General Observations: *Bayern's* scientists spend time mapping and observing the cluster stars from anywhere inside. Observations require one day and yield 1D10 Science Points. Only one set of observations is possible at any one point. Separate observations should be at least two light-years apart.

Baseline Measurements: Like general observations, but *Bayern's* scientists require measurements and photographs of numbers of stars, taken from points at least 10 light-years apart. At each point, they must spend one day gathering data before moving on to the next location. They acquire five Science Points for the first such measurements, 15 for the second, and 20 for the third.

Rare planets of noncluster suns may be Earth-like. Most resemble Earth's moon but are constantly battered by debris.

Close Star Observations: *Bayern* approaches to within 10 au of various cluster stars in order to make spectroscopic observations, measure star movement and solar winds, and search for planets. For all stars of class F5 or cooler, there is a chance (1D10 = 7+) that planets will be present. These will be airless, barren, and continually wracked by asteroid impacts and seismic quakes. In addition to travel times, such observations take two days.

Planetary Observations: These gather data about the planets discovered through close star observations. The crew acquires 10+ 1D10 Science Points for landing a Remote Surface Probe, and 50+ 2D10 points for landing a human party. Conditions on the surface will be extremely hazardous. The referee should feel free, at his discretion, to introduce such threats as lava flows, quakes, asteroid impacts, and volcanic outgassing. Rare planets of noncluster suns may be Earth-like. Most resemble Earth's moon but are constantly battered by debris.

Deep Cluster Nebular Sampling and Observations: Sampling and observation of cluster nebula. Each observation requires 1D10 days. Points are acquired as follows:

10 points for each observation at cluster core.

20 points within one light-year of Alcyone, Maia or Electra.

30 points within two light-years of Merope.

Points are for observations by humans in EVA bugs, landers, or space planes. Half-listed number of points are used if observations are made using a remote interstellar probe. Twice-listed points are for observations made from *Bayern*.

Note: During any set of observations on a 1D10 roll of 7+, gravitic architecture will be noted. On a roll of 0, a node will be detected. The referee determines the node's distance and direction.

Observations of Gravitic Architecture: Observations of the inexplicable structures within nebulae will yield valuable data. Each observation requires 1D10 days and yields 1D10x20 Scientific Points points. If point total is 140 or more, a node will be observed.

Close Observation of an AGRA Node: If a node is discovered within a nebula, close observation of the node may yield data and offer an opportunity to make contact with the AGRA intelligence. Observation of a node requires 1D10 hours and yield 1 D10x50 Science Points.

Furthermore, the ship will gain 1 Contact Point for every 50 Science Points accumulated observing a node.

Note: Attempts to penetrate the AGRA node using *Bayern* or an unmanned probe will fail. Crewmembers using EVA bugs, landers, space planes or even spacesuits may be able to penetrate the node boundary. The events that they may experience there are discussed under "Into the Node."

We'd been studying the Pleiades since the mission began a full year ago, of course. Travelling the 410 light-years between Sol and the cluster was like travelling 400 years forward in time, watching changes and movements in one year which would otherwise have taken for centuries to unfold.

It wasn't until we were three-quarters of the way there, though, that Dieter came to my cabin with a stack of photographs in his hands, and a long and worried look on his face.

The...the thing had all of us stumped. Whatever it was, it defied the laws of physics, at least as we understood them. It was as though the gossamer star-stuff of the nebula had been wadded into a crumpled mass of light, or as if the glowing streamers had somehow braided themselves into a knot of golden radiance. But how? There was nothing physical within that radiance which could have created such an effect.

Viewed from a few au out, those enigmatic clots of light left all of us feeling a bit subdued but strangely excited, as if we'd suddenly been presented with incontrovertible proof that yes, there was, after all, a Santa Claus...

Science Points	Results
0	Absolute and total failure.
1-50	Failure. Data returned is not worth the cost of the mission.
51-100	Near failure. Much of data could have been acquired from Earth.
101-200	Modest success. Many questions remain, requiring further missions to the Pleiades and other clusters.
201-500	Success. Much new data acquired, allowing development of revolutionary new theories of cluster mechanics.
501-1000	Complete success. <i>Bayern</i> data has instigated a revolution in cosmology, including a new understanding of stellar evolution.
Over 1000	Stunning success. Contact (however unsatisfactory) has been made with a highly evolved intelligence. Pleiades anomalies are understood as part of a stellar engineering project on a galactic scale.

Note: Data gathered by remote probes or parties must be physically returned to the ship in order for it to count towards the ship's Science Point totals. Data can be transmitted by radio only if *Bayern* is quite close by—a few light-hours or less.

In much the same way, the mission can be considered a success only if *Bayern* returns to Earth with the data she has accumulated. The data could be broadcast towards Earth by radio, but since it will take 410 years for the radio waves to reach the vicinity of Earth, this effectively defers the mission's success into the 28th century.

SCIENTIFIC SUCCESS

Bayern's primary mission is to gather data about the Pleiades. The more data she gathers, the more successful the mission will be. The referee can use the table above to determine how successful the *Bayern* mission is.

Code: AGRA stands for Alcyone Gravitational and Radiation Anomaly, and it is the real—and secret—reason for the Bayern mission to the Pleiades. Observations...suggest that something very strange and probably artificial is going on within the cluster.

CODE: AGRA

Code: AGRA stands for Alcyone Gravitational and Radiation Anomaly, and it is the real—and secret—reason for the *Bayern* mission to the Pleiades. Observations made from the vicinity of Sol suggest that something very strange and probably artificial is going on within the cluster.

What the player characters know about AGRA before the beginning of the mission is up to the referee, and much depends on what role each player character is playing. *Bayern's* five journalists will not be informed ahead of time, for example; the mission's sponsors are concerned about the possibility of massive cultural shock should word of the discovery of a highly advanced alien civilization be released. On the other hand, *Bayern's* Commander Schmidt and his senior officers will either know before the mission departs, or they will be informed by sealed order en route. Fiendish referees may even set various members of the player group against one another: Some would know the secret and had to keep it quiet, while others didn't know, but were beginning to suspect from clues dropped by scientists during observations of the cluster. The reactions of crewmembers who were not originally informed about the *Bayern's* mission should be varied. Many will be thrilled by the scientific potential. Many others will be shocked and outraged that they were sent on this mission blind to its real purpose. The dissension among these crewmembers could easily become an added complication for the player characters.

THE CLUSTER NODES

During *Bayern's* explorations of the Pleiades, it is possible that strange twistings within the nebulosities surrounding Alcyone, Merope, Maia, and Electra will be discovered. These have the appearance of hazy patches of radiance within the soft glow of the surrounding nebula. One of the scientists studying the phenomena will refer to these fuzzy patches of lights as nodes, and the name will stick.

On examination, nodes will *appear* inexplicably strange. Each is approximately 10 au across. Few details can be made out within the golden radiance of the node's interior, but it is obvious that the nodes are the sources of the AGRA disturbances. Each is the source of gravity waves, radio, and infrared radiation, as well as visible light. None of the phenomena offer any immediate or obvious danger to the observers. However, remote probes sent into a node neither report nor return.

...[C]haracters will experience a bewildering shifting of reality.

Commander Schmidt should (wisely) refuse to take *Bayern* into any of the nodes. Attempts to use *Bayern* to penetrate a node anyway will be fruitless. All power systems will fail, leaving *Bayern* helpless, powerless, blind, and deaf at the fringe of the node, until she drifts clear of it 1D10 days later. Contact will have to be made in this event by one or more members of the crew cutting through *Bayern's* hull (or waiting until she drifts clear) and penetrating deeper into the node using a lander or EVA bug.

INTO THE NODE

Small objects (EVA bugs, landers, space planes, individuals wearing space suits) will be able to penetrate a node unhampered. They will find, however, that all radio contact with *Bayern* is lost once they penetrate the node's outer boundary.

Once within the node, characters will experience a bewildering shifting of reality. Seemingly solid objects of indecipherable design and purpose will *appear*, change shape and size, and vanish in seemingly random fashion. The characters will sense activity and purpose around them—shapes, movement, sounds, change, interlocking shafts of multicolored light, solid objects—but it will be impossible to understand any of it. It is possible that different characters will experience different sensory input; one might hear laughter or tinkling bells but see only light, while another hears nothing, but sees indescribable, twisting shapes directly ahead. Each character must make a task roll in order to preserve his sanity (see page 44).

If the characters persevere in their explorations and proceed towards the heart of the node, the strange sensations will become stronger and more disorienting. Each will have the feeling that they are under observation by some powerful but unseen intelligence. Sounds will be heard by all characters, growing louder and louder, though what each hears will be different from what another hears. All characters will see things, though no two characters will be able to agree on what they see. In all cases, what is seen and heard is completely fantastic and inexplicable: a planet changing colors, then flowing and melting into something like a building composed of geometric shapes; monstrous, living creatures shifting shape and form and texture; *Bayern* viewed from a distance, suddenly distorting into weird and tangled shapes; psychological phantoms such as other members of the crew, or even themselves, suspended in space before them, perhaps shifting and changing into horrible monsters, dying horrible deaths, or engaged in dreamlike activity. The characters will experience hallucinations of touch, taste, and smell as well, and may experience weird hybrids of sensation—smelling purple odors, for example, or tasting a high, wavering, piercing note. The referee should feel free to invent other sights and sensations as well—the more fantastic the better. Each player should feel that his character is losing his grip on reality and is in immediate danger of going insane.

At the very heart of the node—unless they do go insane—the characters will encounter the AGRA Intelligence.

"No way am I taking *Bayern* in there," the Skipper said, and I couldn't say that I blamed him. If we were going to penetrate that golden, glowing barrier, we would have to do it in a small ship...one of the surviving landers, maybe, or in an EVA bug.

Suddenly, my mouth was dry. I'd logged a good many hours in bugs, and it was beginning to look as though I was a good candidate for a mission that had all the earmarks of being a one-way trip.

TASK:
STAYING SANE 1

Characters inside a node will perceive a strangely twisted reality which will, at first, make no sense to them. Each character in this situation will find his perceptions of reality severely challenged. Failure to meet this challenge could result in temporary or permanent damage to his mind.

To determine a character's ability to maintain his sanity, average his Determination, Intelligence, and Education by adding these three attributes, dividing by three, and rounding the result up to the nearest whole number. This average is referred to as the character's Psychological Strength.

Staying sane within a node is a task:

Task: Maintaining sanity (Standard): Routine. Psychological Strength. Instant.

One roll is made by each character upon entering a node. A mishap may result in temporary or permanent damage (see Psychological Damage).



PSYCHOLOGICAL DAMAGE

Failure of a character to maintain a strong and reality-centered view of himself and his surroundings can lead to insanity or death. Failed sanity rolls will result in mishaps of varying degrees of severity, as described below.

SANITY ROLL MISHAPS

Superficial Damage: Reduces the character's Determination by 1. Attribute returns to former level upon exiting node. Character becomes agitated and fearful.

Minor Mishap: character becomes temporarily insane. He may become irrational or wildly frightened, and could injure himself or others by attacking them or panicking. If he becomes violent, it may be necessary to restrain or subdue him. He cannot return any Science or Contact Points to the ship. Reduce the character's Determination by 1D10. Attribute returns to former level after 1D10 days of rest and understanding care outside of the limits of the node.

Major Mishap: Character loses his grip on reality. His Determination is reduced to 0, and he cannot return Science or Contact Points to the ship. At referee's discretion, he may become totally withdrawn (catatonic) or totally irrational and violent (psychotic). Catatonic characters are, for game purposes, unconscious. Violent characters may attempt to attack other characters, aliens, or imaginary enemies by any means at hand, and must be subdued.

Total Mishap: The character dies on the spot from shock or fear.

TASK: TREATING THE INSANE

Characters who become insane as a result of their encounters within a cluster node can be considered to be wounded and in need of treatment. Since there are inadequate psychiatric facilities aboard *Bayern*, severely disturbed characters will be put into cryogenic suspension.

Task: Recovery by insane character: Difficult. Psychological Strength. One week.

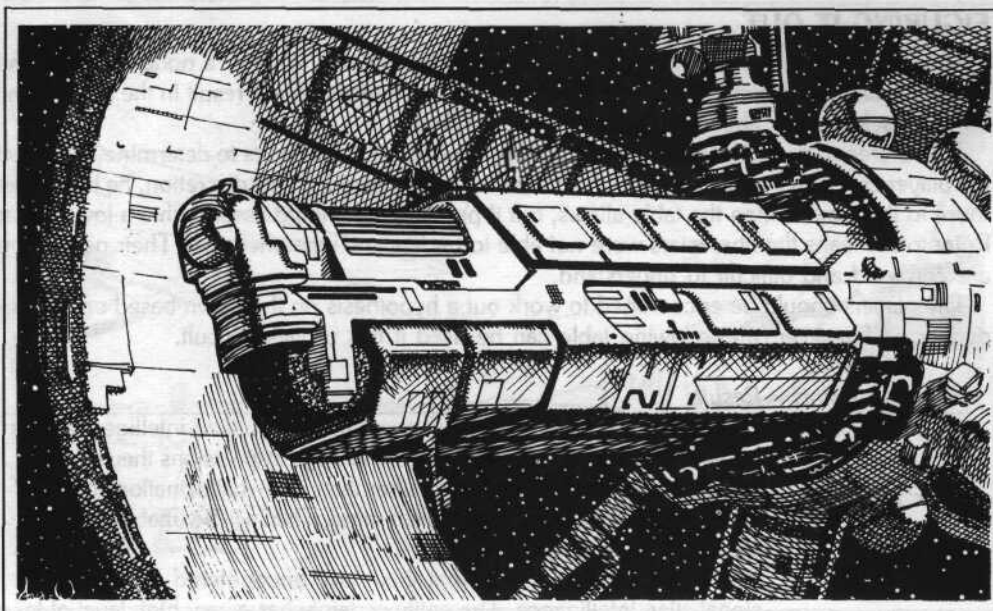
Referee: Recovery is possible only on Earth, or on a colony world with major hospital facilities. Any mishaps will result in permanent mental damage:

Superficial Damage: Permanent 1 point attribute loss each from Int. and Det.

Minor Mishap: Permanent 1D10+1 point attribute loss divided between Int. and Det.

Major Mishap: Permanent 1D10 point attribute loss from each of Int., Det., and Edu. (memory loss). A separate roll is made for each attribute loss.

Total Mishap: The character remains incurably insane, with all psychological attributes permanently reduced to 0.



THE AGRA INTELLIGENCE

The characters will know that they are in the presence of a powerful and highly intelligent entity. All will feel as though they are being watched, or even that something is trying to communicate with them. They will each assume that this is another hallucination unless they compare notes and realize that each is seeing the same thing.

They will perceive the AGRA Intelligence as 1D10+ 1 shapes which appear in front of them. The shapes will be indescribable, geometric, and will continually change in shape, form, size, and color in a way which suggests the shapes are related to one another.

Each character must immediately roll to preserve his sanity. Those who survive will realize that the separate shapes are somehow related; they will appear to act and change in unison, even though they are separated in space. At times, each may suddenly grow and even merge into one or more of the other shapes. At other times, each will shrink to a pinpoint and vanish. The overall effect on the characters will be of overwhelming strangeness, of utterly bewildering but apparently purposeful activity.

Any number of attempts to communicate may be made. The players may use their own ingenuity by drawing diagrams, using sign language, speaking, or trying telepathy. All deliberate attempts to communicate are treated as a task:

Task: Communicate with strange thing (Standard): Difficult. Intelligence. 6 seconds.

The referee should not reveal the results of this roll to the players. A minor mishap, however, will result in no obvious change in the situation, and players may make subsequent attempts to communicate. A major mishap will result in the entity disappearing, at which point the characters will find themselves wandering through the node until they encounter another entity. A total mishap will result in their immediate deaths.

Success will result in their sensing violent motion. Each character will glimpse *Bayern* for a fraction of a moment and realize that somehow, they are seeing the ship inside and out simultaneously. Then they will find themselves back aboard *Bayern*, outside the node, and they will discover that no time has passed since they left the ship. Each sane character will be able to contribute 1D10x50 Science Points to the ship's total, as well as 1 Contact Point per 50 Science Points accumulated. They will have only a vague idea that they have been successful at communicating with the entity, however.

Attempts to attack the entity by either rational or psychotic characters are treated as forms of communication. The task, however, becomes Formidable.

TASK: STAYING SANE 2

Characters within a node may encounter the AGRA Intelligence. As described elsewhere in this scenario, the AGRA Intelligence is a four-dimensional entity of super-human intelligence and complexity. Human characters can only perceive the three-dimensional manifestations of this entity, which are inexplicable and terrifying.

Each character confronted by the AGRA Intelligence must determine his current Psychological Strength, and roll for the following task:

Task: Maintaining sanity in the face of AGRA Entity: Difficult. Psychological Strength. Instant.

A mishap may result in temporary or permanent damage to the character.

Just what the hell had happened to us? I still couldn't tell if we'd gotten through to the thing...or things, whatever they were, but here we were, safely back aboard Bayern, the bay launch crew staring at us and insisting we'd never left.

That could wait. Debriefing could wait. I was more worried about Lee. He had flipped out completely in there...shrieking bloody murder as though he'd been beset by all the demons of hell.

And there was more. Lee had had a scar on the right side of his face, a ragged memento of a barroom brawl years ago which he'd been too fond of to have removed.

Now that scar was on the left...

FIGURING IT OUT

After penetrating a node, none of the characters will be able to enter a node again, neither in that location, nor elsewhere within the cluster. All such attempts will result in the players finding themselves back aboard *Bayern*, outside the node.

The referee may use the total number of accumulated Contact Points to determine how much the player characters understand of what they have experienced. At his discretion, he may reveal more to the players than the table allows, but if possible, he should assume that a low Contact Point total means the characters were not able to understand what they saw. Their perceptions are confused and difficult to understand.

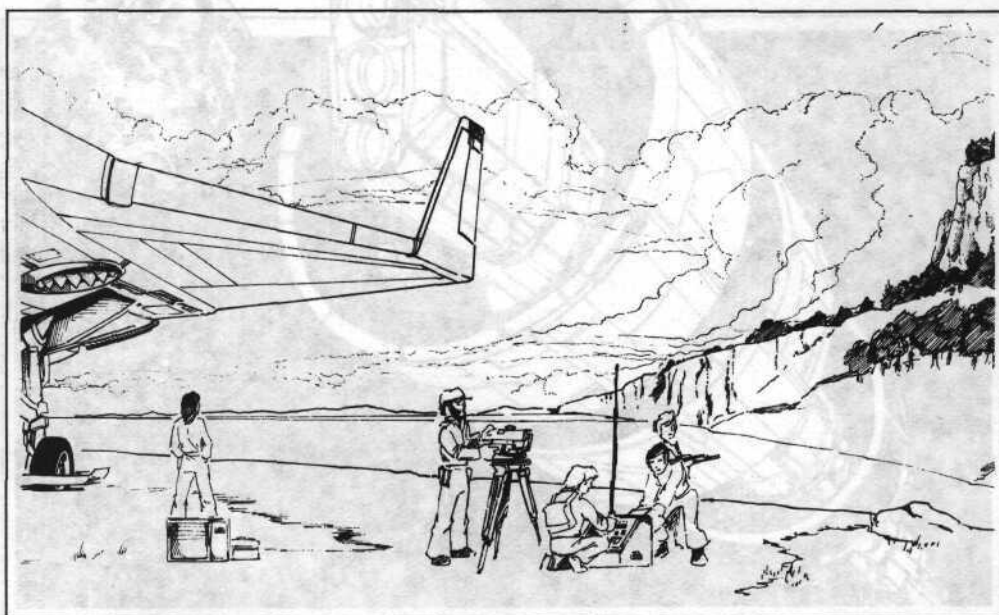
The players should be encouraged to work out a hypothesis on their own based on their experiences. However, the following table can be used if this proves difficult.

Contact Points	Results
7-5:	The characters know they have encountered an alien intelligence, but nothing more. They may assume the strange impressions they received within the node were subjective rather than real—hallucinations brought on by stress or the power of an alien mind. They will be unable to understand their encounter.
6-10:	The characters understand that they have encountered a multidimensional alien intelligence. The entity certainly has a very high level of intelligence and exists within at least four dimensions (as opposed to our normal three). The changing, three-dimensional shapes were, in fact, three-dimensional cross-sections of a four-dimensional being—all of that entity which humans are capable of perceiving.
11-15:	The characters understand the four-dimensional nature of the entity. In addition, they recognize that their strange hallucinations were probably the alien's attempts to communicate with them. However, their minds, based on three-dimensional space, were not able to assimilate the impressions. The "infinite plane" is understood as an incomplete visualization of their normal, three-dimensional space, viewed from a four-dimensional perspective.
Over 15:	All of the above. In addition, one or more of the characters (perhaps the one who made the lowest roll in his attempt to maintain his sanity in the alien's presence) retains a curious and powerful image in his mind. The nodes within the Pleiades are seen as though from a great distance, interconnected by beams of light. Other beams of light extend not through but past space to the vicinity of a vast black hole at the center of the galaxy—some 30,000 light-years away. The character will have a glimpse of sullen fires banked against the space-rending tides of the black hole, of strange and awesome intelligences building—something out of the very fabric of space, time, and gravity. The Pleiades construction is a buttress, one of many minor, architecturally outlying supports, one of many, for a vast construct which spans the entire galaxy.

No further explanation is possible. The beings encountered within the node are, compared with humans, godlike in their powers and abilities, as far beyond humans in their evolution as humans are beyond flatworms. These aliens can no more explain their activities or in any meaningful sense communicate with humans than humans could explain their art and architecture to shellfish.

It is unlikely that the construction project glimpsed at the galaxy's core offers any danger to humanity. The principal danger in this revelation is in the cultural shock which could cripple humanity's development, once word of this discovery is made known. The players will have to use their own judgment here about how much to tell the journalists aboard *Bayern*.

And perhaps there is not even any danger to humanity here. With no way of recording their experiences, it is possible that the characters who ventured into the node will not even be believed.



WORKING SCIENTISTS AND GEAR

It is possible that Bayern's complement of 53 scientists is not at full strength by the time the ship reaches M45. It is also possible that the ship has suffered damage in the course of previous adventures: damage which hampers its ability to collect and process data.

At any time, the referee may arbitrarily decide to reduce the number of Science Points gained by the Bayern crew, due to losses of personnel or equipment. There is no hard and fast rule to follow here, save that the player characters should be aware that, because of such losses, they are not acquiring as much data as they could.

Another factor the referee should keep in mind: Damage or losses to the remote probes and landers are also likely to result in less data won, or no data returned at all.

"Reversal": One final (and literal) twist. Each character who senses the "violent movement" and perceives *Bayern* strangely opened up must roll 1D10 upon his return to normal space. On an even result (including 0), there is no change. On an odd result, medical examination will reveal that all of his internal organs have been reversed...his heart on the right, his liver on the left, and so forth. Left-handed characters become right-handed, and vice versa. Furthermore, the character will need special food supplements (the equivalent of daily vitamins) from now on, because his body chemistry can no longer utilize certain amino acids. *Bayern's* chem labs are equipped to manufacture these supplements.

...[M]edical examination will reveal that all of his internal organs have been reversed...his heart on the right, his liver on the left, and so forth.

This reversal is the result of the character's body being rotated through the fourth dimension. (To form a three-dimensional picture of what has happened, picture picking up a nonequilateral triangle cut from paper and flipping it upside down.) For a moment, each character was looking "down" (three-dimensional words and concepts are inadequate here) into *Bayern* from a fourth dimension. He then entered *Bayern* via that fourth dimension, to find himself back in the ship. That time had been somehow involved is proven by the disagreement between the clocks aboard *Bayern* and the character's own experiences and watches.

Discovery of this fact will add three Contact Points to the group's total, since it will help them understand the dimensional nature of what they have experienced.

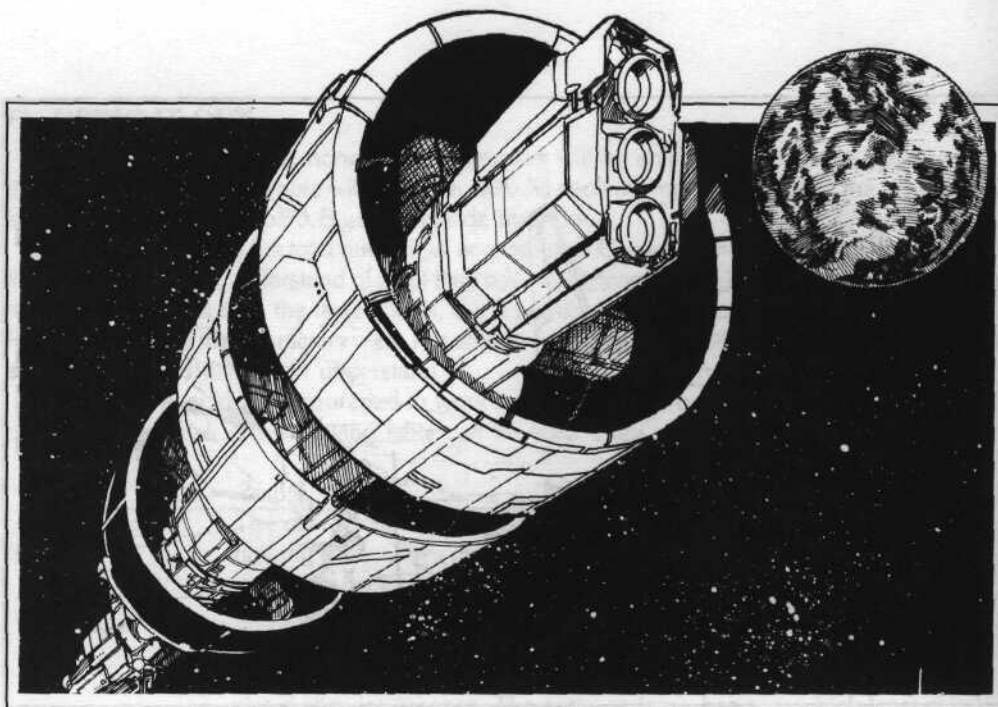
Psychological Effects of "Reversal": Characters who have been reversed by the four-dimensional encounter with the AGRA being will have some severe emotional problems to deal with. Though outwardly nearly identical to their former selves, the knowledge that they are so different now will take its toll in their lives over time. Only time will calm the strong emotions caused by this unanticipated change in their physical beings, and the individuals will have to adjust slowly to their new altered selves and eating habits. In the meantime, they will probably not be fit for duty and will require enormous support from the rest of the crew.

INSPIRATIONAL READING

In order to find inspiration for further adventures which revolve around the exploits of Bayern and her brave crew, referees are encouraged to examine the works of several noted science-fiction writers.

First and foremost are the writings of Arthur C. Clarke and Robert Forward. Both of these men provide excellent examples of Bayern-style adventures in which research and investigation of the unknown is stressed over physical conflict and combat. For those who prefer an exacting scientific approach (i.e., hard-core science fiction), I recommend the latter author, while referees who like a more philosophical or psychological endeavor may find the former more to their liking.

In addition, many novels and short stories by authors such as Larry Niven, Michael McCollum, or David Brin can provide ideas for adventures in which character interaction and exploration are stressed over conflict.



ON HIGHER DIMENSIONS

Eventually, possibly as a result of discussing their strange experience with scientists aboard Bayern, the characters may be able to make some sense out of what they saw.

It can be theorized that a fourth spatial dimension is necessary for the existence of the first three (just as three dimensions are necessary to define a flat, two-dimensional plane, or a plane is necessary to define a line). Current cosmological thinking suggests that there are 11 dimensions left over from the Big Bang—some in time, some in space. Other theories hold that the number of spatial dimensions is infinite.

Current cosmological thinking suggests that there are 11 dimensions left over from the Big Bang—some in time, some in space. Other theories hold that the number of spatial dimensions is infinite.

The strange things seen by some of Bayern's crew can be more easily understood by analogy. Two-dimensional creatures inhabiting a hypothetical "Flatland" might be aware of a 3-D human's hand entering their universe as five separate and uneven circles, with only the fingers intersected at their universe: As the hand pushed further and further through Flatland, the circles would be seen to expand, then merge into a single, irregularly-shaped mass. Should the hand grab a flatlander and pluck him from his 2-D universe, he would have severe difficulty understanding his suddenly expanded vision. It is possible that a 2-D brain would be utterly unable to comprehend any of what it saw. It is also possible that, since the 2-D creature does exist within our 3-D space, he will be completely confused by seeing other two-dimensional "slices" of 3-D space, slices he would have never seen before and which can constantly change as we move him about.

A 4-D being's intersection with 3-D space is what the Bayern crewmembers see when a number of disjointed, writhing shapes appear. The crew may get a clue as to what is happening should one or more of them find themselves rotated (reversed) after a harrowing trip into the hyperdimension.

BAYERN

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he chief tenet of the *Astronomischen-Rechen Institut* is the pursuit of interstellar exploration for the betterment of humanity. A rich and coveted pocket of stars lies a mere 350 light-years away. The time has come to unlock its secrets.

Resting comfortably in the constellation of Taurus in Earth's familiar night sky, the Pleiades have long been an object of awe, worship, and inspiration for different human cultures. To ancient civilizations which placed tremendous importance on the heavenly bodies, the unique character of the Pleiades was as compelling as it was puzzling.

To the modern men of the 24th century, however, the Pleiades are very nearly as great a prize—a storehouse of young stars just waiting to be tapped for information. The *Astronomischen-Rechen Institut*, a foundation pledged to extend the boundaries of human exploration and human knowledge, recognizes this potential and has for years been in preparation for the long voyage to this fabled cache of stars.

The vehicle for that mission has been carefully designed and purposefully crewed for the tenuous journey across uncharted stars. That ship is called the *Bayern*.

After *Bayern's* aborted launch attempt in 2297, the *Astronomischen-Rechen In-*

stitut completed repair and redesign on its vital stutterwarp drive system, and the ship was then ready to set off again for the haunting star group. Now, as the 24th century dawns on the human race, Commander Leopold Schmidt and his international crew of 110 brave explorers make ready to bid farewell to their friends and families for a journey that will last almost half a decade.

The module **Bayern** contains all of the background data needed to run an ongoing campaign of adventures based around the monumental voyage of this great craft. The important crewmembers are all detailed, as are the ship's systems, including the computers and the extra vehicular craft used on the *Bayern* during the mission.

Also included in **Bayern** are two complete adventure scenarios, *Death Throes* and *The Daughters of Atlas*. Each scenario is designed to begin or supplement a continuing campaign covering the unique encounters and adventures that can be found along the long flight of the *Bayern*.

Design.....William W. Connors
Development.....Timothy B. Brown

Since 1973



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